

## SECTION 101 DEFINITIONS AND TERMS

### 101.01 GENERAL

The Standard Specifications are written to the Contractor. They define the Contractor's responsibility in meeting each specification. The short sentences, written in the active voice, explain what the Contractor must do. The Specifications outline the expectations of the Department, and explain what the Contractor must provide the Department. Unless otherwise noted, all actions are to be performed by the Contractor. "Will" statements mean the Department or Engineer is responsible or will perform the action.

The active voice writing style is recommended by the Federal Highway Administration Technical Advisory 5080.16. Examples of the writing styles are as follows:

**A. Passive Voice:** The Contractor shall construct the temporary detour as specified in the contract.

**B. Active Voice:** Construct the temporary detour as specified in the contract.

The titles and headings of the sections, subsections, and sub-parts are for the convenience of reference and do not necessarily have a bearing on their interpretation.

When a publication is specified, it refers to the most recent date of issue, including interim publications, before the date of bid receipts for the project unless the issue of a specific date or year is specified.

Whenever the following abbreviations and terms are used in the contract, the intent and meaning is interpreted as follows:

### 101.02 ABBREVIATIONS

AA .....	Aluminum Association
AAN .....	American Association of Nurserymen
AAR .....	Association of American Railroads
AASHTO .....	American Association of State Highway and Transportation Officials
ACI.....	American Concrete Institute
AGC.....	Associated General Contractors of America
AIA.....	American Institute of Architects
AISC .....	American Institute of Steel Construction, Inc.
AISI.....	American Iron and Steel Institute
ANSI .....	American National Standards Institute, Inc.
ARA .....	American Railway Association
AREA.....	American Railway Engineering Association
ARM.....	Administrative Rules of Montana
ARTBA.....	American Road and Transportation Builders Association
ASCE .....	American Society of Civil Engineers
ASLA .....	American Society of Landscape Architects
ASME .....	American Society of Mechanical Engineers
ASTM.....	American Society for Testing and Materials
AWPA .....	American Wood Preservers Association
AWS .....	American Welding Society
AWWA .....	American Water Works Association
CFR .....	Code of Federal Regulations
CRSI .....	Concrete Reinforcing Steel Institute
FHWA .....	Federal Highway Administration
FSS.....	Federal Specifications and Standards

GSA.....	General Services Administration
IES.....	Illuminating Engineering Society
IMSA.....	International Municipal Signal Association
ITE .....	Institute of Transportation Engineers
MCA.....	Montana Code Annotated
MDT.....	Montana Department of Transportation
MIL.....	Military Specifications
MUTCD.....	Manual on Uniform Traffic Control Devices
NBS .....	National Bureau of Standards
NEC .....	National Electric Code
NEMA .....	National Electrical Manufacturer's Association
OSHA .....	Occupational Safety and Health Administration
PCI.....	Pre-stress Concrete Institute
SAE .....	Society of Automotive Engineers
SSPC.....	Steel Structures Painting Council
UL .....	Underwriters Laboratory
USASI.....	United States of America Standards Institute
WASHTO.....	Western Association of State Highway Transportation Officials
WWPA.....	Western Wood Products Association

### **101.03 DEFINITIONS**

#### **ACTUAL COST**

The cost incurred by the Contractor in the performance of work. Actual cost includes labor, material, actual ownership cost of equipment determined from the owner's records, or invoiced rental rates, and administrative overhead.

#### **ADDENDUM OR AMENDMENT**

Contract revisions developed after advertisement and before opening proposals.

#### **ADDITIONAL WORK**

Additional work is an increase in the quantity of a contract item.

#### **ADVERTISEMENT**

The public announcement inviting proposals for the advertised work.

#### **AWARD**

The acceptance of a proposal by the Commission.

#### **BASE**

One or more layers of specified material placed on the subgrade to support the surface course.

#### **BIDDER**

Any individual or entity submitting a proposal for advertised work.

#### **BID DOCUMENTATION**

All writings, working papers, computer printouts, charts, and all other data compilation that contain or reflect information, data or calculations used by the Bidder to determine the bid proposal submitted, including but not limited to material relating to the determination and application of:

- A. Equipment rates;
- B. Overhead rates and related time schedules;
- C. Labor rates;
- D. Efficiency or productivity factors;
- E. Arithmetic extensions;
- F. Subcontractor and material supplier quotations; and
- G. Manuals standard to the industry used by the bidder in determining the proposal may be included by reference and must show the name and date of the publication and its publisher.

The term "Bid Documentation" does not include documents provided by the Department for use by the Bidder in the preparation of the bid proposal.

### **BOARD OF CONTRACT APPEALS**

The Board consists of the Chief Engineer, the Preconstruction Engineer and the Chief Counsel, with the Construction Engineering Services Engineer as Secretary to the Board. The FHWA Field Operations Engineer and Construction Engineer are non-voting members.

### **BRIDGE**

A structure, including supports, erected over a depression or an obstruction, such as water, a highway, or a railway, and having a track or passageway for carrying traffic or other moving loads and a length measured along the center of roadway exceeding 20 feet (6.1 m) between under-copings of abutments or extreme ends of openings for multiple boxes.

The bridge length is the overall length measured along the line of survey stationing between backs of abutment backwalls or between ends of the bridge floor, but never less than the total clear opening of the structure.

The bridge roadway width is the clear width measured at right angles to the longitudinal centerline of the bridge between the bottom of curbs or guard timbers or, in the case of multiple heights of curbs, between the bottoms of the lower risers.

### **BUSINESS DAY**

Business Day. All days are considered business days except Saturdays, Sundays and holidays.

### **CALENDAR DATE OF COMPLETION**

The fixed calendar date that all work on the project is to be complete.

### **CALENDAR DAY**

Every day shown on the calendar beginning and ending at midnight.

### **CHANGE ORDER**

A written order issued to the Contractor covering changes to the original contract, and establishing the agreed-upon basis of payment and time adjustments for the work affected by the changes.

### **CHIEF ENGINEER**

The Highways Engineering Division Administrator is designated "Chief Engineer" for the Department who establishes engineering policy, resolves technical issues and resolves Contractor disputes.

**COMMISSION**

As provided by Section 2-15-2502 MCA, (as amended), the Transportation Commission is a quasi-judicial board assigned to the Department of Transportation for administrative support only.

**CONFORMITY**

Is compliance with:

- A. Reasonable and customary manufacturing and construction tolerances where working tolerances are not specified; or
- B. The specified working tolerances.

**CONTRACT**

The written agreement between the Commission and the Contractor detailing the obligations of the parties for the performance of the prescribed work.

The contract includes the proposal; contract form; contract bond; specifications; general and detail plans; Detailed Drawings; Notice to Proceed; Materials Manual; and all change orders, extra work orders, including authorized contract time extensions, that are required to complete the project.

**CONTRACT BOND**

The approved security on the Department's form, executed by the Contractor and its surety or sureties, guaranteeing the complete execution of the contract and all supplemental agreements thereto and payment of all legal debts pertaining to the construction of the project.

**CONTRACT ITEM (PAY ITEM)**

A specific unit of work for which a price is provided in the contract.

**CONTRACT TIME**

The number of working days or the fixed calendar date allowed for completing the contract, including authorized time extensions.

**CONTRACTOR**

The individual or legal entity contracting with the Commission to perform the prescribed work.

**CULVERT**

Any structure not classified as a bridge that provides an opening under the roadway.

**DELAY**

Any event, action, force, or factors that causes the contract work to extend beyond the specified contract time.

- A. **Compensable Delay.** An excusable delay for which the Contractor may be entitled to additional compensation.
- B. **Excusable (Non-compensable) Delay.** A delay to the contract or milestone/phase completion date that was beyond the Contractor's control and for which a contract or milestone time extension may be granted.
- C. **Non-excusable Delay.** A reasonably foreseeable delay to the contract completion date within the Contractor's control. No monetary compensation or time extension will be granted.

**DEPARTMENT OF TRANSPORTATION**

The State of Montana, Department of Transportation, acting through the Director and the Commission when the State is the awarding authority. Where Department is used alone, it

means the Montana Department of Transportation. The Department's mailing address is: Montana Department of Transportation, 2701 Prospect Avenue, P.O. Box 201001, Helena, MT 59620-1001.

**DETAILED DRAWINGS**

An edition of special drawings, including necessary detailed instructions that pertain to certain items of work contained in Department projects.

**DIFFERING SITE CONDITIONS**

Subsurface or latent physical conditions at the site that:

- A. Differ materially from those indicated in the contract; or
- B. Differ materially from conditions normally encountered or, those conditions generally recognized as inherent in the nature of the work required in the contract; or
- C. Unknown physical site conditions of an unusual nature. This does not refer to non-physical conditions (i.e., working relationships, etc.)

**DIRECTOR**

The chief administrative officer of the Department, as established by law, and the Director's authorized agents.

**ENGINEER**

The District Administrator acting directly or through an authorized representative, responsible for engineering and administrative supervision of the project.

**EQUIPMENT**

All machinery, tools, apparatus, and supplies necessary for the upkeep, maintenance, construction, and completion of the project.

**EQUITABLE ADJUSTMENT**

An adjustment in the contract price or time.

**EXTRA WORK**

Work added to the original contract required for the completion of the contract.

**EXTRA WORK ORDER**

A written agreement amending the contract that identifies work to be paid for at agreed prices or by force account under Subsection 109.04.

**FORCE ACCOUNT WORK**

A basis of payment to perform extra work when procedures of negotiation are unsuccessful. Force account work will be paid for under Subsection 109.04.2.

**HOLIDAYS**

Legal holidays are defined in the State of Montana laws (Section 1-1-216 MCA).

**INSPECTOR**

The Engineer or Project Manager's authorized representative assigned to make inspections of work and materials furnished.

**INVITATION FOR BIDS**

The advertisement for proposals for work or materials on which bids are requested. The advertisement goes out to interested parties to allow potential bidders an opportunity to examine the site, material sources, etc. It will indicate the estimated quantities and location of the work to

be done or the character and quantity of the material to be furnished and the time and place of the opening of proposals.

**LABORATORY**

The Department testing laboratory or other testing laboratory designated by the Engineer.

**MAJOR ITEM**

Individual bid items having an original contract value equal to or exceeding 5 percent of the total original contract amount.

**MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)**

The FHWA *Manual on Uniform Traffic Control Devices* its current edition and its revisions. It includes the basic principles for the design and use of traffic control devices, but recognizes that engineering judgment is essential to the proper use of traffic control devices. The manual may be supplemented by Standard or Supplemental Specifications, Special Provisions, and by project circumstances when approved by the Engineer (See MUTCD, Section 2A.03 Standardization of Application).

**MATERIALS**

Substances specified for use in the construction of the project. Furnish new materials unless otherwise specified or approved.

**MEDIAN**

The portion of a divided highway separating the traveled ways for traffic in opposite directions. Separation may be by open ground, raised median, or paint not including centerline stripping.

**NOTICE TO PROCEED**

Written notice to the Contractor to proceed with the contract work including the starting date of contract time.

**PAVEMENT STRUCTURE**

The combination of base course and surface course placed on a subgrade to support and distribute the traffic load to the roadbed.

**PLANS**

The approved contract drawings showing the location, type, dimensions, and details of the work required under the contract.

**PROFILE GRADE**

The trace of a vertical plane intersecting the top surface of the proposed wearing surface, usually along the longitudinal centerline of the roadbed. Profile grade means either elevation or gradient of such trace according to the context.

**PROJECT**

The specific section of the highway or location on which construction is to be performed under the contract.

**PROJECT MANAGER**

The Engineering Project Manager, referred to as Project Manager or EPM, the authorized representative of the Engineer. The Project Manager is responsible for direct oversight and documentation of the project. The Project Manager is the Contractor's first contact for all project related issues unless another person or agency is specifically stated in the contract.

**PROJECT RECORDS**

All correspondence, reports, proposals, minutes, articles, logs, calendars, diaries, computations, tabulations, computer printouts, bills, statements, invoices, vouchers, bills of lading, schedules, purchase orders, contracts, agreements, accounts, checks, tape recordings, photostats, video recordings, photographs, sketches, drawings, charts, graphs, transcripts, and other similar objects, any of which pertains to a project or project costs, of a Contractor and its subcontractors.

**PROPOSAL**

A written offer by a bidder, on Department furnished forms, to complete the project at the quoted prices within the specified contract time. Also called "Bid Proposal."

**PROPOSAL FORM**

The approved form on which bids must be prepared and submitted.

**PROPOSAL GUARANTY**

The security furnished with a proposal to guarantee that the bidder enters into the contract if its proposal is accepted.

**QUALITY ASSURANCE**

- A. Acceptance Plan.** A statistically based procedure for evaluating acceptance test results.
- B. Lot.** A discrete quantity of material evaluated for acceptance.
- C. Price Reduction.** A pre-established decrease in payment to the Contractor for a contract bid item in which the quality and workmanship, determined by statistical means is at the lower limit of the acceptance range.
- D. Quality Assurance.** A statistical based process to determine the acceptability of a given product. Also known as "lot by lot" or "lot" basis or system.
- E. Quality Incentive Allowance.** A pre-established increase in payment to the Contractor for a contract bid item in which a superior level of quality and workmanship, determined statistically, was performed.
- F. Random Sampling.** A selection procedure in which all potential samples have an equal chance of being selected for testing.

**QUALITY CONTROL**

- A. Quality Control.** Operational techniques and activities used to control the quality of a product or service in order to satisfy given requirements.
- B. Quality Control Plan.** A Contractor prepared plan describing the type and frequency of Contractor inspection, sampling, and testing necessary to measure and control the various properties governed by the contract specifications.

**RENTAL RATES**

Hourly rates approved by the Department for furnishing and operating various types of construction equipment.

**RESOURCES**

The labor, equipment, and material necessary to perform work on a contract bid item or other contract work element.

**RESPONSIVE BID**

A bid that meets all requirements of the Proposal and Instructions to Bidders.

**RESPONSIBLE BIDDER**

A bidder that the Department determines has the skill, ability, and integrity to perform the project. The Department's standards of responsibility are in Section 18.3.201, Administrative Rules of Montana.

**RIGHT-OF-WAY**

Land, property, or interest, acquired for or devoted to a highway. Also R/W or ROW.

**ROAD, HIGHWAY OR STREET**

A public way for vehicular travel, including the entire area within the right-of-way.

**ROADBED**

The graded portion of a highway within the top and side slopes prepared as a foundation for the pavement structure and shoulders.

**ROADSIDE**

The areas between the outside edges of the shoulders and the right-of-way boundaries and other areas within the right of way not intended for motorized travel.

**ROADSIDE DEVELOPMENT**

Those items necessary for:

- A. The preservation of landscape materials and features;
- B. The rehabilitation and protection against erosion of areas disturbed by construction through seeding, sodding, mulching, and the placing of other ground covers; and suitable plantings; and
- C. Other improvements that increase the effectiveness and enhance the appearance of the highway.

**ROADWAY**

The portion of a highway within the limits of construction.

**SHOULDER**

The portion of the roadway adjacent to the traveled way for accommodation of stopped vehicles for emergency use and for lateral support of base and surface courses.

**SIDEWALK**

That portion of the right of way constructed for pedestrian use.

**SPECIAL PROVISIONS**

Modifications to the Standard and Supplemental Specifications applicable to an individual project.

**SPECIFICATIONS**

The compilation of provisions in this book, the Supplemental Specifications, and Special Provisions for the performance of the project.

**STATE**

The State of Montana acting through its authorized representative.

**STRUCTURES**

Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, endwalls, buildings, sewers, service pipes, underdrains, foundation drains, and other features that may be encountered in the work.

**SUBCONTRACTOR**

An individual or legal entity, to which a Contractor subcontracts, assigns or otherwise disposes of any part of the work. This includes subcontractors at any contract tier, such as sub-subcontractors, etc.

**SUBGRADE**

The top surface of a roadbed upon which the pavement structure, shoulders, and curbs are constructed.

**SUBSTRUCTURE**

All of the structure below the bearings of simple and continuous spans, skewbacks of arches, and tops of footings of rigid frames, together with the backwalls, wingwalls, and wing protection railings.

**SUPERINTENDENT**

The Contractor's authorized representative in responsible charge of the work.

**SUPERSTRUCTURE**

The entire structure except the substructure as defined in this Section.

**SUPPLEMENTAL SPECIFICATIONS**

Approved additions and revisions to the standard specifications.

**SURETY**

The legal entity or individual, other than the Contractor, executing a bond furnished by the Contractor (see Section 28-11-401 MCA).

**SURFACE COURSE**

One or more layers of a pavement structure designed to accommodate the traffic load, the top layer of which resists skidding, traffic abrasion, and the disintegrating effects of climate. The top layer is sometimes called the "wearing course."

**TITLES (OR HEADINGS)**

The titles or headings of the divisions, sections, and subsections are for convenience of reference and do not have any bearing on their interpretation.

**TOPSOIL**

Topsoil under Section 203 is soil that supports normal plant growth.

Topsoil under Section 610 is soil that supports normal plant growth and meets Subsection 713.05 requirements.

**TRAVELED WAY OR PRESENT TRAVELED WAY**

The existing paved or graveled roadway section in use including the shoulders and auxiliary lanes. Also referred to as the PTW.

**UNBALANCED BID**

- A. Materially Unbalanced.** A bid that generates a reasonable doubt that award to the bidder submitting a mathematically unbalanced bid results in the lowest ultimate cost to the Department.
- B. Mathematically Unbalanced.** A bid containing lump sum or unit bid items that do not reflect reasonable actual costs plus a reasonable proportionate share of the bidder's anticipated profit, overhead costs, and other indirect costs.

**WORK**

The furnishing of all resources necessary to complete the project.

**WORKING DAY**

All days are considered working days except Saturdays, Sundays, holidays, days on which the Contractor is specifically required by the contract to suspend construction operations, and all days during the period of November 16 through April 15 with no construction activities. Working days will be charged from November 16 through April 15 for all days construction activities occur that have any impact on the traveling public, exclusive of emergency and maintenance repairs to the project.

**WORKING DRAWINGS**

Stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or other supplementary plans or similar data that the Contractor is required to submit to the Project Manager.

**SECTION 102  
BIDDING REQUIREMENTS  
AND CONDITIONS**

**102.01 JOINT-VENTURE BIDS**

Execute a "Declaration of Joint Venture and Power of Attorney" form, available from the Department's Contract Plans Bureau, to submit bid packages for highway construction as a joint venture. Designate the joint venture business name and specifically authorize a person to execute all bid packages and contracts with the Transportation Commission on behalf of all individuals and legal entities of the joint venture. Authorize this person to receive all monies due under the contract and issue binding receipts and releases with the Department. Include joint-venture affidavits in the proposal.

Joint venture firms do not need to separately incorporate.

**102.02 CONTENTS OF BID PACKAGE**

The bid package ordinarily includes the following:

- A. Proposal;
- B. Disadvantaged Business Enterprise (DBE) Requirements;
- C. Schedule of Items;
- D. Special Provisions;
- E. Current Supplemental Provisions;
- F. Wage Rate Schedules;
- G. Other documents included by reference but not attached;
- H. FHWA Form 1273 (Required Contract Provisions for Federal-aid Construction Contracts), when applicable;
- I. EEO Affirmative Action Requirements on Federal and Federal-aid Construction Contracts; and
- J. Contract Plans.

**102.03 CONTRACTOR REGISTRATION**

Montana law requires all contractors to register with the Montana Department of Labor & Industry.

Register before executing a contract on federal-aid projects.

Register before submitting a bid on state-funded projects.

Contact the Department of Labor & Industry at 1-406-444-7734 for more information.

**102.04 ISSUANCE OF PROPOSALS**

The Department reserves the right to refuse to issue a bid package to a bidder for any of the following reasons:

- A. Uncompleted work that the Department determines might hinder or prevent the prompt completion of additional work;
- B. Default under previous contracts;
- C. Failure to reimburse the Department for an overpayment made on any contract or contracts after written notification of the overpayment that is due;
- D. Failure to pay, or satisfactorily settle, all bills due for labor and material on any contract in force at the time of issuance of proposals;
- E. Unsatisfactory performance on a previous or current contract; or
- F. Misconduct that is of such a serious nature as to adversely affect the Contractor's ability to perform future work.

Request bid packages from the Department.

Pay the Department the sum stated in the Invitation for Bids for each copy of the bid package.

#### **102.05 QUANTITIES OF WORK IN THE PROPOSAL**

Submit unit bid prices for the estimated quantities.

Estimated quantities may be increased or decreased under the contract.

Payment is made for the actual quantities of work performed and accepted or materials furnished and accepted under the contract.

#### **102.06 EXAMINATION OF DOCUMENTS AND SITE OF WORK**

Examine the proposed work site including the existing field staking and documents before submitting a proposal. Submitting a proposal is an affirmative statement by the bidder that the bidder has examined the site and is satisfied with the conditions to be encountered in performing the work and the bid package requirements.

The Department is not bound by any statement or representation concerning conditions or description of the work unless included in the bid package. Do not rely on oral explanations or instructions given by Department employees or agents before award of the contract. Accept these as non-binding oral explanations or instructions and relying on them is solely at the Bidder's risk.

Immediately submit any request for an explanation of the meaning or interpretation of the bid package, in writing, to the Engineer or to the Department's Q & A Forum found at <http://www.mdt.mt.gov>.

