Montana Fish, Wildlife & Parks

SPECIFICATIONS FOR WORK
SPECIAL PROVISIONS

Contents:

1. Project Description
2. Project Related Contracts
3. Site Inspection
4. Soils Information
5. Project Representative, Inspections, and Testing
6. Engineering Interpretations
7. Rejected Work
8. Utilities
9. Construction Safety
10. Construction Limits and Areas of Disturbance
11. Decontaminate Construction Equipment
12. Tree Protection and Preservation
13. Construction Surveys
14. Material Sources and Construction Water
15. Materials Salvage and Disposal
16. Stored Materials
17. Staging and Stockpiling Areas
18. Security
19. Cleanup
20. Access During Construction
21. Construction Traffic Control
22. Sanitary Facilities
23. Contract Closeout
24. Measurement and Payment

PROJECT DESCRIPTION

The Project involves construction work associated with:

Cree Crossing WMA Equipment Storage Facility
Fish, Wildlife & Parks (FWP) project # FWP 7155318
Located in Phillips County, MT

The project includes constructing a 36' x 36' cold storage building with an overhead door and man door. The project includes a gravel floor and electrical wiring.

1. PROJECT RELATED CONTACTS

Project contacts are designated as follows:

Owner:	Montana FWP 1420 E. Sixth Ave. PO Box 200701 Helena, MT 59620-0701
FWP Project Representative:	Joseph Renenger FWP Project Manager 1522 Ninth Avenue Helena, MT 59620 406-841-4007 (wk) 406-841-4004 (fax)

2. SITE INSPECTION

All Bidders should satisfy themselves as to the construction conditions by personal examination of the site described in this document. Bidders are encouraged to make any investigations necessary to assess the nature of the construction and the difficulties to be encountered, see General Conditions, Article 3.

3. SOILS INFORMATION

Geotechnical investigation work has not been done for this Project. It is the responsibility of the Bidders to conduct all investigations and determine the soil type and digging conditions that may be encountered with this Project prior to bid preparation, see General Conditions, Article 3.

4. PROJECT REPRESENTATIVE, INSPECTIONS, AND TESTING

The Contractor's work will be periodically tested and observed to insure compliance with the Contract Documents. Complete payment will not be made until the Contractor has demonstrated that the work is complete and has been performed as required. If the Project Representative detects a discrepancy between the work and the requirements of the Contract Documents at any time, up to and including final inspection, such work will not be completely paid for until the Contractor has corrected the deficiency, see General Conditions, Article 9.

The Project Representative will periodically monitor the construction of work to determine if the work is being performed in accordance with the contract requirements. The Project Representative does not have the

authority or means to control the Contractor's methods of construction. It is, therefore, the Contractor's responsibility to utilize all methods, equipment, personnel, and other means necessary to assure that the work is installed in compliance with the Drawings and Specifications, and laws and regulations applicable to the work. Any discrepancies noted shall be brought to the Contractor's attention, who shall immediately correct the discrepancy. Failure of the Project Representative to detect a discrepancy will not relieve the Contractor of his ultimate responsibility to perform the work as required, see General Conditions, Article 3.

The Contractor shall inspect the work as it is being performed. Any deviation from the Contract requirements shall be immediately corrected. Prior to any scheduled observation by the Project Representative, the Contractor shall again inspect the work and certify to the Project Representative that he has inspected the work and it meets the requirements of the Contract Documents. The Project Representative may require uncovering of work to verify the work was installed according to the contract documents, see General Conditions, Article 12.

The work will be subject to review by the Project Representative. The results of all such observations, and all contract administration, shall be directed to the Contractor only through the Project Representative.

5.1 Services Required by the Contractor. The Contractor shall provide the following services:

a. Any field surveys to establish locations, elevations, and alignments as stipulated on the Contract Documents. FWP reserves the right to set preliminary construction staking for the project. The Contractor is responsible to notify FWP for any construction staking discrepancies.

b. Preparation and certification of all required shop drawings and submittals as described in the General Conditions, Article 3.

c. All testing requiring the services of a laboratory to determine compliance with the Contract Documents shall be performed by an independent commercial testing laboratory acceptable to the Project Representative. The laboratory shall be staffed with experienced technicians properly equipped, and fully qualified to perform the tests in accordance with the specified standards.

d. Preparation and submittal of a construction schedule, including submittals, see General Conditions, Article 3. The schedule shall be updated as required, as defined in the Contract Documents.

e. All Quality Control testing as required by the Contractor’s internal policies.

f. All Quality Assurance testing and/or re-testing as stated in the Contract Documents, see General Conditions, Article 13.

5.2 Services Provided by the Owner. The Owner shall provide the following services at no cost to the Contractor except as required for retests as defined in the Contract Documents.

a. The Project Representative may check compaction of backfill and surfacing courses using laboratory testing submittal information supplied by the Contractor. These tests are to determine if compaction requirements are being fulfilled in accordance with the Contract Documents. It is ultimately the responsibility of the Contractor to ensure that this level of compaction is constant and met in all locations.

b. Any additional Quality Assurance testing deemed appropriate by the Owner, at the Owner’s expense.

5. ENGINEERING INTERPRETATIONS

Timely Engineering decisions on construction activities or results have an important bearing on the Contractor's schedule. When engineering interpretation affects a plan design or specifications change, it should be realized that more than 24 hours may be required to gain the necessary Owner participation in the decision process including time for formal work directive or change order preparation as required.

6. REJECTED WORK

Any defective work or nonconforming materials or equipment that may be discovered at any time prior to the expiration of the warranty period, shall be removed and replaced with work or materials conforming to the provisions of the Contract Documents, see General Conditions, Article 12. Failure on the part of the Project Representative to condemn or reject bad or inferior work, or to note nonconforming materials or equipment on the Contractors submittals, shall not be construed to imply acceptance of such work. The Owner shall reserve and retain all its rights and remedies at law against the Contractor and its Surety for correction of any and all latent defects discovered after the guarantee period (MCA 27-2-208).

Only the Project Representative will have the authority to reject work which does not conform to the Contract Documents.

7. UTILITIES

The exact locations of existing utilities that may conflict with the work are not precisely known. It shall be the Contractor's responsibility to contact the owners of the respective utilities and arrange for field location services. **One Call Locators, 1-800-424-5555**

The Contract Documents may show utility locations based on limited field observation and information provided to the Project Representative by others. **The Project Representative cannot guarantee their accuracy.** The Contractor shall immediately notify the Project Representative of any discrepancies with utility locations as shown on the Contract Drawings and/or their bury depths that may in any way affect the intent of construction as scoped in these specifications.
There will be no separate payment for exploratory excavation required to locate underground utilities.

7.1 Notification. The Contractor shall contact, in writing, all public and private utility companies that may have utilities encountered during excavation. The notification includes the following information:

a. The nature of the work that the Contractor will be performing.
b. The time, date and location that the Contractor will be performing work that may conflict with the utility.
c. The nature of work that the utility will be required to perform such as moving a power pole, supporting a pole or underground cable, etc.
d. Requests for field location and identification of utilities.

A copy of the letter of notification shall be provided to the Project Representative. During the course of construction, the Contractor shall keep the utility companies notified of any change in schedule, or nature of work that differs from the original notification.

7.2 Identification. All utilities that may conflict with the work shall be the Contractor's responsibility to locate before any excavation is performed. Field markings provided by the

utility companies shall be preserved by the Contractor until actual excavation commences. All utility locations on the Drawings should be considered approximate and should be verified in the field by the Contractor. The Contractor shall also be responsible for locating all utilities that are not located on the Drawings.

