PART 4

STANDARD MODIFICATIONS AND SPECIAL PROVISIONS

To the **STATE OF ALASKA**

STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

2004
EDITION

KODIAK AREA ROADS PAVEMENT PRESERVATION
KODIAK AREAWIDE DELINEATION IMPROVEMENTS
PROJECT NO.: STP-0001(459)/54149 & AC-HHE-000S(843)/55966

SECTION 101

DEFINITIONS AND TERMS

Standard Modifications

101-1.03 DEFINITIONS.

PLANS. Delete Text of PLANS and replace with:

The Department's Contract drawings, profiles, typical cross sections, standard drawings, and supplemental drawings or reproductions showing the location, character, dimensions, and details of the work.

E32-012707

Add the following definition:

QUALIFIED PRODUCTS LIST. A list of companies and products that the Department has found conforms to the SSHC.

E36-012707

Insert the following definition after RESPONSIVE BID:

RETAINAGE. A percentage of a payment established in advance under a contract or subcontract to be withheld from progress payment due on the contract or subcontract. Payment or a percentage of payment withheld for unsatisfactory performance is not retainage.

E101-030512

Replace the definitions of SUBGRADE with the following:

SUBGRADE. The soil or embankment upon which the pavement structure is constructed.

E22-010106

SECTION 102

BIDDING REQUIREMENTS AND CONDITIONS

Standard Modification

102-1.04 EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND WORK SITE.

Replace the second paragraph with the following:

The records of geotechnical investigations including boring logs, test results, geology data reports, soil reports, material site reports, and geotechnical reports included in a bid package or made accessible to bidders or Contractors, are for information purposes only. These records are not part of the Contract. These records indicate subsurface conditions only at specific locations and times, and only to the depths penetrated. They do not necessarily reflect variations in soil, rock, or groundwater conditions that may exist between or outside such locations. Actual conditions may differ from what is shown in the records. Material Sources referenced in these records may not contain materials of sufficient quantity or quality to meet project requirements. The accessibility of these records does not constitute approval, nor guarantee suitability of soils or sources, or the rights to use sources for this project, except as specifically provided in subsections 106-1.02.4.b Mandatory Sources and 106-1.02.4.c Designated Sources. The records shall not substitute for independent investigation, interpretation, or judgment of the bidder or Contractor. The Department is not responsible for any interpretation or conclusion drawn from its records by the bidder or Contractor.

Bidders and Contractors shall examine subsection 106-1.02 Material Sources for further information about material source development.

E23-010106

102-1.05 PREPARATION OF BID. Modify the second sentence in the third paragraph, after:

"If a bidder is a corporation, the bid must be signed by a corporate officer," add: or agent.

E18-063004

SECTION 103

AWARD AND EXECUTION OF CONTRACT

Standard Modifications

Delete Subsection 103-1.05 and replace with the following:

103-1.05 PERFORMANCE AND PAYMENT BONDS. The successful bidder shall furnish all required Performance and Payment Bonds on forms provided by the Department for the sums specified in the Contract. If no sum is specified, the successful bidder shall comply with AS 36.25.010. The Surety on each bond may be any corporation or partnership authorized to do business in the state as an insurer under AS 21.09 or two individual sureties approved by the Contracting Officer.

If individual sureties are used, two individual sureties must each provide the Department with security assets located in Alaska equal to the penal amount of each bond. Any costs incurred by the Contractor and the individual Surety are subsidiary and shall be borne by the Contractor or the individual Surety. In no event will the Department be liable for these Costs.

Individual sureties shall provide security by one, or a combination, of the following methods:

1. Escrow Account, with a federally insured financial institution, in the name of the Department. Acceptable securities include, but are not limited to, cash, treasury notes, bearer instruments having a specific value, or money market certificates.

2. Irrevocable letters of credit, with a financial institution approved by the Contracting Officer.

3. Cashier's or certified check, made payable to the State of Alaska issued by financial institutions approved by the Contracting Officer.

These bonds and security assets, as applicable, shall remain in effect for 12 months after the date of final payment or, if longer, until all obligations and liens under this Contract are satisfied, including, but not limited to, obligations under Subsection 107-1.19.

The Department may, in its discretion, notify the bonding company or Surety of any potential default or liability.

The Contractor shall substitute, within five working days, another bond or surety acceptable to the Department if an individual Surety or the Surety on any bond furnished in connection with the Contract:
1. Becomes insolvent or is declared bankrupt;
2. Loses its right to do business in any state affecting the work;
3. Ceases to meet Contract requirements;
4. Fails to furnish reports of financial condition upon request; or
5. Otherwise becomes unacceptable to the Department.

When approved by the Contracting Officer, the Contractor may replace:
1. An individual surety with a corporate surety; or
2. Posted collateral with substitute collateral.

Failure to maintain the specified bonds or to provide substitute bonds when required under this section may be grounds for withholding contract payments until substitute bonding is obtained, and may, in the Department's discretion, be grounds for declaring the Contractor in default.

E65-022309

SECTION 104

SCOPE OF WORK

Standard Modifications

104-1.01 INTENT OF CONTRACT. Add to the end of this subsection:

The Contractor is responsible for the means, methods, techniques, sequence, or procedures of construction, safety, quality control, and to perform or furnish the work in accordance with the Contract documents.

E58-072808

SECTION 105

CONTROL OF WORK

Standard Modifications

105-1.02 PLANS AND WORKING DRAWINGS. In the third paragraph delete:

"(24"x36")" and replace with: (22"x34")

105-1.03 CONFORMITY WITH PLANS AND SPECIFICATIONS. In the first sentence of the first paragraph after:

"Work performed and materials furnished shall conform to the Plans and Specifications" add: and approved Working Drawings,

In the first sentence of the second paragraph after: "All work or material not conforming to the Plans and Specifications" add: and approved Working Drawings,

E33-012707
Special Provisions

105-1.06 UTILITIES. Add the following:

Request locates from the utilities having facilities in the area. Use the Alaska Digline, Inc. Locate Call Center for the following utilities.

ALASKA DIGLINE, INC.	
Locate Call Centers:	
Statewide	(800) 478-3121
Call Centers will notify the following: Alaska Communications Systems (ACS) AT & T Alascom (AT&T) General Communications, Inc. (GCI) Kodiak Kenai Cable Co.	

Call the following utilities and agencies directly:

City of Kodiak Public Works (Mark Kozak) ..... (907) 486-8060
Kodiak Electric Association ..... (907) 486-7746
DOT/PF Maintenance and Operations Kodiak District (Rob Greene): ..... (907) 487-4952
Kodiak Island Borough, Community Development (Bud Cassidy) ..... (907) 486-9363
Kodiak Island Borough, engineering & facilities (Woody Koning) ..... (907) 486-9343

105-1.07 COOPERATION BETWEEN CONTRACTORS. Add the following:

The following state owned projects may be under construction concurrently with this project.

Project Name:	Project No.:
Kodiak: Chiniak Road MP 23.7 Improvements	58107

Coordinate traffic control, construction, and material hauling operations with the prime contractor of the above projects to minimize impact on the traveling public, and to minimize conflicts with the work being performed under the other contracts.

CR1051-110309

Standard Modification

105-1.13 MAINTENANCE DURING CONSTRUCTION. Add the following at the end of this subsection:

Costs of maintenance work during construction and before the project is accepted as substantially complete shall be subsidiary to the prices bid on the various Contract items, and the Contractor will not be paid an additional amount for such work.

If in the Engineer's opinion, the Contractor at any time fails to provide adequate maintenance, the Engineer will notify the Contractor of such noncompliance. The notification will specify the areas or structures for which there is inadequate maintenance, the corrective maintenance required, and the time allowed to complete corrective maintenance. If the Contractor fails to take corrective action within the specified time, the Engineer may:

1. Suspend the work until corrective maintenance is completed;
2. Assess a traffic price adjustment against the Contract Amount when an adjustment rate is specified in the Contract; and
3. Employ others for corrective maintenance and deduct the cost from the Contract amount.

E33-012707

105-1.15 PROJECT COMPLETION. In the second paragraph, second sentence, delete:

"Subsection 621-3.04" and replace with: Subsection 618-3.06 and 621-3.04.

In the third paragraph, first sentence, delete:

"Subsection 621-3.04" and replace with: Subsection 618-3.06 and 621-3.04.

E59-072808

105-1.16 FINAL ACCEPTANCE AND RECORD RETENTION. Modify the first paragraph, Item 4. after:

"DOLWD" add: and State Department of Revenue.

E19-063004

Special Provisions

105-1.17 CLAIMS FOR ADJUSTMENT AND DISPUTES. Add the following:

Appeals to the superior court under AS 36.30.685 must be filed in the Third Judicial District.

CR93-032101

Standard Modification

Add the following Subsection 105-1.18:

105-1.18 RESERVED FOR WARRANTIES.

E33-012707
Special Provision

SECTION 106

CONTROL OF MATERIAL

Standard Modifications

106-1.01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS. In fifth paragraph, in two places remove the text. "Approved Products List" and replace with: *Qualified Products List*

E36-012707

Special Provision

Add the following:

Buy America Provision. Comply with the requirements of 23 CFR 635.410, Buy America Requirements, and submit a completed Material Origin Certificate, Form 25D-60, before award of the Contract.

Steel and iron products, which are incorporated into the work, shall be manufactured in the United States except that minor amounts of steel and iron products of foreign manufacture may be used, provided the aggregate cost of such does not exceed one tenth of one percent (0.001) of the total contract amount, or $2500, whichever is greater. For the purposes of this paragraph, the cost is the value of the products as they are delivered to the Project including freight.

"Manufactured in the United States" means that all manufacturing processes starting with the initial mixing and melting through the final shaping, welding, and coating process must be undertaken in the United States. The definition of "manufacturing process" is smelting or any subsequent process that alters the material's physical form, shape or chemical composition. These processes include rolling, extruding, machining, bending, grinding, drilling, etc. The application of coatings, such as epoxy coating, galvanizing, painting or any other coating that protects or enhances the value of steel or iron materials shall also be considered a manufacturing process subject to the "Buy America Requirements."