The records of any subsurface investigation conducted by the Department are available for inspection as a public document. When not included in the bid package, inspect available records at the Materials Bureau, Bridge Bureau in Helena, or the District where the project is located.

The records of subsurface investigations are not a part of the bid package or contract, but are available to all bidders for informational purposes only. There is no warranty or guaranty, either expressed or implied, that the subsurface investigation records disclose the actual conditions that will be encountered during the performance of the work. Department subsurface investigation results may differ from a bidder's independent subsurface evaluation due to different sampling techniques, the date of the investigation, etc. Using or relying on Department subsurface investigations is at the bidder's risk. The Bidder must perform and rely on its independent subsurface evaluation made before submitting a bid proposal. Submittal of a bid is an affirmative statement that an independent subsurface evaluation was made and Department subsurface investigations were not relied on. Individual test boring log data included in the Department's subsurface investigation records apply only to that particular boring taken on the date indicated. The character of any material or conditions between or around test borings on the date of the site examination is not conclusive.

Submission of a bid waives any potential claim of the above, including a claim of justifiable reliance on such information or materials.

Do not take advantage of an apparent error, omission or ambiguity in the bid package. Upon discovery, immediately notify the Engineer in writing if an error, omission, or ambiguity exists and why it appears erroneous, omitted, or ambiguous. Advise bidders submitting a subcontract quotation of this obligation and clarify their responsibility to include this information with their subcontract quotation. The Department will clarify the error, omission, or ambiguity and, if necessary and possible, issue an addendum to all prospective bidders before opening bid packages.

Do not submit a bid proposal or a subcontract quote without receiving clarification. Failure to provide written notification is a waiver of the error, omission or ambiguity, and additional compensation or contract time will not be allowed.

The Department, for most projects, prepares preliminary bid packages (plans and special provisions) to provide advance notice to prospective bidders of the general requirements for those projects. Preliminary packages are not in final form, and there may be substantial changes between the preliminary and final bid package released for bid letting. Use the preliminary packages only for general familiarization with the project. Request final bid packages for use in bidding. Do not base any bid on a preliminary package.

### 102.07 BIDDING REQUIREMENTS

Submit bids only using the Electronic Bid System (EBS) that generates the required Proposal, Schedule of Items, Disadvantaged Business Enterprise (DBE) requirements, and indicates acknowledgement of addenda if applicable.

- A. Distribution Procedures.** The Department will make electronic bid files, and addendum files available to prospective bidders. Bidders may obtain EBS packages free of charge from the Department's Contractor's System Internet Site, <http://www.mdt.mt.gov>. Hardcopy bid packages are available for a fee from the Contract Plans Bureau.
- B. Bidding Requirements.** Ensure bids submitted using the EBS format contain a Proposal guarantee, an EBS generated Proposal, Schedule of Items, and DBE requirements when applicable.

Ensure the EBS Schedule of Items is a single continuous printout for each individual bid, evidenced by all Schedule of Items sheets having the same check number. Written changes to the Schedule of Items, or a bidder's non-submission of every page from the Expedite Bid EBS file, (including all Schedule of Items pages and all DBE pages), automatically renders the bid non-responsive, and the bid will not be read or considered.

Acknowledge addenda using the amended EBS project file to generate the Proposal, Schedule of Items and DBE requirements. The printout indicates acknowledgment of receipt of addenda when the correct project file is used. Return a computer disk containing the complete project files for all projects bid with the bid package. It is the bidders responsibility to ensure that they acquire and apply addenda files when applicable.

- C. Determination of Bid Responsiveness.** Bids are opened at the designated time and inspected to determine if the following requirements are met:
- 1. Schedule of Items.** Unit Prices are provided for all required bid items. A complete and verifiable Schedule of Items is provided. Each sheet of the Schedule of Items must contain the same check number, to ensure that the unit bid prices correspond with the total. There are no written changes to the Schedule of Items.
  - 2. Proposal Guarantee.** The bid bond is on the most current version of the Department-furnished form; is signed and sealed in the proper places; a copy of the agent's Power of Attorney for the insurance company is attached; and contains the correct and complete project number; all signatures are original (stamped signatures are unacceptable). If using Bid Submission via Internet and Bid Express<sup>TM</sup>, a qualified Surety Company must verify the Contractor bond.
  - 3. Addenda.** All addenda are acknowledged by using the correct electronic file.
  - 4. Proposal.** The proposal is signed and notarized in the designated places or in acceptable digital format; and all signatures are original (stamped signatures are unacceptable).

A bid is non-responsive if any of the above requirements is not met.

For non-responsive bids, only the Contractor's name, and the reason for the non-responsiveness determination, will be announced at the letting. The Department retains non-responsive bids.

Submission of a bid is a statement by the bidder that sufficient time was available to adequately prepare a Proposal and conduct a complete investigation of the work site and all contract documents.

### **102.08 REJECTION OF BID PROPOSALS**

The Commission reserves the right to reject bid Proposals, waive technicalities, or advertise for new Proposals.

A Proposal is irregular and will be rejected as non-responsive for any of the following:

- A.** Failure to complete the bid bond or Proposal, provided by MDT, by all specified persons, including notaries, in the correct blocks.
- B.** There are unauthorized additions, conditional or alternate bids, or irregularities that make the bid package incomplete, indefinite, or ambiguous.
- C.** The Proposals for two or more projects advertised separately are connected or made contingent one upon the other so that the Proposal for one project carries a provisional deduction in the bid price on one or more of the other projects.
- D.** Any unauthorized provisions are added reserving the right to accept or reject an award or to enter into a contract pursuant to an award.
- E.** More than one Proposal for the same work from an individual, firm, corporation, partnership, or joint venture under the same or different name is submitted using the same format. (See Subsection 102.10(B)(6)).
- F.** Evidence of collusion among bidders exists. Participants in collusion will not receive recognition as bidders, either singly or as a joint venture, for future Department work until reinstated as qualified bidders.
- G.** Bidder fails to properly complete and sign, by original signatures, on the most current Department-furnished Proposal and bid bond forms. Stamped signatures are not authorized.
- H.** Failure to acknowledge receipt of electronic addenda by using the correct electronic files.
- I.** Failure to provide a complete Schedule of Items, or an unverifiable Schedule of Items. Each sheet of the Schedule of Items must contain the same check number, to ensure that the unit bid prices correspond with the total.
- J.** The bidder does not submit all pages from the Expedite Bid EBS file.

A bid Proposal is considered irregular and may be rejected as non-responsive for any of the following:

- A.** The Department-furnished Proposal is altered.
- B.** Bidder fails to include a name and mailing address.
- C.** The unit prices contained in the Proposal are mathematically and/or materially unbalanced.
- D.** Information entered in the Proposal by the bidder is not legible.
- E.** There are changes in the Proposal such as erasures, strikeouts, and whiteouts that are not initialed in ink.
- F.** Non-compliance with the Disadvantaged Business Enterprise (DBE) requirements. If Bid Express™ Software indicates an error, the Department will determine if the Proposal is non-responsive.

**102.09 PROPOSAL GUARANTY**

Make the Proposal guaranty unconditionally payable to the Department for no less than 10 percent of the Proposal. Provide the guaranty by bid bond with the Proposal. The guaranty must be a bid bond executed by a surety corporation authorized to do business in the State of Montana.

**102.10 DELIVERY AND PUBLIC OPENING OF PROPOSALS**

Bid Proposals are opened and read publicly at the place, time, and date specified in the "Invitation for Bids."

Deliver by the date and hour set for the opening of bid Proposals to the Department officials conducting the bid opening. Bid Proposals received after the specified time are returned to the bidder unopened.

The clock designated by the Department bid opening officials determines the bid opening time.

Do not submit bid Proposals by facsimile machines.

A Proposal not properly addressed and identified is returned to the bidder after it is opened.

**A. Bid Submission by Sealed Envelope.** Place the bid Proposal in a sealed envelope plainly marked to indicate the contents. Mail or deliver to: Montana Department of Transportation, Contract Plans Bureau, 2701 Prospect Avenue, P.O. Box 201001, Helena, Montana 59620-1001.

Mailed Proposals must be received by the Department's official conducting the bid opening before the bid opening time. The Contractor is solely responsible for the Proposal's delivery.

**B. Internet Bid Submission Via the Internet and Bid Express™.** (Optional Bid Submission Procedure)

1. Access to the electronic bidding information is available on Bid Express™ at [www.bidx.com](http://www.bidx.com) and the MDT Contractors System Internet Site at <http://www.mdt.mt.gov>.
2. When installing the Bid program, enter the vendor code that was issued by MDT. Before running the electronic bidding programs, read the on-line help documentation for the Expedite software.
3. Acknowledge all addenda in the electronic bid submitted.
4. "Joint Venture Bids" are not able to be submitted to Bid Express™.
5. Select tools and then check bid from the Windows Expedite menu to check the bid and ensure there are no errors prior to submitting the electronic bid. The electronic bid may be changed and resubmitted electronically to Bid Express™ as many times as desired before the advertised cutoff time. The last bid submitted for a given Bid opening as of the cutoff time will be the only bid considered. If a bidder chooses to submit Proposal using Bid Express™ and also submits a hard copy bid, the electronic copy of the bid controls.
6. Make no claim against the Department in the event it is unable to submit it's bid to Bid Express™ and/or Bid Express™ is unable to submit the bid(s) to the Department. The Department reserves the right to postpone or cancel the public opening and reading of bids in the event of internet, Bid Express™ or MDT technical difficulties.

**102.11 WITHDRAWAL OF PROPOSALS**

Submit withdrawal requests to the Department in writing or telegram before the time set for opening bid proposals. A bidder may withdraw any proposal in person or through an authorized agent before any bid proposal on that project is read.

### **102.12 DEBARMENT**

Federal statutes and regulations adopted pursuant to federal statutes, require that any firm or individual submitting a bid on a federal-aid project certify compliance with Part XI of FHWA Form 1273 (Required Contract Provisions - Federal-aid Construction Contracts) and that firm or individual must obtain and furnish the Department certification that all subcontractors, material suppliers, vendors, and other lower tier participants used are in compliance with Part XI of FHWA Form 1273.

Make certification part of each subcontract, material supply agreement, purchase order, and other covered lower tier transaction. Covered lower tier transactions include primary material purchases for contract items incorporated into the work.

The Department's debarment policies and procedures are in the Administrative Rules of Montana, beginning at Section 18.3.101.

### **102.13 MATERIALS GUARANTY**

The successful bidder may be required to furnish a complete statement of the origin, composition, and manufacture of materials to be used in the construction of the work, together with samples to be tested for conformance with the contract requirements. Include the costs of furnishing the statements and samples in the bid.

### **102.14 RESERVED**

### **102.15 VENUE**

In the event of any dispute concerning a project, whether over its advertisement, bidding, award, execution, or claim, any litigation filed by or against the Department has venue in Lewis and Clark County.

### **102.16 CONSENT TO CONTRACT PROVISIONS**

The submission of a bid is an affirmative statement that the bidder and its proposed Subcontractor(s) consent to all of the bid package provisions upon which the bidder has submitted its bid. That consent extends to all portions of the bid package and applies to all the bidder's subcontractors. Do not submit a bid proposal unless consent to all the bid package provisions is given.

**SECTION 103  
AWARD AND EXECUTION  
OF CONTRACT**

**103.01 CONSIDERATION OF PROPOSALS**

Bid proposals will be compared on the basis of the summation of the item total prices shown in the bid schedule.

**103.02 AWARD OF CONTRACT**

The contract will be awarded within 45 calendar days after the bid opening to the lowest responsive, responsible, and qualified bidder whose bid proposal complies with all the requirements. The successful bidder will be notified in writing of the acceptance of the proposal and the award of the contract.

If the contract is not awarded within 45 calendar days, all bid proposals will be rejected and the proposal guaranties returned. The Commission can extend the 45-day time period.

**103.03 ASSIGNMENT OF CLAIMS**

In consideration of being awarded the contract, the Contractor, on its own behalf and on behalf of its subcontractors, assigns to the Department all claims or causes of action for any antitrust law violations, or damages arising there from, as to goods, materials, and services purchased under the terms of the contract or any change order that may result from the contract.

**103.04 CANCELLATION OF AWARD**

The award of the contract may be canceled at any time before the execution of the contract by all parties without liability against the Department.

**103.05 RETURN OF PROPOSAL GUARANTY**

Except for the three lowest bidders, all proposal guaranties other than bid bonds will be returned immediately following opening and checking of the proposals. The retained proposal guaranties of the unsuccessful two lowest bidders will be returned within 10 calendar days following the award of the contract. The successful bidder's proposal guaranty will be returned after a satisfactory contract bond has been furnished and the contract has been executed.

**103.06 CONTRACT BOND**

Furnish an executed contract bond or bonds in a sum equal to the contract amount under Subsection 103.07. Use a form provided by the Department and executed by a surety company authorized by law to transact business in the State.

**103.07 EXECUTION AND APPROVAL OF CONTRACT**

Return to the Contract Plans Bureau in Helena no later than 5:00 p.m. on the 20th calendar day after receipt, not counting the date of receipt of the contract documents:

- A. The signed contract;
- B. The contract bond; and
- C. A copy of the insurance policy or a certificate of insurance.

A proposal is not binding unless all the above requirements have been satisfied.

Do not begin work before:

- A. The contract is executed;
- B. Contract bond is completed;
- C. Evidence of the required insurance is provided; and
- D. Possessing a current special fuel user permit issued under 15-70-302 MCA.

The contract, bond, and insurance are subject to legal approval after execution by the Contractor and Surety.

### **103.08 FAILURE TO EXECUTE CONTRACT**

Upon failure to execute the contract and file acceptable bonds and insurance policies within 20 calendar days after receipt of the contract, under Section 18-1-204 MCA, the award will be canceled and the proposal guaranty forfeited. Award may then be made to the next lowest responsive, responsible and qualified bidder, or the work may be re-advertised.

### **103.09 SUBMISSION OF BID DOCUMENTATION**

When required by the contract, no later than seven calendar days after the date of bid-opening (the date of bid opening to count as the first full day), the apparent low bidder must submit to the Contract Plans Bureau, during its regular work hours, a legible copy of all bid documentation it used to prepare its bid. If the seventh day is a holiday, turn the documentation in earlier. The term "Bid Documentation," as used in this specification, means any writings, working papers, computer printouts, charts, schedules of any kind (e.g., CPM, bar chart, etc.), and any data compilations, computerized or not, used by the Contractor to determine the bid it submits for this project. "Bid Documentation" includes, but is not limited to, Contractor equipment internal rates for ownership, Contractor overhead rates, labor rates, efficiency or productivity factors, scheduling calculations, written review or analysis of the site of the work, written analysis of how the work should be performed, arithmetic extension, worksheets used to prepare the bid (identifying by name and edition any software programs used to prepare them), and all quotations to the extent that these items were used in formulating and determining the amount of the bid. "Bid Documentation" also includes identification of all manuals which are standard to the industry used by the Contractor in determining the bid for this project. (Include these manuals in the bid documentation and the inventory by reference to their title, author, edition, date and page or section number.) The term does not include bid documents provided by the Owner (e.g., plans, specifications, etc.) for use by the Contractor in bidding on this project.

Place the bid documentation in sealed envelopes no smaller than 8 1/2-inch x 11-inch and no larger than 10-inch x 13-inch. If multiple sealed envelopes are provided in some form of container, do not lock or seal it. The container will be emptied and the sealed envelopes secured by an agent of the Department's Construction Administration Services Bureau at the place of storage in Helena. An agent of the Contractor, at its discretion, may be present at the time the documentation is placed in the storage container. Furnish with the bid documentation, a complete inventory on the Department-furnished form found elsewhere in the proposal titled "Bid Documentation Inventory." A copy of the inventory will be placed in the storage container, one will be kept in the Construction Administration Services Bureau's project file, and the Contractor retains one.

A bidder's failure to provide its full bid documentation automatically makes its bid unresponsive and it will be rejected. It will also be considered a refusal to enter into the contract, and the bidder's proposal guaranty will be forfeited due to its failure to evidence its good faith in fully submitting that bid. The second low, responsive responsible bid will then be reviewed and required to meet the above requirements.

If the apparent low bidder, for whatever reason, is not awarded the contract, the apparent second low bidder will be told that it has seven calendar days from the date of its verbal notification (followed immediately in writing) to comply with the above requirements. That Contractor must comply with those requirements.

The bid documentation will remain in the storage container during the life of the contract and will be returned after a certificate of completion has been issued for the project and a release of

claims has been signed. An agent of the Contractor may be present at the time the documents are removed from the storage container.

In the event that a claim requesting compensation, reimbursement or contract time is made, or an action in any court, based upon the contract, is filed, the copies of the bid documentation become the property of the Department for its use, specifically including use in preparing for and conduct of all claims, disputes, or litigation. Failure to submit all documentation and inventory as required above, or listing on the inventory documentation that is not actually provided as required, will be considered a material breach of the contract, is a failure to comply with a condition precedent to filing of a claim or lawsuit, acts as a total and final waiver of all claims or disputes involving matters that would have been included (e.g., claims of delay, changed site conditions, loss of productivity, etc.), and subjects the Contractor to action under ARM 18.3.101 et seq.



## **SECTION 104 SCOPE OF WORK**

### **104.01 INTENT OF CONTRACT**

Furnish all resources required to complete the work under the contract within the specified time, and for the amount bid.

### **104.02 DIFFERING SITE CONDITIONS, SUSPENSIONS OF WORK, AND SIGNIFICANT CHANGES IN THE CHARACTER OF WORK**

#### **104.02.1 Differing Site Conditions**

During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions must promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

Upon written notification, the Engineer will investigate the conditions. If the Engineer determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding loss of anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the contract is warranted.

No contract adjustment, which results in a benefit to the Contractor, will be allowed unless the Contractor has provided the required written notice.

No contract adjustment will be allowed under this clause for any effects caused on unchanged work.

#### **104.02.2 Suspensions of Work Ordered by the Engineer**

If the performance of all or any portion of the work is suspended or delayed by the Engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor must submit to the Project Manager in writing a request for adjustment within seven calendar days of receipt of the notice to resume work. Set forth the reasons and support for such adjustment in the request.

Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The Contractor will be notified of the Engineer's determination as to whether or not an adjustment of the contract is warranted.

No contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed.

No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of the contract.

**104.02.3 Significant Changes in the Character of Work**

The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations do not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment must be agreed upon before the work is performed. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Engineer may determine to be fair and equitable.

If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

The term "significant change" applies only to the following circumstances:

- A.** When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction.
- B.** When a major item of work, as defined in Subsection 101.03, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity will apply only to that portion in excess of 125 percent of the original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.
- C.** When an item of work, not defined as a major item in Subsection 101.03, is increased in excess of 150 percent or decreased below 50 percent of the original contract quantity. Any allowance for an increase in quantity will apply only to that portion in excess of 150 percent of the original contract item quantity, or in case of a decrease below 50 percent, to the actual amount of work performed.

**104.02.4 Change Orders**

Change orders will include the following information:

- A.** A description of the altered, increased, or decreased work or description of other change necessitating the change order;
- B.** An estimate of the types and quantities of work to be performed and a listing of the agreed prices and contract unit prices at which payment will be made; and
- C.** Contract time adjustments.

Change orders must be executed by both parties to the contract and become a part of the contract.

Payment for the work will be made for the actual quantities of work performed at the prices specified in the change order.

**104.03 EXTRA WORK**

Perform unanticipated work, not included in the contract, if determined necessary to complete the project. Perform extra work as directed. Payment for extra work is made under Subsection 109.04.

Extra work performed without an executed written order will not be paid for.

**104.04 MISCELLANEOUS WORK**

This is any minor work or material that is necessary to the work.

Miscellaneous work, as provided for in the contract, is measured by the respective unit for either the material or work performed, as directed in writing by the Project Manager.

Payment for miscellaneous minor work is at agreed prices or on a force account basis.

## **104.05 MAINTENANCE OF THE WORK**

### **104.05.1 General**

Perform maintenance work on completed and uncompleted parts of the project until acceptance under Subsection 105.15.

Maintenance includes, but is not limited to the following:

1. Patching chuck holes with asphalt mix;
2. Reshaping the subgrade, side slopes, ditch sections, or aggregate courses, as necessary;
3. Cleaning debris from drainage courses, culverts, and inlets;
4. Removing rocks or earth from the roadway and ditch sections;
5. Removing debris resulting from construction activities;
6. Providing access to residences, businesses, and roads and keeping the present accesses open;
7. Repair or replace minor damaged parts of the work
8. Repair or replace extensive damage, not by Contractor negligence, under Subsection 104.02.4;
9. Maintenance of the constructed roadway under Subsection 203.03.5;
10. Disposing of removed matter;
11. Maintenance of irrigation water under Subsection 104.05.6; and
12. Other maintenance-type work not specifically described but necessary for the maintenance and protection of traffic or of completed and uncompleted portions of the project.

Maintenance work performed before acceptance under Subsection 105.15 is incidental to other contract items.

### **104.05.2 Failure to Properly Maintain Roadway or Structure**

The Project Manager will immediately notify the Contractor if it fails to maintain the project. Failure to remedy unsatisfactory maintenance within 24 hours after receipt of the notice will cause the Department to take over project maintenance. The cost of the maintenance will be deducted from monies due or to become due the Contractor, or otherwise be billed to the Contractor.