Utilities are depicted on the Contract Documents in accordance with their achieved "Quality Levels," as defined in the American Society of Civil Engineer's Document, ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data." Reliance upon these data for risk management purposes during bidding does not relieve the Contractor, or Utility Owner from following all applicable utility damage prevention statutes, policies, and/or procedures during construction. It is important that the Contractor investigates and understands the scope of work between the project Owner and Engineer regarding scope of limits of the utility investigations leading to these utility depictions. Definitions of Quality Levels are described as follows:

a. "QUALITY LEVEL A" – (QLA): LOCATING THROUGH EXCAVATION. QLA data are highly accurate and are obtained by surveying an exposed utility. As such, both horizontal and vertical data are recorded. Survey accuracies are typically set at 15mm (1/2-inch) vertically, and to project survey standards horizontally (typically the same as for topography features), although these survey accuracies and precisions are generally left to the owner to specify in a scope of work. In addition to the applicable standard of care and any other additional standards imposed by commercial indemnity clauses, the accuracy of these location data is also typically guaranteed. Other data typically characterized include material type, surface elevation, utility size/capacity, outside dimensions, and configurations, soil type, and utility condition.
b. "QUALITY LEVEL B" – (QLB): DESIGNATING. QLB information is obtained through the application of appropriate surface geophysical methods to identify the existence and approximate horizontal location of utilities (a utility's "designation") within the project limits, followed by survey, mapping, and professional review of that designation. Underground utilities are identified by interpretation of received signals generated either actively or passively, and through correlating these received signals with visible objects (QLC) and record data (QLD) to determine function. Designated utilities that can't be identified are labeled as "unknowns." Although approximate has no accuracy associated with it, generally the locations are within inches rather than feet. The more utility congested the area or the deeper the utilities, the less likely it is that the designations will achieve that accuracy. These designations are then surveyed to project accuracies and precisions, typically third-order accuracy similar to other topography features. Note that surveying existing one-call marks does not lead to QLB data, since the genesis of the marks was not under the direct responsible charge of the professional certifying the QLB depictions, and one-call generally does not address unknown utilities, privately owned utilities, utilities without records, abandoned utilities, and so on. Nor does the professional have knowledge of the field technician's qualifications, training, and level of effort.
c. "QUALITY LEVEL C" – (QLC): SURFACE VISIBLE FEATURE SURVEY. QLC builds upon the QLD information by adding an independent detailed topography site survey for surface-visible appurtenances of subsurface utilities including but not limited to fire hydrants, valves, risers, and manholes. Professional judgment is used

to correlate the QLD data to the surveyed features, thus increasing the reliability of both utility location and existence. It is a function of the professional to determine when records and features do not agree and resolve discrepancies. This may be accomplished by depiction of a utility line at quality level D, effectively bypassing or disregarding (but still depicting) a surveyed structure of unknown origin. Additional resolution may result from consultation with utility owners.

d. "QUALITY LEVEL D" – (QLD): EXISTING RECORDS RESEARCH. QLD is the most basic level of information. Information is obtained from the review and documentation of existing utility records, verbal accounts, and/or one-call markings (to determine the existence of major active utilities and their approximate locations).

7.3 Removal or Relocation of Utilities. All electric power, street lighting, gas, telephone, and television utilities that require relocation will be the responsibility of the utility owner. A request for extending the specified contract time will be considered if utility owners cause delays.

7.4 Public Utilities. Water, sewer, storm drainage, and other utilities owned and operated by the public entities shall, unless otherwise specifically requested by the utility owner, be removed, relocated, supported or adjusted as required by the Contractor at the Contractor's expense. All such work shall be in accordance with these Contract Documents, or the Owner's Standard Specifications or written instructions when the work involved is not covered by these Specifications.

7.5 Other Utilities. Utilities owned and operated by private individuals, railroads, school districts, associations, or other entities not covered in these Special Provisions shall, unless otherwise specifically requested by the utility owner, be removed, relocated, supported or adjusted as required by the Contractor at the Contractor's expense. All work shall be in accordance with the utility owner's directions, or by methods recognized as being the standard of the industry when directions are not given by the owner of the utility.

7.6 Damage to Utilities and Private Property. The Contractor shall protect all utilities and private property and shall be solely responsible for any damage resulting from his construction activities. The Contractor shall hold the Owner and Project Representative harmless from all actions resulting from his failure to properly protect utilities and private property. All damage to utilities shall be repaired at the Contractor's expense to the full satisfaction of the owner of the damaged utility or property. The Contractor shall provide the Owner with a letter from the owner of the damaged utility or property stating that it has been repaired to the utility owner's full satisfaction.

7.7 Structures. The Contractor shall exercise every precaution to prevent damage to existing buildings or structures in the vicinity of his work. In the event of such damages, he shall repair them to the satisfaction of the owner of the damaged structure at no cost to the Owner.

7.8 Overhead Utilities. The Contractor shall use extreme caution to avoid a conflict, contact, or damage to overhead utilities, such as power lines, streetlights, telephone lines, television lines, poles, or other appurtenances during the course of construction of this project.

7.9 Buried Gas Lines. The Contractor shall provide some means of overhead support for buried gas lines exposed during trenching to prevent rupture in case of trench caving.

7.10 Pavement Removal. Where trench excavation or structure excavation requires the removal of curb and gutter, concrete sidewalks, or asphalt or concrete pavement, the pavement or concrete shall be cut in a straight line parallel to the edge of the excavation by use of a spade-bitted air hammer, concrete saw, colter wheel, or similar approved equipment to obtain a straight, square clean break. Pavement cuts shall be 2 feet wider than the actual trench opening.

7.11 Survey Markers and Monuments. The Contractor shall use every care and precaution to protect and not disturb any survey marker or monuments, such as those that might be located at lot or block corners, property pins, intersection of street monuments or addition line demarcation. Such protection includes markings with flagged high lath and close supervision. No monuments shall be disturbed without prior approval of the Project Representative. Any survey marker or monument disturbed by the Contractor during the construction of the project shall be replaced at no cost to the Owner by a licensed land surveyor.

7.12 Temporary Utilities. The Contractor shall provide all temporary electrical, lighting, telephone, heating, cooling, ventilating, water, sanitary, fire protection, and other utilities and services necessary for the performance of the work. All fees, charges, and other costs associated therewith shall be paid for by the Contractor.

8. CONSTRUCTION SAFETY

The Contractor shall be solely and completely responsible for conditions of the jobsite, including safety of all persons (including employees and subcontractors) and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to U.S. Department of Labor (OSHA), and all other applicable federal, state, county, and local laws, ordinances, codes, and regulations. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve them from compliance with the obligations and penalties set forth therein, see General Conditions, Article 10.

9. CONSTRUCTION LIMITS AND AREAS OF DISTURBANCE

9.1 Construction Limits. Where construction easements or property lines, are not specifically called out on the Contract Documents, limit the construction disturbance to ten (10) feet, when measured from the edge of the slope stake grading, or to the adjacent property line, whichever is less. Disturbance and equipment access beyond this limit is not allowed without the written approval of both the Project Representative and the Owner of the affected property. If so approved, disturbance beyond construction limits shall meet all requirements imposed by the landowner; this includes existing roads used and/or improved as well as the construction of new access roads. Special construction, reclamation, or post-construction reclamation or other closure provisions required by the landowner on access roads beyond the construction limits shall be performed by the Contractor at no additional cost to the Owner.

9.2 Areas of Disturbances. Approved areas of disturbance are those areas disturbed by construction activities within the construction limits and along designated or approved access routes. Such areas may require reclamation and revegetation operations, including grading to the original contours, top soiling with salvaged or imported topsoil, seeding, fertilizing, and mulching as specified herein. Other areas that are disturbed by the Contractor's activities outside of the limits noted above will be

considered as site damage or unapproved areas of disturbance, see General Conditions, Articles 3 and 10. This includes areas selected by the Contractor outside the defined construction limits for mobilization, offices, equipment, or material storage.

10. DECONTAMINATE CONSTRUCTION EQUIPMENT

Power wash all construction equipment that have been previously operated off of paved or gravel roadways entering the project site to prevent the spread of noxious weeds and aquatic invasive species. This applies to all FWP projects, whether or not individual construction permits specifically address cleaning of equipment.

11. TREE PROTECTION AND PRESERVATION

The Contractor and the Owner shall individually inspect all trees within the project construction limits prior to construction. The Owner shall determine which trees are to be removed and which trees are to be preserved. Construction of the grading, utilities and various roadway facilities must not significantly damage the trees root system or hinder it's chances for survival. Reasonable variations from the Contract Documents, as directed by the Project Representative, may be employed to ensure the survival of trees.

12. CONSTRUCTION SURVEYS

The Contractor will be responsible for all layout and construction staking utilizing the Project Representative's existing control and coordinate data for the project. Dimensions and elevations indicated in layout of work shall be verified by the Contractor. Discrepancies between Drawings, Specifications, and existing conditions shall be referred to the Project Representative for adjustment before work is performed. The Project Representative may set location and grade stakes prior to construction; however, it is ultimately the responsibility of the Contractor to check and verify all construction staking for the project.