Buy America does not apply to raw materials (iron ore), scrap pig iron, and processed, pelletized and reduced iron ore. It also does not apply to temporary steel items (e.g., temporary sheet piling, temporary bridges, steel scaffolding, and falsework). Further, it does not apply to materials that remain in place at the Contractor's convenience (e.g., sheet pilings, and forms).

The North American Free Trade Agreement (NAFTA) does not apply to the Buy America requirement. There is a specific exemption within NAFTA (article 1001) for grant programs such as the Federal-aid highway program.

When steel and iron products manufactured in the United States are shipped to a foreign country where non-steel or iron products are installed on or in them (e.g., electronic components in a steel cabinet), the steel and iron is considered to meet the requirements of this subsection.

Take whatever steps are necessary to ensure that manufacturing processes for each covered product comply with this provision. Non-conforming products shall be replaced at no expense to the State. Failure to comply may also subject the Contractor to default and/or debarment. False statements may result in criminal penalties prescribed under Title 18 US Code Section 1001 and 1020.

CR13-020705

Standard Modification

106-1.02 MATERIAL SOURCES.

1. a. General. Within Item a. delete text and replace with: Utilize Useable Excavation according to subsection 104-1.04 before using material sources listed in subsection 106-1.02.4. When there is insufficient, Useable Excavation furnish additional required materials from sources of the Contractor's choice, except that the Contractor shall use a mandatory source when identified in the Contract.

4. Type of Sources. Replace the first paragraph with the following:

The Contractor shall utilize Useable Excavation according to subsection 104-1.04 before using material sources listed in this subsection. When there is insufficient Useable Excavation, the Contractor shall furnish additional required materials from sources of the Contractor's choice, except that the Contractor shall use a mandatory source when identified in the Contract.

When there is insufficient Useable Excavation, the Contractor shall supply additional required material from the following sources:

d. Available Sources. Replace the second paragraph with the following:

When the Department furnishes copies of existing boring logs, test results, or other data in its possession concerning Available Sources, the Contractor is responsible for determining the accuracy and completeness of this data, for assumptions the Contractor makes based on this data, and for exploring Available Sources to the Contractor's satisfaction.

e. Excluded Material Sources. Replace the paragraph with the following:

Some material sources may not be considered acceptable regardless of location or ownership. The bid documents may identify some material sources excluded from use. The Department reserves the right to exclude a material source or any portion of a material source, at any time after Contract Award that is determined by material testing to be unsuitable for use on the Project.

E24-010106

Add new Subsection 106-1.08:

106-1.08 SUBMITTAL PROCEDURE. The Contractor shall complete a Submittal Register, and shall submit to the Engineer on forms provided by the Department. The intent of the Submittal Register is to provide a blueprint for the smooth flow of specified Project document. The Contractor shall fill it out sequentially by bid Item and allow at least three spaces between bid items. The Submittal Register shall list working drawings, schedules of work, and other items required to be submitted to the Department by the Contractor including but not limited to Progress Schedule, anticipated dates of material procurement, Construction Phasing Plan, Utility Progress Schedule, Blasting Plan, Mining Plan, annual EEO reports, DBE payment documentation, and subcontracts.

The Contractor shall submit materials (product) information to the Engineer for review, as required by the Materials Certification List and the Contract.

The number of copies required for submittals may be included in the specifications for individual bid items. If the number of copies of a submittal is not otherwise specified, three copies shall be required. On each sheet submitted to the Department, including working drawings, catalog cuts, manufacturer's certifications, etc., space shall be provided for Contractor and Department review stamps.

Each copy of each submittal shall include a Submittal Summary sheet. The Contractor may use forms provided by the Department of a similar form of the Contractor's choice as approved by the Department. The Contractor shall sign submittals and submit them to the Engineer. The Department will review submittals within 30 days after they are received. The Department will return submittals to the Contractor as either: approved, conditionally approved with the conditions listed, or rejected with the reasons listed. The Contractor may resubmit a rejected submittal to the Engineer with more information or corrections. The Department will review resubmittals within 30 days after they are received.

The Contractor shall not order material or use working drawings that have not been approved by the Department. The Contractor shall be responsible for timely submittals. Failure by the Department to review submittals within the time given may be the basis for a request for extension of Contract time but not for additional compensation.

Payment for a specific Contract Item will not be made until the Department has received the Submittal Register for all items and approved all required submittals for that specific Contract Item.

When material invoices, freight bills, and mill certificates are submitted, they shall provide sufficient information for the Engineer to identify the date, company and location of invoice (bill, certificate); Project name and number where material will be incorporated, manufacturer, product number, quantity and cost.

Add the following Subsection 106-1.09:

106-1.09 RESERVED.

E34-012707

SECTION 107

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

Special Provisions

107-1.02 PERMITS, LICENSES, AND TAXES.

The Department will: Add No. 3.:

3. The Department has received the following permits on the Contractor's behalf:

   a. U.S. Army Corps of Engineers (USACE), Nationwide Permit (NWP) 3 – Maintenance. Comply with all NWP General Conditions and Regional Conditions E, F, G, and H provided in Appendix B.

The Contractor shall: Add the following:

9. Obtain through the Engineer a written statement from the State Historic Preservation Officer stating that material disposal, extraction, stockpiling, or staging, on or off project site, is not expected to impact cultural resources. The State Historic Preservation Officer is with the Department of Natural Resources in Anchorage, and may be contacted at (907) 269-8715. If cultural resources are discovered during construction activities, stop work at the site and notify the Engineer.

10. Provide a wetland specialist able to conduct wetlands determinations and delineations according to the Corps of Engineers 1987 Wetland Delineation Manual, and the Regional Supplement to the Corps of Engineers Wetland Delineations Manual (Alaska Region, Version 2.0, September 2007). The wetland specialist shall conduct the determination and delineations of sites outside the project limits or not previously permitted, impacted by the Contractor's operations. These delineations will be subject to Corps of Engineers approval.

11. Provide information to comply with the Alaska Department of Environmental Conservation (ADEC) Alaska Pollutant Discharge Elimination System (APDES) General Permit for Alaska to discharge storm water from the construction site. Refer to Section 641, Erosion, Sediment, and Pollution Control for requirements for this permit.

Provide the Engineer a copy of permits or clearances received before using sites outside the project limits. Additionally, provide the Engineer a written statement that permits or clearances have been obtained. Also, provide a written statement to the Engineer listing agencies or offices contacted that responded that no additional action is required.

CR7-092612

Standard Modifications

107-1.05 FEDERAL AID PROVISIONS. Add the following after paragraph two:

Form 25D-55H Required Contract Provisions for Federal-Aid (FHWA) Construction Contracts. The FHWA no longer requires the Contractor to fill out FHWA Form 47, Statement of Materials and Labor Used By Contractors on Highway Construction Involving Federal Funds. Section VI Records of Materials, Supplies and Labor of Form 25D-55H is no longer applicable to highway construction contracts.

Title VI Requirements. During the performance of this Contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

(1) **Compliance with Regulations:** The Contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, "DOT") title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Contract.

(2) **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, Section 21.5 of the regulations, including employment practices when the Contract covers a program set forth in Appendix B of the Regulations.

(3) **Solicitation for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.

(4) **Information and Reports:** The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the DOT&PF or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to the DOT&PF, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the DOT&PF shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the Contractor under the Contract until the Contractor complies, and/or
(b) cancellation, termination, or suspension of the Contract, in whole or in part.

(6) **Incorporation of Provisions:** The Contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The Contractor shall take such action with respect to any subcontract or procurement as the DOT&PF or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the DOT&PF to enter into such litigation to protect the interests of the DOT&PF, and, in addition, the Contractor may request the United states to enter into such litigation to protect the interests of the United States.

E67-101509

107-1.07 ARCHAEOLOGICAL OR HISTORICAL DISCOVERIES. Change the first sentence to the following:

When operation encounters historic or prehistoric artifacts, burials, remains of dwelling sites, paleontological remains, (shell heaps, land or sea mammal bones or tusks, or other items of historical significance), cease operations immediately and notify the Engineer.

107-1.11 PROTECTION AND RESTORATION OF PROPERTY AND LANSDCAPE. Add the following:

If water is required for a construction purpose from a nonmunicipal water source, obtain a Temporary Water Use Permit from the Water Resource Manager, and provide a copy to the Engineer. The Water Resource Manager is with the Department of Natural Resources in Anchorage and may be contacted at (907) 269-8645.

CR7-092612

Standard Modification

Add the following paragraphs:

7. Restoring Areas. Areas used by the Contractor, including haul routes, shall be restored to their original condition after the Contractor's operations are completed. The original condition of an area shall be determined as follows:

   Before beginning operations, the Engineer and the Contractor shall inspect each area and haul route that will be used by the Contractor and take photographs to document their condition. After construction operations are completed, the condition of each area and haul route will be compared to the earlier photographs. Before demobilization, the Contractor shall repair damages attributed to its operations. The Contractor agrees that costs associated with repairs shall be subsidiary to other items of work and will not be paid for directly.

8. Material Disposal Sites. Offsite disposal areas may be at locations of the Contractor's choice, provided the Contractor obtains from the owner of such land written permission for such dumping and a waiver of all claims against the State for any damage to such land which may result there from, together with permits required by law for such dumping. A copy of permission, waiver of claims, and permits shall be filed with the Engineer before beginning work on private property. The Contractor's selected disposal sites shall also be inspected and approved by the Engineer before use of the sites.