### **104.05.3 Maintenance for Traffic and Detours**

- A. Maintenance for Traffic.** Keep the road open to traffic during the work or provide detour roads as specified or directed.

Maintain the work under construction to accommodate traffic. Construct and maintain all accesses to parking lots, garages, businesses, residences, farms, etc. The cost of this work is incidental to other items of the contract.

Provide traffic control meeting the approved traffic control plan, Section 618 - Traffic Control, and the MUTCD.

- B. Special Detours.** When the contract has the bid item Detour - Construct, Maintain, and Remove, it includes constructing and maintaining the detour, including constructing and removing temporary bridges, pipes and associated work and obliterating the detour road.

Do not use all or any portion of an existing structure, as defined in Subsection 101.03, without the Engineer's approval. Do not modify existing structures or construct temporary

structures without Department approval before starting work. This work is incidental to the contract item.

The Department will provide the right-of-way for temporary detours or bridges specified in the contract.

#### **104.05.4 Maintenance for Traffic During Work Suspensions**

**A. Temporary Suspension.** Make passable and open to traffic all portions of the project, connections, and temporary roadways before temporary work suspensions. Maintain parts of the project, connections, temporary roadways, and detours under traffic at Contractor expense during work suspensions.

**B. Winter Suspension.** Be responsible for all traffic control, maintenance, and snow removal, during winter weather shutdowns, including the time between November 16th and April 15th, for all roadways not completed through the first lift of plant mix surfacing. Furnish all necessary supervision, personnel, and equipment to maintain the road in a safe condition and at the highest level of service to traffic.

The Contractor may request that the Department furnish all resources to perform snowplowing, sanding, de-icing and incidental work during winter suspension. This work would be detailed in a written agreement. The Contractor would reimburse the Department, under an accounts receivable, for all Department winter maintenance expenses.

Before the winter shutdown, a Contractor's representative, the District Maintenance Chief, the District Construction Engineer, and the Project Manager will review the project to develop the agreement details.

Failure to maintain the project under these requirements will invoke Subsection 104.05.2.

Repair or replace all work and materials lost or damaged due to temporary use of the project. Maintenance work for acts of God or acts of the public enemy, or that are outside the Contractor's control during work suspensions is paid for at contract unit prices or as extra work.

#### **104.05.5 Reserved**

#### **104.05.6 Maintenance of Irrigation Water**

Construct or move irrigation structures, boxes, channel changes, and culverts to maintain irrigation water flow at Contractor expense.

Do not shut off irrigation water in an irrigation ditch without the water-master or ditch owners written permission.

#### **104.06 RIGHTS IN AND USE OF MATERIALS FOUND ON THE WORK**

Obtain the Engineer's approval to use excavated materials found in other parts of the work. The quantity of excavated material used will be paid for under the pay item for which the material is used.

Payment will not be made under any other pay item for excavating the material. Replace the removed material with acceptable material at Contractor expense.

Do not excavate or remove material from within the right-of-way that is outside the grading limits without written permission.

#### **104.07 FINAL CLEANING UP**

Clean the highway, borrow pits, and all ground used in performance of the work of all rubbish, debris, excess materials, temporary structures, and equipment before final acceptance.

Meet the requirements of Subsection 106.02.5 for final cleanup of borrow and aggregate sources.

The final cleanup work of the project area and the pits, borrow areas, or quarries is not paid for directly but is incidental to other contract items.

Specify the conditions for final cleanup in all landowner agreements. Complete all cleanup conditions before final project acceptance.

#### **104.08 VALUE ENGINEERING PROPOSALS**

Cost savings generated on the contract from cost reduction proposals offered by the Contractor and approved by the Department will be shared.

The Contractor is encouraged to submit proposals for modifying the contract that reduces the total cost of construction. The cost reduction proposal must not impair the essential functions or characteristics of the project including but not limited to service life, economy of operation, ease of maintenance, reliability, desired appearance, and safety.

Submit the proposal in writing and include the following information:

1. A description of both the existing work and proposed changes for performing the work with a discussion of the comparative advantages and disadvantages;
2. An itemization of the necessary changes to the contract if the proposal is accepted;
3. A detailed cost estimate for performing the work under the existing contract and under the proposed change detailing quantities and dollar amounts for each work item;
4. An estimate of the effect the proposed changes would have on other costs to the Department;
5. A time frame within which the Department must make a decision;
6. The dates, project numbers and the action of the Department if the proposal was previously submitted; and
7. A statement of the effect implementation of the proposal would have on the contract completion time.

The Department is not required to consider a proposal or be liable to the Contractor for failure to accept or act on a proposal submitted under this specification including delays to the work attributable to the proposal. Proposals that are similar to a change in the contract that are under consideration or have been adopted by the Department before the submittal will not be accepted. The Department reserves the right to make these changes without compensation to the Contractor.

Continue to perform the work according to the contract requirements until the Department has taken final action on the proposal. Consider the proposal rejected if the Department's final decision is not received within the time frame specified in the Contractor's submittal.

The Department will determine the acceptability and the estimated net savings in construction costs from the adoption of all or part of a proposal. The Department will disregard the contract unit prices if these prices do not represent a fair measure of the value of work to be performed or to be deleted. The Department's costs for reviewing and implementing proposals including any increased costs to the Department resulting from its application will be deducted from the total estimated cost saving to arrive at the net savings.

The Department's cost of investigating a proposal is at the Contractor's expense with the submittal of a proposal constituting the Department's authority to deduct these costs from any monies due or that may become due to the Contractor under the contract.

Proposals accepted by the Department in whole or in part will be by a change order. The change order will incorporate the changes in the contract necessary to implement the proposal and will include any conditions placed on the approval by the Department. The change order will establish the estimated net savings in the cost of performing the work attributable to the proposal and provide for payment of 50 percent of the estimated net savings to the Contractor.

Acceptance of proposals does not extend the contract time unless specifically provided for in the change order.

The payment amount specified in the change order constitutes full compensation to the Contractor for the proposal and the performance of the work.

The Department reserves the right to apply a proposal for general use on other contracts administered by the Department. When an accepted proposal is applied for general use, only the Contractor who submitted the initial proposal is eligible for compensation and this compensation applies only to those contracts awarded to the Contractor before submission of the accepted proposal. Proposals that are identical or similar to previously submitted proposals are eligible for consideration and compensation under this specification if the proposals were not previously adopted for use in other contracts administered by the Department. Subject to these provisions, the Department reserves the right to use all or any part of any submitted proposal without obligation or compensation to the Contractor.

This specification applies only to the Contractor awarded the contract. No consideration will be given to, and no payment made for any claims for additional compensation for changed conditions that are attributable to the approved proposal.

## **SECTION 105 CONTROL OF WORK**

### **105.01 AUTHORITY OF THE ENGINEER**

The Engineer will decide all questions regarding the quality and acceptability of materials furnished, work performed, the rate of progress of the work, the interpretation of the contract, and the acceptable fulfillment of the contract. Contract time will continue to be charged during suspensions under A of this Subsection and Subsection 105.09(2).

- A.** The Engineer will suspend the work wholly or in part for failure to:
  - 1. Correct conditions unsafe for project personnel or the public; or
  - 2. Carry out provisions of the contract; or
  - 3. Carry out orders of the Engineer.
- B.** Work may also be partially or wholly suspended for:
  - 1. Periods necessary due to unsuitable weather; or
  - 2. Conditions unsuitable for the prosecution of the work; or
  - 3. Any condition or reason determined to be in the Department's interest.

### **105.02 CONTRACTOR FURNISHED DRAWINGS AND SUBMITTALS**

The plans show the details of structures, lines, grades, typical roadway cross sections, location and design of structures, and a summary of items appearing in the bid package.

Furnish the Department with Contractor prepared working drawings that detail required work not included in the contract plans. Prepare all working drawings using English or Metric units as shown in the contract. Upon request, submit manufacture literature describing the materials and equipment to be incorporated into the work. This requirement to submit drawings and literature applies to all items not specifically requested elsewhere in the contract.

The Department has 20 working days to review the submittals before returning them to the Contractor. The Department has 20 working days to review drawings returned for correction and that are re-submitted for review. The Department will consider extending contract time should the Department review exceed the 20 working day review time limit.

Working drawings, falsework plans, and calculations for facilities open to public travel are to be signed by a professional engineer before submittal to the Project Manager.

### **105.03 CONFORMITY WITH PLANS AND SPECIFICATIONS**

#### **105.03.1 General**

Perform work and furnish materials to meet the contract requirements.

Provide materials and workmanship uniform in character and meeting the plan dimensions and contract specifications.

When a contract item does not meet the contract requirements but is adequate to serve the design purpose, the Engineer will determine the extent the work will be accepted and remain in place. The Engineer will document the basis of acceptance by change order, providing an adjustment in the contract unit price.

When a contract item does not meet the contract requirements resulting in work inadequate to serve the design purpose, remove and replace or correct the work by and at Contractor expense.

#### **105.03.2 Items Designated for Acceptance on a Lot Basis (Quality Assurance)**

Contract items listed in Table 105-1 are designated for acceptance on a lot-by-lot basis. The elements in the table are evaluated and the contract items accepted under this provision. All other contract items are evaluated for acceptance under the specifications covering those items.

An element of a lot will be evaluated for conformance when results of one or more tests are outside specified tolerance limits for that element.

All the individual test results in the lot for the element to be evaluated will be averaged, and the percent of price reduction for the lot determined by the applicable formula.

1. The formula  $P = (Xn + aR - Tu) \times F$  will be used if a maximum limit only is specified; or when the average of the test values is above the midpoint of a specified band or above a job mix target value.
2. The formula  $P = (TL + aR - Xn) \times F$  will be used if a minimum limit only is specified; or when the average of the several test values is below the midpoint of a specified band or below a job mix target value.

**TABLE 105-1**  
**CONTRACT ITEMS - EVALUATION ELEMENTS**

ELEMENTS EVALUATED						
Item	Aggregate Gradation	Fineness Modulus	Penetration	Compaction	Cleanness Value	Fracture
Selected Surfacing	X					
Sand Surfacing	X					
Crushed Base Course Type A	X					X
Crushed Base Course Type B	X					
Crushed Top Surfacing Type A	X					X
Crushed Top Surfacing Type B	X					
Crushed Aggregate Cover Material	X				X	X
Portland Cement Treated Base	X					
Plant Mix Surfacing and Base	X			X		X
AC in Plant Mix Surfacing and Base			X			
Portland Cement Concrete Paving	X	X				

Where:

- P is the percent of reduction in contract unit price.
- Xn is the average of the several test values from samples taken from the lot, with n indicating the number of values.
- A is a variable factor to be used as n changes according to the following: when n is 3, a = 0.45; n is 4, a = 0.38; n is 5, a = 0.33; n is 6, a = 0.30; and n is 7, a = 0.28.
- R is the difference between the highest and lowest values in the group of several test results from the lot.
- Tu is the upper or maximum tolerance limit permitted by the specifications.
- TL is the lower or minimum tolerance limit permitted by the specifications.
- F is the price reduction factor to be applied for each element as shown in Table 105-2.

**TABLE 105-2**  
**TABLE OF PRICE REDUCTION FACTORS**

ELEMENT	FACTOR "F"
100% size sieve	1
1/2-inch (12.5 mm) sieve and larger	1
No. 100 to 3/8-inch (0.150 mm to 9.5 mm) sieve, inclusive (except 100% size sieve)	Cover Material, 2 All Other Aggregates, 3
No. 200 (0.075 mm) sieve	Cover Material, 3 All Other Aggregates, 6
Fine aggregate fineness modulus	12
Penetration, 85-100 asphalt cement	3
Penetration, 120-150 asphalt cement	2
Penetration, 200-300 asphalt cement	1
Compaction	12
Fracture	2

If P is less than 3 or a negative quantity, the lot will be accepted as being in conformance. If one or more elements for a contract item show a positive P value, the positive values will be added and the resulting sum used to determine whether the lot is in conformance. If the total P value is between 3 and 25, the Engineer may require correction or accept the lot at a reduced price. If P is greater than 25, the Engineer may: (1) require complete removal and replacement with specification material at Contractor expense; (2) require corrective action to bring the material into conformance at Contractor expense; or (3) where the finished product is found to be capable of initially performing the intended purpose but with a reduced service life expectancy, permit leaving the material in place with an appropriate price adjustment calculated using a P value ranging between 25 and 50.

Immediately halt production following written notification when either of the following has occurred:

1. Three consecutive lots for a contract item have an individual total P value of 5 or more.
2. Beginning with the second lot, when three tests within one lot have one or more elements outside the specification bands and the total P value for the lot is 5 or more.

Make adjustments to bring the product within the specification limits before resuming production. The Contractor does not have the option of accepting a price reduction in lieu of producing specification material. Continued production of non-specification material is prohibited. Material that is obviously defective may be isolated and rejected without regard to sampling sequence or location within a lot.

### 105.03.3 Quality Incentive Allowance

**A. Gradation.** When "Volumetric Acceptance" is not specified, a 1.05 pay factor will be applied to non-commercial plant mix surfacing lots where the results of aggregate gradation tests for the No. 4 (4.75 mm), No. 40 (0.425 mm), and No. 200 (0.075 mm) sieves are not more than one-half the allowable tolerance from the job mix target value.

A 1.05 pay factor will be applied to crushed base course Type "A" surfacing lots where the results of aggregate gradation tests for the No. 4 (4.75 mm) and No. 40 (0.425

mm) sieves are not more than one-half the allowable tolerance from the job mix target value.

**B. Density.**

1. When “Density Acceptance by Cores” is specified, a 1.05 pay factor will be applied to the lots of plant mix surfacing when the average density for the lot (Xn) is from 94 percent to 95 percent, inclusive, of the Maximum Specific Gravity (Rice’s Method) and the range (R) is three or less.
2. When “Density Acceptance by Cores” is not specified, a 1.05 pay factor will be applied to the lots of plant mix surfacing using the Marshall method where the average density for the lot (Xn) is from 97 percent to 98 percent, inclusive, of the target Marshall density and the range (R) is three or less.

**C. Quality Incentive Allowances.** Quality incentive allowances will be used to offset any price reductions. Any quality incentive allowance remaining after all price reductions have been deducted will be paid for as a lump sum when all work on the item is complete. Quality incentive allowances for gradation are waived when the plan quantity of surfacing is less than the standard lot size.

**105.03.4 Table of Contractor Submittals**

To assist in identifying all required submittals and clarifying the submittal process, the contract may include a Table of Contractor Submittals as a Special Provision.

The table may not be all-inclusive and does not include submittals required by other Special Provisions.

Provide all submittals required by the contract, including those not listed in the table.

If a discrepancy exists, submittals required by other Special Provisions in the contract take precedence over the Table of Contractor Submittals.

Submit all required submittals to the Project Manager unless another person or agency is specified. When another person or agency is specified to receive the submittal, also submit one copy to the Project Manager.

**105.04 COORDINATION OF CONTRACT PROVISIONS**

All documents referred to in Subsection 101.03 (Contract) are essential parts of the contract, and a requirement occurring in one is binding as though occurring in all. They are complementary and describe and provide for a complete contract. If a discrepancy exists, the governing ranking is:

**Dimensions**

1. Plan
2. Calculated
3. Scaled

**Information**

1. “Question and Answer Forum” Information
2. Special Provisions
3. Table of Contractor Submittals
4. Plans
5. Supplemental Specifications
6. Standard Specifications
7. Supplemental Detailed Drawings
8. Detailed Drawings

**105.05 COOPERATION BY CONTRACTOR**

The Department will furnish the Contractor at least 15 sets of contract documents. Keep at least one set available on the project at all times.

Cooperate with the Engineer, Project Manager, the Inspectors, and other Contractors during the contract work.

Staff the project with a Superintendent experienced in the type of work to be performed under the contract. Ensure the Superintendent, when not physically on the project, has the ability to communicate with Department representatives by phone, cell phone, radio, or other electronic means.

Maintain a Contractor representative having the Superintendent's authority, when the Superintendent is not physically on the project or available for immediate communication. Notify the Project Manager in writing of the identity and contact information of that representative before that person assumes the authority.

Give the Superintendent the authority to execute orders or instructions of the Project Manager or authorized representative and the authority to obtain all resources to complete the contract, including directing all Subcontractor operations.

Provide the Project Manager, the Superintendent's name in writing before work starts.

The Project Manager or authorized representative will issue instructions to the superintendent.

Notify the Project Manager in writing at least 24 hours in advance of changes in the Contractor's representative.

Failure to maintain a Contractor's Superintendent or authorized representative on the project is cause for the Project Manager to stop work until one is assigned. All cost associated with delay in the stopped work is solely the Contractor's responsibility.

#### **105.06 COOPERATION WITH UTILITIES**

Underground, overhead, and non-utility facilities will be relocated or adjusted to clear conflicts with the contract. Some or all of these facilities may be relocated or adjusted during the contract work. Perform the contract work without damaging these facilities.

Conduct on-project meetings on a weekly or biweekly basis with utility company representatives having facilities within the project limits and the Project Manager. Have the first meeting on the project before grading and excavation work begins to discuss the utility locations and progress on utility relocation work. A list of utility representatives is furnished in the contract.

Cooperate with utility owners in the removal and rearrangement of utility facilities to minimize interruption to utility service and duplication of work by the utility owner.

Submission of a bid is an affirmative statement that the Contractor has considered in the bid proposal all permanent and temporary utility facilities in the present or relocated positions as specified in the contract and as revealed by its site investigation. No additional compensation is allowed for delays, inconvenience, or damage sustained due to interference from the utility facilities or their re-location work.

The contract indicates utility items to be relocated or adjusted and who is to perform the work. The contract indicates the means of adjudication, if any, if the utility owners fail to relocate or adjust the facilities.

#### **105.07 COOPERATION BETWEEN CONTRACTORS**

The Department reserves the right to contract for and perform other or additional work on or near the work for the project.

Conduct the work without interfering with or hindering the progress or completion of the work by other Contractors. Cooperate with other Contractors working within the limits of the project.

Each Contractor involved must accept all liability, financial or otherwise, in connection with the contract and protect and hold harmless the Department from damages or claims that may arise because of inconvenience, delay, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

Coordinate and sequence with the work of other contractors. Do not store materials, tools, machinery, and other equipment in locations that interfere with the work of other Contractors.

### **105.08 CONSTRUCTION STAKES, LINES, AND GRADES**

#### **105.08.1 Finish Grade Control**

Provide all finish grade control required to establish the surfacing sections shown in the plans. Calculate the finish grades for the subgrade and each surfacing course using the plan information and the furnished staking notes. Special borrow is a surfacing course for finish grade control purposes.

The Department will set construction stakes establishing lines, slopes, and profile grade for roadwork, excluding finish grade control, and will furnish the Contractor these staking notes.

Run a level circuit to check the project benchmarks on each roadway section where finish grade is being controlled.

Establish finish grades using survey personnel that are trained, experienced, and skilled in construction layout and staking. Do not hire Department personnel to perform any finish grade control work.

The Department will provide control for culverts, protective and accessory structures and appurtenances as required. Use provided controls as the field control to perform the work. Request all Department furnished construction staking in writing. Staking requests must be submitted on form CSB105\_08\_1. Department construction staking will be performed once for a given type and location. If construction staking is required more than once, submit an additional request to the Project Manger in writing with justification.

#### **105.08.2 Bridge Survey**

The Department will establish control points defining median or roadway centerline, bridge centerline, and benchmarks for elevation control.

Establish and maintain all other survey controls required to control bridge alignment and grade meeting the plan dimensions and elevations using survey personnel trained, experienced, and skilled in construction layout and staking. Do not hire Department personnel to perform survey work.

Furnish horizontal and vertical control meeting the Department's Survey Manual requirements. Furnish the original survey notes upon request. Furnish the notes showing the initial layout and primary controls and references and the method of independent check before starting work on the substructure units. Submit a copy of the structure excavation cross-section notes. The Project Manager reserves the right to re-survey any pay item area.

Make calculations from the plan information to control alignment and elevation. Correct all mis-locations, mis-alignments, and incorrect elevations caused by Contractor calculations, layouts, and surveys at Contractor expense. Submit the proposed method of correction for approval. Do not begin the corrective work until the proposal has been reviewed and approved.

#### **105.08.3 Materials and Equipment**

Furnish all materials and equipment required to perform this work.

Keep survey notes in a standard field notebook, written in a clear, orderly, neat manner meeting the Department's Survey Manual requirements and standard surveying practice. If survey notes are generated electronically, produce notes in a format meeting these requirements. The Project Manager will inspect the field notes for acceptance. The finished notes become the Department's property.

Perform the work meeting all contract requirements.

#### 105.08.4 Construction Requirements

Use a finish grade control method that provides positive horizontal and vertical alignment control for the required surfacing sections and ride quality.