Existing survey control (horizontal and vertical) has been set for use in the design and ultimately the construction of these improvements. A listing of the coordinates and vertical elevation for each of these control points may be included in the project drawings.

The Contractor will be responsible for preserving and protecting the survey control until proper referencing by the Contractor has been completed. Any survey control obliterated, removed, or otherwise lost during construction will be replaced at the Contractor's expense.

Contractor shall be aware of property pins and survey monuments. Damage to these pins will require replacement of such by a registered land surveyor at no cost to the owner.

The Contractor shall provide construction staking from the Contractor's layouts and the control points. Contractor's construction staking includes at a minimum:

1. Slope stakes located at critical points as determined by the Project Representative.
2. Blue tops every longitudinally and transversely for subgrade and crushed base to verify finish grading of course.
3. Location and grade stakes for drainage features and retaining walls.
4. Location stakes for roadside safety items, permanent and temporary traffic control, and misc. items as determined by the Project Representative.

Original field notes, computations and other records take by the Contractor for the purpose of quantity and progress surveys shall be furnished promptly to the Project Representative and shall be used to the extent necessary in determining the proper amount of payment due to the Contractor.

13. MATERIAL SOURCES AND CONSTRUCTION WATER

The Contractor shall be responsible for locating all necessary material sources, including aggregates, earthen borrow and water necessary to complete the work. The Contractor shall be responsible for meeting all transportation and environmental regulations as well as paying any royalties. The Contractor shall provide the Project Representative with written approvals of landowners from whom materials are to be obtained, prior to approval.

The Contractor may use materials from any source, providing the materials have been tested through representative samples and will meet the Specifications.

Water for compaction efforts shall be supplied by the Contractor.

14. MATERIALS SALVAGE AND DISPOSAL

Notify the Owner for any material salvaged from the project site not identified in the Contract Documents. The Owner reserves the right to maintain salvaged material at the project site, compensate the Contractor for relocation of salvaged material, or agreed compensation to Owner for material salvaged by the Contractor.

Haul and waste all waste material to a legal site and obey all state, county, and local disposal restrictions and regulations.

15. STORED MATERIALS

Contractor shall use an approved storage area for materials. Materials and/or equipment purchased by the Contractor may be compensated on a monthly basis. For compensation, provide the Project Representative invoices for said materials, shop drawings and/or submittals for approval, and applicable insurance coverage, see General Conditions, Article 9.

16. STAGING AND STOCKPILING AREA

Contractor shall use staging and stockpiling sites for to facilitate the project as approved by the Owner. Contract Documents may show approved staging and stockpiling locations. Notify Owner within 24 hours for approval of staging and stockpiling sites not shown on the Contract Drawings.

17. SECURITY

The Contractor shall provide all security measures necessary to assure the protection of equipment, materials in storage, completed work, and the project in general.

18. CLEANUP

Cleanup for each item of work shall be <u>fully</u> completed and accepted before the item is considered final. If the Contractor fails to perform cleanup within a timely manner the Owner reserves the right to withhold final payment.

19. ACCESS DURING CONSTRUCTION

Provide access to all public and private roadways and approaches within the project throughout the construction period.

Provide emergency access at all times within the project throughout the construction period.

20. CONSTRUCTION TRAFFIC CONTROL

The Contractor is responsible for providing safe construction and work zones within the project limits by implementing the rules, regulations, and practices of the Manual on Uniform Traffic Control Devices, current edition.

21. SANITARY FACILITIES

Provide on-site toilet facilities for employees of Contractor and Sub-Contractors and maintain in a sanitary condition.

22. CONTRACT CLOSEOUT

The Contractor's Superintendent shall maintain at the project site, a "Record Set of Drawings" showing field changes, as-built elevations, unusual conditions encountered during construction, and such other data as required to provide the Owner with an accurate "as constructed" set of record drawings. The Contractor shall furnish the "Record Set" to the Project Representative following the Final Inspection of the Project.

The Contractor's final payment will not be processed until the "Record Set" of drawings are received and approved by the Project Representative.

23. MEASUREMENT AND PAYMENT

Review these Contract Documents for additional Measurement and Payment specifications for definitions. Quantities are listed on the Bid Proposal for Payment Items. Additional material quantities, volumes, and measurements may be shown on the Contract Document drawings and/or specifications.

Unit Price quantities and measurements shown on the Bid Proposal are for bidding and contract purpose only. Quantities and measurements supplied, completed for the project, and verified by the Project Representative shall determine payment. Each unit price will be deemed to include an amount considered by the Contractor to be adequate to cover Contractor's overhead and profit for each bid item.

The Owner or Contractor may make a Claim for an adjustment in Contract Unit Price if the quantity of any item of Unit Price Work performed by the Contractor differs materially and/or significantly (increase or decrease by 50%) from the estimated quantity indicated on the Bid Proposal.

Lump sum bid item quantities will not be measured. Payment for these lump sum bid proposal items will be paid in full amount listed on the Bid Proposal when accepted by the Project Representative, unless specified otherwise.

INDEX TO TECHNICAL SPECIFICATIONS
CREE CROSSING WMA EQUIPMENT STORAGE FACILITY

FWP# 7155318

DIVISION 1 GENERAL REQUIREMENTS

Section 01010 - Summary of Work
Section 01019 - Contract Considerations
Section 01025 - Measurement and Payment
Section 01029 - Utilities **within** Work **Area**
Section 01039 - Coordination and Meetings
Section 01300 - Required Submittals
Section 01400 - Quality Control
Section 01560 - Temporary Controls
Section 01600 - Material & Equipment
Section 01700 - Contract Closeout

DIVISION 2 SITE WORK

Section 02110 - Site Clearing & Grubbing
Section 02207 - Aggregate Material
Section 02211 - Rough Grading
Section 02231 - Aggregate Courses

DIVISION 3 CONCRETE

Section 03300 – Cast in Place Concrete

BUILDING SPECIFICATION

PLAN SHEETS

Sheet l : Cover
Sheet 2: Building Site
Plan Sheet 3:
Building Floor Plan
Sheet 4: Building
Elevation

SECTION 01010- SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Owner and Contractor Responsibilities

B. Contractor use of site andpremises.

C. Scope of Work

1.2 Owner and Contractor Responsibilities

A. Owners Responsibilities:

1. Staking of building location.
2. Coordination of site access with Montana Department Fish Wildlife and Parks.
3. Final Acceptance and inspection.

B. Contractors Responsibilities:

1. Coordination with FWP Engineer Joseph Renenger
2. Obtaining state building permit
3. Completion of project as bid
4. Quality control of work

1.3 CONTRACTOR USE OF SITE

A. Limit use of site to allow:

1. Coordinate with FWP to limit public usage in work areas as necessary.

1.3 SCOPE OF WORK

A. Project Objective: Construction of storage facility as described in plans and specifications.

B. Scope of Work: Work includes the following but is not limited to the general description contained herein:

BASE BID ITEMS:

A. Base Bid-

1. Mobilization, Insurance & Bonding

- General: This bid item shall include the costs associated with mobilizing to the project site, insurance, bonding, permitting, and submittals.

- Work Included:
  - All labor, tools, equipment, materials, royalties, and incidentals needed to complete the work as specified;
  - Transport and set up all equipment, materials, and other items needed to complete the project;

- All permits, coordination, and compliance inspections required for the work;
- Insurance and bonding;
- Prepare and provide submittals, construction schedule, and all other paperwork required by the contract documents prior to construction startup.
- State building permit
- State electrical permit

◆ Measurement: Measurement shall be one lump sum bid item.

◆ Payment: Payment shall be by the price bid for the lump sum bid item listed in the proposal.

2. Gravel Building Floor

◆ General: This bid item shall include the preparation for and placement of the gravel floor section inside the building footprint and five feet beyond the building drip line.

◆ Work Included:
- All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
- Clearing and grubbing;
- Remove and replace existing topsoil
- revegetation
- Grading, compaction and preparation of existing surfaces to be graveled;
- Placement and compaction of crushed base course and crushed top surfacing;
- Compaction testing;
- Survey as needed;
- Watering and dust control;
- Fine grading.

◆ Measurement: Measurement shall be per square yard of gravel surfacing installed. Measurement shall be rounded to the nearest square yard.

◆ Payment: Payment shall be by the unit price bid for each square yard of gravel surfacing installed listed in the proposal.