E35-012707

Add the following:

Bald Eagles are protected under the Bald Eagle Protection Act (16 U.S.C. 668-668c) which prohibits "takes" of bald eagles, their eggs, nests, or any part of the bird. The Act defines "taking" as "to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

Maintain a Primary Zone of a minimum 330 ft as an undisturbed habitat buffer around nesting bald eagles. If topography or vegetation does not provide an adequate screen or separation, extend this buffer to 0.25 miles, or a sufficient distance to screen the nest from human activities. The actual distance will depend on site conditions and the individual eagle's tolerance for human activity. Within the Secondary Zone, between 330 ft and 660 ft from eagles nest tree no obtrusive facilities or major habitat modifications shall occur. If nesting occurs in sparse stands of trees, treeless areas, or where activities would occur within line-of-site of the nest, this buffer shall extend up to 0.5 miles. No blasting, logging and other noisy, disturbing activities should occur during the nesting period (March 1 – August 31) within the primary or secondary zones.

Extremely noisy activities such as road construction or other activities that occur within the Secondary Zone shall be conducted outside the nesting period to avoid disturbance to eagles. If activities occur in proximity to a nest site, employ an individual qualified to observe and assess the impact of such activities on nesting eagles. Behavior generally associated with disturbed eagles includes alarm calls, birds flushed from their nest or perch, and aggressiveness.

If nest trees are discovered within the vicinity of the project site, the U.S. Fish and Wildlife Service must be notified immediately by calling (907) 786-3503 or (907) 271 – 2772, before starting construction activities, for further site evaluation. This is an advisory. Do what is required to keep from disturbing a nesting eagle.

CR1071-081210

Add the following subsection:

107-1.21 FEDERAL AFFIRMATIVE ACTION. The Federal Equal Employment Opportunity Disadvantaged Business Enterprise and On-the-Job Training affirmative action program requirements that are applicable to this Contract are contained in the project Special Provisions and Contract Forms, and may include:

Disadvantaged Business Enterprise (DBE) Program	Section 120
Training Program	Section 645
Federal EEO Bid Conditions	Form 25A 301
EEO-1 Certification	Form 25A 304
ADOT&PF Training Program Request	Form 25A 310
Training Utilization Report	Form 25A 311
Contact Report	Form 25A 321A
DBE Subcontractable Items	Form 25A 324
DBE Utilization Report	Form 25A 325C
Summary of Good Faith Effort Documentation	Form 25A 332A
Required Contract Provisions, Federal-Aid Contracts	Form 25D 55

In addition to the sanctions provided in the above references, non-compliance with these requirements is grounds for withholding of progress payments.

S80-012202

SECTION 108

PROSECUTION AND PROGRESS

Standard Modification

Delete Subsection 108-1.01 in its entirety and replace with the following:

108-1.01 SUBCONTRACTING OF CONTRACT. The Contractor shall submit a Contractor Self Certification for Subcontractors and Lower Tier Subcontractors, Form 25D-042, before the Contractor or any subcontractor subcontracts, sells, transfers, assigns, or otherwise disposes of the Contract or any portion of the Contract. The Department has authority to review subcontracts and to deny permission to subcontract work. The Department may penalize the Contractor for false statements or omissions made in connection with Form 25D-042.

The Contractor shall perform, with the Contractor's own organization, work amounting to at least 30 percent of the difference between the original Contract price and the price of designated Specialty Items. For the purpose of this Subsection, work is defined as the dollar value of the services, equipment, materials, and manufactured products furnished under the Contract. The Engineer will determine the value of the subcontracts based on Contract unit prices or upon reasonable value, if entire items are not subcontracted.

The Department's consent to the subcontracting, sale, transfer, assignment, or disposal of all or a part of the Contract shall not relieve the Contractor and the Surety of responsibility for fulfillment of the Contract or for liability under bonds regardless of the terms of the transfer or sublet approvals.

1. The Contractor shall ensure that for all subcontracts (agreements):
   a. The Department is furnished with one completed Contractor Self Certification, Form 25D-042, for each subcontract;
   b. The subcontractors have submitted a Bidder Registration; Form 25D-6;
   c. The required prompt payment provisions of AS 36.90.210 are included in all subcontracts;
   d. A clause is included requiring the Contractor to pay the subcontractor for satisfactory performance according to AS 36.90.210 and within eight (8) working days after receiving payment for which the subcontractor is to be paid.
   e. A clause is included requiring the Contractor to pay the subcontractor interest, according to AS 45.45.100(a), for the period beginning the day after the required payment date and ending on the day payment of the amount due is made;
   f. A clause is included requiring the Contractor to pay the subcontractor all retainage due under the subcontract, within eight (8) working days after final payment is received from the Department, or after the notice period under AS 36.25.020(b) expires, whichever is later;
   g. A clause is included requiring the Contractor to pay interest on retainage, according to AS 36.90.250 and AS 45.45.101(a);
   h. Other required items listed in Form 25D-042 are included in the subcontracts;
   i. The subcontractors pay current prevailing rate of wages as per Subsection 107-1.04 and file certified payrolls with the Engineer and DOLWD for all work performed on the project; and
   j. Upon receipt of a request for more information regarding subcontracts, the requested information is provided to the Department within 5 calendar days.

2. The Contractor shall ensure that for all lower tier subcontracts (agreements between subcontractors and lower tier subcontractors):

   a. The required prompt payment provisions of AS 36.90.210 are included in all lower tier subcontracts;
   b. A clause is included requiring the subcontractor to pay the lower tier subcontractor for satisfactory performance according to AS 36.90.210, and within eight (8) working days after receiving payment from which the subcontractor is to be paid;
   c. A clause is included requiring the subcontractor to pay the lower tier subcontractor interest, according to AS 45.45.010(a), for the period beginning the day after the required payment date and ending on the day payment of the amount due is made;

d. A clause is included requiring the subcontractor to pay the lower tier subcontractor all retainage due under the subcontract, within eight (8) working days after final payment is received, or after the notice period under AS 36.25.020(b) expires, whichever is later;
e. A clause is included requiring the subcontractor to pay the lower tier subcontractor interest on retainage, according to AS 36.90.250 and AS 45.45.101(a);
f. Other required items listed in Form 25D-042 are included in the lower tier subcontracts;
g. The lower tier subcontractors pay current prevailing rate of wages as per Subsection 107-1.04 and file certified payrolls with the Engineer and DOLWD for all work performed on the project; and
h. Upon receipt of a receipt for more information regarding subcontracts, the requested information is provided to the Department within 5 calendar days.

3. The following will be considered as subcontracting, unless performed by the Contractor:

   a. **Roadside Production.** Roadside production of crushed stone, gravel, and other materials with portable or semi-portable crushing, screening, or washing plants set up or reopened in the vicinity of the project to supply materials for the project, including borrow pits used exclusively or nearly exclusively for the project.
   b. **Temporary Plants.** Production of aggregate mix, concrete mix, asphalt mix, other materials, or fabricated items from temporary batching plants, temporary mixing plants, or temporary factories that are set up or reopened in the vicinity of the project to supply materials exclusively or nearly exclusively for the project.
   c. **Hauling.** Hauling from the project to roadside production, temporary plants, or commercial plants, from roadside production or temporary plants to the project, from roadside production or temporary plants to commercial plants, and all other hauling not specifically excluded in this subsection.
   d. **Other Contractors.** All other contractors working on the project site under contract with the Contractor are considered subcontractors unless specifically excluded in this subsection.

4. The following will not be considered as subcontracting, but the Contractor shall comply with the prompt payment provisions AS 36.90:

   a. **Commercial Plants.** The purchase of sand, gravel, crushed stone, crushed slag, batched concrete aggregates, ready-mixed concrete, asphalt paving mix, and any other materials or fabrication produced at and furnished from established and recognized commercial plants that sell to both public and private purchasers.
   b. **Hauling.** Delivery of materials from a commercial plant to a different commercial plant, and delivery from a commercial plant to the project site by vehicles owned and operated by the commercial plants or by commercial freight companies that have a contract with the commercial plant. Commercial freight companies are trucking or hauling companies that deliver multiple types of materials to multiple clients, both public and private, on an established route, and on a recurrent basis.
   c. **Contractors' General Business.** Work within permanent home offices, branch plants, fabrication plants, tool yards, and other establishments that are part of a contractor's or subcontractor's general business operations.

5. **Owner-Operators.** Hauling of materials for the project by bona fide truck owner-operators who are listed as such on the certified payroll of the Contractor or approved subcontractor is not considered subcontracting for purposes of AS 36.30.115.

   The Contractor shall ensure that the required prompt payment provisions of AS 36.90.210 are included in contracts with owner-operators.

   The Contractor shall collect and maintain at the project site current and valid copies of the following to prove that each trucker listed is a bona fide owner-operator.

   a. Alaska Driver's License with appropriate CDL class and endorsements;
   b. Business license for trucking with supporting documents that list the driver as the business owner or corporate officer;
   c. Documents showing the driver's ownership interest in the truck, including copies of:

(1) Truck registration; and
(2) Lease (if truck is not registered in driver's name or in the name of the driver's company).

The Contractor shall maintain legible copies of these records for a period of at least three years after final acceptance of the project.

Owner-operators must qualify as independent contractors under the current Alaska Department of Labor's criteria. Owner-operators may be required to show:

a. The owner-operator's right to control the manner in which the work is to be performed;
b. The owner-operator's opportunity for profit or loss depending upon their managerial skill;
c. The owner-operator's investment in equipment or materials required for their task, or the employment of helpers;
d. Whether the service rendered requires a special skill;
e. The degree of permanence of the working relationship; and
f. Whether the service rendered is an integral part of the owner-operator's business.

The status of owner-operators is subject to evaluation throughout the project period. If the criteria for an independent contractor are not met, the Contractor shall submit amended payrolls listing the driver as an employee subject to all labor provisions of the Contract.

The Contractor shall issue each owner-operator a placard in a form approved by the Engineer that identifies both the truck driver and the vehicle. The placard shall be prominently displayed on the vehicle so that it is visible to scale operators and inspectors.