#### 105.08.5 Survey Tolerances and Inspection

The Department will perform finish grade checks based on the following:

- A. Subgrade.** Three random stations per 1,000-foot (300-meter) section will be checked. The 1,000-foot (300-meter) section will be accepted if 80 percent or more of the points checked are within a vertical tolerance of  $\pm 0.10$  foot ( $\pm 30$  mm), and the horizontal alignment is within 0.30 foot (90 mm) of the true line. If not within required tolerances, rework the entire 1,000-foot (300-meter) section. Three new random stations will be checked after rework is completed. Random checks will be performed for finish ditch grade control to assure proper drainage.
- B. Special Borrow.** Three random stations per 1,000-foot (300-meter) section will be checked. The 1,000-foot (300-meter) section will be accepted if 80 percent or more of the points checked are within a vertical tolerance of  $\pm 0.10$  foot ( $\pm 30$  mm), and the horizontal alignment is within 0.30 foot (90 mm) of the true line. If not within required tolerances, rework the entire 1,000-foot (300-meter) section. Three new random stations will be checked.
- C. Aggregate Surfacing.** Six random stations per 1,000-foot (300-meter) section will be checked. Each 1,000-foot (300-meter) section will be accepted if 85 percent or more of the points checked are within a vertical tolerance of  $\pm 0.10$  foot ( $\pm 30$  mm), and the horizontal alignment is within 0.30 foot (90 mm) of the true line. If not within required tolerances, rework the entire 1,000-foot (300-meter) section. Six new random stations will be checked.

Sections that are obviously defective may or may not be checked prior to rejection.

A station check consists of centerline, shoulders, any break in cross slope, and intermediate points not to exceed intervals of 20 feet (6 m). All elevation checks are taken on the material, not on the finish grade control. The Project Manager may increase or decrease the number of stations being checked. The Project Manager will perform the finish grade check by the close of the working day following the notification of a completed section. Contract time will be extended day for day, without any other compensation, for Department caused delays beyond the allotted time to perform the finish grade check.

#### 105.08.6 Method of Measurement

- A. Finish Grade Control.** Finish grade control is measured by the course foot (kilometer) along the roadway centerline to the nearest 50 feet (0.01 kilometer). A course foot (course kilometer) is one foot (one kilometer) for each two-lane roadway including shoulders and ditches. Each traffic lane is considered as one-half course foot (one-half course kilometer) including the adjacent shoulder, ditch, parking, turning, median lanes, and chain up areas.

The subgrade and each surfacing course requiring finish grade control are measured separately by the course foot (course kilometer) for each roadway section, ramp, intersecting roadway, PTW connection, temporary detour, and each frontage road.

Finished grade control for approaches is not measured for payment.

- B. Bridge Survey.** Bridge survey is measured by the lump sum.

**105.08.7 Basis of Payment**

Payment for the completed and accepted quantities is made as follows:

<b><u>Pay Item</u></b>	<b><u>Pay Unit</u></b>
Finish Grade Control	Course Foot (kilometer)
Bridge Survey	Lump Sum

Correct all deficient work due to incorrect finish grade control or bridge survey and reset reference points lost or destroyed by traffic or construction at Contractor expense.

Payment at the contract unit price is full compensation for all resources necessary to complete the item of work under the contract.

**105.09 AUTHORITY AND DUTIES OF PROJECT MANAGER**

Each project will be staffed with a Project Manager who is the Engineer's direct representative. The Project Manager has immediate charge of the engineering details of each construction project and is responsible for the administration and satisfactory completion of the project.

The Project Manger can:

1. Reject defective material.
2. Suspend work being improperly performed.
3. Execute any authority delegated to the Project Manager by the Engineer.

The Project Manager will be identified before work begins.

**105.10 AUTHORITY AND DUTIES OF INSPECTORS**

Department Inspectors are authorized to:

- A. Inspect all work being done and materials furnished. Inspection extends to all or any part of the work and to the preparation or manufacture of the materials to be used. Inspection does not relieve the Contractor's obligation to perform the work as specified in the contract.
- B. Reject materials or suspend the work until the issue can be referred to and decided by the Project Manager.

Inspectors, Technicians, and Aides cannot:

- A. Revoke, alter, enlarge, or relax any requirements of the contract.
- B. Final approve or accept any portion of work.
- C. Issue instructions contrary to the contract.

Only the Engineer is authorized to make contract changes, waive or alter the contract specifications, and then only if it is made in writing. Assure that the change, waiver, or alteration is in writing before taking action on it.

**105.11 INSPECTION OF WORK**

All work is subject to Department inspection. Inspectors may not be at all work activities nor available for all work shifts for each work activity. Perform the work meeting the contract requirements regardless of inspection.

Allow the Inspector access to all parts of the work and furnish information and assistance necessary to make a complete and detailed inspection. Provide a safe environment for the Inspector during the inspections.

Inspection of the work does not relieve the Contractor of its responsibility to meet the contract requirements. The Inspector cannot waive contract requirements.

Remove or uncover portions of the finished work as directed. Once examined, restore the work to the contract requirements. If the work is acceptable, the uncovering, or removing and replacing the covering or making good the parts removed is paid for as extra work. If the work is

unacceptable, the uncovering, removing, and replacing the covering or making good the parts removed is at Contractor expense.

Work done or materials used without inspection by an authorized Department Inspector may be ordered removed and replaced at Contractor expense.

When a government agency, political subdivision, a utility or railroad is to accept or pay a portion of the cost of the work covered by the contract, the organization's representatives may inspect the work. The inspection does not make that entity a party to the contract nor permit it to interfere with the rights of either party to the contract.

### **105.12 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK**

Work not meeting the contract requirements is unacceptable, unless determined acceptable under Subsection 105.03.

Remove and replace any unacceptable work before final acceptance at Contractor expense. This requirement has full effect regardless of the fact that the unacceptable work or defective materials were known or overlooked by the Inspector.

Work done contrary to instructions received, or beyond the plan limits, or extra work done without the permission of the Project Manager will not be considered for payment. Work so done may be ordered removed, restored or replaced at Contractor expense.

Neither the Contractor nor the Department incurs any liability by reason of any verbal directions or instructions received from the Project Manager. The Department will not be liable for extra materials furnished or used, or for extra work or labor done, unless required by written order from the Project Manager.

If the Contractor fails to follow any order made under this Subsection, the Project Manager has the authority to remove, replace, or restore the work and deduct the costs from any monies due or to become due the Contractor.

### **105.13 EQUIPMENT**

Submit to the Project Manager a list of all construction equipment to be used on the project. Include the year, make, model, type, and serial number for each piece of construction equipment.

Submit this list at the pre-construction conference. Submit updates whenever other construction equipment is brought onto the project.

### **105.14 RESERVED**

### **105.15 ACCEPTANCE**

#### **105.15.1 Reserved**

#### **105.15.2 Final Inspection**

Upon notice of completion of the entire contract, the Project Manger will arrange to make a final inspection. When all work is complete but deferment of final inspection is necessary for causes outside the Contractor's control, the Project Manager will issue a suspend work order and contract time charges will cease.

If the contract work is found satisfactorily completed, the inspection will constitute the final inspection. If the inspection discloses unsatisfactory work, the Project Manager will issue instructions to the Contractor on the necessary corrections. Immediately comply with the instructions. When the deficiencies are corrected, another inspection will be made which constitutes the final inspection.

Upon completion of the final inspection, submit a completed "Contractor's Final Inspection" (Form CSB 105\_15\_2). The form is available from the Department's website or the Project

Manager. The Contractor's project superintendent must sign the certification, which must be sworn to and notarized. The certification must state that:

1. The Department and the Contractor have visually inspected the work, and the Contractor verifies that the work was completed in full accordance with the specifications and the requirements of the contract.
2. The Project Closeout Checklist for the Storm Water Pollution Prevention Plan (SWPPP) has been completed, all necessary corrective actions taken and the SWPPP transferred to the appropriate entity.
3. Liquidated damages have or have not been assessed, and damages that have been assessed are or are not disputed by the Contractor.
4. The Contractor is aware that the Department will not consider the contract for "final acceptance" until the Contractor has fully completed its FHWA Form PR 47 (if required), required labor and materials certifications and documentation, and reviewed and agreed to the final estimate.

Completion and acceptance of the Contractor's Final Inspection is not a statement or commitment by the Department that the work meets the contract requirements, and does not waive or alter any of the contract's terms. The contract bond remains in effect until the certificate of completion is executed and the contract is accepted by the Commission.

### **105.15.3 Final Acceptance**

When the final estimate is accepted by the Contractor under Subsection 109.08, submit a completed "Contractor's Request and Certification for Acceptance" (Form CSB 105\_15\_3). The form is available from the Department's website or the Project Manager. An authorized officer of the Contractor must sign the certification, which must be sworn to and notarized. The certification must state that:

1. The work requested for acceptance has been completed in accordance with the contract's specifications, and the required materials have been used, both in quality and quantity.
2. All claims to be made on the contract have been fully submitted in writing to the Engineer, and are current as of that date.
3. There are no pending investigations referencing alleged nonpayment to subcontractors or suppliers.
4. There are no pending labor compliance or nonpayment claims on the contract.
5. There are no known environmental violations, and the Contractor is responsible for any violations issued for damages prior to the transfer of the SWPPP.

If any of the above is not completed in full before the certification is submitted, the Project Manager will inform the Contractor that the acceptance of the contract is rejected. If the contract receives final acceptance, a Certificate of Completion will be issued within 10 days and the final estimate submitted to Accounting for payment.

## **105.16 CLAIMS FOR ADJUSTMENT AND DISPUTES**

### **105.16.1 Notice of Claim**

Notify the Project Manager in writing by no later than the next business day of disagreements that are to be the subject of a claim for additional compensation, time extension, contract change, or other remedy. Provide full details in the written notice why additional compensation, time extension, contract change, or other remedy is warranted. Include in the notice of claim all documentation showing the history of the disagreement.

Upon submission of the written notice, immediately begin keeping and maintaining complete and specific daily records using the Department's "Claim Cost Record" (Form CSB105\_16\_1) of

all details and costs directly related to the disagreement. The form is available from the Project Manager or the Department's website. Base equipment costs on internal rates for ownership, depreciation, and operating expense. Provide the Project Manager with updates of details and costs related to the disagreement as they develop.

Failure to timely provide the written notice as required waives the Contractor's right to make any claim for the disagreement. Ensure that any notice of disagreement is fully and completely explained and documented, as the Department expects and requires early notice to mitigate costs and to fully document any potential costs.

The Project Manager will attempt to resolve the disagreement after the written notice is submitted. The Project Manager will issue a written response no more than 14 calendar days after receipt of the written notice.

#### **105.16.2 Submission of Certified Claims**

If an agreeable resolution is not reached within 14 calendar days of the written notice, the Contractor may submit a Certified Claim using the "Certified Claim" (Form CSB105\_16\_2) to the Project Manager no more than seven calendar days after receipt of the Project Manager's response. The form is available from the Project Manager or the Department's website. Include all Claim Cost Records to date with the Certified Claim. Provide copies to the District Construction Engineer and the Construction Engineering Services Engineer of the Engineering Division. The Project Manager will continue to attempt to resolve the disagreement after the Certified Claim is submitted.

Detail the following in the Certified Claim:

- A.** Reasons for each requested remedy, referenced to the applicable contract provisions;
- B.** Objections to the Project Manager's response, and
- C.** Basis for and amount of any additional compensation, extension of time, contract change, or other remedy, including any potential solutions.

The Prime Contractor must verify the claim data and certify the claim, whether originating from the Prime Contractor, Subcontractor, supplier or materialman, for the Department to consider it. Only the Prime Contractor may submit the Certified Claim.

Failure to timely submit the completed Certified Claim form and the Claim Cost Records as required is a material breach of contract and waives the Contractor's right to make any claim for the disagreement or be entitled to any compensation, time extension or contract change related to the disagreement.

Allow the Project Manager access to and provide copies of all records when requested by the Department. Make other project records available for technical and audit evaluation during the project and after the claim-related work has been performed. Promptly furnish written clarification and any additional information or data requested by the Department.

After the Certified Claim is submitted, continue keeping and maintaining complete and specific daily records using the Department's "Claim Cost Record" form of all details and costs directly related to the claim. Base equipment costs on internal rates for ownership, depreciation, and operating expense.

Submit claim updates every month until the claim is resolved. Include all costs incurred and any other pertinent information discovered after the Certified Claim was submitted, and include copies of all Claim Cost Records for that month.

Do not change the basis of a claim after submitting the written notice. Do not supplement a faulty submission to rebut or dispute a decision made by the Project Manager. Claims that have changed in basis or that have been supplemented due to an original faulty submission will not be considered, and are waived by the Contractor.

The Contractor waives the claim and any compensation, time extension, or contract change for any of the following:

1. Not filing a timely, complete written notice;
2. Not submitting a timely and complete Certification of Claim form;
3. Not submitting monthly claim updates as required; or
4. Not keeping and submitting timely and complete Claim Cost Records.

### **105.16.3 Decision on Claims**

The District Construction Engineer will provide a written decision no more than 30 calendar days after receipt of the Certified Claim. If additional time is required to research and evaluate the Claim, the District Construction Engineer can extend the time period 14 calendar days by notifying the Contractor in writing.

To advance the claim, appeal the District Construction Engineer's decision to the Board of Contract Appeals (Board). Submit the appeal by letter to the Construction Engineering Services Engineer no more than 30 calendar days after receipt of the District Construction Engineer's decision. Provide a copy of the appeal to the District Construction Engineer. The District Construction Engineer's decision is final unless appealed no more than 30 calendar days after receipt of the decision. If appealed, the District Construction Engineer will forward the original claim, supporting documents or evidence, and the District's evaluation to the Construction Engineering Services Engineer.

If the District Construction Engineer denies the Certified Claim, the Contractor may request a non-binding, independent third party mediation to the Construction Engineer of the Engineering Division. The request for third party mediation must be submitted in writing no more than 30 calendar days after the date of the Contractor's appeal. The Contractor and the Construction Engineer must mutually agree to the mediator and schedule the mediation date within 14 days of the request for mediation or the claim will proceed to the board. All costs associated with mediation are shared equally between the Contractor and the Department. Mediation does not suspend the Contractor's requirement to continue submitting monthly updates and maintaining the required cost records. Claims undergoing third party mediation will not be submitted to the Board unless the mediation is unsuccessful.

The Construction Engineering Services Engineer will submit the claim to the Board. Board meetings are scheduled on a quarterly basis, with the schedule available on request from the Construction Engineering Services Engineer. Claim appeals received less than 60 days in advance of the next scheduled Board meeting may not be presented to the Board until the following scheduled meeting.

The Board will only review those documents and evidence submitted in the original claim, its supporting documents, and the District's evaluation, but may request further information from the District Construction Engineer or the Contractor.

The Board may affirm, overrule, or modify, in whole or in part, the decision of the District Construction Engineer. The decision of the Board is the final decision.

## **SECTION 106 CONTROL OF MATERIAL**

### **106.01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS**

The contract specifies the basis of acceptance for materials and assemblies.

#### **106.01.1 Source of Supply**

Use only materials that meet the contract requirements. Submit a list of the names and addresses of the suppliers, producers, manufacturer's and fabricators furnishing products for the contract. Itemize the list as shown in the contract schedule of items.

Material may be inspected and tested at the source of supply before delivery to the project. All materials may be inspected, tested, and possibly rejected before incorporated into the work.

Determine the quality and quantity of materials produced at or developed from any source based on the contract documents and by conducting an independent source investigation.

If payments due the owner of a materials source become delinquent and the owner notifies the Department, a sum equal to the amount of the delinquent payments may be withheld from estimate payments due the Contractor.

#### **106.01.2 Samples, Tests, and Cited Specifications**

**A. Materials accepted by Certification.** Ensure all required certifications for materials are furnished to the Department and the Department has inspected and accepted the certification before incorporating the materials into the work.

The Project Manager may grant written permission to place materials before receiving certifications for materials only under the following conditions:

1. Not placing the materials poses immediate danger to traffic or the general public; or
2. Not placing the materials would cause a delay in the work resulting in damage to the project or adjacent property.

The Project Manager may require that materials be removed and replaced at Contractor expense if the certification(s) are not furnished.

**B. Materials Accepted by Department Testing.** Do not incorporate material into the work until it is inspected or sampled by the Department.

Reference to a specification or test designated in AASHTO, ASTM, Federal Specifications, or other recognized, nonproprietary national organization, is the specification or test method that is current on the date of advertisement for bids and as amended by the Department's Test Method Manual. Copies of individual test methods are available from the Department's Materials Bureau in Helena.

Department material tests are by and at the Department's expense. Where there is a difference in the test methods, the order of precedence for tests is:

1. The Department's Standard Material Test Methods in the Materials Manual
2. AASHTO
3. ASTM

Submit representative preliminary material samples in the specified quantities for testing upon request. The testing of preliminary samples does not constitute acceptance of the materials. Only materials delivered for incorporation into the work will be accepted or rejected based on the test results specified in the contract.

#### **106.01.3 Unacceptable Materials**

All materials not meeting the contract requirements will be accepted or rejected under Subsection 105.03.

## **106.02 LOCAL MATERIAL SOURCES**

### **106.02.1 General**

Local aggregate, borrow and topsoil materials sources include prospected sources, Contractor-furnished sources, and mandatory sources.

Provide the source for obtaining local materials unless mandatory sources are specified. When prospected sources are identified in the contract, use the prospected sources or locate other sources of material. Contractor-furnished sources must be approved by the Engineer. The Contractor must:

- A.** Provide an approved reclamation plan meeting Subsection 106.02.5 before using any materials source;
- B.** Comply with Section 106 of the National Historic Preservation Act; and
- C.** Adhere to state and federal requirements and obtain clearance from the State Historic Preservation Officer before using material from surfacing and borrow sources.

### **106.02.2 Prospected Sources**

Contact the Department for information on Department prospected local material sources.

The Department is not responsible for the quantity or quality of materials indicated in the prospected source reports. Test data included in the reports are based on the samples tested from the exact locations shown using standard tests. No interpretation is made or intended by the Department. Any interpretation is the judgment of the person examining the tests. See Subsection 102.06 concerning verifying quantity and quality by an independent subsurface investigation before submitting a bid.

If a "Surfacing Materials Prospect Report" shows a prospected source to be "Department-optional" or "Department-owned," the material may be available for use, possibly with a royalty or other cost. Do not sell material from Department-owned or Department-optional sources without a written agreement establishing royalty refunds to the Department.

Follow Department made arrangements with landowners for sampling and obtaining material from the prospected material sources.

Pay all royalties and adhere to all agreed stipulations, including contouring of pits, topsoil conservation and replacement, seeding, repair or obliteration of haul roads, cattle guards, and fencing; the cost of which is incidental to and included in the materials cost.

### **106.02.3 Contractor-furnished Sources**

Acquire the rights to take materials from Contractor-furnished sources and pay all related costs, including costs due to increased haul length, exploring and source development.

Furnish material that meets all statutory and regulatory requirements for being non-toxic and non-hazardous. Do not furnish material from mine tailings and waste, slag, sources within state and federal superfund sites, or sources within areas known or suspected to be contaminated with toxic substances or petroleum products unless laboratory reports from an approved laboratory indicate the material meets these requirements.

The Department will process and test samples to determine the suitability of the material. See Subsection 106.10 for the number of Department furnished tests at Department expense.

Arrange with the Project Manager for representative samples to be taken and witnessed by the Department at least 30 calendar days before beginning aggregate production. Provide all equipment and labor necessary for the sampling.

Source approval is based on part or all the following sample test results:

- A.** Wear Test MT-209 (acceptance);
- B.** Volume Swell Test MT-305 (acceptance);
- C.** Trial Mix Marshall Properties MT-306 (informational);

- D. Resistance of Compacted Asphalt Mixtures to Moisture-induced Damage AASHTO T 283-02 (MT 330); and
- E. Adhesion MT-322 (informational).

Passing wear and volume swell test results are mandatory for Department approval of bituminized material aggregate sources. Passing wear test results are mandatory for Department approval of untreated aggregate sources.

Assume all risk for producing aggregate from sources not meeting the wear test (MT 209). The Department will randomly test stockpiled aggregate for wear acceptance.

The Department's approval of the source does not release the Contractor from the responsibility to produce aggregate meeting all specified acceptance requirements.

#### **106.02.4 Mandatory Material Sources**

Use of materials from mandatory sources is a condition for preparing a bid and executing a contract. Follow the conditions in the contract for producing materials from mandatory sources.

#### **106.02.5 Reclamation Requirements**

- A. **General.** Reclaim all land used in constructing the project as required by the approved reclamation plan. Comply with the pertinent statutes relating to the open cut mining (Title 82, Ch. 4 MCA); the hard rock mining (Title 82, Ch. 4, Part 3); water quality (Title 75, Ch.5); stream bank preservation (Title 82, Ch. 5, Part 5 and Title 75, Ch. 5); Montana County Noxious Weed Management Act Title 7, Ch. 22 Part 21; and all other applicable federal, state, and local statutes, regulations and ordinances.

The Department of Environmental Quality has final responsibility for administration of the Open Cut Mining Act and the Hard Rock Mining Act and must review and approve all reclamation plans and reclamation work. Follow all directives and instructions issued by the Department of Environmental Quality with regard to reclamation work.

- B. **Reclamation Plan.** Submit a copy of the approved reclamation plan before removing earth, quarried rock, sand, gravel, or other substance from any materials source. Follow the Department of Environmental Quality "Format For Reclamation Plan" and "Mapping Guidelines" when developing reclamation plans. The format and guidelines are available from:

Department of Environmental Quality  
Permitting and Compliance Division  
Industrial and Energy Minerals Bureau  
Open Cut Mining Section  
Helena, MT 59620-0901

The time allowed for approval of reclamation plans is included in the Open Cut Mining Act, Section 82-4-434 MCA.

- C. **Reclamation Work.** Perform reclamation immediately after removing the necessary material. Leave all slopes in a stable condition and, if topographic conditions permit, grade to no steeper than 3:1 after final grading. Grade the excavated area to maintain the natural contour of the land and blend into the surrounding terrain. Remove or grade all outcroppings to daylight where possible.