3. Post and Frame Building

◆ General: This bid item shall include the installation of a post and frame building structure above the building floor, including roofing.

◆ Work Included:
- All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
- Provide structural design including drawings and calculations, prepared by a Professional Engineer;
- Provide and erect wood girders, columns and other framing members;
- Provide and install wall and roof panels;

- Provide and install trim;
- Provide and install rain gutter and down spouts;
- Sealants and gaskets;
- Obtain building permit from State of Montana;
- Fees for building permit.

- Measurement: Measurement shall be one lump sum bid item.

- Payment: Payment shall be by the price bid for the lump sum bid item listed in the proposal.

4. Overhead Doors

- General: This bid item shall include the installation of overhead doors of the size indicated in the proposal.

- Work Included:
  - All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
  - Provide and install overhead doors and supports;
  - Provide and install electrical operator.
  - Concrete Door Threshold

- Measurement: Measurement shall be per each overhead door installed.

- Payment: Payment shall be by the price bid for each overhead door installed as listed in the proposal.

5. Mandoors

- General: This bid item shall include the installation of mandoors of the size indicated in the proposal.

- Work Included:
  - All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
  - Provide and install doors and door frames;
  - Provide and install concrete threshold, trim, door stops, closers, lock sets and all other appurtenances associated with the door;

- Measurement: Measurement shall be per each mandoor installed.

- Payment: Payment shall be by the price bid for each mandoor installed as listed in the proposal.

6. Electrical

- General: This bid item shall include the installation/of all electrical components defined in the project documents.

- Work Included:
  - All labor, tools, equipment, materials, royalties, and incidentals needed to complete the work as specified;
  - Provide and install all electrical components conductors and appurtenances as defined in the electrical plans;
  - Trench excavation and backfill for buried conductors and conduit;
  - Permits.

- Measurement: Measurement shall be one lump sum bid item.

- Payment: Payment shall be by the price bid for the lump sum bid item listed in the proposal.

Additive Alternate #1-

7. Concrete Floor Slab

- General: This bid item shall include the installation of concrete floor slabs.

- Work Included:
  - All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
  - Placement of underlying crushed gravel with compaction;
  - Survey line and grade;
  - Provide, place and finish concrete;
  - Install contraction and expansion joints;
  - Protection of existing concrete;
  - Finishing;
  - Hot and cold weather concreting procedures.

- Measurement: Measurement shall be per square foot of concrete floor slab installed. Measurement shall be to the nearest square foot.

- Payment: Payment shall be by the price bid per square foot of concrete floor slab installed as listed in the proposal.

B. CONTRACTS:

All work shall be done under one general contract.

END OF SECTION

SECTION 01019
CONTRACT CONSIDERATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Application for Payment
B. Change procedures
C. Project Staking
D. Environmental Considerations

1.2 RELATED SECTIONS

A. Section O1025 - Measurement and Payment.
B. Section O1400 - Quality Control

1.4 APPLICATIONS FOR PAYMENT

A. Submit 1 copy of each application on Department Fish, Wildlife and Parks Form 101.

B. Content and Format: Utilize Schedule of Values on payment form for listing items in Application for Payment.

C. Payment Period: 30 days.

1.5 CHANGE ORDER PROCEDURES

A. The Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by State of Montana, General Conditions of the Contract.

B. The FWP Engineer may issue a Change Directive, which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit an estimate within 5 days.

C. The Contractor may propose changes by submitting a request for change to the FWP Engineer describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors.

D. Unit Price Change Order: For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units, which are not pre-determined, execute Work under a Construction Change Directive. Changes in Contract Sum/Price or Contract Time will be computed from the Schedule of Values.

1.6 PROJECT STAKING

A. Construction staking provided by the owner

- Staking of building location.
- If owners staking is destroyed through careless actions of the Contractor, the staking may be replaced by the owner and the cost of replacement deducted from the Contractor's contract.

B. Construction staking provided by the Contractor

1.7 All staking desired by the Contractor in addition to that noted above shall be provided by the Contractor.

1.8 ENVIRONMENTAL CONSIDERATIONS

A. The Contractor shall use best management practices to prevent silt, soil and debris from entering the water. This may include straw, gravel or fabric. Temporary dikes to divert rainwater may be used, provided they are removed and the gravel or soil returned to the original condition. Exposed soil may require straw or similar cover to minimize erosion caused by rain. Other appropriate methods may be used at the Contractors' discretion or as directed by the owner.

B. Equipment used in or near water shall not leak fluids. It shall be power washed before use on the site and examined by the engineer.

C. All material removed from the site will be disposed of in a safe and legal manner.

END OF SECTION

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Measurement and payment criteria applicable to the Work performed under a lump sum price payment method.

B. Defect assessment and non-payment for rejected work.

1.2 QUANTITIES SPECIFIED

A. Lump sum bid item quantities will not be measured. Payment for these lump sum bid items will be per bid form.

B. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit sum/prices contracted.

1.3 PAYMENT

A. Payment Includes: Full compensation for all required labor, Products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.4 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of the Engineer it is not practical to remove and replace the Work, the Engineer will direct one of the following remedies:

1. The defective Work will be repaired to the instructions of the Montana Department of Fish, Wildlife and Parks Engineer and the unit sum/price will be adjusted to a new sum/price at the discretion of the Montana Department of Fish, Wildlife and Parks Project Engineer.

2. The defective work will not be repaired. The Project Engineer will adjust the unit sum/price of the work to reflect the degree of defectiveness and subsequent serviceability.

C. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.

D. The authority of the Montana Department of Fish, Wildlife and Park Project Engineer to assess the defect and identify payment adjustment, is final.

1.5 NON-PAYMENT FOR REJECTED PRODUCTS

A. Payment will not be made for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from the transporting vehicle.
   4. Products placed beyond the lines and levels of the required Work.
   5. Products remaining on hand after completion of the Work.
   6. Loading, hauling and disposing of rejected Products.

END SECTION

SECTION 01029

UTILITIES WITHIN WORK AREAS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Utilities within work areas.

B. Contractor's responsibilities.

1.2 UTILITIES WITHIN WORK AREAS

A. The contractor shall be responsible for determining the location of any utilities in the project area.

B. The contractor shall be responsible for working safely around any utilities that are located within the project area.

1.3 CONTRACTOR RESPONSIBILITIES

A. Notification: The Contractor shall contact, in writing, all public and private utility companies that may have utilities that may be encountered during excavation. The notification shall include the following information:

1. The nature of the work the Contractor will be performing.

2. The time, date, and location the Contractor will be performing work that may conflict with the utility.

3. The nature of work the utility will be required to perform such as moving a power pole, supporting a pole or underground cable, etc.

4. Requests for field location and identification of utilities.

B. Overhead Utilities: The Contractor shall use extreme caution to avoid a conflict, contact, or damage to overhead utilities such as power lines, telephone lines, television lines, poles, or other appurtenances during construction of this project.

END OF SECTION

SECTION 01039
COORDINATION AND MEETINGS

PARTl GENERAL

1.1 SECTION INCLUDES

A. Coordination.
B. Alteration project procedures.
C. Preconstruction conference.

1.2 COORDINATION

A. Coordinate scheduling, submittals, and Work of the various Sections of specifications to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Coordinate completion and cleanup of Work of separate Sections in preparation for Substantial Completion.

C. After Owner occupancy of site, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

D. Contractor will coordinate all work activities with the Montana Department of Fish, Wildlife and Parks Engineer Joey Renenger.

1.3 PRECONSTRUCTION CONFERENCE

A. Engineer will schedule a conference after Notice of Award is issued.

B. Attendance Required: Engineer, Contractor and the Regional Fish, Wildlife and Parks representative when possible.

C. Agenda:
1. Execution of Owner-Contractor Agreement.
2. Submission of executed bonds and insurance certificates.
3. Distribution of Contract Documents.
4. Submission of list of Subcontractors, list of products, Schedule of Values, and progress schedule.
5. Designation of personnel representing the parties in Contract, and the Engineer.
6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders and Contract closeout procedures.
7. Scheduling.

END OF SECTION

SECTION 01300
SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittal procedures.
B. Construction progress schedules.
C. Proposed products list.
D. Product data.
E. Samples.
F. Manufacturers' instructions.
G. Manufacturers' certificates.
H. Construction photographs.