Not withstanding the Department's definitions of contracting and subcontracting, the Contractor shall be responsible for determining and complying with all federal and state laws and regulations regarding contracting, subcontracting, and payment of wages. The Contractor shall promptly pay any fines or penalties assessed for violations of those laws and regulations, and shall promptly comply with the directives of any government agency having jurisdiction over those matters.

E102-030512

Special Provision

108-1.03 PROSECUTION AND PROGRESS. Delete the last sentence of the first paragraph and substitute the following:

Submit the following at the Preconstruction Conference:

Delete the last sentence of the first paragraph in No. 1. A progress schedule, and substitute the following:

1. A Critical Path Method (CPM) Schedule is required, in a format acceptable to the Engineer, showing the order the work will be carried out and the contemplated dates the Contractor and subcontractors will start and finish each of the salient features of the work, including scheduled periods of shutdown. Indicate anticipated periods of multiple shift work in the CPM Schedule. Revise to the proposed CPM Schedule promptly. Promptly submit a revised CPM Schedule if there are substantial changes to the schedule, or upon request of the Engineer.

CR261-121302

SECTION 109

MEASUREMENT AND PAYMENT

Special Provisions

109-1.02 MEASUREMENT OF QUANTITIES. Under subtitle Electronic Computerized Weighing System Item (1) add the following to the end of the first sentence:

", CD, or a USB device."

109-1.05 COMPENSATION FOR EXTRA WORK ON TIME AND MATERIALS BASIS. Under Item 3. Equipment, Item a. add the following to the second paragraph:

The rental rate area adjustment factors for this project shall be as specified on the adjustment maps for the Alaska – South Region.

CR14-043105

Standard Modification

Delete Subsection 109-1.06 in its entirety and replace with the following:

109-1.06 PROGRESS PAYMENTS. The Department will make monthly progress payments to the Contractor based on estimates of the value of work performed and materials on hand under Subsection 109-1.07. At the Departments discretion, a progress payment may be made twice monthly if the value of the estimate exceeds $10,000.

Contractor's failure to pay subcontractors or subcontractor's failure to pay lower tier subcontractors, according to prompt payment provisions required under Subsection 108-1.01 is considered unsatisfactory performance.

The Department will not withhold payment as retainage but may withhold payment for unsatisfactory performance. If satisfactory progress is being made and subcontractors are paid according to Subsection 108-1.01 and AS 36.90.210, the Engineer will authorize 100 percent payment for the estimated value of work accomplished, less any authorized deductions.

If the Engineer finds that satisfactory progress is not being made or payment for satisfactory work by a subcontractor or lower tier subcontractor is not paid according to Subsection 108-1.01, the Engineer may withhold up to 100 percent of the total amount earned from subsequent progress payments. The Engineer may withhold up to 200 percent of the estimated cost to complete final punch list items for unsatisfactory performance until those items are complete. The Engineer will notify the Contractor in writing within eight (8) working days of a request for a progress payment of the reasons why part or all of the payment is being withheld for unsatisfactory performance and what actions may be taken by the Contractor to receive full payment.

Payments of withheld amounts will be made in accordance with AS 36.90.200. No interest will be paid to the Contractor for amounts withheld for unsatisfactory performance except if the Department fails to pay the amount withheld within twenty one (21) calendar days after the Contractor satisfactorily completes the remedial actions identified by the Engineer, as provided in AS 36.90.200(e).

The Contractor shall pay interest on retainage withheld from subcontractors, and at an interest rate according to AS 36.90.250 and AS 45.45.010(a).

E103-030512

109-1.08 FINAL PAYMENT. Add the following sentence to the first paragraph:

The Department will not process the final estimate until the Contractor completes Items 1 through 4 in the first paragraph of Subsection 105-1.16.

E11-063004

Special Provisions

Add the following Section:

SECTION 120

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM

120-1.01 DESCRIPTION. The work consists of providing Disadvantaged Business Enterprises (DBEs), as defined in Title 49, CFR (Code of Federal Regulations), Part 26, the opportunity to participate fairly with other contractors in the performance of contracts financed with federal funds. The Contractor and subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor will carry out applicable requirements of 49 CFR Part 26 in the award and administration of US DOT assisted contracts.

120-1.02 INTERPRETATION. This Section implements the requirements of 49 CFR, Part 26, and the Department's federally approved DBE Program.

120-1.03 ESSENTIAL CONTRACT PROVISION. Failure to comply with the provisions of this Section is a material breach of contract, which may result in contract termination or other remedy as DOT&PF deems appropriate. Failure to comply with this Section is justification for debarment action as provided in AS 36.30.640(4).

120-1.04 DEFINITIONS AND TERMS.

1. **Administrative Reconsideration.** A process by which the low bidder may request reconsideration when the Department determines the Good Faith Effort (GFE) requirements have not been met.

2. **Broker.** A certified DBE for the delivery of creditable materials, supplies, equipment, transportation/hauling, insurance, bonding, etc., within its certified category, that is necessary to complete the project. A broker of materials certified in a supply category must be responsible for scheduling the delivery of materials and ensuring that the materials meet specifications before credit will be given.

3. **Civil Rights Office.** The Department's Civil Rights Office.

4. **Contract Compliance Officer.** Individual within the Civil Rights Office with the authority to administer the Department's compliance programs.

5. **Disadvantaged Business Enterprise.** A Disadvantage Business Enterprise which is a for-profit small business concern that is certified in accordance with 49 CFR, Part 26 and listed in the Alaska DBE Directory.

6. **DBE Key Employee.** A permanent, year-round employee of the DBE and whose name is on file with the Civil Rights Office as a key employee. A key employee may act as an on-site representative when the owner is not on-site.

7. **DBE Utilization Goal.** The percent of work to be performed by certified DBEs. The goal is established by the Department and specified in the Contract.

8. **DBE Officer.** Individual designated in writing as a representative of the Contractor concerning DBE issues.

9. **Manufacturer.** A DBE certified in a supply category that changes the shape, form, or composition of original material in some way. The DBE must provide that material to the general public or the construction industry at large on a regular basis.

10. **Race Conscious Participation.** DBE participation used to meet a specified DBE Utilization Goal.

11. **Race Neutral Participation.** DBE participation that is in excess of the specified DBE Utilization Goal.

12. **Regular Dealer.** A DBE certified in a supply category who operates in a manner consistent with industry practice and who:

    a. maintain an in-house inventory on a regular basis of the particular product provided to this project; and

    b. keeps an inventory in an amount appropriate for the type of work using that product; and

    c. offers that inventory for sale to the general public or construction industry at large (private and public sectors), not just supplied as needed on a project by project basis during the construction season, except where the product requires special or heavy equipment for delivery and the DBE possesses and operates this equipment on a regular basis throughout the construction season in order to deliver the product to the general public or construction industry at large. If the distribution equipment is rented or leased, it must be on a repetitive, seasonal basis; and may additionally fabricate (assemble large components) for use on a construction project, consistent with standard industry practice, for delivery to the project.

    d. a person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business, if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

120-2.01 MEETING THE DBE UTILIZATION GOAL. A DBE's proposed work may be used to demonstrate the successful bidder's ability to meet the DBE Utilization Goal before Contract award. The DBE must be certified in a category covering the Commercially Useful Function to be performed at the time of listing on Form 25A-325C (DBE Utilization Report).

A bidder may meet the DBE Utilization Goal through (1) the participation of certified DBE firms, or (2) documentation of required Good Faith Effort (Subsection 120-3.01), or (3) a combination of participation and Good Faith Effort to be eligible for Contract award.

DBE participation on contingent sum items will count as RACE Neutral DBE participation and not towards fulfilling a minimum DBE Utilization Goal, which is RACE Conscious DBE participation.

120-3.01 DETERMINATION OF COMPLIANCE.

1. **Phase I-Bid.** All DBE Good Faith Efforts must be completed prior to bid opening.

2. **Phase II-Award.** The apparent low bidder shall submit evidence of DBE commitment(s) within five working days after receipt of written notification by the Department of the successful low bid. The apparent low bidder may not supplement its DBE efforts after opening, nor may offer new or additional DBE participation after submitting the DBE Utilization Report (Form 25A-325C).

    a. **Written DBE Commitment:** Complete Form 25A-326 for each DBE subcontractor.

    b. **DBE Utilization Report.** Submit a completed DBE Utilization Report Form 25A-325C listing certified DBEs to be used to meet the DBE Utilization Goal.

    c. **Good Faith Effort Documentation.** Submit a completed Summary of Good Faith Effort Documentation Form 25A-332A (with attachments) and contact Report Form 25A-321A if the DBE Utilization Goal is not demonstrated on Form 25A-325C.

If the bidder cannot demonstrate the ability to meet the DBE Utilization Goal, and cannot document the minimum required Good Faith Effort (as specified below), the Contracting Officer will determine the bidder to be not responsible.

120-3.02 GOOD FAITH EFFORTS (GFE).

1. **Good Faith Effort Criteria.** When a bidder fails to meet DBE Utilization Goals, the Civil Rights Office will use the following criteria to judge whether they have demonstrated sufficient Good Faith Effort to be eligible for award of the Contract.

   a. **Consider All Subcontractable Items.** The bidder shall, at a minimum, seek DBE participation for each of the subcontractable items with an established DBE goal as identified on Form 25A-324, before bid opening. It is the bidder's responsibility to facilitate DBE participation by making the work listed on the subcontractable items list available to DBE firms.

      If the bidder cannot achieve the DBE Utilization Goal, then the bidder may also consider other items not listed that could be subcontracted to DBEs.

   b. **Initial DBE Notification.** All DBEs listed in the Department's current DBE Directory that have a "Yes" Under Required GFE Contact and "Yes" under the specific Work Area (Region) must be contacted at least seven calendar days prior to bid opening. DBEs certified to perform work items identified on Form 25A-324 must be contacted to solicit their interest. Each contact with a DBE firm will be logged on a Contact Report, Form 25A-321A.