Strip and stockpile all topsoil and overburden from the material source, stockpile site, crushing area, and equipment parking areas before excavating material. Salvage all topsoil from all new or widened haul, access, and service roads before grading or surfacing. Reclaim all roads when removal operations are complete. Store overburden or subsoil separately from topsoil and replace before topsoil is replaced on reclaimed areas. Uniformly re-distribute all topsoil to the entire reclaimed area.

Seed all re-topsoiled areas during the first seeding season following grading and topsoil replacement. Contour-seed all slopes steeper than 3:1.

Fence newly seeded, reclaimed areas including roads where required to protect from livestock. Use Type F-3M fence.

Do not locate material sources in a flowing stream or on a stream floodway at a location likely to develop a new channel to the stream during flooding. Leave the final floor elevations of material sources high enough to not be impacted by fluctuations in the groundwater table, unless addressed in the approved reclamation plan. Provide protection and safety of persons and property adjacent to the work.

**D. Method of Measurement and Basis of Payment.** Reclamation of material sources is incidental to the materials cost.

#### **106.02.6 Protection of Livestock and Property**

Prevent livestock from straying into or out of any materials source.

Protect all irrigation facilities from construction operations. Promptly repair or replace damaged irrigation facilities to the landowner's satisfaction at Contractor expense.

#### **106.02.7 Rejects (Excess Fines)**

Material referred to as "rejects" are inherent in a rock pit, gravel pit, or quarry, or accumulated during crushing and screening operations. Stockpile rejects, from material sources owned or optioned by the Department and not acceptable for use on the project, at a site selected or approved by the Engineer when requested. Stockpiled reject material is paid for at 15 cents per ton mile (10 cents per metric ton kilometer) for haul in excess of 200 feet (61 meters) from the crusher site to the stockpile.

Retain title to all rejects accumulated during aggregate production from Contractor-furnished sources. Department purchased rejects are paid for at an agreed purchase price.

#### **106.03 CERTIFICATION OF COMPLIANCE**

The Engineer may designate certain materials or assemblies that can be incorporated into the work by Certificates of Compliance that state they meet the contract requirements. A manufacturer's authorized representative must sign the certificate. Clearly identify each lot of certified materials or assemblies delivered to the work in the Certificate of Compliance.

Materials or assemblies used on the basis of Certificates of Compliance may be sampled and tested at any time. Materials not meeting contract requirements will be rejected.

#### **106.04 PLANT INSPECTION**

Meet the following conditions if materials are Department inspected at the source of supply or manufacture:

- A.** Provide the Inspector full cooperation and assistance during inspections.
- B.** Provide the Inspector full entry to all parts of the plant used in the manufacture or production of the materials.
- C.** Furnish the facilities to determine if the material furnished meets contract requirements.
- D.** Provide and maintain adequate safety measures.

Materials inspected at the source may be re-inspected before incorporation into the work. Materials not meeting the contract requirements will be rejected.

#### **106.05 FIELD LABORATORY**

The Department will furnish all field offices and laboratories.

Furnish 110 to 120 volt alternating current of sufficient capacity and a potable water supply to operate all testing equipment for the offices and laboratories at Contractor expense.

**106.06 QUALIFIED PRODUCTS LIST (QPL)**

MDT Materials Bureau maintains a Qualified Products List (QPL). Obtain further information and requirements on the QPL website, located at <http://www.mdt.mt.gov> contracting/consultant link.

The QPL is limited to certain types of items. Different types of products may be added to, or deleted from the QPL. Procedures for qualifying, listing, and de-listing products are available on the QPL website.

Materials listed as approved on the QPL at the time the materials are delivered to the project may be accepted as a pre-approved QPL item in lieu of the normal sampling and testing procedures.

Submit the documentation required by the QPL.

Work to qualify or list products on the QPL is not measured for payment.

**106.07 HANDLING AND STORAGE OF MATERIALS**

Store and handle materials to preserve their quality. Stored materials are subject to inspection and re-testing before incorporating into the work. Locate stored materials for ease of inspection.

Obtain approval to use portions of the right-of-way for storage and placing the plant and equipment.

Obtain additional required space at Contractor expense. Do not use private property for storage without the landowners or lessees written permission. Furnish copies of the written permission to the Project Manager. Restore all storage sites to original condition at Contractor expense.

Transport bulk materials in vehicles that do not cause material loss or segregation.

**106.08 DEPARTMENT-FURNISHED MATERIAL**

Department furnished material will be delivered or made available at the locations specified.

Include the cost of handling and placing Department-furnished materials in the contract unit price for the item.

Be responsible for all Department furnished material. Deductions will be made from any monies due for shortages, deficiencies, and damage that occur after delivery. Demurrage charges, resulting from failure to accept the material at the designated time and location will be deducted from monies due the Contractor.

**106.09 DOMESTIC MATERIALS**

Furnish domestic steel or iron materials for permanent incorporation in the work. Domestic material is material that all manufacturing processes, including coating of steel or iron, occur in the United States. Pig iron, and processed, pelletized and reduced iron ore may be manufactured outside the United States. Furnish the appropriate manufacturer's mill tests and certifications documenting the manufacturing processes, including coatings of covered materials, performed in the United States. A minimal quantity of foreign manufactured steel and iron material may be used if the cost of the material, including delivery costs to the project, does not exceed one-tenth of one percent of the total contract amount or \$2,500.00, whichever is greater. Do not incorporate steel or iron materials into the project until the proper documentation is furnished.

**106.10 BITUMINOUS AND CONCRETE MIX DESIGNS AND TESTING OF SURFACING MATERIAL SOURCES**

The Department will furnish the number of mix designs and tests shown in Table 106-1, at no cost to the Contractor:

**TABLE 106-1  
NUMBER OF MIX DESIGNS AND TESTS FURNISHED AT NO COST**

DESCRIPTION	NO. FURNISHED PER CONTRACT
Plant Mix Surfacing Mix Design	2 per grade
Plant Mix Base Mix Design	2 per grade
Portland Cement Concrete Mix Design	1 per class
Cement Treated Base Mix Design	2 per grade
Surfacing Material Testing Package	
Indicated source(s) shown on plans	2
Surfacing source(s) furnished by the Contractor	2

The Contractor will be charged the Department's cost for each additional mix design and testing package furnished. The total cost will be deducted from the progress estimate payments using the schedule of the current charges for additional testing packages and mix designs available from the Project Manager.

**SECTION 107**  
**LEGAL RELATIONS AND**  
**RESPONSIBILITIES TO THE PUBLIC**

**107.01 LAWS, RULES, AND REGULATIONS TO BE OBSERVED**

Observe and comply with all of the following:

- A.** Federal and state laws and regulations;
- B.** Local laws and ordinances; and
- C.** Regulations, orders and decrees of bodies or Tribal ordinances having any jurisdiction or authority.

Protect and indemnify the Department and its representatives against any claim or liability arising from the violation of any of the above listed items, whether violated by the Contractor, a Subcontractor, materialman, or supplier, or any of their employees or agents.

Follow all rules and regulations of federal, state, and local health officials. Do not require an employee of the Contractor or Subcontractor (s) to work in surroundings, or under conditions that are unsanitary, hazardous or dangerous to health or safety. Admit any inspector of the OSHA or other legally responsible agency involved in safety and health administration without delay and without presentation of an inspection warrant to all areas of the work and project site upon presentation of proper credentials.

Comply with and enforce all federal, state, and local safety standards (i.e. the Montana Scaffolding Act, etc.) for Contractor's workers and its Subcontractor's workers on the project, protecting and indemnifying the Department and its representatives from all claims, suits, damages or liabilities from all accidents or safety violations, and ensuring the public's safety. The Contractor is not to enforce safety standards for Department employees.

Follow federal, state and local laws, rules and regulations regarding unlawful employment practices including race, religion, color, sex or national origin discrimination, and that define actions required for Affirmative Action and Disadvantaged Business programs.

Work within a State or National Forest is under the regulations of the authority having jurisdiction governing the forest.

Immediately notify the Engineer in writing if any discrepancy or inconsistency is discovered between the contract and any law, ordinance, regulation, order or decree.

**107.02 PERMITS, LICENSES, AND TAXES**

Obtain all legally required permits and licenses, pay all charges, fees, taxes, and fuel taxes giving all notices necessary and incidental to the lawful prosecution of the work.

**107.03 PATENTED DEVICES, MATERIALS, AND PROCESSES**

Do not use any design, device, material, or process covered by letters of patent or copyright, without a legal agreement with the patentee or owner. Indemnify and hold harmless the Department, any affected third party, or political subdivision from all claims for infringement for the use of any patented design, device, material or process, or trademark or copyright. Indemnify the Department of all costs, expenses, and damages obligated for payment by reason of an infringement during the prosecution or after the completion of the project.

**107.04 RESTORING SURFACES OPENED BY PERMIT**

The Department may grant permits to construct or re-construct a utility facility in the highway or street for authorities of the municipality in which the work is done. Do not allow any individual, firm, or corporation to make an opening in the street without a Department permit. Do not allow any person or persons to make an opening unless authorized by the Engineer. Parties bearing

permits may make openings in the street. When requested by the Engineer, repair these openings. The work is paid for under Subsection 104.03 or as provided in the contract. Repair to the same standards as the original work.

#### **107.05 FEDERAL-AID PARTICIPATION**

Federal laws, rules, or regulations in conflict with any provisions of a federally assisted contract prevail and take precedence over conflicting contract provisions.

Federally assisted work is under Department supervision and subject to inspection and approval of the United States Government. Inspections by authorized Federal representatives do not make the United States a party to the contract and does not interfere with the rights of the contract parties.

#### **107.06 PUBLIC CONVENIENCE AND SAFETY**

Conduct construction with minimum obstruction to traffic. Provide safety and convenience to the public and protect persons and property including, but not limited to, items specified in Subsection 104.05 and Section 618.

Do not close public roads without the Engineer's permission.

#### **107.07 RAILWAY - HIGHWAY PROVISIONS**

Responsibilities for work involving railway property are:

**A. Contractor.** Perform work on railroad right-of-way without interfering with the movements of trains or traffic on railway property. Do not cross the railway right of way or tracks except at temporary or existing, open public grade crossings.

Furnish signed copies of the "Contractor Requirements and Acknowledgment for Working on Railroad Right of Way" found in the contract to the railroad and Project Manager before entering railroad property and starting work.

Provide advance notice, as agreed to between the Contractor and railway officials, before working on railway property, hauling across railway tracks, or blasting within 1000 feet (305 m) of railway property.

Comply with Subsections 107.09 and 107.18 when blasting or performing other work on or near railway property.

Furnish insurance for all work performed as required by Subsection 107.13 or the contract. Make arrangements with the railway company for railway crossings not specified in the contract at Contractor expense.

Reimburse the railroad company for all costs of railway flagging, other protective services, and installation of temporary crossings for haul roads for Contractor-furnished material sources based on billings submitted by the railway company.

**B. Department.** The Department will:

1. Enter into an agreement with the Contractor and the railway company when required by the railway company;
2. Arrange for railway crossings specified in the contract and pay for the crossings, railway flagging and other protective services necessary for work performed on or near railroad right of way, including haul road track crossings to Department-optioned or owned material sources; and
3. Forward billings for flagging, track crossings, and other protective service billings for Contractor-requested crossings, submitted to the Department by the railway company.

**C. Railway.** Railway companies must:

1. Furnish all flagging or other protective service as necessary for the safe operation of trains or traffic on railway property, and

2. Construct, maintain, protect, and remove temporary crossings and submit billings for flagging or other protective services to the Contractor or Department.

### **107.08 LOAD RESTRICTIONS**

Do not exceed legal load restrictions when hauling material and equipment on public roadways and bridges within and beyond the project limits and on all new and existing portland cement concrete roadways, treated base courses, bituminous surfacing lifts and courses, including plant mix base, plant mix surfacing, and seal and cover.

Do not place loads on a concrete pavement, treated base, or structure before the curing period has been achieved.

Repair damaged roadways and structures resulting from construction operations at Contractor expense.

Measure and analyze truck legal load limits by the bridge formula before hauling any material over existing or newly paved roadways and bridges. Furnish a drawing showing distances between axles, truck tare weight, and the overall length of each truck.

Show a minimum of two applications using the bridge formula on the drawing. Include on the first application the overall length between axles. For the second application, do not consider the steering axle, and add the value obtained from the bridge formula to the anticipated load on the steering axle. Use the lesser of the two values obtained as the legal load. Retain a copy of the appropriate drawing in each truck. Do not exceed established legal load weights for single axle and tandem axles.

The weight on a truck in excess of the maximum legal weight as determined above will be deducted from the quantity considered for payment.

Comply with this provision and all applicable laws, rules, and regulations related to operation of motor vehicles on public roads.

Trucks operated on public roads may be checked by the Department's Motor Carrier Services and fines levied for exceeding legal loads.

Do not use existing bridges, new bridges, or bridges to be removed but still in use by the public as work platforms, work bridges, or to support or move equipment without the Engineer's written approval.

Approval will be granted only where load analysis and review of traffic control, safety, and convenience show it to be in the public interest.

No additional compensation will be considered or allowed for any violation of these provisions.

### **107.09 USE OF EXPLOSIVES**

Transport, store, handle, and load explosives and blasting agents following all laws and ordinances as well as the applicable requirements of Title 29, Title 30, and Title 49 of the Code of Federal Regulations when using, handling, loading, transportation, and storing explosives and blasting agents.

Use explosives without endangering life or property and be responsible for all resulting property damages, injury, or death.

Only use persons experienced in the handling of explosives and do not fire explosives until sounding a warning and removing all persons from the radius of danger.

Notify each property owner, railway company, and public utility company having facilities near the blasting area of the intent to use explosives to enable them to take precautions to protect their property from injury. Be responsible for damages to property or injury to persons attributable to the use of explosives.

### **107.10 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE**

Preserve all public and private property when performing work. Do not disturb or damage land monuments and property markers until witnessed or referenced by the Project Manager.

Be responsible for all damage to public and private property resulting from any act, omission, neglect, or misconduct in the manner or method of executing work until the project is accepted. This responsibility includes damage caused by compaction, vibratory, and impact equipment.

Replace or restore damaged property to its original condition at Contractor expense.

Conduct a review of all public roadways to be used by Contractor equipment, including haul operations, before work begins. Arrange for a local road authority representative and the Project Manager to attend the review.

The parties are to review and document the roadways existing condition and determine a dispute resolution process if an agreement on roadway restoration cannot be reached.

Once the roadway is no longer in use by the Contractor, conduct another review by the same parties. The parties are to reach an agreement on what is required to restore the roadway comparable to its original condition.

Perform all work required to restore the roadway comparable to its original condition and obtain the Engineer's approval of the work once completed.

Roadway restoration is not measured for payment.

### **107.11 ENVIRONMENTAL PROTECTION**

#### **107.11.1 General**

Follow all state, local, and federal laws and regulations controlling pollution of the environment. Take precautions to prevent pollution of streams, lakes, ponds, reservoirs, and wetlands with silt, fuels, oils, bitumens, chemicals, or other harmful materials. Prevent pollution of the atmosphere from particulate and gaseous matter.

Obtain all required permits and furnish copies of all permits or authorizations before starting activities that require permits.

#### **107.11.2 Water Pollution and Siltation Regulations**

Attention is directed to Title 75, Chapter 5, MCA, (Water Quality) and the administrative rules of the Water Quality Bureau, Department of Health and Environmental Sciences.

Under the Water Pollution Control Act, Construction De-watering - General Discharge Permits and Short-term Construction Authorizations are required for construction activities that may result in a violation of water quality standards of streams, lakes, or other bodies of water located on or adjacent to the project.

Under the Federal Water Pollution Control Act, as administered by the U.S. Army Corps of Engineers, Permits Branch, P.O. Box 5, Omaha NE 68101, Section 404 Permits are required for discharging dredged or fill material into wetlands or waters under the jurisdiction of the Corps. Information on Section 404 Permits may be obtained from the Corps offices in Helena or Billings.

Other requirements relating to water pollution control are covered in Section 208.

**A. Construction De-watering - General Discharge Permits.** Obtain a Construction De-watering - General Discharge Permit from the Water Protection Bureau, Department of Environmental Quality in Helena before de-watering any cofferdam or other excavation. Copies of the permit are available from the Water Protection Bureau. A permit is valid for a project only when accompanied by an authorization letter. Do not start work authorized by a Construction De-watering - General Discharge Permit, until an executed copy of the authorization letter is submitted.

The General Discharge Permit may require the treatment of wastewater by pumping the water to retention ponds for clarification or provide other approved treatment.

**B. Short-term Construction Authorization.** Obtain all Short-term Construction Authorizations, under ARM 16-20.633(3a), for all operations involving activities or improvements that would violate the Montana Water Quality Standards.

Forms for "Application For Authorization" for short-term construction activities may be obtained from the Department of Environmental Quality (DEQ), Permitting and Compliance Division.

Applications for Authorization require furnishing the following information:

1. A detailed description of all construction activities that may result in stream sedimentation or turbidity (e.g., riprap work, instream work with equipment, dredging, channeling, excavating);
2. A list of the type of equipment planned for use to accomplish the work described in (1) above and a discussion of how the equipment is to be used in conjunction with the project;
3. The date construction activity is anticipated to commence;
4. The estimated completion date;
5. A discussion of the alternatives considered or available for minimizing or eliminating stream sedimentation as a result of construction activity; and
6. A location map; plan and elevation drawings showing the temporary facilities relationship to the stream channel. Include photographs if possible.

**C. Section 404 - Nationwide and Individual Permits.** Attention is directed to the Federal Water Pollution Control Act. Follow the provisions of this act, with special attention directed to Section 404.

Construction activities in and around wetlands or waterways may be covered by a U.S. Army Corps of Engineers Nationwide Permit or may require an individual Section 404 Permit. Obtain all permits necessary for activities relating to the construction that are not covered by a Section 404 Permit already obtained by the Department. These activities may include, but are not limited to, temporary fills and berms, haul roads, work bridges, and the like, which require fill below the ordinary high-water limits of streams, wetlands, lakes, or other water bodies under the jurisdiction of the Corps.

The contract will include any additional conditions and requirements for applicable Section 404 permits.

### **107.11.3 Air Quality**

Operate all equipment including, but not limited to, hot-mix paving plants and aggregate crushers to meet the minimum air quality standards established by federal, state, and local agencies.

No additional payment will be made for the use or installation of dust or smoke control devices, for the disruption of work or loss of time occasioned by the installation of such control devices, or for any other related reasons.

### **107.11.4 Noise Pollution**

Follow all applicable laws and regulations and all requirements contained in the contract regarding noise pollution.

The contract may include additional requirements for projects located in or near urban areas.

### **107.11.5 Noxious Weed Management**

Follow the requirements of the County Noxious Weed Management Act, Title 7, Chapter 22, Part 21 MCA, and all county and contract noxious weed control requirements. Determine the specific noxious weed control requirements not specified in the contract of each county where the project is located before submitting a bid.

All costs incurred to meet the weed control requirements are incidental to other items of the contract.

#### **107.11.6 Reserved**

#### **107.12 FOREST PROTECTION**

Observe sanitary laws and regulations regarding the performance of the work within or adjacent to State or National Forests and Parks. Keep all areas in a neat condition, dispose of all refuse, and obtain permits for the construction and maintenance of construction camps, stores, warehouses, residences, latrines, cesspools, septic tanks, and other structures.

The Contractor, subcontractors, and their employees must prevent, suppress, and assist in preventing and suppressing forest fires, and immediately notify a forest official of the location and extent of any fire discovered.

Maintain spark arresters to meet the Forest Supervisor's requirements on all steam, gas, or diesel-driven machinery used and on all flues at construction camps.

#### **107.13 INSURANCE REQUIREMENTS**

##### **107.13.1 Insurance on All Contracts**

Obtain commercial general liability insurance with a general aggregate limit of \$2,000,000; an occurrence limit of \$1,000,000; and products and completed operations limit of \$1,000,000. Obtain insurance from an insurer with a Best rating of A- or better on the date the policy is written.

Obtain a policy that:

- A.** Provides coverage on an occurrence basis and not on a claims made basis;
- B.** Provides the owners and Contractor protective coverage with the same limits as the commercial general liability insurance, with the State of Montana, its agents, employees, and officers as an additional named insured;
- C.** Does not contain exclusions for explosion, collapse, and underground damage hazards; and
- D.** Provides that all insurance or self insurance maintained by the State, its agents, employees, and officers is excess of the Contractor's insurance and does not contribute with it.

Do not start work until the Department has been furnished evidence that adequate insurance has been obtained.

The insurance requirements are a condition precedent to the contract. Failure to obtain and maintain all required insurance, or permitting the insurance to lapse before the contract is complete and accepted is considered a material breach of the contract.

##### **107.13.2 Insurance Involving Railroads**

Furnish Railroad Protective Liability Insurance on behalf of the railroad when equipment or personnel are located or work is done on any railroad right of way.

The limits of liability are specified in the contract.

Obtain public liability and property damage insurance as specified in Subsection 107.13.1 before working within 50 feet (15.25 m) from the nearest rail but still on railroad property.

Submit copies of the Railroad Protective Liability Insurance policy, and a certificate of insurance required in Subsection 107.13.1 for transmittal to and approval by the railroad. Do not use or enter railroad property until railroad approval is received and the policies are in effect. This applies to all work done as a part of the project.