1.2 SUBMITTAL PROCEDURES

A. Transmit each submittal to Project Manager **no less than 5 days** before product installation.

B. Apply Contractor's stamp, signature or initial certifying that review and verification of Products submitted, is in accordance with the requirements of the Work and Contract Documents.

C. Schedule submittals to expedite the Project.

D. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

E. Revise and resubmit submittals as required, identify all changes made since previous submittal.

1.3 CONSTRUCTION PROGRESS SCHEDULES

A. Submit initial progress schedule within 15 days after date established in Notice to Proceed for Project Manager's review.

1.4 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Notice to Proceed, submit complete list of major products/aggregates proposed for use, with name of manufacturer/supplier, trade name, and model number of each product.

B. 5 days prior to installation of surfacing aggregate materials, submit aggregate laboratory test analysis for the aggregate along with the name of the supplier.

C. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, in quantities specified for Product Data.

B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.6 MANUFACTURER'S CERTIFICATES

A. When specified in individual specification Sections, submit manufacturers' certificate to Engineer for review, in quantities specified for Product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or Product but must be acceptable to Engineer.

END OF SECTION

SECTION 01400
QUALITY CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality assurance and control of installation.

B. References

C. Inspection and testing laboratory services.

1.2 QUALITY ASSURANCE/CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

B. Comply fully with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform work by persons qualified to produce workmanship of specified quality.

F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.3 REFERENCES

A. Conform to reference standard by date of issue current on January 1, 2005.

B. Should specified reference standards conflict with Contract Documents, or Regulations request clarification for Architect/Engineer before proceeding.

C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

OWNER

A. Engineer will perform periodic field inspections to determine if testing is required.

END OF SECTION

SECTION O1560
TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Weed Control.

B. Water Control.

C. Dust Control.

D. Erosion and Sediment Control

E. Pollution Control

F. Traffic Control

1.2 RELATED SECTIONS

A. Section 01010 - Summary of Work

B. Section 01039 - Coordination and Meetings

1.3 WEED CONTROL

A. Seed and reclaim disturbed areas as soon as possible.

B. Thoroughly clean equipment before bringing on site and notify Engineer for inspection.

1.4 WATERCONTROL

A. Grade site to drain away from natural water bodies. Maintain excavations free of water.

B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.5 DUST CONTROL

A Contractor shall grade and compact materials as soon as possible after being placed.

1.6 EROSION AND SEDIMENT CONTROL

A. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.

B. Minimize amount of bare soil exposed at one time.

C. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.

D. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.

E. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

1.7 POLLUTION CONTROL

A Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

B. Provide portable sanitation facility for contractor's workers and subcontractors.

1.8 TRAFFIC CONTROL

A Provide all temporary signing, personnel and traffic control devises as required by federal, state and local regulations.

END OF SECTION

SECTION 01600
MATERIAL AND EQUIPMENT

PART I GENERAL

1.1 SECTION INCLUDES

A. Products.

B. Transportation and handling.

C. Storage and protection.

D. Substitutions.

1.2 PRODUCTS

A. Products: Means new material, components, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.

B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.

1.3 TRANSPORTATION AND HANDLING

A. Transport and handle products in accordance with manufacturer's instructions.

B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 STORAGE AND PROTECTION

A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.

B. For exterior storage of fabricated products, place on sloped supports, above ground.

C. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.

D. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

E. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

1.5 SUBSTITUTIONS

A. Engineer will consider requests for Substitutions only within 15 days after date established in Notice to Proceed.

B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.

C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.

D. A request constitutes a representation that the Contractor:

1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.

2. Will provide the same warranty for the Substitution as for the specified product.

3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.

4. Waives claims for additional costs or time extension which may subsequently become apparent.

E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

F. Substitution Submittal Procedure:

1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.

2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.

3. The Engineer will notify Contractor, in writing, of decision to accept or reject request.

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Closeout procedures.

B. Final cleaning.

C. Adjusting.

D. Project record documents.

1.2 CLOSEOUT PROCEDURES

A. Notify the Engineer within 5 days of Work completion that Work is complete in accordance with Contract Documents and ready for Project Manager's final inspection.

B. Provide submittals to Engineer that are required by governing or other authorities or Owner.

C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due. Include Certificate of Substantial Completion, Affidavit on Behalf of the Contractor, Consent of Surety Company to Final Payment and As-built drawings and specifications.

D. Owner will occupy all portions of the site.

1.3 FINAL CLEANING

A. Execute final cleaning prior to final inspection.

B. Clean equipment and fixtures to a sanitary condition.

C. Clean site, rake clean landscaped areas, leave all disturbed areas relatively smooth with no wheel tracks, ridges or ruts.

1.4 PROJECT RECORD DOCUMENTS

A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
   1. Contract Drawings.

   2. Specifications.

3. Addenda.

4. Change Orders and other Modifications to the Contract.

5. Reviewed shop drawings, product data, and samples.

B. Store Record Documents separate from documents used for construction.

C. Record information concurrent with construction progress.

D. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:

1. Manufacturer's name and product model and number.

2. Product substitutions or alternates utilized.

3. Changes made by Addenda and Modifications.

E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:

1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

2. Field changes of dimension and detail.

3. Details not on original Contract drawings.

4. Product substitutions or alternates utilized.

5. Changes made by Addenda and Modifications.

F. Submit documents to Engineer with claim for final Application for Payment.

1.5 WARRANTIES

A. All work shall be warranted free from defect for a period of one year from final inspection date.

END OF SECTION

SECTION 02110
SITE CLEARING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Remove surface debris.

B. Clear only areas designated for construction of plant life and grass.

C. Tree and shrub removal.

D Topsoil excavation.

E. Measurement and Payment

1.2 REGULATORY REQUIREMENTS

A. Conform to State and County codes for disposal of debris and burning debris on site.

B. Coordinate clearing Work with utility companies.

PART II EXECUTION

1.1 PROTECTION

A. Locate, identify, and protect utilities that remain, from damage.

B. Protect trees, plant growth, and features designated to remain, as final landscaping.

1.2 CLEARING

A. Clear areas required for access to site and execution of Work.

B. Remove root system of woody plants to a depth of24 inches below finished grade.

D. Clear undergrowth and deadwood, without disturbing subsoil.

1.3 REMOVAL

A. Remove extra top soil, rock, and extracted plant life to designated area.

B. Dispose of any additional material according to local regulations.

1.4 TOPSOIL EXCAVATION

A. Excavate and stockpile topsoil from all areas that are to receive fill or further excavation.

B. Stockpile location to be approved by Engineer.

1.5 MEASUREMENT AND PAYMENT

A. The work described in Section 02110 will be incidental to the Gravel Floor – Building bid item. See Section 01010 Summary of Work

END OF SECTION

SECTION 02207
AGGREGATE MATERIALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. References

B. Submittals

C. Aggregate materials and engineering fabric

D. Source quality control

E. Stockpiling

F. Stockpile clean up

1.2 RELATED SECTIONS

A. Section 02211 - Rough Grading.

B. Section 02231 - Aggregate Courses.

1.3 REFERENCES

A. AASHTO - M147 - Materials for Aggregate and Soil-Ag gregate.

B. ANSI/ASTM C136 - Method for Sieve Analysis of Fine and Coarse Aggregates.

C. ANSI/ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb. (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.

D. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

E. ASTM D4318 - Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.4 SUBMITTALS

A. Submit laboratory test results for each type of aggregate material 5 days prior to installation, for Project Manager approval.

1. Each aggregate material used as a base or surfacing material shall have as a minimum the following laboratory tests completed:

I. Sieve Analysis
II. Proctor
III. Atterberg Limit Test (crushed top surfacing only)

B. Materials Source: Submit name of imported materials suppliers. Provide materials from same source throughout the work. Change of source requires retesting at the Contractor's expense.

C. Change of source requires Engineer's approval.

PART 2 PRODUCTS

2.1 AGGREGATE MATERIALS AND ENGINEERING FABRIC

Crushed Surfacing free of silt, lumps of clay, loam, friable or soluble materials, and organic matter; graded in accordance with ANSI/ASTM C136; within the following limits:

TABLE OF GRADUATIONS
Percentage by Weights Passing Square Mesh Sieves

Passing	%Passing
1"	100%
3/4"	
1/2"	
3/8"	
#4	40%-70%
#10	25%-55%
#16	
#30	
#50	
#100	
#200	5%-12%

The aggregate for all grades, including added binder or filler, shall meet the following supplemental requirements.