      The bidder must give DBEs at least five calendar days to respond. The bidder may reject DBE quotes received after the deadline. Such a deadline for bid submission by DBEs will be consistently applied.

      The only acceptable methods of initial and follow up notification are:

      1) By fax with a confirmation receipt of successful transmission to the DBE's fax number listed in the DBE Directory. A fax transmission without receipt of successful transmission is unsatisfactory.

      2) By email with a confirmation of successful receipt by DBE's email address listed in the DBE Directory. Email without confirmation of successful receipt is unsatisfactory.

      3) By U.S. Mail to the DBE's address listed in the DBE Directory with a return receipt requested. Letters mailed without a return receipt signed by the DBE or DBE Key employee are unsatisfactory. Delivery confirmation with evidence of successful delivery is an acceptable substitute for Return Receipt.

      4) By telephone solicitation with a record of the date and time of the telephone call made to the DBE's telephone number listed in the DBE Directory. Telephone solicitation without a record of date and time is unsatisfactory.

   c. **Non-Competitive DBE Quotes.** DBE quotes more than 10 percent higher than an accepted non-DBE quote will be deemed non-competitive, provided they are for the exact same work or service.

      All evidence in support on a non-competitive bid determination must be provided at the time of the Good Faith Effort submittal. When a DBE quote is rejected as being non-competitive, the work must be performed by the non-DBE subcontractor whose quote was used to provide the basis of the determination. Payments received by the non-DBE subcontractor during the execution of the Contract shall be consistent with the accepted quote. This does not preclude increases due to change documents issued by the Department.

   d. **Assistance To DBEs.** Contractors must provide DBEs with:

      1) Information about bonding or insurance required by the bidder.

      2) Information about securing equipment, supplies, materials, or related assistance or services.

3) Adequate information about the requirements of the Contract regarding the specific item work or service sought from the DBE.

e. **Follow-up DBE Notifications.** Contact the DBEs to determine if they will be bidding. For acceptable forms of notification and required documentation see 120-3.02, subsection 1.b items 1 through 4.

Failure to submit a bid by the deadline is evidence of the DBE's lack of interest in bidding. Documentation of follow-up contacts shall be logged on the Contact Report, Form 25-321A.

f. **Good Faith Effort Evaluation.** Subsections (a) through (e) must be completed for a Good Faith Effort based submission to be considered. Failure to perform and document actions contained in subsection (a) through (e) constitutes insufficient Good Faith Effort. After submitting a Good Faith Effort, bidders may only clarify efforts taken before opening. No new efforts or additional DBE participation is permitted after opening.

2. **Administrative Reconsideration.** 49 CFR Part 26.53(d) provides an opportunity for administrative reconsideration when the Department determines that Good Faith Effort is insufficient. This opportunity must be exercised within three working days of notification that Good Faith Efforts were unsatisfactory. For reconsideration, the bidder must provide written documentation or argument concerning efforts to meet the DBE Utilization Goal. No new or additional contact information may be provided. Only contact information the bidder provided in support of its initial request for a Good Faith Effort determination by the Civil Rights Office may be presented to support the request for administrative reconsideration.

The process for an Administrative Reconsideration is as follows:

a. The bidder will have the opportunity to meet with the DBE Liaison Officer in person to discuss the issue. If so desired, the bidder must be ready to meet with the DBE Liaison Officer within four working days of receipt of notice that it failed to meet the requirements of this subsection.

b. The DBE Liaison Officer will render a written decision and provide notification to the bidder within four working days after the meeting. The written decision will explain the basis for finding.

c. The finding of the DBE Liaison Officer cannot be appealed to the U.S. DOT.

3. **Phase III-Construction.**

a. **DBE Creditable Work.** The Commercially Useful Function work items and creditable dollar amounts shown for a DBE on the DBE Utilization Report, Form 25A-325C, shall be included in any subcontract, purchase order of service agreement with that DBE.

b. **DBE replacement.** The Contractor shall submit a written request to replace a DBE to the Engineer. If approved, the Contractor shall replace the DBE with another DBE for the same work in order to fulfill its commitment under the DBE Utilization Goal. If the Engineer and the Civil rights Office agree that the criteria of Subsection 120-3.04 have been met, the DBE may be replaced by the Contractor with a non-DBE subcontractor.

c. **DBE Utilization Goal Adjustment.** The DBE Utilization Goal will be adjusted only if a DBE replacement is approved by the Engineer, and only to the extent the Contractor cannot obtain another DBE subcontractor to perform the work.

120-3.03 COMMERCIALLY USEFUL FUNCTION.

1. **Creditable Work.** Measuring the DBE Utilization Goal will be based upon the actual amount of money received by the DBEs for creditable Commercially Useful Function work on this project. This is determined by the Engineer in accordance with this Section.

   Commercially Useful Function is limited to:

   a. Prime Contractors;

   b. Subcontractors;

   c. Manufacturers;

   d. Regular Dealers;

   e. Brokers; or

   f. Joint Ventures

2. **Determination of Commercially Useful Function.** In order for the Commercially Useful Function work of the DBE to be credited toward the goal, the Contractor will ensure that the DBE is certified in the appropriate category at the time of the submittal of the subcontract, or the issuance of a purchase order or service agreement. Subcontracts, purchase orders and service agreements shall be consistent with written DBE commitment.

   a. The Commercially Useful Function performed by a DBE certified in a supply category will be evaluated by the Engineer to determine whether the DBE performed as either a broker, a regular dealer, or manufacturer of the product provided to this project.

   b. The following factors will be used in determining whether a DBE trucking company is performing a Commercially Useful Function:

      1) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.

      2) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the Contract.

      3) The DBE receives credit for the total value of the transportation services it provides on the Contract using trucks it owns, insures, and operates using drivers it employs.

      4) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Contract.

      5) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the Contract. Additional participation by non-DBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangement.

      6) A lease must indicate the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

c. The Contractor will receive credit for the Commercially Useful Function performed by DBEs as provided in this Section. Contractors are encouraged to contact the Engineer in advance of the execution of the DBE's work or provision of goods or services regarding Commercially Useful Function and potential DBE credit.

d. The DBE may perform work in categories for which it is not certified, but only work performed in the DBE's certified category meeting the Commercially Useful Function criteria may be credited toward the DBE Utilization Goal.

e. DBE work shall conform to the following requirements to be a Commercially Useful Function:

1) It will be necessary and useful work required for the execution of the Contract.

2) The scope of work will be distinct and identifiable with specific contract items of work, bonding, or insurance requirements.

3) It will be performed, controlled, managed, and supervised by employees normally employed by and under the control of the certified DBE. The work will be performed with the DBE's own equipment. Either the DBE owner of DBE On-Site Representative will be at the work site and responsible for the work.

4) The manner in which the work is sublet or performed will conform to standard industry practice within Alaska, as determined by the Department. The work or provision of goods or services will have a market outside of the DBE program (must also be performed by non-DBE firms within the Alaskan construction industry). Otherwise, the work or service will be deemed an unnecessary step in the contracting or purchasing process and no DBE credit will be allowed.

There will be no DBE credit for lower-tier non-DBE subcontract work.

5) The cost of the goods and services will be reasonable and competitive with the cost of goods and services outside the DBE program within Alaska. Materials or supplies needed as a regular course of the Contractor's operations such as fuel, maintenance, office facilities, portable bathrooms, etc. are not creditable.

The cost of materials actually incorporated into the project by a DBE subcontractor is creditable toward the DBE goal only if the DBE is responsible for ordering and scheduling their delivery and fully responsible for ensuring that they meet specifications. The cost of materials purchased from the Contractor or its affiliates is not creditable.

6) Subcontract work, with the exception of truck hauling, shall be sublet by the same unit of measure as is contained in the Bid Schedule unless approved in advance by the Engineer.

7) The DBE will control all business administration, accounting, billing and payment transactions. The Contractor cannot perform these functions for the DBE.

In accordance with AS 36.30.420(b), the Engineer may inspect the offices of the DBE and audit their records to assure compliance.

3. **Rebuttal of a Finding of No Commercially Useful Function.** Consistent with the provisions of 49 CFR, Part §26.55(c)(4)&(5), before the Engineer makes a final finding that no Commercially Useful Function has been performed by a DBE, the Engineer will coordinate transmittal of the presumptive finding through the Civil Rights Office to the Contractor, who will in-turn, notify the DBE. The Contractor will provide the DBE the opportunity to provide rebuttal information. The Contractor shall present the information to the Engineer.

The Engineer, together with the Civil Rights Office, will make a final determination on whether the DBE is performing a Commercially Useful Function. Under no circumstances will the Contractor take any action with respect to the DBE until the final determination is made. The Engineer's decisions on Commercially Useful Function matters are subject to review by the Department, but are not administratively appealable to the US DOT.

4. **Monthly Required Reporting.** On a monthly basis, the Contractor shall submit the Monthly Summary of Disadvantaged Business Enterprise Participation, Form 25A-336, to the Civil Rights Office. Reports are due by the 15th of the following month. Also attach copies of canceled checks or bank statements that identify payer, payee, and amount of transfer to verify payment information shown on the form.

5. **Removal of DBE Certification.** Should a DBE performing a Commercially Useful Function lose its DBE certification during the term of the subcontract, purchase order, or service agreement for reasons beyond the control of and without the fault or negligence of the Contractor, the work remaining under the subcontract, purchase order, or service agreement may be credited toward the DBE Utilization Goal.

   The Contractor must still meet the DBE Utilization Goal by expending Good Faith Effort (Subsection 120-3.03, 2.) and either:

   a. Withdrawing the subcontract, purchase order or service agreement from the decertified DBE to replace it with a currently certified DBE for that same work or service; or

   b. Continuing with the subcontract, purchase order or service agreement with the decertified firm and finding other work not already committed to DBEs in an amount that meets the DBE Utilization Goal.