**107.13.3 Reserved****107.13.4 General**

Furnish insurance policies with an endorsement that prohibits canceling, altering, amending or reducing coverage without giving a minimum of 30 calendar days written notice by the insurance company to the insured and the Department. Keep the required insurance in full force and effect until all work has been satisfactorily completed and accepted under the terms of the contract. A Montana resident agent must countersign all insurance policies issued under the contract. If the state where the insurance is being purchased has a reciprocal agreement with the State of Montana and the insurance company is licensed to do business in the State of Montana, a countersignature by a Montana Resident Agent is not required.

**107.14 THIRD PARTY BENEFICIARY CLAUSE**

It is specifically agreed between the parties to the contract that it is not intended to create anyone as a third party beneficiary or to authorize anyone not a party to the contract to maintain an action for damages pursuant to the terms or provisions of the contract.

**107.15 RESPONSIBILITY FOR DAMAGE CLAIMS**

Indemnify and hold harmless the Department and the Department's officers and employees from all actions or claims brought because of injuries or damages to persons or property caused by the actions or omissions of the Contractor's employees or agents.

**107.16 OPENING SECTIONS OF PROJECT TO TRAFFIC**

The Engineer may open certain sections of the work before completion or acceptance of the contract. Opening these sections does not constitute acceptance of the work, or waive any contract requirement.

Pending completion and acceptance of the roadway, complete all repairs or removals on sections of opened roadway caused by defective materials, work or by causes other than ordinary wear and tear meeting Subsection 107.17 requirements.

If shoulders, drainage structures, or other elements of the work are not completed on schedule, the Engineer may order all or a portion of the project open to traffic. Liability and responsibility for maintaining the work before final acceptance remains in effect. Complete the remaining work with minimum interference to traffic.

**107.17 CONTRACTOR'S RESPONSIBILITY FOR WORK**

Protect the work against loss, injury, or damage caused by the elements, traffic, or any other cause, including, but not limited to, fire, theft, pilferage, vandalism, or third-party negligence until final acceptance. Rebuild, repair, and restore all loss, injury and damages to the work resulting from the above causes before final acceptance at Contractor expense.

Rebuilding, repairing, and restoring damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor (including, but not restricted to: acts of God such as earthquake, flood, tornado, or other cataclysmic phenomenon of nature or acts of the public enemy or of governmental authorities) will be paid for under Subsection 104.03. This does not excuse, or allow compensation or repayment for any act or omission by the Contractor or its subcontractors, either in violation of law, regulation, ordinance, etc., or for any act or occurrence, which could have or should have been foreseen.

Expect probable adverse weather and stream flow conditions to occur. The cost of delay, loss, injury, or damage occurring to dikes, cofferdams, caissons, work bridges, haul bridges, or any other construction item or equipment, caused by adverse weather and stream flow conditions is the Contractor's responsibility.

The above requirements do not apply to units or portions of the project accepted under Subsection 105.15.

Repair of damage not caused by the Contractor to installed delineators, impact attenuators, median barrier, guardrail, guideposts, light poles, sign supports, and the like, that have been accepted as complete and to any building that has been completed in its entirety, is fully functional, and is open to the public, will be paid for under Subsection 104.03.

Payment for repair of damages resulting from public traffic and use does not entitle the Contractor to:

- A. The release of any part of unpaid contract funds; or
- B. Relief from responsibility for defective workmanship or materials; or
- C. A waiver of any contract provision.

Conduct the work to assure maximum convenience and safety to the general public and to the property owners adjacent to the work.

Maintain access for adjacent property owners at all times.

Take precautions to prevent damage to the project during work suspensions. Provide for drainage and erect all necessary temporary structures, signs, or other facilities at Contractor expense.

#### **107.18 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES**

Protect railway, telegraph, telephone, and power company properties or other property from damage, loss or inconvenience from construction before starting work. Cooperate with the utility owners in the removal and rearrangement of underground or overhead utility lines or facilities to minimize interruption to service and duplication of work by the utility owners.

Call the Utilities Underground Location Center (1-800-424-5555) or other notification system for the marking and locating of the utilities before excavation. Do not damage underground facilities during excavating and backfilling work.

Obtain and carry a \$2,000,000.00 comprehensive insurance policy covering underground work and resulting damage to underground utilities in addition to the insurance required by Subsection 107.13.

Provide and maintain temporary drainage facilities if existing surface drainage, sewers, or underdrains are interrupted at Contractor expense until permanent drainage facilities are completed. Protect and preserve existing tile drains, sewers, other subsurface drains, conduits, and other underground structures affected by construction that can remain in use without any change.

Immediately stop work if a utility line, cable, pipe or other facility is exposed or damaged during the work. Notify the Project Manager and the utility company of the damage and its location. Cooperate with the utility company if utility services are interrupted due to an accidental break until service has been restored. The Project Manager will stop work in the area of the damaged utility should the Contractor not stop work voluntarily. Resume work upon notice from the Project Manager. No compensation is made for delays associated with utility damage caused by the contractors work.

The Department will withhold monies from estimates due or to become due the Contractor for all utility damage and related costs not reimbursed by the Contractor under this Subsection.

Do not begin work around fire hydrants until provisions for continued service have been made and approved by the local fire authority. Provide continuous repair until service is restored if water service is interrupted.

Repairs to damaged utility facilities or structures resulting from construction operations and negligence is at Contractor expense. Be responsible to the utility owners and operators for

damage, injury, expense, loss, inconvenience, delay and for any legal suits, actions, or claims that may result from the work.

The Commission may require the Contractor to furnish protective public liability and property damage insurance to each corporation, company, partnership, or individual owning or operating the properties affected.

#### **107.19 FURNISHING RIGHT-OF-WAY**

The Department will obtain all right-of-way for the project.

Exceptions will be noted in the bid proposal and award of the contract may not be made until right-of-way is obtained. The submission of a bid is an affirmative statement that the bidder accepts this condition and waives any damage that could be claimed.

Claims for damage or loss of anticipated profits because of this delay will not be considered by the Department. Consideration will be given for an appropriate extension of the contract time if the award is substantially delayed.

#### **107.20 PERSONAL LIABILITY OF PUBLIC OFFICIALS**

The Department, and its authorized representatives are acting solely as agents and representatives of the State when carrying out or exercising the power or authority granted under the contract.

There is no liability on them either personally or as officials of the State.

#### **107.21 NO WAIVER OF LEGAL RIGHTS**

Once the work is complete, the Department will expeditiously make final inspection and notify the Contractor of acceptance. Final acceptance does not prevent the Department from correcting any measurement, estimate, or certificate made before or after contract completion and from recovering from the Contractor, or surety, or both overpayment's sustained for failure to fulfill the obligations under the contract. A Department waiver of any breach of any part of the contract does not constitute a waiver of any other or subsequent breach.

Be liable to the Department for latent defects, fraud, or gross mistakes as may amount to fraud, or with regards to the Department's rights under any warranty or guaranty.

#### **107.22 PROTECTION OF ARCHEOLOGICAL AND HISTORICAL FINDINGS**

Submit written evidence that no historic or pre-historic sites on or eligible for listing in the National Register of Historic Places are located on property used for construction activities that are outside of the Department obtained right of way, easements, material sites, or other areas designated in the contract before construction starts. These areas include but are not limited to staging areas, Contractor furnished material sites, or other related areas to be used for the work.

Submit the legal descriptions, the acreage (hectares) involved, a description of the work activity, a site plan, and a description of the ground surface of all sites not included in the contract plans. Within 10 working days, the Department will notify the Contractor if the presence or potential of cultural resources exists in the areas and recommend if a professional cultural resource survey is needed or not needed. If a survey is not recommended, no further cultural resource work is required.

If a survey is recommended, hire a professional cultural resource contractor to perform a survey. A directory of cultural resource contractors is available from the Department Archeologist.

If the survey does not identify any historic or pre-historic site within the area of proposed disturbance, the Department will issue a notice to proceed with the work. If the cultural resource contractor or the Department identify any historic or pre-historic sites within the proposed area of

disturbance, the Department, in concert with SHPO will determine whether the site(s) may be eligible for listing in the National Register of Historic Places.

Choose one of the following options if a site is eligible:

- A. Do not use or disturb the proposed site.
- B. Request the Department to proceed with the steps to comply with 36 CFR 800. Use a professional cultural resource contractor to perform all field work, surveys, etc. required to complete the process identified by the Department. No additional compensation or delay considerations are allowed under these requirements.

Immediately stop work if archeological or historical artifacts are encountered. Immediately notify the Project Manager of the find. The Project Manager will stake the area to remain undisturbed until further notice.

### **107.23 DISCOVERY OF UNDERGROUND STORAGE TANKS**

Take the following action if an underground storage tank or tanks are encountered, the existence or location which was previously unknown to the Department or Contractor, on the project within the highway right-of-way, or in any other area of the project, including the Contractor's own work areas:

- A. Immediately stop work in the vicinity and notify the Project Manager of the find and notify the State authority:

Waste and Underground Tank Management Bureau  
Department of Environmental Quality  
Permitting and Compliance Division

- B. Immediately notify the local fire authority and, within 24 hours notify the State authority if there is evidence of a tank leak or pipe leak. The State authority to be contacted is:

Underground Storage Tank Program  
Department of Environmental Quality  
Environmental Remediation Division  
1-800-457-0568

- C. Immediately protect people and property from fire, explosion, vapor, and other potential hazards and, prevent further release of the tank's contents. Take all actions requested by the Project Manager and the Underground Storage Tank Program personnel.
- D. Perform the tank closure work as directed by the MT Dept. of Environmental Quality.
- E. Do not resume work in the immediate vicinity of the tank until approved.

Costs incurred from the discovery of underground storage tanks within the highway right-of-way are paid for as extra work under Subsection 104.03. Costs from the discovery of underground storage tanks outside the highway right-of-way are at the Contractor's expense.

### **107.24 DISCOVERY AND REMOVAL OF UNKNOWN HAZARDOUS MATERIALS**

If the Contractor discovers hazardous material (i.e., asbestos, PCBs, petroleum, PCPs, hazardous waste or radioactive material, etc.), the existence or location which was previously unknown to the Department and the Contractor and not identified in the contract, the Contractor must immediately stop work in that area. Immediately notify the Project Manager. Work may continue in unaffected areas believed to be safe.

The Department will equitably compensate the Contractor under Subsection 109.04.3 for costs associated with the delay to work in the affected area.

Once notified of the contaminated site, the Department will determine whether a separate Contractor will be used to assess and clean up the contaminated site before permitting the Contractor to resume work in the contaminated area. The separate Contractor must obtain all

necessary clearances (procedures, permits, etc.) from the regulatory agencies before starting any work. If the Department, after consulting with the Contractor, determines that the Contractor can perform the work it is subject to Subsection 107.26 and is paid for under Subsection 109.04.3.

If the Contractor does not want to perform the work, it agrees and accepts that it waives any potential claim for itself, its subcontractors, and suppliers for damages for delay from the Department's securing another Contractor to perform the clean-up work.

If the area is determined to pose a hazard to the traveling public, close off all access to the area as directed.

#### **107.25 ACCESS TO CONTRACTORS RECORDS**

Allow access by the Department or its authorized representative, and the FHWA to all project records, and the project records of all Subcontractor's, under Section 18-1-118 MCA, by the Legislative Auditor and Legislative Fiscal Analyst to determine compliance with the contract terms.

#### **107.26 LIABILITY FOR CERCLA/CECRA CLAIMS**

The Department will indemnify, protect, and hold harmless, the Contractor for any actions which the Department specifically directs or reasonably requires the Contractor to perform only if said action is the subject of litigation or administrative action under CERCLA, 42 U.S.C. Section 9601, et seq., or CECRA (Section 75-10-701 et seq. MCA), and it does not fall within the exceptions below.

Indemnify, protect, and hold harmless the Department for any omissions or actions not specifically directed by the Department if said omissions or actions are the subject of litigation or administrative action pursuant to CERCLA or CECRA. Actions or omissions which are chosen either in type, scope, location, amount or method by the Contractor are not "specifically directed or reasonably required" by the Department.

Further indemnify, protect, and hold harmless, the Department for any negligent actions by the Contractor, its subcontractors, their employees or agents, including any actions that may be the subject of litigation or administrative action pursuant to CERCLA or CECRA.

When the Contractor is directed by the contract to obtain hazardous material liability insurance coverage for a project, that contract requirement controls and has priority over this specification.

#### **107.27 DIESEL FUEL USED ON THE PROJECT**

Use taxed clear fuel as required by state law to construct the project.

Violation of state law will result in a six-month suspension of the violating firm from participation in Department contracts not already awarded on the date of suspension. Prime contractors are responsible for compliance of their own equipment, and the equipment of all subcontractors and their subcontractors.



## **SECTION 108**

### **PROSECUTION AND PROGRESS**

#### **108.01 SUBCONTRACTING OR ASSIGNMENT OF CONTRACT**

##### **108.01.1 Subcontracting**

Do not subcontract, assign, or otherwise dispose of more than 60 percent of any portion of the contract cost without the written consent of the surety and the Department.

Include in the written subcontract or assignment or in a separate written document with the subcontract or assignment the following language:

"In consideration of being awarded this subcontract, and in consideration of having this subcontract approved by the State of Montana, the Subcontractor hereby assigns to the State of Montana any and all claims or causes of action for any antitrust law violations, or damages arising there from, as to goods, materials, and services purchased under the terms of this subcontract or any change order that may result from this subcontract."

##### **108.01.2 Contract Performance**

Perform at least 40 percent of the contract cost with the Contractor's organization. Designated contract "Specialty Items" may be performed by subcontract without regard to the 40 percent limitation.

Where an entire item is subcontracted, the percentage of the total work subcontracted is based on the contract item unit price. When a portion of an item is subcontracted, the percentage of the work subcontracted will be based on either the subcontract item unit price or on an estimated percentage of the contract item unit price, determined by the Construction Administration Services Engineer.

Do not allow a Subcontractor at any contract tier to start work until its subcontract is consented to by the Construction Administration Services Engineer in Helena. Include two executed and certified copies of the subcontract, a letter from the surety consenting to the subcontract, and a copy of the proposed Subcontractor's current special fuel users permit issued under 15-70-302 MCA.

Do not subcontract or assign more than the allowable 60 percent by including additional labor, equipment, and supervision costs on the Contractor's payroll records to circumvent the subcontracting provisions.

Inform the Subcontractor of all the contract provisions. The minimum wage included in the contract applies to labor performed on all work subcontracted, assigned, or otherwise disposed of.

Attach to each subcontract all required contract provisions and predetermined minimum wage rates. Include in the subcontract these words: "The Subcontractor agrees to comply with all of the labor provisions contained in the attached "Special Required Contract Provisions" and "Minimum Wage Determination."

All subcontractors are agents of the Contractor. The Contractor is responsible for all work, material furnished, project documentation provided by, and indebtedness incurred by its subcontractors.

Written consent to subcontract, assign or transfer the contract does not release the Contractor from liability under the contract and bond.

**108.02 NOTICE TO PROCEED**

Work is to begin and time charges start on the date stipulated in the "Notice to Proceed". Do not begin actual work nor permit subcontractors to begin work until all Subsection 103.07 requirements are met.

If work cannot begin on the date in the Notice to Proceed due to reasons beyond the Contractor's control, these conditions, dates, and reasons will be recorded in the weekly "Assessment of Contract Time" form and no time will be charged. Begin work when the Engineer determines and issues a notice to resume work and that assessment of contract time will start.

**108.03 PROSECUTION OF WORK****108.03.1 General**

Begin obtaining all air quality, water quality and storm water runoff permits, approval of reclamation plans, and archaeological and historical clearances immediately upon receipt of the notice of contract award letter from the Department. Furnish the completed applications to secure permits, approvals or clearances as they are submitted to the respective agency. Furnish approved permits, reclamation plans and clearances necessary to complete the work in conformance with all federal, state and contract requirements.

The Department will reimburse all reasonable costs incurred in securing the permits, approvals and clearances if the Department does not execute the contract for reasons outside its control.

A pre-construction conference will be held on a mutually agreed date between the Contractor, Department and other parties interested in the work before work within the project limits begins. The Contractor's superintendent in charge of the project must attend the conference. Encourage subcontractors to attend. A pre-construction conference will not be scheduled or held and no work (other than obtaining permits) may begin until the Project Manager approves the schedule meeting all requirements of Subsection 108.03.2.

Obtain written approval before starting night work. Provide work area flood lighting for night work and do not rely solely on equipment lights. Night work approval may be rescinded at any time.

Suspending and resuming work on all or a part of the contract will be by Subsection 105.01.

Work may be suspended on working day contracts for unsuitable weather or for other conditions that are detrimental to the work accuracy and quality. Prevent damage and repair damaged work that was not protected during the suspension at Contractor expense. No time extensions will be approved for work to correct non-protected work.

Store materials to protect against damage and without obstructing, endangering or impeding traffic.

Do not allow water to pond on the roadway or within the construction limits, excluding environmental protective devices. Open ditches and shoulder drains, and take other actions to protect the public and the work.

The Department does not authorize project suspension by the Contractor and time will be charged during unauthorized project suspensions. If the Contractor suspends the project, provide written notification of the suspension to the Project Manager seven calendar days before the suspension. The Contractor is responsible for all maintenance required during unauthorized suspensions and for all work and materials required due to the suspension.

**108.03.2 Project Schedules**

For projects not subject to Subsection 108.03.3 CPM requirements, submit two copies of an Activities Schedule Chart (ASC), and two copies of a Written Narrative (WN) that details the work and time (working days, calendar days or completion date) to complete the contract.

The Contractor may use a Critical Path Method (CPM) schedule as the ASC if it meets the requirements described in Subsection 108.03.2 herein and results in no additional cost to the Department.

**A. Include in the ASC:**

1. A bar chart chronologically sequenced and to time scale showing the following:
  - a. All work activities with a completion duration of five or more working days. (For this requirement, "working days" does not exclude the period from November 16 through April 15.)
  - b. Any work activity that has an impact on completion of the project.
2. The relationship of each work activity listed in Subsection 108.03.2(A)(1) to other work activities, permits, plans, submittals and approvals required to complete the project.
3. Work activity durations by working days or calendar days as appropriate. Note non-working periods exceeding three days on each activity bar.

**B. Include in the WN:**

1. The proposed work process sequence describing the relationship of the work activities listed in Section A. herein required to complete the contract, including shop drawing submittals, permits (including estimated maximum waiting periods for all required permits), fabrication and delivery activities.
2. A detailed description and the progress time of each work activity listed in Section A. herein, measured by working day or calendar day, as appropriate.
3. A detailed description of the ASC, including holidays, planned workdays per week, number of shifts per day, hours per shift, size of work crews and resources used.

Submit an updated ASC and WN every month in which work is performed, one week before the end of the project's monthly estimate cycle. The ASC and WN should show current progress and all revisions or modifications that reflect changes in the method or manner of the work, specification changes, extra work, changes in duration, changes in shifts, work crews or resources. If the work is not proceeding consistent with the Contractor's most recent ASC and WN, the Project Manager may require that the Contractor submit two copies of an updated ASC and WN that accurately reflect the Contractor's progress, resource allocation for the project, and revised schedule. Submit the updated ASC and WN within one working day of the Project Manager's request. It is the Contractor's responsibility to ensure that the WN and ASC submitted meet the above requirements and accurately reflects the work progress. The Project Manager may suspend work under 105.01.A. if the WN and ASC do not accurately reflect the actual progress of the work; the suspension may continue until accurate WN and ASC are submitted.

Any delay in beginning or prosecuting work that is caused by the Contractor's failure to provide an ASC or WN when and as required is solely the responsibility of the Contractor, and is not an excusable delay.

Prosecute the work with the resources required to complete the contract within the time shown in the Contractor's updated ASC and WN.

The Department may withhold ten percent of each monthly progress estimate for failure to submit an original or updated ASC or WN on time and in the manner required. Payment withheld for violation of the schedule requirements will be included in the next progress estimate following the Contractor's submission of the required ASC and WN. The Project Manager's approval does not attest to the validity of the ASC or WN.

### **108.03.3 Critical Path Method (CPM) Scheduling**

When requested, furnish one workstation copy of a computer software package compatible with Windows© operating systems to produce a Critical Path Method (CPM) schedule for the

contract work. Payment for the workstation copy of the computer software package will be made at invoice cost. Schedule all contract work including that of subcontractors, vendors and suppliers.

Prepare the initial CPM schedule as an Activity On Node (AON) or Precedence Diagramming Method (PDM).

The Project Manager may withhold ten percent of each monthly progress estimate for failure to submit an original or updated CMP schedule on time and in the manner required. Payment withheld for violation of the schedule requirements will be included in the next progress estimate following the Contractor's submission of the required CPM schedule. The Project Manager's approval of the CPM schedule does not attest to the validity of the Contractor's assumptions, logic constraints, dependency relationships, resource allocations, labor and equipment or other schedule aspects.

**A. Preparation and Submission of Schedule.** Prepare an initial schedule and submit a disk with the software package used to develop the CPM schedule and one ANSI D (24-inch by 36-inch) paper copy. Submit all items listed in Item C herein.

Attend a meeting scheduled by the Project Manager within 10 calendar days of the Project Manager's receipt of the CPM schedule to review, correct or adjust the CPM schedule if required.