(1) Dust Ration. The portion passing the No. 200 Sieve shall not be greater than 2/3 of the portion passing the No. 40 Sieve.

(2) The liquid limit for that portion of the fine aggregate passing a No. 40 Sieve shall not exceed 25 and the plasticity index (Pl) shall be less than six, as determined by AASHTO T-89 and T-90.

(3) No intermediate sizes for cover aggregate, or for other purposes, shall be removed from the material in the course of production unless authorized in writing by the Architect/Engineer.

(4) The material shall meet all the requirements of this section when it arrives on the project site. Windrow mixing of different materials to obtain the specified material will not be allowed. If bentonite is to be added, it shall be done in a method approved by the Engineer.

(5) At least 50% by weight of the aggregate retained on the No. 4 sieve must have at least one mechanically fractured face.

2.2 SOURCE QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of General Conditions.

B. Tests and analysis of aggregate material will be performed in accordance with AASHTO T-11 and T-27 and as specified in this Section.

C. If tests indicate materials do not meet specified requirements, change material and retest.

PART 3 EXECUTION

3.1 STOCKPILING

A. Stockpile materials on site at locations approved by Engineer.

B. Separate differing materials with dividers or stockpile apart to prevent mixing.

C. Stockpile in sufficient quantities to meet project schedule and requirements.

D. Direct surface water away from stockpile site so as to prevent erosion or deterioration of materials.

3.2 STOCKPILE CLEANUP

A. Remove stockpile, leave area in a clean, neat condition reseed as necessary. Grade site surface to prevent freestanding surface water.

END OF SECTION

SECTION 02211
ROUGH GRADING

PART 1 GENERAL

1.1 SECTION INCLUDE

A. Removal of topsoil and subsoil.
B. Excavating, grading, filling and rough contouring the site for parking area and boat ramp construction.
C. Measurement and Payment

1.2 RELATED SECTIONS

A. Section 01410 - Testing Laboratory Services: Testing fill compaction.
B. Section 02110 - Site Clearing
C. Section 02207 - Aggregate Materials.

1.3 REFERENCES

A. AASHTO Tl80- Moisture-Density Relations of Soils using a 10-lb (4.54 kg) Rammer and an 18-in. (457 mm) Drop.

B. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

PART2 EXECUTION

2.1 PREPARATION

A. Identify required lines, levels, contours, and datum.

B. Stake and flag locations of known utilities.

C. Notify utility companies to locate buried utilities.

D. Locate, identify, and protect utilities that remain from damage.

2.2 TOPSOIL AND SUBSOIL EXCAVATION

A. Excavate topsoil and subsoil from marked areas.

B. Stockpile topsoil in area approved by Engineer.

C. Topsoil will be blended into landscape and seeded or used for reclamation on site. See Section 02936

2.3 FILLING

A. Fill areas to contours and elevations with unfrozen materials.

B. Place fill materials on continuous layers and compact. SeeSection 02231

C. Maintain optimum moisture content of fill materials to attain required compaction density. Compact to minimum 95 percent of maximum density.

D. Make grade changes gradual. Blend slope into level areas.

2.4 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed as necessary by the Engineer. Compaction testing will be performed in accordance with ASTM D2922. If determined necessary by the FWP Engineer.

B. Placement of base aggregate and subsequent road surfacing shall not commence until Engineer has been notified and has had 48 hours to inspect rough grading.

2.5 MEASUREMENT AND PAYMENT

A. The Rough Grading described in Section 02211 shall be included under Gravel Floor - Building on the Bid Form.

END OF SECTION

SECTION 02231
AGGREGATE COURSES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aggregate courses.

1.2 RELATED SECTIONS

A. Section 01025 - Measurement and Payment: Requirements applicable to lump sum.

1.3 REFERENCES

A. AASHTO T180 - Moisture-Density Relations of Soils using a 10 lb (4.54 kg) Rammer and an 18 in. (457mm) Drop.

B. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

C. ASTM D3017 - Test Methods for Moisture Content of Soil and Soil-Aggregate Mixtures.

PART 2 PRODUCTS

2.1 SURFACING MATERIALS

A. 1 inch minus crushed surfacing: As specified in Section 02207.

B. 3 inch minus pit run: As specified in Section 02207.

PART 3 EXECUTION

3.1 AGGREGATE PLACEMENT

A. Spread material over prepared substrate to a total compacted thickness indicated for each material. A vibratory roller is suggested for compaction. Compact to minimum 95 percent of maximum density.

B. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.

C. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.2 TOLERANCES

A. Flatness: Maximum variation of 1/10 foot in 10 feet measured along existing slope.

B. Scheduled Compacted Thickness: Within 1/4 inch of designated thickness.

C. If tests indicate Work does not meet specified requirements, Project Manager may at his discretion direct the Contractor to rework the material and retest or remove work, replace and retest.

3.3 FIELD QUALITY CONTROL

A. Contractor will be responsible for field quality control.

B. Compaction testing will be performed in accordance with ASTM D2922.

C. If tests indicate Work does not meet specified requirements, recompact and retest or at Engineer's discretion, remove Work, replace and retest.

3.4 MEASUREMENT AND PAYMENT

A. All material and labor associated with the 1" (-) crushed surfacing shall be bid and compensated under Gravel Floor - Building.

END OF SECTION

SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete formwork.

B. Floors and slabs on grade.

C. Concrete foundation walls.

D. Concrete foundations and anchor bolts for pre-engineered building.

E. Concrete reinforcement.

F. Joint devices associated with concrete work.

G. Concrete curing.

1.02 REFERENCE STANDARDS

A. ACI 117 - Standard Specifications for Tolerances for Concrete Construction and Materials; 2010.

B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; 1991 (Reapproved 2009).

C. ACI 301 - Specifications for Structural Concrete; 2010 (Errata 2012).

D. ACI 302.1R - Guide for Concrete Floor and Slab Construction; 2004 (Errata 2007).

E. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000.

F. ACI 305R - Hot Weather Concreting; 2010.

G. ACI 306R - Cold Weather Concreting; 2010.

H. ACI 308R - Guide to Curing Concrete; 2001 (Reapproved 2008).

I. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2011.

J. ACI 347R - Guide to Formwork for Concrete; 2014.

K. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2015a.

L. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.

M. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2012.

N. ASTM C150/C150M - Standard Specification for Portland Cement; 2015.

O. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2014.

P. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a.

Q. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2015.

R. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 2013.

S. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2014.

T. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures; 2014.

U. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types); 2004 (Reapproved 2013).

V. COE CRD-C 513 - COE Specifications for Rubber Waterstops; 1974.

1.03 SUBMITTALS

A. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
   1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.

B. Mix Design: Submit proposed concrete mix design.
   1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 - Concrete Mixtures.
   2. Indicate proposed mix design complies with requirements of ACI 318, Chapter 5 - Concrete Quality, Mixing and Placing.

C. Test Reports: Submit termite-resistant sheet manufacturer's summary of independent laboratory and field testing for effectiveness in subterranean termite exclusion.

D. Warranty: Submit manufacturer warranty and ensure forms have been completed in State of Montana Fish, Wildlife & Parks' name and registered with manufacturer.

1.04 QUALITY ASSURANCE

A. Perform work of this section in accordance with ACI 301 and ACI 318.

B. Follow recommendations of ACI 305R when concreting during hot weather.

C. Follow recommendations of ACI 306R when concreting during cold weather.

1.05 WARRANTY

A. Slabs with Moisture Vapor Reducing Admixture (MVRA): Provide warranty to cover the cost of flooring failures due to moisture migration from slabs for ten years.
   1. Include cost of repair or removal of failed flooring, placement of topical moisture remediation system, and replacement of flooring with comparable flooring system.

B. Moisture Emission Reducing Curing and Sealing Compound: Provide warranty to cost of flooring delamination failures for 10 years.
   1. Include cost of repair or removal of failed flooring, remediation with a moisture vapor impermeable surface coating, and replacement of flooring with comparable flooring system.

PART 2 PRODUCTS

2.01 FORMWORK

A. Formwork Design and Construction: Comply with guidelines of ACI 347R to provide formwork that will produce concrete complying with tolerances of ACI 117.