120-3.04 TERMINATION OF A DBE SUBCONTRACT. In accordance with 49 CFR 26.53(f)(1) the Contractor shall not terminate a DBE subcontractor without the written consent of the DBE Liaison Officer. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. The Contractor must give the DBE subcontractor written notice of an approved subcontract termination.

120-3.05 DEFAULT OF DBE. If a DBE defaults on their obligation for any reason, the Contractor shall take immediate steps to retain the services of other DBEs to perform the defaulted work. If the Contractor cannot obtain replacement DBE participation, the DBE Utilization Goal will not be adjusted. However, the Engineer may consider the following criteria as satisfying that portion of DBE participation that cannot be replaced:

1. The Contractor was not at fault or negligent in the default and that the circumstances surrounding the default were beyond the control of the Contractor; and

2. The Contractor is unable to find replacement DBE participation at the same level of DBE commitment and has adequately performed and documented the Good Faith Effort expended in accordance with Subsection 120-3.03 for the defaulted work; or

3. It is too late in the project to provide any real subcontracting opportunities for DBEs.

If a DBE firm defaults on their work for whatever reason, the Contractor shall immediately notify the Engineer of the default and the circumstances surrounding it.

120-4.01 DETERMINING DBE CREDIT. The Contractor is entitle to count toward the DBE Utilization Goal those monies actually paid to certified DBEs for Commercially Useful Function work performed by the DBE as determined by the Engineer. The Contractor will receive credit for the utilization of the DBEs, as follows:

1. Credit for the Commercially Useful Function of a DBE prime contractor is 100 percent of the monies actually paid to the DBE under the Contract for creditable work and materials in accordance with 49 CFR 26.55.

2. Credit for the Commercially Useful Function of a subcontractor is 100 percent of the monies actually paid to the DBE under the subcontract for creditable work and materials.

3. Credit for the Commercially Useful Function of a subcontractor performing hauling/transportation is 100 percent of the monies actually paid to the DBE under the subcontractor for creditable work for those firms certified in the 100 percent credit category. Leasing trucks from another DBE firm also qualifies for credit and must conform to the provisions of 49 CFR 26.55(d). Credit for the Commercially Useful Function of a subcontractor performing hauling/transportation is 5 percent of the monies actually paid to the DBE under the subcontract for creditable work for those firms certified in the 5 percent credit category.

4. Credit for the Commercially Useful Function of a manufacturer is 100 percent of the monies paid to the DBE for the creditable materials manufactured.

5. Credit for the Commercially Useful Function of a regular dealer of a creditable material, product, or supply is 60 percent of its value. The value is the actual cost paid to the DBE not to exceed the bid price for such item.

6. Credit for the Commercially Useful Function of a broker performed by a DBE certified in a supply category for providing a creditable material, product or supply is limited to a reasonable brokerage fee. The brokerage fee will not exceed 5 percent of the cost of the procurement contract for the creditable item.

7. Credit for the Commercially Useful Function of a broker performed by a DBE certified in a bonding or insurance category is limited to a reasonable brokerage fee, not to exceed 5 percent of the premium cost.

8. Credit for the Commercially Useful Function of a joint venture (JV) either as the prime contractor or as a subcontractor may not exceed the percent of the DBE's participation in the JV agreement, as certified by the Civil Rights Office. The DBE joint venture partner will be responsible for performing all of the work as delineated in the certified JV agreement.

120-5.01 ACHIEVEMENT OF DBE GOALS. Work under this item is subsidiary to other contract items and no payment will be made for meeting or exceeding the DBE Utilization Goal.

If the Contractor fails to utilize the DBEs listed on Form 25A-325C as scheduled or fails to submit proof of payment, requested documentation, or otherwise cooperate with a DBE review or investigation, the Department will consider this to be unsatisfactory work. If the Contractor fails to utilize Good Faith Effort to replace a DBE, regardless of fault (except for Subsection 120-3.05 item 3), the Department will also consider this unsatisfactory work. Unsatisfactory work may result in disqualification of the Contractor from future bidding under Subsection 102-1.13 and withholding of progress payments consistent with Subsection 109-1.06.

S97-030512

SECTION 202

REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Special Provisions

202-1.01 DESCRIPTION. Add the following:

Pavement Planing. Remove, and or reuse, or dispose of planed pavement materials as noted herein.

CR2023-082310

Add the following:

This work also includes:

Fugitive Materials. Remove and dispose of fugitive materials from under guardrails, around luminaire bases, and as specified in this section. Conduct a pre-construction inspection of the project area with the Engineer to determine the limits of the fugitive material removal and disposal work.

202-2.01 MATERIALS. Add the following:

Fugitive Materials. Including but not limited to organic matter (peat, roots, sticks, sod or other), muck, earth (where not part of surface material) rocks, gravel, sand, silts and debris (trash and similar) and as identified by the Engineer.

CR2024-092612

202-3.05 REMOVAL OF PAVEMENT, SIDEWALKS, AND CURBS. Add the following:

Removed pavement material, including sidewalks and curbs, is the property of the Contractor. Handle and transport materials according to the Alaska Department of Environmental Conservation (DEC) regulations. Store materials at a Contractor DEC approved site.

Removed pavement, sidewalks, and curbs may be used for embankment construction if it is not exposed at the completed embankment surface. Maximum allowable dimension of broken materials is 6 inches. The use of pavement, sidewalk, and curb in the embankment requires written approval and direction for use from the Engineer.

Dispose of removed pavement, sidewalks, and curbs not wanted by the Contractor and not used in the project, according to Subsection 3.09.

CR2022-010610

Add the following Subsection 3.06:

202-3.06 PAVEMENT PLANING. Remove existing asphalt pavement by cold planing at locations shown in the Plans. Adjust planing machine to remove all ruts in the roadway surface and as directed by the Engineer. The surface of the pavement after planing shall be a uniformly fine milled textured surface.

Notify the Engineer of pavement areas that may be thin or unstable. Where the planing equipment breaks through the existing pavement, repair as specified in the Division 400, Sections 401, 408, and 409. Repair with Section 401 HMA; Type II, Class B. If Section 401 is not included in the project special provisions use the HMA Type specified for the immediate layer of HMA to be placed over the planed surface. Repair work and materials are subsidiary to HMA Pay Items.

Pavement material planed from the project roadway is the property of the Contractor. Remove planed material from the project immediately after planing. Handle and transport materials according to the Alaska Department of Environmental Conservation (DEC) regulations. Store materials at a Contractor DEC approved site.

Planed material may be:

- incorporated into the embankment construction, Section 203;
- used as shoulder buttressing as specified in Section 301;
- used as recycled asphalt pavement as specified in Section 306;
- and as directed by the Engineer.

The use of planed material requires written approval and direction from the Engineer.

The Local DOT Maintenance and Operations Station may be able to accept planed materials not used in the project and not wanted by the Contractor. If the Local Maintenance and Operations Station is able to accept some or all of the material, coordinate the delivery, time of delivery and quantity of delivery with the Station Manager. Contact the Central Region Maintenance & Operations Office at, (907) 269-0760, to obtain the appropriate District Station Managers phone number for this project.

Dispose of planed materials not used in the project, not accepted by the Local Maintenance and Operations Station and not wanted by the Contractor according to Subsection 3.09.

During planing operations, sweep the streets according to 643-3.04 Traffic Control Devices, No. 6. Street Sweeping and Power Brooming to control dust and remove loose material from the planed areas. The removal operation shall follow within 50 feet of the planing machine.

Do not allow traffic to travel on surfaces that have an abrupt longitudinal planed edge greater than 2 inches. In the event it is necessary to route traffic across such edges, an asphalt pavement transition 2 feet in width shall be placed adjacent to the edge and to gutters.

Where existing asphalt pavement overlays gutters adjacent to the area being planed remove the existing pavement.

The existing curb, gutter, and edge of existing Portland cement pavement not designated for removal shall not be damaged or disturbed. Damage caused by the planing operation shall be removed and replaced by the Contractor at the Contractor's expense.

The planing machine shall have the following capabilities:

1. Self propelled and capable of milling at speeds from 0 ft to 40+ ft per minute.
2. Able to spray water inside the milling chamber to reduce dust.
3. Able to mill adjacent to a gutter without damaging gutter.
4. Automatic cross slope and depth control combined with automatic longitudinal grade control actuated by sonic or laser ski sensors.
5. Produce a "fine milled" textured surface with a tool spacing of 5/16 inch.
6. Able to uniformly maintain a planar surface across adjacent lanes (no elevation differential or ridges between adjacent passes).

Provide a small machine (producing a "fine milled" textured surface) to trim areas that are inaccessible to the larger machine at manholes, valve covers, curb returns, and intersections.

The Engineer may reject any machine that does not comply with the above noted requirements.

54149-032613

Add the following Subsection 3.08:

202-3.08 REMOVAL OF FUGITIVE MATERIALS. Remove fugitive materials from in front of, under, and for a width of 10 ft behind sections of guardrail, measured from the roadside face of guardrail, or as directed by the Engineer. Provide positive drainage away from the roadway. Slope edges of sand removal at 3:1 or flatter.

Clean around the base of a luminaire when the base falls within the 10 ft. The 10 ft width is measured from the roadside face of the guardrail toward the shoulder to the closest point of the luminaire base plate, or as directed by the Engineer. Remove fugitive materials from around the base to a level flush with surrounding ground - or as directed by the Engineer.

Remove disturbed materials in the same work shift the disturbance occurred.

Removed materials are the property of the Contractor. Do not reuse these materials within the project limits without the written approval of the Engineer.

Dispose of removed materials at the Municipality of Anchorage Hazardous Materials Waste Disposal site or similar as required dependent on the type of materials and as required by the Federal, State, and Municipal environmental regulations.

CR2024-092612

Add the following Subsection 3.09.

202-3.09 DISPOSAL OF PAVEMENT, SIDEWALKS, AND CURBS.