Make all schedule adjustments and corrections discussed at the meeting and re-submit a disk with the revised schedule within 15 calendar days after the meeting. Plan and execute the work to meet project milestones and completion dates.

**B. Initial Schedule Requirements.** Include the requirements listed in Subsection 108.03.3(C) and the following:

1. Total Float Sort; Responsibility/Early Start Sort; Area/Early Start Sort;
2. 60-day look ahead bar charts by early start; and
3. Logic diagram having a maximum 100 activities for each ANSI D (24-inch by 36-inch) size sheet. Ensure each sheet includes project number, page number, title, match data or diagram correlation and key to identify all components used in the diagram.

**C. Schedule Requirements.**

Submit schedules that include:

1. Activity identification numbers;
2. Activity descriptions;
3. Finish to start relationships with no lead or lags;
4. Activity durations of not more than 20 working days and not less than one working day unless otherwise approved by the Project Manager. Submit activity manpower, equipment, unit quantities and production rates to the Project Manager for review;
5. Material procurement separated into at least two activities, fabrication and delivery. Include time for delivering all submittals and 30 calendar days for Department review of working drawing submittals as separate items in the schedule logic for all items requiring submittal, review and approval;
6. Activities coded to reflect the party performing each activity (only one party performs each activity) including subcontractors and suppliers and the area/location of each activity; and
7. Work days per week, holidays, number of shifts per day, hours per shift and major equipment to be used.

Use only contractual restraints in the schedule logic. Do not use any other schedule restraints such as activity mandatory start and finish dates or mandatory zero float constraints.

Float is defined as the amount of time between when an activity "can start" and when it "must start". Float is a shared commodity, not for the exclusive use or financial benefit of either party. Either party has the full use of float until it is depleted.

Show the sequence and interdependence of all activities required for the complete performance of all items of work under this contract, including acquiring all the environmental permits. Show all network "dummies" on the diagram.

The Department reserves the right to limit the number of activities on the schedule to between 50 and 500 activities.

Describe the activities so that the work is identifiable and the progress on each activity is measurable.

**D. Schedule Updates and Progress Payments.** Schedule and attend monthly project progress meetings to compare the schedule to the actual finish dates of completed activities, the remaining duration of uncompleted activities and the proposed logic and/or time estimate revisions. Provide the status of activities at these meetings, and the schedule updates based on this information, once it has been verified.

Each month of the project, one week before the end of the project's monthly estimate cycle, submit a schedule on disk containing:

1. An updated I node - J node sort;
2. Total Float Sort;
3. A narrative report describing the critical path, logic revisions or modifications to the schedule, including, but not limited to: changes in the method or manner of the work, changes in specifications, extra work, changes in duration, etc.; and
4. Any revised activity on node diagrams for the following:
  - a. Delay in the completion of any critical activity;
  - b. Actual prosecution of the work that is different than that represented on the CPM schedule; and
  - c. The addition, deletion, or revision of activities required by contract modification(s), or logic revisions.

The contract time will be adjusted only as specified in the contract. Furnish documentation to support requests for time extensions for milestone dates or the contract completion date.

#### **108.03.4 Method of Measurement**

CPM schedule is measured by the lump sum. Other scheduling requirements are not measured for payment.

#### **108.03.5 Basis of Payment**

Payment for all costs associated with CPM scheduling is included in the lump sum contract unit price for critical path method (CPM) scheduling. Payment for all costs associated with other scheduling requirements is included in the payment for other items of work.

The Department may withhold ten percent of each monthly progress estimate for not submitting the monthly schedule updates as required. Payment withheld for violation of the schedule requirements will be included in the next progress estimate following the Contractor's submission of the required schedule.

Partial payments for CPM scheduling will be made based on the lump sum contract unit price as follows:

1. 50 percent when the initial schedule is finalized.
2. 75 percent when the overall project is 50 percent complete.
3. 100 percent when all updates have been submitted.

**108.04 LIMITATION OF OPERATIONS**

Conduct the work to minimize interfering with traffic and work already started. Finish a section of roadway before starting work on any additional sections if it is essential to public convenience.

**108.05 CHARACTER OF WORKERS**

Provide workers with the skill and experience to perform the work.

Remove any person employed who does not perform work in a proper and skillful manner or who is intemperate or disorderly. Do not re-hire these employees without the Engineer's approval.

Failure to remove the employee or employees or failure to furnish suitable and sufficient personnel to perform the work may result in a written notice to suspend the work.

**108.06 METHODS AND EQUIPMENT**

Use equipment of the size and mechanical condition to perform and produce the specified quality of work. Do not use equipment that damages the roadway, adjacent property, or other highways.

Operate all equipment with adequate lighting at night.

Do not use methods or equipment other than as specified unless requested in writing and authorized by the Engineer. Include in the request a full description of the proposed methods and equipment to be used and the reasons for the change. Produce work meeting the contract requirements.

Discontinue use of alternate methods or equipment if the Engineer determines that the work does not meet contract requirements. Remove and replace or repair deficient work with work of specified quality at Contractor expense. No change will be made regarding payment for authorizing a change in methods or equipment.

**108.07 DETERMINATION OF COMPENSATION AND EXTENSION OF CONTRACT TIME FOR EXCUSABLE, NONCOMPENSABLE, AND COMPENSABLE DELAYS**

Time allowed for completion of the contract is determined by either the "Calendar Date" or the "Working Day" provision in the contract.

**108.07.1 Calendar Date Contracts**

Complete all work by the fixed calendar date specified in the contract. The fixed calendar completion date will be extended:

- A. If the contract is awarded more than 10 calendar days after bid opening; or
- B. For extra work according to the calendar days computed under Subsection 108.07.5; or
- C. For authorized suspensions of work.

The new completion date is determined by adding the number of calendar days between the tenth day after bid opening and the award date; the calendar days computed under Subsection 108.07.5; or the number of calendar days during authorized suspensions to the specified fixed calendar completion date.

The actual completion date is the date the Engineer accepts the project as complete under Subsection 105.15.3.

Contract time overruns for assessment of liquidated damages will be computed as the number of calendar days elapsing between the contract completion date and the actual completion date.

**108.07.2 Reserved**

### 108.07.3 Working Day Contracts

Complete all work within the number of working days specified in the contract.

A working day is defined in Subsection 101.03. Holidays designated as nonworking days are defined in Subsection 101.03.

Working days will be assessed against the contract time except for days when inclement weather or the aftermath of inclement weather prevents the performance of operations that would be in progress for:

1. At least 60 percent of the normal daily schedule being worked from April 16 through November 15.
2. At least 60 percent of the normal daily schedule being worked or four hours, whichever is less, from November 16 through April 15.

All days worked from November 16 through April 15 will be considered a chargeable day except for the following:

1. Producing and stockpiling surface aggregates; and
2. Emergency and maintenance repairs to the project.

Assessment of time begins on the effective date of the Notice to Proceed.

If work cannot be performed at the regular starting time because of inclement weather or the effects of inclement weather and the work crew is dismissed, no time will be charged for that day.

Do not work on holidays or Sundays without the Engineer's approval. Work done on Saturdays, Sundays, and approved holidays will be assessed as working days.

Producing and stockpiling surfacing aggregates, pre-wetting, making emergency repairs to the project, and providing protection for the public may be accomplished on Saturdays, Sundays, holidays, and during a work suspension period without assessment of time with the following exception:

- The period from November 16 through April 15 is chargeable for state maintenance stockpiling projects.

Chargeable or non-chargeable working days will be determined and agreed upon daily between the Project Manager and the Contractor's superintendent. Except for the period November 16 through April 15, the Project Manager will furnish a weekly report showing the number of working days:

- A. Charged for the preceding week;
- B. Previously charged;
- C. Specified for contract completion;
- D. Of approved time extensions, except for days covered under Subsection 108.07.5, second paragraph; and
- E. Remaining to complete the contract.

The report will be furnished every Monday.

From November 16 through April 15, the Project Manager will furnish a report showing the information listed above, for any week that the Contractor has chargeable days.

File a written protest with the Project Manager within ten calendar days of receipt of the weekly report of any alleged discrepancies in the time assessed. Failure to file a protest is conclusive evidence that the time assessed is accepted as correct.

### 108.07.4 Delays

The following delays will be considered for extensions of contract time.

- A. **Excusable or Non-compensable Delay.** Contract time allowed for the performance of the work may be extended for delays caused by acts of God, acts of the public enemy,

fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays not caused by the Contractor's fault or negligence.

- B. Compensable Delay.** Contract time may be extended for delays caused by the Department under Subsection 108.07.6.

#### 108.07.5 Extensions

Provide a written request detailing the reasons for requesting a time extension. A plea that insufficient contract time was specified is not a valid reason for a time extension. If the Department finds that the work was delayed because of conditions beyond the control of and not the fault of the Contractor, the contract time will be extended in the amount justified. The extended time for completion is in full force and effect as though it were the original time for completion.

The contract time as awarded is based on the estimated quantities as defined in Subsection 102.05. No decrease in contract time will be made for any decrease in a contract item. The contract time will be increased based on the quantity and difficulty of added work. The minimum time allowed for any additional work is computed by the following formula:

$$\text{Time Extension in Days} = \frac{\text{Total Dollar Amount of Additional Work}}{\text{Total Amount of Contract as Awarded}} \times \text{The Contract Time as Awarded}$$

The computed time extension will be rounded to the nearest whole day.

No additional contract time will be allowed for:

- A. Increases in percentages of asphalt in plant mix materials.
- B. The addition of anti-stripping additives to bituminous materials.
- C. The addition of or for increases in hydrated lime or mineral fillers to plant mix materials.
- D. Increases in traffic control devices.
- E. Delays for slow delivery of materials from the supplier or fabricator.
- F. Material deliveries delayed for reasons of late ordering, financial considerations, or other foreseeable and preventable causes within the Contractor's control.

Delays in material deliveries for unusual market condition caused by an industry-wide strike, national disaster, or an area-wide shortage beyond the Contractor's control will be considered as a basis for granting additional time.

Submit written documentation substantiating the reasons for the late delivery or non-availability of materials. The documentation must be from the original supplier and document the dates the material was ordered by the Contractor and the reason for late delivery or non-availability of the material. Include a statement elaborating on the efforts to obtain materials from alternate suppliers.

#### 108.07.6 Delay Compensation

Requests for any compensation for delay under this provision must fully comply with the provisions of Subsection 105.16, in addition to the following requirements.

Notify the Project Manager of the request for delay consideration. Keep daily records of all non-salaried labor, material costs, and equipment expenses for all operations affected by the delay.

Maintain a daily record of each operation affected by the delay and the location, by stations, of the affected operations. The Department will maintain daily records of the operations by stations. Each Monday, the two records will be compared. Prepare and submit, each Monday, written reports to the Project Manager containing the following information:

1. Number of days behind schedule;

2. A summation of all operations that have been delayed, or will be delayed;
3. An explanation for compensable delays and how the Department's act or omission delayed each operation;
4. An estimate of the time required to complete the project; and
5. An itemization of all extra costs incurred, including:
  - a. Relating the extra costs to the delay and document how they are calculated and measured;
  - b. Identifying all non-salaried project employees for whom costs are being compiled; and
  - c. Summarizing the time charges for equipment, identified by manufacturer's number for which costs are compiled.

Provide a written summation of the comparison of the detailed reports within ten calendar days. Define all disagreements between specific records.

Failure to meet to review the Department's records or to report disagreements between the records is considered the Contractor's acceptance of the records as accurate.

**A. Procedures Following Completion of Work Allegedly Delayed.** Submit a written report within 15 calendar days of project completion, or phase of work allegedly delayed, containing the following information:

1. A description of the operations delayed and the documentation and explanation of the reason for the delay, including all reports prepared for the Contractor by consultants, if used; and
2. An item-by-item measurement and explanation of extra costs requested for reimbursement due to the delay.

All costs shown in the report submitted to the Department must be certified by an accountant.

The Engineer will review the submittal and any reports prepared by the Project Manager. The Engineer will provide a written decision to the Contractor within 60 calendar days of receiving the submittal.

In the case of compensable delays, if it is determined that the Department is responsible for delays to the Contractor's operations, the Engineer's written decision will reflect the nature and extent of any equitable adjustment to the contract as specified in Subsection 109.04.3.

#### **108.08 FAILURE TO COMPLETE ON TIME**

For each working day or calendar day the contract remains uncompleted after the specified contract completion time, including approved adjustments, a daily charge will be made against the contract. This daily charge, determined from Table 108-1 will be deducted from any money due the Contractor. This deduction is for liquidated damages for added Department contract administration costs for failure to complete the work on time.

**TABLE 108-1**  
**SCHEDULE OF LIQUIDATED DAMAGES**

ORIGINAL CONTRACT AMOUNT		DAILY CHARGE
From More Than	To and Including	Working Day or Calendar Day
\$ 0	\$ 50,000	\$ 478
\$ 50,000	\$ 100,000	\$ 618
\$100,000	\$ 500,000	\$ 967
\$ 500,000	\$ 1,000,000	\$ 1,171
\$ 1,000,000	\$ 2,000,000	\$ 1,505
\$ 2,000,000	\$ 5,000,000	\$ 2,341
\$ 5,000,000	\$ 10,000,000	\$ 2,804
\$ 10,000,000	—	\$ 3,379

Permitting the Contractor to continue and complete the work after the specified contract completion time or approved extensions granted does not waive the Department's rights under the contract.

The Commission may waive such portions of the liquidated damages as may accrue after the work is substantially complete (e.g., a few punch list items to be completed) and in condition for the safe and convenient use by the traveling public. If the Contractor disputes the liquidated damages on the accepted "Contractor's Final Inspection" form, the Construction Administration Services Bureau will send a final notification in writing to the Contractor of the number of days to be assessed and the dollar amount of proposed liquidated damages. Submit any objections of the assessment to the Construction Administration Services Bureau in writing within thirty days of receipt of the Department's notification. Include with the objection the justification and all information to support an adjustment to the assessment. The Department will review the Contractor's information, incorporating it into the Department's recommendation to the Commission. The Construction Administration Services Bureau will provide a copy of the Department's recommendation within 45 days of receipt of the objections to the Contractor. The Contractor must state in writing within fourteen days of receipt of the Department's recommendation if an appearance before the Commission is requested. If an appearance is requested, the Department will notify the Contractor in writing of the date the Commission will review the liquidated damages recommendation. The Commission will not receive or hear new information at the meeting not already furnished in the Contractor's original response.

#### **108.09 DEFAULT OF CONTRACTOR**

If the Contractor:

- A.** Fails to begin the work under the contract within the time specified in the notice to proceed.
- B.** Fails to perform the work with sufficient resources to promptly complete the work.
- C.** Fails to perform the work in accordance with the contract requirements or refuses to remove and replace rejected materials or unacceptable work.
- D.** Discontinues the prosecution of the work.
- E.** Fails to resume work that has been discontinued within a reasonable time after notice to resume has been given.
- F.** Becomes insolvent or is declared bankrupt or commits an act of bankruptcy or insolvency.
- G.** Allows a final judgment to remain unsatisfied for a period of 10 days.

- H. Makes an assignment for the benefit of creditors.
- I. Fails to comply with contract requirements regarding minimum wage payments, EEO requirements, or any state or federally mandated affirmative action requirements.
- J. For any other cause fails to carry on the work in an acceptable manner.

The Engineer will give written notice to the Contractor and surety of such delay, neglect, or default. Failure to correct the delay, neglect, or default within 10 calendar days after the Engineer's written notice gives the Department full authority without violating the contract to take over prosecution of the work from the Contractor. The Department may appropriate or use any or all materials and equipment at the project site that is suitable and acceptable and enter into an agreement for completing the contract. The Department may use any methods determined necessary to complete the contract.

All costs and charges incurred by the Department, including the cost of completing the work under the contract, will be deducted from any monies due or that may become due the Contractor. If the expense exceeds the sum that would have been payable under the contract, then the Contractor and the surety are liable and must pay to the Department the amount of such excess.

## **108.10 TERMINATION FOR PUBLIC CONVENIENCE**

### **108.10.1 General**

The Department may terminate the contract in whole or part, whenever:

- A. Work cannot proceed because of an Executive Order of the President with respect to the prosecution of war or in the interest of national defense; or an Executive Order of the President or Governor of the State with respect to the preservation of energy resources.
- B. Work cannot proceed because of a preliminary, special, or permanent restraining order of a court of competent jurisdiction where the issuance of such restraining order is primarily caused by acts or omissions of persons or agencies other than the Contractor.
- C. It is determined that termination is in the best interests of the Department.

### **108.10.2 Payment**

Payment will be made for the actual work performed at the contract unit prices for completed items of work when the contract is terminated under Subsection 108.10.1.

An equitable adjustment for partially completed items of work and disposal of materials will be made under Subsection 109.05.

Submit to the Engineer a claim for termination costs after receipt of the notice of Termination for Public Convenience, under Subsection 108.10.1(A). Detail the claim as specified in Subsection 105.16.2 so the Engineer can determine the basis and amount of the claim. Submit the claim no later than 60 calendar days from the effective date of termination. Resolution of the claim will be through the established administrative channels. If the claim cannot be resolved and an agreement reached, appeal the claim under Subsection 105.16.3. Make all project records available to verify the claim.

### **108.10.3 Responsibility of the Contractor and Surety**

Termination of a contract does not relieve the Contractor of any contractual responsibilities for the work nor the Surety or Sureties of the obligations under the contract bond for the work performed.



## SECTION 109 MEASUREMENT AND PAYMENT

### 109.01 MEASUREMENT OF QUANTITIES

Work completed under the contract will be measured using the United States standard measure or the metric system when specified.

Where the standard measure is given in the English system, approximate metric equivalents are shown in parentheses. No guarantee is provided, explicit or implicit, that the units are exact conversions. Work will be accepted on the basis of measures in the contract. Specified metric tolerances apply to metric Contracts.

Metric measurements are given in the System International (SI). Metric abbreviations in the contract are as follows.

Millimeter - mm	Meter - m
Kilometer - km	Square Meter – m <sup>2</sup>
Cubic Meter - m <sup>3</sup>	Kilogram - kg
Metric Ton - t	Liter - L
Kiloliter - kL	Hectare - ha
Course Kilometer - cr km	Kilometer Cubic Meter- km m <sup>3</sup>
Metric Ton Kilometer - t km	Kilometers Per Hour - km/h

The method of measurement and computations used in determining quantities of material furnished and work performed are those methods recognized as conforming to sound engineering practice.

A station, when used as a term of measurement, is 100 feet or 100 meters.

Longitudinal and transverse measurements for surface area computations will be made horizontally using the neat plan dimensions. No deductions will be made for individual fixtures having an area of 9 square feet (0.8 square meters) or less.

Structures are measured using neat lines shown on the plans or as altered to fit field conditions.

Items that are measured by the foot (meter, millimeter), such as pipe culverts, guardrail, underdrains, and the like, are measured parallel to the structure base or foundation.

Computing excavation volumes will be by the average end area method or by alternate methods involving three-dimensional measurements (delta surface).

The term "gage," when used for measuring plates, is the U.S. Standard Gage. Galvanized sheets used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing are specified and measured as sheet thickness in inches (millimeters).

When the term "gage" refers to measuring wire, it is the U.S. Steel Wire Gage.

The term "ton" is the short ton consisting of 2,000 pounds avoirdupois (908 kg).

Measure or proportion weighed materials on certified scales at the designated locations.

Material shipped by rail may be accepted using the car weight provided that only the actual weight of material is paid for. Car weights are not acceptable for material that will be processed in mixing plants.

Obtain tare weights daily on haul vehicles, or as directed. Clearly mark each individual vehicle with a legible identification mark.

Haul materials measured by volume in approved hauling vehicles and measure materials at the point of delivery.

If approved, material specified to be measured by the ton may be weighed and converted to cubic yards (cubic meters). The Project Manager will determine the conversion factors from weight to volume subject to Contractor concurrence before using this method of measurement.

Bituminous materials are measured by the gallon or ton (liter or metric ton). Volumes are measured at 60 °F (15.5 °C) or will be corrected to the volume at 60 °F (15.5 °C) under ASTM D 1250.

Net certified scale weights, based on certified volumes in the case of rail shipments, will be the basis of measurement, corrected for loss of bituminous material from the car or distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights or volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement is measured by the ton (metric ton). A ton is 2,000 pounds (908 kg).

Timber is measured by the thousand feet board measure (MFBM) (cubic meter) for timber actually incorporated in the structure. Measurement is based on nominal widths and thicknesses and each pieces extreme length.

"Lump sum" payment is complete payment for the work item described in the contract.

When a complete structure or structural unit (i.e., "lump sum" work) is specified as the unit of measurement, the unit includes all necessary fittings and accessories.

Rented equipment is measured in hours of actual working time and necessary equipment travel time within the project limits. Travel time and transportation to the project is measured for special equipment, ordered by the Project Manager for force account work.

When standard manufactured items are specified, such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section dimensions, etc., this identification is the nominal weight or dimension. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Other quantities are computed in the contract units using established engineering principles, without consideration of local rules or customs.

### **109.01.1 Weighing Equipment**

Furnish accurate weigh equipment for material specified to be proportioned or measured for payment by weight. The weigh equipment must indicate the weight to within the smaller of:

1. Tolerances from correct weight adopted by the Montana Bureau of Weights and Measures; or
2. One-half percent of the correct weight.