B. Form Materials: General Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
   1. Form Facing for Exposed Finish Concrete: General Contractor's choice of materials that will provide smooth, stain-free final appearance.
   2. Earth Cuts: Do not use earth cuts as forms for vertical surfaces. Natural rock formations that maintain a stable vertical edge may be used as side forms.
   3. Form Coating: Release agent that will not adversely affect concrete or interfere with application of coatings.
   4. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches of concrete surface.

2.02 REINFORCEMENT

A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) for #4 bars and larger, Grade 40 (40,000 psi) for #3 bars.
   1. Type: Deformed billet-steel bars.
   2. Finish: Unfinished, unless otherwise indicated.

B. Reinforcement Accessories:
   1. Tie Wire: Annealed, minimum 16 gage, 0.0508 inch.
   2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
   3. Provide galvanized, plastic, or plastic-coated steel components for placement within 1-1/2 inches of weathering surfaces.

2.03 CONCRETE MATERIALS

A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
   1. Acquire cement for entire project from same source.

B. Fine and Coarse Aggregates: ASTM C 33.
   1. Acquire aggregates for entire project from same source.

C. Fly Ash: ASTM C618, Class C or F.

D. Calcined Pozzolan: ASTM C618, Class N.

E. Silica Fume: ASTM C1240, proportioned in accordance with ACI 211.1.

F. Water: Clean and not detrimental to concrete.

2.04 ADMIXTURES

A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.

B. Air Entrainment Admixture: ASTM C260/C260M.

2.05 ACCESSORY MATERIALS

A. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
   1. Grout: Comply with ASTM C1107/C1107M.
   2. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.
   3. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch.
   4. Flowable Products:
      a. Dayton Superior Corporation; Sure-Grip High Performance Grout: www.daytonsuperior.com/#sle.
      b. Dayton Superior Corporation; Sure-Grip Precision Grout: www.daytonsuperior.com/#sle.
      c. L&M Construction Chemicals, Inc, a subsidiary of Laticrete International, Inc; DURAGROUT: www.laticrete.com/our-products/concrete-construction-chemicals/#sle.
      d. SpecChem, LLC; SC Precision Grout: www.specchemllc.com/#sle.
      e. W. R. Meadows, Inc; 1428 HP: www.wrmeadows.com/#sle.

2.06 BONDING AND JOINTING PRODUCTS

A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.

B. Waterstops: Rubber, complying with COE CRD-C 513.
   1. Configuration: As indicated on the drawings.
   2. Size: As indicated on the drawings.

C. Reglets: Formed steel sheet, galvanized, with temporary filler to prevent concrete intrusion during placement.
   1. Size: 1/2-inch throat, 1/2 inch deep.

D. Slab Isolation Joint Filler: 1/2-inch-thick, height equal to slab thickness, with removable top section that will form 1/2-inch-deep sealant pocket after removal.
   1. Material: ASTM D1751, cellulose fiber.

E. Slab Contraction Joint Device: Preformed linear strip intended for pressing into wet concrete to provide straight route for shrinkage cracking.

F. Slab Construction Joint Devices: Combination keyed joint form and screed, galvanized steel, with rectangular or round knockout holes for conduit or rebar to pass through joint form at 6 inches on center; ribbed steel stakes for setting.
   1. Provide removable plastic cap strip that forms wedge-shaped joint for sealant installation.
   2. Height: To suit slab thickness.

2.07 CURING MATERIALS

A. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.
   1. Product dissipates within 4 to 6 weeks.
   2. Manufacturers:
      a. Dayton Superior Corporation; Clear Cure VOC J7WB: www.daytonsuperior.com/#sle.
      b. Kaufman Products Inc; Thinfilm 420 Resin Base: www.kaufmanproducts.net/#sle.
      c. SpecChem, LLC; SpecRez: www.specchemllc.com/#sle.
      d. W. R. Meadows, Inc; 1100-Clear: www.wrmeadows.com/#sle.

2.08 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.

B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
   1. For trial mixtures method, employ independent testing agency acceptable FWP Design and Construction for preparing and reporting proposed mix designs.

C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.

D. Normal Weight Concrete:
   1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch.
   2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
   3. Calcined Pozzolan Content: Maximum 10 percent of cementitious materials by weight.
   4. Silica Fume Content: Maximum 5 percent of cementitious materials by weight.
   5. Water-Cement Ratio: Maximum 40 percent by weight.
   6. Total Air Content: 4 percent, determined in accordance with ASTM C173/C173M.
   7. Maximum Slump: 3 inches.
   8. Maximum Aggregate Size: 5/8 inch.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.

B. Verify that forms are clean and free of rust before applying release agent.

C. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.

D. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
   1. Use latex bonding agent only for non-load-bearing applications.

E. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Lap joints minimum 6 inches. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor

retarder before covering.

3.03 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.

B. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

3.04 PLACING CONCRETE

A. Place concrete in accordance with ACI 304R.

B. Place concrete for floor slabs in accordance with ACI 302.1R.

C. Notify FWP not less than 24 hours prior to commencement of placement operations.

D. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

E. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.

F. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.

G. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.05 SLAB JOINTING

A. Locate joints as indicated on the drawings.

B. Anchor joint fillers and devices to prevent movement during concrete placement.

C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.
   1. Install wherever necessary to separate slab from other building members, including columns, walls, equipment foundations, footings, stairs, manholes, sumps, and drains.

D. Load Transfer Construction and Contraction Joints: Install load transfer devices as indicated; saw cut joint at surface as indicated for contraction joints.

E. Saw Cut Contraction Joints: Saw cut joints before concrete begins to cool, within 4 to 12 hours after placing; use 3/16-inch-thick blade and cut at least 1 inch deep but not less than one quarter (1/4) the depth of the slab.

F. Construction Joints: Where not otherwise indicated, use metal combination screed and key form, with removable top section for joint sealant.

3.06 FLOOR FLATNESS AND LEVELNESS TOLERANCES

A. Maximum Variation of Surface Flatness:
   1. Exposed Concrete Floors: 1/4 inch in 10 feet.
   2. Under Seamless Resilient Flooring: 1/4 inch in 10 feet.
   3. Under Carpeting: 1/4 inch in 10 feet.

B. Correct the slab surface if tolerances are less than specified.

C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.07 CONCRETE FINISHING

A. Repair surface defects, including tie holes, immediately after removing formwork.

B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more

in height.

C. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
   1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.

D. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
   1. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI 302.1R; thin floor coverings include carpeting, resilient flooring, seamless flooring, resinous matrix terrazzo, thin set quarry tile, and thin set ceramic tile.
   2. Decorative Exposed Surfaces: Trowel as described in ACI 302.1R; use steel-reinforced plastic trowel blades instead of steel blades to avoid black-burnish marks; decorative exposed surfaces include surfaces to be stained or dyed, pigmented concrete, surfaces to receive liquid hardeners, surfaces to be polished, and all other exposed slab surfaces.

3.08 CURING AND PROTECTION

A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
   1. Normal concrete: Not less than 7 days.
   2. High early strength concrete: Not less than 4 days.

C. Surfaces Not in Contact with Forms:
   1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.
      a. Spraying: Spray water over floor slab areas and maintain wet.
   2. Final Curing: Begin after initial curing but before surface is dry.
      a. Curing Compound: Apply in two coats at right angles, using application rate recommended by manufacturer.

3.09 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests.

B. Provide free access to concrete operations at project site and cooperate with appointed firm.

C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.

D. Compressive Strength Tests: ASTM C39/C39M. For each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cubic yards or less of each class of concrete placed.

E. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.

F. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

3.10 DEFECTIVE CONCRETE

A. Test Results: The testing agency shall report test results in writing to FWP Design and Construction and General Contractor within 24 hours of test.

B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

C. Repair or replacement of defective concrete will be determined by the FWP Design and Construction. The cost of additional testing shall be borne by General Contractor when defective concrete is identified.

D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of FWP Design and Construction for each individual area.

3.11 PROTECTION

A. Do not permit traffic over unprotected concrete floor surface until fully cured.

3.12 DESIGN

A. For Additive Alternate #1, place #3 bars spaced 12” on center each way.

B. For Additive Alternate #1, Place 15 mil Vapor Barrier under the slab.

C. Compact subgrade to 95% of ASTM D-1557 Proctor.

D. Compact gravel to 98% of ASTM D-1557 Proctor.

E. For Additive Alternate #1, place 4” compacted gravel floor below the concrete slab.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

1. Concrete slab will be measured by in place concrete surface area. Measurement will be by the square foot rounded to the nearest whole number. Concrete thresholds and any other concrete not included in the concrete slab will not be measured separately for payment and will be included in the lump sum cost of the Post and Frame Building. The 4” of compacted gravel under the concrete slab will be measured by the square yard. All other items require for the concrete slab will not be measured separately for payment. Include the costs associated with these items in the unit cost for Concrete Floor Slab.