Pavement planing materials not being used in the project, stored at a Contractor DEC approved site, provided to the local DOT Maintenance and Operations Yard, or disposed of at a previously approved DEC disposal site require a DEC Solid Waste Disposal Permit.

Disposal sites shall be outside the project limits unless directed otherwise, in writing, by the Engineer. Obtain written consent from the property owner. Dispose of solid waste materials, pavement, sidewalk, and curb (including handling, transporting, storing and disposing) according to the Alaska Department of Environmental Conservation (DEC) Regulations.

A DEC Permitting Officer in Anchorage may be contacted at (907) 269-7590.

CR2021-010610

202-4.01 METHOD OF MEASUREMENT. Add the following:

Item 202(15). Pavement planing is measured by the square yard of the pavement planed.

CR2023-082310

Add the following:

Removing and disposing fugitive materials is measured along the edge of the traveled way on the side of the road nearest the area of work by the linear foot.

CR2024-092612

202-5.01 BASIS OF PAYMENT. Add the following:

Acquiring a solid waste disposal permit from DEC is subsidiary to 202 Pay Items.

CR2021-010610

Add the following:

Item 202(15). At the Contract Unit Price - payment is full compensation for activities and equipment associated with pavement planing including:

- removal of pavement from curbs and gutters;
- mechanical sweepers and power brooms used during the planing operation;
- stockpiling planed material when required;

Replace damaged loop detectors, piezoelectric sensors, RWIS or other highway data sensors outside the specified planing depth according to the requirements of section 660 and 669 at no expense to the Department.

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
202(15)	Pavement Planing	Square Yard

CR2023-082310

Add the following:

Pay Item No.	Pay Item	Pay Unit
202(40)	Remove Fugitive Materials	Linear Foot

CR2024-092612

SECTION 204

STRUCTURE EXCAVATION FOR CONDUITS AND MINOR STRUCTURES

Standard Modifications

204-3.01 CONSTRUCTION REQUIREMENTS. In the first sentence of paragraph four, delete:

"bedding and"

E37-012707

Special Provisions

Add the following after the third paragraph:

Excavation, bedding, backfill, and compaction for culverts outside the roadbed may be visually inspected and approved by the Engineer.

CR204-020608

SECTION 301

AGGREGATE BASE AND SURFACE COURSE

Special Provision

301-2.01 MATERIALS. Add the following after the first sentence:

Recycled Asphalt Material (RAM) may be substituted for aggregate base course, inch for inch, if the following conditions are met:

1. RAM shall be crushed or processed to 100 percent by weight passing the 1.5 inch sieve and 95-100 percent by weight passing the 1 inch sieve.

2. The gradation of the extracted aggregate shall meet the following:

Sieve	Percent Passing by Weight
1 inch	100
3/4 inch	70 – 100
3/8 inch	42 – 90
No. 4	28 – 78
No. 16	11 – 54
No. 50	5 – 34
No. 100	3 - 22
No. 200	2 – 12

3. The asphalt content shall be 2.5 – 5.0 percent by weight of the RAM.

CR176-012407

Standard Modification

301-3.01 PLACING. Add the following:

After removal of pavement conduct an inspection with the project engineer to determine areas where it may be necessary to remove existing unsuitable material prior to placement of aggregate base course. The selected areas will be excavated as directed by the engineer and the material disposed of.

Costs associated with inspection, excavation, haul and disposal of unsuitable material will be subsidiary to 301(1) Pay Item.

301-3.03 SHAPING AND COMPACTION. Add the following:

If recycled asphalt material is substituted for aggregate base course, the following conditions shall be met:

1. Density acceptance will be determined by control strip method ATM 412. Use a test strip with a vibratory compactor with a minimum dynamic force of 40,000 pounds. The optimum density will be determined by the Engineer using a nuclear densometer gauge to monitor the test strip. Adequate water shall be added to aid compaction.

2. After the appropriate coverage with the vibratory compactor, a minimum of 6 passes with a pneumatic tire roller shall be completed. Tires shall be inflated to 80 psi (± 5 psi) and the roller shall have a minimum operating weight per tire of 3,000 pounds.

301-5.01 BASIS OF PAYMENT. Add the following:

Inspection, excavation, haul, disposal and preparation of the existing surface including the work and materials associated with Subsection 301-3.01 are subsidiary to the associated 301(1) pay item.

Recycled asphalt material substituted for aggregate base course will be paid for as Item 301(1) Aggregate Base Course, at the unit price shown in the bid schedule for that Item.

54149-020713

SECTION 303

RECONDITIONING

Standard Modifications

303-1.01 DESCRIPTION. In the first sentence, delete:

"clean and recondition the ditches, and shape the shoulders"

303-3.01 CONSTRUCTION REQUIREMENTS. Replace the second sentence with the following:

Pulverize material to 1.5 inches or smaller.

Delete the second paragraph

303-4.01 METHOD OF MEASUREMENT. In the first sentence, add the following:

"and Lane-Station (12 foot width)."

303-5.01 BASIS OF PAYMENT. Add the following:

The disposal of excess material generated from pulverizing will be subsidiary.

Delete Pay Item 303(1) Reconditioning and replace with the following:

Pay Item No.	Pay Item	Pay Unit
303(1A)	Reconditioning	Station

Add Pay Item 303(1B) Highway Spot Repair:

Pay Item No.	Pay Item	Pay Unit
303(1B)	Highway Spot Repair	Lane-Station

54149-032813

Special Provisions

Replace Section 306 with the following:

SECTION 306

ASPHALT TREATED BASE COURSE

306-1.01 DESCRIPTION. Construct a plant-mixed asphalt treated base (ATB) course on an approved foundation to the lines, grades, and depths shown in the Plans. Recycled asphalt pavement (RAP) may be used in the mix as specified herein.

306-1.02 REFERENCE.

1. Section 401, Hot Mix Asphalt and Surface Treatments.

MATERIALS

306-2.01 COMPOSITION OF MIXTURE - JOB MIX DESIGN (JMD). Design the JMD according to the Alaska Test Manual (ATM) 417 using the design requirements of Table 306-1 and as specified herein. Recycled Asphalt Pavement may be used to supplement the aggregate and asphalt cement in the ATB.

TABLE 306-1

ATB DESIGN REQUIREMENTS

DESIGN PARAMETERS	CLASS "B"
ATB (Including Asphalt Cement)	
Stability, Pounds	1200 min.
Flow, 0.01 Inch	8 - 16
Voids in Total Mix, %	3 – 5
Compaction, Number of Blows Each Side of Test Specimen	50
Asphalt Cement	
Percent Voids Filled with Asphalt Cement (VFA)	65 - 78
Asphalt Cement Content, Min. % @ 4% VTM	5.0
Dust-Asphalt Ratio*	0.6 - 1.4
Voids in the Mineral Aggregate (VMA), %, Min.	
Type II	12.0

*Dust-asphalt ratio is the percent of material passing the No. 200 sieve divided by the percent of effective asphalt cement.

The JMD will specify the Target Values (TV) for gradation, the TV for asphalt cement content, the Maximum Specific Gravity (MSG) of the ATB, the additives, and the allowable mixing temperature range.

Target values for gradation in the JMD must be within the broad band limits shown in Table 703-3. For acceptance testing, ATB mixture will have the full tolerances in Table 306-2 applied. The tolerance limits will apply even if they fall outside the broad band limits shown in Table 703-3, except the tolerance limit of the No. 200 sieve is restricted by the broad band limits. Tolerance limits will not be applied to the largest sieve specified.

Do not mix ATB produced from different plants for testing or production paving. ATB from different plants will be rejected.

Submit the following to the Engineer at least 15 days before the production of ATB:

1. A letter stating the location, size, and type of mixing plant, the proposed gradation for the JMD including gradations for individual virgin aggregate (aggregate) stockpiles and the RAP stockpile. Provide supporting process quality control information; including the blend ratio of each aggregate stockpile, the RAP stockpile and the RAP asphalt cement content. For mixes with RAP, provide JMD gradation with and without RAP. Provide calibration data if WAQTC FOP for AASHTO T308 is used for RAP process control.

2 Representative samples of each aggregate (coarse, intermediate, fine, blend material and mineral filler, if any) and RAP required for the proposed JMD. Furnish 100 lbs of each intermediate and/or coarse aggregate, 200 lbs of fine aggregate, 25 lbs of blend sand, and 200 lbs of RAP.

3. Three separate 1-gallon samples, minimum, of the asphalt cement proposed for use in the ATB. Include name of product, manufacturer, test results of the applicable quality requirements of Subsection 702-2.01, manufacturer's certificate of compliance according to Subsection 106-1.05, a temperature viscosity curve for the asphalt cement or manufacturer's recommended mixing and compaction temperatures, and current Material Safety Data Sheet (MSDS).

4. One sample, of at least 1/2 pint, of the anti-strip additive proposed, including name of product, manufacturer, and manufacturer's data sheet, and current MSDS.

The Engineer will evaluate the material and the proposed gradation using ATM 417 and Table 306-1 ATB Design Requirements.

The mix, the materials and proposed gradation meeting the specification requirements will become part of the Contract when approved, in writing, by the Engineer.

FAILURE TO MEET SPECIFICATION REQUIREMENTS

Submit a new JMD with changes noted and new samples in the same manner as the original JMD when:

- The results do not achieve the requirements specified in Table 306-1
- The asphalt cement source is changed
- The source of aggregate, aggregate quality, gradation, or blend ratio is changed
- The source of RAP is changed

Do not produce ATB for production paving and payment before the Engineer provides written approval of the JMD, the original or a new replacement JMD.

Payment for ATB will not be made until the new JMD is approved. Approved changes apply only to ATB produced after the submittal of changes.

The Engineer will assess a fee for each mix design subsequent to the approved Job Mix. The fee will be included under Pay Item 306(6) Asphalt Price Adjustment - Quality.

306-2.02 AGGREGATES. Conform to Subsection 703-2.04. Type II, Class B (IIB) total combined aggregates.