Use weigh systems tested and certified by the Bureau of Weights and Measures before each use and after each scale set-up or when directed. The Project Manager will accept reports from a Montana certified scale service stating compliance with the applicable tolerances in lieu of State certification. Seal the weigh system after adjustment and testing. Evidence of tampering or scale adjustment is cause to suspend use of the scale until it is re-tested and certified.

All materials received after the last test and certification will be reduced by the percent of error in excess of the specified tolerances if the weigh system is found to overweigh (indicate more than the correct weight).

No adjustment is made for systems found to under-weigh (indicate less than the correct weight).

Repair and re-certify weigh systems under-weighing or over-weighing outside the specified accuracy limits before use.

Follow the weigh equipment manufacturers procedures or the National Bureau of Standards Handbook No. 44 procedures for weigh system testing, witnessed by the Project Manager.

Provide all equipment, tools, and labor necessary to perform the test. Test permanent scales at least annually.

The cost of furnishing, testing, operating and maintaining weigh equipment is incidental to and included in the payment for the work.

### **109.01.2 Metric Abbreviations in the Schedule of Items**

The Department uses the following abbreviations in the Schedule of Items for the respective metric units of measurement:

Millimeter .....	MM
Meter.....	M
Kilometer.....	KM
Square Meter .....	M2
Cubic Meter .....	M3
Station (100 Meters) .....	STA
Kilogram.....	KG
Metric Ton.....	MT
Liter .....	L
Kiloliter .....	KL
Hectare .....	HA
Course Kilometer .....	CR KM
Kilometer Cubic Meter .....	KM M3
Metric Ton Kilometer.....	MT KM

### **109.02 SCOPE OF PAYMENT**

Receive and accept the specified compensation as full payment for furnishing all materials, performing all work under the contract in a complete and acceptable manner and for all risk, loss, damage, or expense arising from the work, subject to Subsection 107.21.

If the "Basis of Payment" clause for unit price in the contract requires that the unit price be full compensation for work or material essential to the item, this same work or material is not measured or paid for under any other pay item in the contract.

The payment of any current or final estimate or of any unpaid contract funds does not prejudice or affect the Contractor's obligation to submit for final acceptance a completed improvement meeting the contract specifications.

In accordance with the requirements of Chapter 50, Title 15, MCA, for contracts exceeding \$5,000, including approved modifications, the Department will withhold one percent of the dollar amount of all Contractor payments. All payments by a Prime Contractor to a Subcontractor are also subject to this one percent gross receipts fee. The Prime Contractor must withhold one percent of all payments made to subcontractors.

### **109.03 COMPENSATION FOR ALTERED QUANTITIES**

Accept payment for work quantities that vary from the contract quantities at the original contract unit prices. No allowance, except under Subsections 104.02 and 108.10, will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense and subsequent loss of expected reimbursements or from any other cause.

Only those quantities of materials actually incorporated into the final work and accepted will be paid for.

## 109.04 PAYMENT FOR EXTRA WORK

### 109.04.1 Unit Price or Lump Sum Basis

Extra work performed under Subsections 104.02 and 104.03 is paid for at the unit price or lump sum price agreed upon and specified in the authorized work order. Extra work is authorized by a change order signed by both parties.

### 109.04.2 Force Account Basis

Approved extra work paid for on a force account basis must be accounted for daily on report sheets signed by each parties authorized representative. The daily report sheets are the true record of extra work. Extra work on a force account basis ordered by the Engineer in writing, under Section 104, is paid for as follows:

**A. Labor.** The Contractor is paid the wage rates for all labor and foremen performing the extra work for the total hours worked plus at least 80 percent of the total. The 80 percent surcharge may be increased if certified documentation is submitted showing that a higher percentage surcharge is needed to cover labor costs. The wage rates used for the above computation include travel pay, if applicable, but must not include fringe benefits, whether or not paid directly to the employees. Payment as described above is full compensation for all labor related expenses incurred including but not limited to premiums for worker's compensation insurance, public liability and property damage insurance, social security, unemployment compensation, health and welfare expenses, and other expenses imposed by federal or state laws or both.

Submit evidence of the actual wage rates paid.

**B. Materials.** The Contractor will receive the actual delivered cost of all materials used based on invoices, plus 15 percent. The quantity of material used must be documented.

**C. Equipment.** The Contractor will receive the rental rates agreed upon in writing before beginning the work for any machinery or special equipment (other than small tools) used to perform the work. Rental rates are calculated using the current issue of the Departments Equipment Rental Rate Guidelines. Rates and allowances for standby time, outside rented equipment, owner-operated equipment, and moving of equipment is determined under the Equipment Rate Guidelines.

**D. Bond.** The actual cost chargeable to force account work of premiums for the performance bond are paid. No surcharge is allowed for the performance bond. Furnish evidence of the rate paid for the bond.

**E. Miscellaneous.** Accept the compensation provided for under Subsection 109.09.2 as full payment for extra work done.

**F. Statements.** Submit all statements for the extra work done on a force account basis on Department forms. Attach the original extra work order, material invoices and freight bills.

The Inspector will compile and forward to the Project Manager, at the end of each day, a daily record of extra work done on a force account basis, signed by both the Inspector and Contractor's Superintendent.

**G. Subcontracting.** Extra work performed on a force account basis by a Subcontractor under an extra work order will include the percentage allowed in Table 109-1 for administrative expenses. This administrative allowance only applies to charges for labor and materials. The allowance is applied to all charges and added percentages specified in Subsection 109.04.2 paragraphs (A), (B), and (D) above. Bid items in the original contract are not eligible for this administrative allowance.

**TABLE 109-1**  
**SUBCONTRACTING - ADMINISTRATIVE ALLOWANCES**

EXTRA WORK - SUBCONTRACTOR	ADMINISTRATIVE ALLOWANCE
\$0 to \$1,000	10%
\$1,000.01 to \$10,000	\$100 plus 5% of excess over \$1,000
Over \$10,000.01	\$550 plus 3% of excess over \$10,000

Approval of this additional percentage is made after the Contractor furnishes receipted invoices.

Administrative expenses are not paid for on a force account basis above the amount allowed the Prime Contractor and Subcontractor if the work is done by a sub Subcontractor.

#### **109.04.3 Equitable Adjustment**

The equitable adjustment provided for in Subsection 105.16 is determined as follows:

- A.** If the parties agree, the price is determined using unit prices or other agreed upon prices.
- B.** If the parties cannot agree, the price is determined by the Engineer using unit prices or other means to establish cost.

The following limitations apply:

- A.** The rental rates must be actual cost not to exceed the rates established in Subsection 109.04.2 and in effect at the time the work is performed.
- B.** No claim for loss of anticipated profits on deleted or uncompleted work or consequential damages of any kind is allowed.

#### **109.05 DELETED OR TERMINATED WORK**

The Engineer may delete work by change order under Subsection 104.02.4 or may terminate the contract in whole or part, under Subsection 108.10. When the contract is terminated in part, the partial termination is treated as a deletion change order for payment under this Section. Payment for completed items is at the contract unit prices.

When any item is deleted, in whole or in part, by change order or when the contract is terminated, in whole or in part, payment for deleted or terminated work is made as follows:

- 1.** Payment will be made for the actual number of units of work completed at the contract unit prices unless the Engineer determines the contract unit prices are inappropriate for the work actually performed. When that determination is made, payment for work performed will be as mutually agreed. If the parties cannot agree, the Engineer will determine the amount or the equitable adjustment under Subsection 109.04.3.
- 2.** Payment for partially completed lump sum items will be as mutually agreed. If the parties cannot agree, the Engineer will determine the amount of the equitable adjustment under Subsection 109.04.3.
- 3.** The Department will pay as part of the equitable adjustment those direct costs necessarily and actually incurred in anticipation of performing the work that has been deleted or terminated. Costs previously paid for by the contract unit prices for completed units of work are excluded.
- 4.** The total payment for any one item in the case of a deletion or partial termination can not exceed the contract unit price as modified by approved change orders less the estimated cost (including overhead and profit) to complete the work and less any amount paid to the Contractor for the item.

5. The total payment where the contract is terminated will not exceed the total contract price, as modified by approved change orders less those amounts paid before the effective date of termination.

No claim for damages of any kind or for loss of anticipated profits on deleted or terminated work is allowed because of the termination or change order.

Contract time will be adjusted as the parties agree. If the parties cannot agree, the Engineer will determine the equitable adjustment for contract time.

Materials to be permanently incorporated into the work and ordered before the date the work was terminated under Subsection 108.10 or as deleted under Subsection 104.02, will either be purchased by the Department at the actual cost and become Department property, or the Contractor will be reimbursed for the actual cost of returning the materials to the suppliers.

#### **109.06 PARTIAL PAYMENTS**

Partial payments will be made once each month based on estimates of the value of the work performed and materials complete in place under the contract, including materials delivered under Subsection 109.07.

The Department reserves the right to withhold all or part of any partial payments earned under the contract until all special fuel user's tax payments due or owing to the State of Montana under 15-70-302 MCA or other statutory taxes are paid in full.

If the Contractor becomes delinquent in any monetary contractual obligations (e.g., prompt payment upon satisfactory completion of work, payment to owners of materials sources, etc.), the Department may withhold unpaid contract funds from each monthly estimate thereafter until the delinquency is resolved or the amount of the delinquency has been withheld. The amount of the withholding will not exceed the amount of known delinquency but, depending on the amount of the delinquency and the amount of the monthly estimate, may be in the full amount of that monthly estimate. In the event the delinquency involves nonpayment to a Subcontractor, supplier or materialman, the Department also may order forfeiture of the contract bond, or take action under Subsection 108.09.

The Department will release the withheld amounts to the Contractor upon the Engineer's receipt of a notarized statement from the entity to whom the delinquency was owed stating that the delinquency has been satisfied in full or, in the event the entity has received partial payment of the delinquency, that portion of the withheld amount may be released.

If the contract extends beyond the contract completion time, the sum specified in Table 108-1 will be deducted from any money due the Contractor.

#### **109.06.1 Reserved**

#### **109.07 PAYMENT FOR MATERIAL ON HAND**

The materials designated in Table 109-2, when produced or delivered and stockpiled at the project site or other location approved by the Project Manager may be considered for partial payment, if the following requirements are met:

1. The material meets the contract requirements.
2. The material is a manufactured end product or a fully fabricated product. Aggregate must be produced and stockpiled to the final stage for incorporation into the specified mixture or the roadway. Riprap meeting the gradations specified in Table 701-19 for the class specified in the plans is considered a manufactured end product for this Subsection.
3. Material is stored to prevent damage and theft, without obstructing or impeding the traveling public. MDT Inspectors have access to the inventory sheets and the stockpiles at all times.

4. A written request accompanied by a delivery receipt for all items received. Include the quantity for which payment is requested, the length of time the material is to be stored, the location for material stored off the project site, and sufficient detail to justify the costs.

Furnish paid invoices and updated inventory sheets to the Project Manager whenever items are added to, or removed from the stockpile. Clearly identify the project number, location, designation and the entire inventory on these sheets. Keep each projects stockpiled material separated from stockpiles belonging to other projects. Only use stockpiled material for the designated project.

5. Furnish paid invoices for all stored manufactured or fabricated materials that have not been incorporated into the permanent work within 60 days from the date payment was requested. Include a notarized statement from the supplier or fabricator certifying that their payment has been received. If a paid invoice is not furnished, the quantity of any previously allowed material remaining in storage will be deducted from the next progress estimate, and further payment will not be made until the material is incorporated into the work.

Steel items meeting Subsection 106.09 may be stored at property owned or leased by the General Contractor or approved Subcontractor if approved by the Project Manager. The property must be located in Montana and accessible to Department personnel at all times.

Payment made for material on hand does not constitute acceptance of the material.

If stored material is lost, stolen, or damaged, the materials value will be deducted from the subsequent estimate or estimates.

Payment of partial estimates for stored material, acceptance of the materials to be stored, or approval of the storage method does not relieve the Contractor's responsibility for all materials and work upon which payments have been made or the restoration of any damaged work. The payments are not a waiver by the Department of any other contract provisions or of its rights to require fulfillment of all contract terms.

Partial payment will be made at the contract unit price for the specified percentage of the quantity produced or delivered and stockpiled as follows:

**TABLE 109-2  
MATERIALS IN STORAGE ELIGIBLE FOR PAYMENT**

<u>Material</u>	<u>Percent of Quantity for Partial Payment</u>
Aggregate Base and Surfacing	
0-5 Miles Haul (0-8 km).....	50
6-9 Miles Haul (10-15 km).....	60
10-20 Miles Haul (16-32 km).....	63
21 Miles and Greater (34 km) .....	65
Cover Material & OGFC.....	50
Aggregate for Bituminous Mixtures	
0-5 Miles (0-8 km) Haul.....	35
6-9 Miles (10-15 km) Haul.....	45
10-19 Miles (16-31 km) Haul.....	48
20-29 Miles (32-47 km) Haul.....	51
30-39 Miles (48-63 km) Haul.....	54
41 Miles (66 km) and Greater .....	57
Riprap	
0-5 Miles (0-8 km) Haul.....	20

6-9 Miles (10-15 km) Haul .....	25
10-19 Miles (16-31 km) Haul.....	30
20 Miles (32 km) and Greater .....	35
Aggregate for Concrete (Bridges).....	2
Aggregate for Concrete (PCCP) .....	8
Pavement Marking Paint.....	50
Glass Beads for Paint Striping .....	10
Epoxy Pavement Marking Material .....	40
Glass Beads for Epoxy Striping .....	20
Structural Steel .....	60
Reinforcing Steel .....	50
Corrugated Metal Pipe.....	30
Structural Plate Pipe or Pipe Arch .....	40
Prestressed Concrete Beams.....	75
Steel Girders.....	75
Bridge Elastomeric Bearing Devices .....	10
Bridge Pile	
Pipe Pile.....	60
H pile.....	60
Monotube .....	70
Bridge Pile Cutting Shoes.....	5
Bridge Joint Seals.....	50
Bridge Deck Re-Surfacing Materials.....	30
Concrete Pipe.....	40
Guardrail (Rail and Hardware).....	25
Guardrail (Posts and Blocks) .....	30
Fencing (Posts and Wire) .....	30
Precast Concrete Bridge Members	
(after curing period is completed) .....	60
Cantilever and Bridge Sign Structures.....	50
Sign Panels.....	60
Electrical and Signal Items .....	50
Steel Sign Posts .....	35
Wood Sign Posts .....	35
Posts, Metal U .....	40
Precast Concrete Products.....	50
Cattle guards .....	50
Topsoil .....	30
Water and Sewer Pipe and Appurtenances.....	30
Construction Fabric.....	50
Striping - Preformed Plastic .....	65
Words and Symbols - Preformed Plastic .....	75
Thermoplastic Pavement Marking Material .....	40
Treated Timber .....	50

Obtain the Engineer's written approval of off-project site storage locations for bridge prestressed beams, bridge structural steel members, concrete box structures, and other large structural items.

No payment is made for bridge deck re-surfacing materials having a manufacturer's expiration date passing before its scheduled incorporation into the work.

Haul is the distance to the nearest mile (km) via the most direct route from the aggregate production plant to the stockpiles for mix production as determined by the Project Manager.

Payment is made for aggregates that are to be stockpiled for at least 60 days or at the Engineer's discretion.

### **109.08 FINAL ESTIMATE**

When the final inspection of the contract is complete under Subsection 105.15.2, the contract documents will be finalized and a final estimate will be prepared. The estimate will include the amount and value of each class of work performed and any extra work and materials. Deductions for all previous payments and amounts to be deducted or withheld under the provisions of the contract will be made in the final estimate. Errors made in previous partial payments will be corrected in the final estimate.

When the final estimate is complete and all required documentation (e.g., material certifications, labor dispute resolutions, FHWA Form 47, etc.) has been received, the Construction Administration Services Bureau will send a copy of the final estimate to the Contractor for review. The Contractor has thirty days to dispute the final estimate or submit the request for acceptance under Subsection 105.15.3.

To dispute the final estimate, submit the items disputed and justification to the Construction Administration Services Bureau. Provide a copy to the Project Manager. The Construction Administration Services Bureau will provide a written decision on the disputed estimate within 30 calendar days of receipt of the disputed items.

The Department reserves the right to withhold all or part of the final payments earned under the contract until all taxes and assessments due and owing to the State of Montana for any reason have been paid in full unless a written release is received from the Department or the state agency having a claim against the Contractor.

The statutory time for filing claims against the contract bond is 90 calendar days from the date of the Commission acceptance of the project. See 18-2-201 to 18-2-208 MCA. The Engineer will immediately notify the Contractor and its surety of all claims filed against the contract or bond.

### **109.09 MOBILIZATION**

#### **109.09.1 General**

Mobilization is the preparatory work and operations performed including, but not limited to, those necessary for:

1. The movement of personnel, equipment, supplies, and incidentals to the project site;
2. The establishment of all offices, buildings, and other facilities necessary for work on the project;
3. Premium on contract bonds;
4. Insurance for the contract;
5. Other work and operations that must be performed or costs incurred before beginning contract work; and
6. Mobilization costs for subcontracted work.

#### **109.09.2 Payment**

The original contract amount is the total price of the contract as bid and includes mobilization. Partial payments for mobilization will be made based on the lump sum contract unit price as follows:

1. One percent of the original contract amount, but not more than 100 percent of the amount bid for mobilization, will be paid on the first regular estimate period following the award of the contract.
2. When 5 percent of the original contract amount is paid under the contract, 25 percent of the amount bid for mobilization or 3 percent of the original contract amount, whichever is less, will be paid.
3. When 10 percent of the original contract amount is paid under the contract, 50 percent of the amount bid for mobilization or 6 percent of the original contract amount, whichever is less, will be paid.
4. When 25 percent of the original contract amount is paid under the contract, 60 percent of the amount bid for mobilization or 8 percent of the original contract amount, whichever is less, will be paid.
5. When 50 percent of the original contract amount is paid under the contract, 90 percent of the amount bid for mobilization or 10 percent of the original contract amount, whichever is less, will be paid.
6. When 70 percent of the original contract amount is paid under the contract, 100 percent of the amount bid for mobilization will be paid.

Nothing in the contract may be construed to limit or preclude partial payments provided in the contract. Payment will be full compensation for all work necessary to complete the item.

#### **109.09.3 Payment (SMP Contracts)**

An exception to Subsection 109.09.2 is:

- For state maintenance stockpile contracts (SMP contracts), mobilization will be paid for based on the percentage each stockpile site quantity bears in relation to the entire contract quantity, determined by the Department. The amount established as payment for mobilization for each site will be paid for in its entirety with the first estimate for each site.

#### **109.10 OVERPAYMENTS**

Overpayments on progress estimates will be deducted from subsequent progress estimate payments, or the Contractor may be notified of the overpayment. The Contractor has 30 days from the date of receipt of notification of overpayment to repay the money owed. If the money owed is not received by the Department before the 30-day period expires, interest will be charged on the overpayment beginning with the date of receipt of notification of overpayment. The interest rate charged will be the average Short Term Investment Pool (STIP) rate, determined by the Montana State Board of Investments, for the period in which the overpayment is not repaid.

#### **109.11 FUEL PRICE ADJUSTMENT**

Provide the Engineer a list of up to ten contract items that will be subject to fuel price adjustment at the Pre-construction Conference or by the Notice to Proceed Date, whichever comes first. Provide diesel fuel, propane fuel and gasoline fuel costs for the respective contract items. The accumulated diesel fuel, propane fuel and gasoline fuel costs may not exceed 20 percent of the contract unit price without justification acceptable to the Engineer. Items measured on a lump sum basis will not be eligible for fuel price adjustment.

Adjustments will be calculated using the increase or decrease between the base price and the monthly average price at the time the contract items are added to the progress estimate. The base price for the contract will be the average of the high and low price for the five days before the bid opening. The base price for propane fuel will be the base price for diesel fuel divided by the difference in BTU/hr for each fuel, or 1.5455 BTU/hr. The monthly average price will be the

average of the high and low prices on Wednesday of each week in the adjustment period taken from Platt's Oilgram Price Report for Billings, Montana for unleaded gasoline and low sulfur No. 2 diesel fuel. The average price for propane fuel will be the average monthly price for diesel fuel divided by 1.5455. The adjustment period for fuel price is from the Wednesday of the full week before the beginning of the estimate cycle to the Wednesday of the full week prior to the next estimate cycle. If the estimate cycle extends beyond the monthly estimate period, only the fuel prices from the month in which the item is added to the estimate will be used to generate the average price.

Adjustments will be made only when the monthly average price is 20 percent more or less than the base price. The adjustments will be for the amount exceeding 20 percent.

The price adjustment for each type of fuel will be the percent change from the base price (BP) to the monthly average price (AP) multiplied by the quantity (Q) of the item added to the progress estimate, multiplied by the fuel cost (FC).

Adjustments will be according to the following formulas:

$$Increase = \left( \frac{AP - BP}{BP} - 0.20 \right) * FC * Q$$

$$Decrease = - \left( \frac{BP - AP}{BP} - 0.20 \right) * FC * Q$$

Where:

AP = Monthly Average Price

BP = Base Price

FC = Fuel Cost

Q = Quantity

Adjustments will be calculated for each type as described without regard to the grade or amount of fuel actually used. The total of the fuel price adjustments will be added to, or subtracted from, the monthly progress estimate.