4.02 PAYMENT

1. Concrete will be paid by the square foot rounded to the nearest whole number. Concrete will be paid at the unit price submitted in the proposal under the additive alternate #1. The gravel under the concrete will be paid for under the bid item for Gravel Floor – Building.

END OF SECTION

CREE CROSSING WMA
BUILDING SPECIFICATION

PART 1 GENERAL

1.1 SUMMARY

A. The BASE BID for this contract includes the construction of a 36' wide x 36' long x 14' sidewall height pole barn type structure on concrete pier foundations with metal siding and a steel roof and other features as described in this specification including:
   a. One 16' Wide x 12' High overhead sectional door electrically powered.
   b. One 3' Wide x 7' High hollow metal door and frame with heavy duty commercial hardware.
   c. Concrete thresholds under overhead door and walk through door.
   d. Electrically wired for overhead door, 2 banks of overhead shop lights, and electrical outlets.
   e. A gravel foundation with ¾" aggregate base at 4" depth.
   f. All necessary site work to complete the specified building.
   g. All construction related site cleanup during construction and at project completion.

B. Work shall meet or exceed all specifications set forth in this document. If there is a conflict between specifications, the more stringent will apply, unless otherwise specifically authorized by the Owner.

C. All equipment moved to the project site shall be thoroughly cleaned before it is brought to the site to prevent the introduction of weed seeds. Equipment removed from the site may not be returned until thoroughly cleaned.

1.3 SUBMITTALS

A. Contractor shall submit manufacturer's standard color samples for siding, roof, trim, doors and fiberglass panels to the Owner. Materials shall not be ordered until Owner has approved color selections.

B. Contractor shall submit manufacturer/supplier product data for metal roof and wall material, framing material, concrete mix design, gravel gradations, doors, overhead doors, and all accessory materials.

C. At Substantial Completion, Contractor shall submit (2) copies of Operations and Maintenance Manuals including record drawings, manufacturer's maintenance instructions and material warranties.

1.4 QUALITY ASSURANCE

A. All work performed and materials provided shall meet or exceed the minimum requirements of these specifications, manufacturer's installation instructions and requirements, whichever is more stringent.

B. All materials shall be delivered to the project site in manufacturer's unopened packaging with labels intact. Materials shall be stored in a secure manner off the ground at the project site to prevent any damage, staining or other physical damage from vandalism, accidental damage,

weather, direct sunlight, construction activities and any other cause. Comply with manufacturer's recommendations regarding storage. Damaged materials shall not be installed and shall be replaced by the Contractor at no additional cost to the Owner.

C. All materials delivered and installed permanently on the project shall be new or in new condition.

1.5 WARRANTY

A. Contractor's one-year labor and materials warranty shall commence on the date of substantial completion.

B. Metal siding and roofing shall have a 25-year minimum manufacturer's warranty.

C. Posts and roof trusses shall have a lifetime manufacturer's warranty.

PART 2 PRODUCTS

1.1 POLE BUILDING

A. Nominal building dimensions shall be 36' wide x 36' long x 14' nominal height. Clear inside height shall be measured from the finished gravel surface to underside of the truss bottom chord.

B. Roof slope shall be 2:12 with gable ends. Roof framing shall be factory manufactured trusses, lumber purlins, factory manufactured fasteners and anchors as designed. Trusses shall also be capable of suspending overhead doors and operators and electrical equipment as specified herein.

C. Structure shall be framed with #1 or better kiln dried lumber. Lumber exposed to weather or within 6" of grade shall be pressure treated with 100% penetration.

D. Metal roofing and siding shall be structural quality, pre-engineered building metal, providing a low-maintenance metal building roofing system. Coating system shall be a polyester paint system and shall include as a minimum galvanized coating, zinc pre-treatment, sealer, primer and finish coats on each side. Siding shall include all caulk, flashing, and trim to provide a weather tight envelope. Steel roof panels shall be connected by corrosion resistant screws with rubber/neoprene washers. Submittals for the roofing and siding color shall be submitted and approved by the owner.
   a. Roofing shall be 29 ga. Minimum
   b. Siding shall be a 29 ga. Minimum

E. Contractor shall install 4000 psi concrete door thresholds on a 4" lift of 1-1/2" minus compacted crushed structural fill gravel in entire area of structure. Reinforce with #4 reinforcement bar at 24" on center each way.

F. Overhead garage door shall be hollow core insulated metal door with 12' minimum overhead clearance and shall be equipped with manual latch and interior locking mechanism. Door hardware, springs and structural elements shall be of a commercial quality. Finish shall be a

baked on, polyester finish or approved equal. The ceiling shall be wired and accommodate the electric door opener.

G. Man door shall be hollow core insulated metal door with a metal frame. Provide key lock exterior style door hardware for man door. Door hardware shall be of a commercial quality.

H. Electrical wiring shall meet all applicable electrical codes. Two banks LED overhead shop lights shall be installed. They shall be equally spaced and be a minimum of 4' long with three lights per bank. There shall be electrical outlets on three walls with a minimum of four outlets per wall. The wall with the doors will not require outlets.

PART 3 EXECUTION

1.1 GENERAL

A. Contractor shall examine and verify existing conditions prior to bidding, construction and design. Contractor is fully responsible to measure existing conditions, procure materials and ensure a complete 'turn-key' project to the Owner.

B. Contractor shall provide all temporary power, scaffolding, lift equipment, temporary weatherproofing, and temporary shoring of the building and any other staging equipment and/or materials necessary to complete the work.

C. Contractor shall comply with all manufacturers' recommended installation instructions.

1.2 INSTALLATION

A. Following approval by the Owner of all submittals the Contractor shall commence site work.

B. Contractor shall dispose of all unused materials off-site in a legal manner.

C. Contractor shall prepare building and site construction as necessary to install the building components.

D. Contractor shall furnish and install all work and all peripheral elements of the work as listed in these specifications, required by the structural design, in accordance with the manufacturer's instructions.

E. Completed Project shall be weather-tight at all joints, penetrations and seams and construction shall be square, plumb, and properly fitting in all locations.

1.3 BUILDING COMPLETION AND SITE CLEANUP

A. Grading of structural fill around finished structure shall be at finished floor elevation for 5' beyond the building drip line and slope at 12:1 to daylight.

B. The Contractor shall be responsible for final clean up at the end of the project to a level satisfactory to the Owner. All construction debris, no matter how small, shall be collected and

removed from the site. All wheel ruts shall be filled in and be leveled to match the adjacent grade and material. Re-seeding or re-sodding, or other re-surfacing may be necessary to repair any construction related impacts or damage.

C. At the end of each construction day, site shall be cleaned of garbage and debris, unused construction materials shall be stacked in the owner designated staging area and the site shall be left looking as neat and orderly as practical.

D. All survey markings, stakes, temporary paint marks, flagging and other devices shall be removed regardless of who installed them. All excess pavement, concrete, gravel, soil, or other construction materials not intended for permanent use shall be removed.

E. All final slopes shall be dressed manually to remove woody debris, accumulated trash and oversized material. Any new slope or topsoil surfaces shall be hand raked to provide a uniform appearance. The contractor shall dress all gravel, pavement and concrete edges to eliminate abrupt edges and provide a smooth transition. All construction related temporary sediment control devices shall be removed as soon as practical.

F. Clean all finished surfaces immediately prior to substantial completion in accordance with the manufacturer's cleaning and maintenance instructions.

G. Protect installed components to ensure that, except for normal weathering, components will be without damage until time of substantial completion.

H. Adjust doors and operators as necessary for operation to the satisfaction of the Owner prior to final completion. Provide a minimum of two (2) sets of keys for door locksets.

PART 4 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. Measurement will be made for unit bid items as specified in Section 01010 – Summary of Work. No measurement will be taken for lump sum bid items.

4.2 PAYMENT

A. All materials and work required to complete the above specified construction project will be paid as specified in Section 01010 – Summary of Work at the price bid in the proposal.

END OF SECTION