Use a minimum of three stockpiles for crushed ATB aggregate (coarse, intermediate, and fine). Place RAP, blend material and mineral filler in separate piles.

306-2.03 ASPHALT CEMENT. Conform to 702-2.01 and the following:

The total asphalt cement content may be a combination of PG 52-28 and the residual asphalt cement/binder in the RAP, or only PG 52-28. Documentation and conformance is required for the PG 52-28.

Provide test reports for each batch of asphalt cement showing conformance to the specifications in Section 702, before delivery to the project. Require that the storage tanks used for each batch be noted on the test report, the anti-strip additives required by the mix design be added during load out for delivery to the project, and a printed weight ticket for anti-strip is included with the asphalt cement weight ticket. The location where anti-strip is added may be changed with the written approval of the Engineer.

Furnish the following documents at delivery:
1. Manufacturer's certificate of compliance (Subsection 106-1.05).
2. Conformance test reports for the batch (provide prior to delivery as noted above).
3. Batch number and storage tanks used.
4. Date and time of load out for delivery.
5. Type, grade, temperature, and quantity of asphalt cement loaded.
6. Type and percent of anti-strip added.

306-2.04 ANTI-STRIP ADDITIVES. Use anti-strip agents in the proportions determined by ATM 414 and included in the approved JMD. At least 70% of the aggregate must remain coated when tested according to ATM 414. A minimum of 0.25% by weight of asphalt cement is required.

306-2.05 PROCESS QUALITY CONTROL. Sample and test materials for quality control of the ATB according to Subsection 106-1.03. Submit to the Engineer, with the JMD, a documentation plan that will provide a complete, accurate, and clear record of the sampling and testing results. When directed by the Engineer, make adjustments to the plan and resubmit.

Submit a paving and plant control plan at the pre-paving meeting to be held a minimum of 7 days before initiating pre-paving operations. Address the sequence of operations. Outline steps to provide product consistency, to minimize segregation, to prevent premature cooling of the ATB, and to provide the mat density required by these specifications. Include a proposed quality control testing frequency for gradation, asphalt cement content, and compaction.

Failure to perform quality control forfeits the Contractor's right to a retest under Subsection 306-4.02.

Provide copies of the documented sampling and testing results no more than 24 hours from the time taken.

306-2.06 RECYCLED ASPHALT PAVEMENT (RAP). Process existing pavement removed under Subsection 202-3.05 and 3.06 so material passes the 1 1/2" sieve. Stockpile the material separately from the crushed aggregates. Perform one gradation and one asphalt cement content test for every 1000 tons of RAP or a minimum of 10 sets of tests whichever is greater.

CONSTRUCTION REQUIREMENTS

306-3.01 WEATHER LIMITATIONS. Do not place ATB on a wet surface, on an unstable/yielding roadbed, when the base material is frozen, or when weather conditions prevent proper handling or finishing of the mix. Do not place ATB unless the roadway surface temperature is 40°F or warmer.

306-3.02 EQUIPMENT, GENERAL. Use equipment in good working order and free of ATB buildup. Make equipment available for inspection and demonstration of operation a minimum of 24 hours before placement of production ATB.

306-3.03 ASPHALT MIXING PLANTS. Meet AASHTO M 156. Use an asphalt plant designed to dry aggregates, maintain accurate temperature control, and accurately proportion asphalt cement and aggregates. Calibrate the asphalt plant and furnish copies of the calibration data to the Engineer at least 4 hours before ATB production.

When using recycled asphalt pavement material, mix the RAP with the aggregate before the aggregate enters the plant thereby adding the RAP combined with the aggregate to the asphalt treated base mixture at one time.

Provide a scalping screen at the asphalt plant to prevent oversize material or debris from being incorporated into the ATB.

Provide a tap on the asphalt cement supply line just before it enters the plant (after the 3-way valve) for sampling asphalt cement.

Provide aggregate and asphalt cement sampling equipment meeting OSHA safety requirements.

306-3.04 HAULING EQUIPMENT. Costs associated with meeting the requirements of Subsection 306-3.04 are subsidiary to Section 306 Pay Items.

Vehicles/Equipment. Haul ATB in trucks with tight, clean, smooth metal beds, thinly coated with a minimum amount of paraffin oil, lime water solution, or an approved manufactured asphalt release agent. Do not use petroleum fuel as an asphalt release agent.

During ATB hauling activities, the hauling vehicle will have covers attached and available for use. Be prepared to demonstrate deployment of the cover when hauling material or empty. Illustrate the efficiency of deployment and how the materials are protected from the environment and the environment is protected from the materials. When directed by the Engineer, cover the ATB in the hauling vehicle(s).

Roadway Maintenance. Daily inspect, remove/clean, and dispose of project materials deposited on existing and new pavement surface(s) inside and outside the project area including haul routes.

The inspection plan and method of removal/cleaning and disposal shall be submitted in writing to the Engineer and approved by the Engineer 7 days before initiating paving operations. Include alternatives, options to immediately correct deficiencies in the inspection plan and methods of removal/cleaning and disposal that may be discovered as the work is being performed.

The Engineer may require the Contractor to include a vehicle/equipment cleaning station(s), to be added at the project site and or at the plant, in the basic plan or as one of the corrective alternatives/options. At a minimum, the cleaning station will include the materials and means to:

(1) Spray truck tires with an environmental degradable release agent if mix adheres to tires before dumping in front of the paving equipment.
(2) Clean off loose mix from gates, chains, and tires that might fall on the pavement of the haul route.
(3) Contain, collect and disposal of (1) and (2).

The Contractor is responsible for the inspection plan, the means, and methods used for removal/cleaning and disposal of fugitive materials/debris. The Contractor is responsible for the damage as a result of not removing these materials (to the roadway material, the users and others) and the damage to the roadway materials from the removal method(s). Approval does not change the Contractor's responsibility, nor add responsibility to the Department for this work.

Repair damage, as specified in Subsection 306-3.16 Patching Defective Areas, to the existing roadway materials (asphalt type) as a result of the fugitive materials or their removal. Use repair materials of similar type to the damaged material. Attain written approval from the Engineer for the proposed material.

306-3.05 PAVING EQUIPMENT. Use self propelled asphalt pavers with a heated vibratory screed. Control grade and cross slope with automatic grade and slope control devices. Use an erected string line, a 30-foot minimum mobile stringline (ski), or other approved grade follower, to automatically actuate the screed or blade control system. Use grade control on either (a) both the high and low sides or (b) grade control on the high side and slope control on the low side.

Use a paver screed assembly that produces a finished surface of the required smoothness, thickness, and texture without tearing, shoving, or displacing the ATB.

Equip pavers with a receiving hopper having sufficient capacity for a uniform spreading operation and a distribution system to place the ATB uniformly in front of screed.

Prevent segregation of the coarse aggregate particles from the remainder of the ATB during paving operations. Specifically equip pavers to prevent segregation between the hopper and augers. Use means and methods approved by the paver manufacturer. Means and methods may include chain curtains, deflector plates, or other similar devices or combination of devices. When required by the Engineer, provide a Certificate of Compliance verifying use of the means and methods required to prevent segregation.

306-3.06 ROLLERS. Use both steel-wheel (static or vibratory) and pneumatic-tire rollers. Avoid crushing or fracturing of aggregate. Use rollers designed to compact ATB asphalt mixtures and reverse without backlash.

All rollers shall have an attached infrared thermometer that measures and displays the surface temperature to the operator.

Use fully skirted pneumatic-tire rollers having a minimum operating weight of 3000 pounds per tire.

306-3.07 PREPARATION OF EXISTING SURFACE. Prepare base surface conforming to the Plans and Specifications.

Before placing the hot asphalt mix, apply tack coat material (Section 702) as specified here and in Section 402. Uniformly coat contact surfaces of curbing, gutters, sawcut pavement, cold joints, manholes, and other structures with tack coat material. Allow tack coat to break before placement of ATB on these surfaces.

306-3.08 PREPARATION OF ASPHALT. Provide a continuous supply of asphalt cement to the asphalt mixing plant at a uniform temperature, within the allowable mixing temperature range.

306-3.09 PREPARATION OF AGGREGATES. Dry the aggregate so the moisture content of the ATB, sampled at the point of acceptance for asphalt cement content, does not exceed 0.5% (by total weight of mix), as determined by WAQTC FOP for AASHTO T 329.

Heat the aggregate for the ATB, and the RAP when being used in the mix, to a temperature compatible with the mix requirements specified.

Adjust the burner on the dryer to avoid damage to the aggregate and to prevent the presence of unburned fuel on the aggregate. ATB containing soot or fuel is unacceptable (Subsection 105-1.11).

306-3.10 MIXING. Combine the aggregate, asphalt cement, and additives in the mixer in the amounts required by the JMD. Mix to obtain 98% coated particles when tested according to AASHTO T 195.

306-3.11 TEMPORARY STORAGE. Silo type storage bins may be used, provided the characteristics of the ATB remain unaltered. Changes in the JMD, visible or otherwise, are cause for rejection. Changes may include: visible segregation, heat loss; and the physical characteristics of the asphalt cement, lumpiness, or stiffness of the ATB or similar.

306-3.12 PLACING AND SPREADING. Use asphalt pavers to distribute ATB. Place the ATB upon the approved surface, spread, strike off, and adjust surface irregularities. The maximum compacted lift thickness allowed is 3 inches.

During placement, the Engineer, using an infrared camera, may evaluate the ATB surface immediately behind the paver for temperature uniformity. Areas with temperature differences more than 25° F lower than the surrounding ATB may produce areas of low density. Contractor shall immediately adjust laydown procedure to maintain a temperature differential of 25° F or less. Thermal images and thermal profile data will become part of the project record and shared with the Contractor.

Use hand tools to spread, rake, and lute the ATB in areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impracticable.

When the section of roadway being paved is open to traffic, pave adjacent traffic lanes to the same elevation within 24 hours. Place approved material against the outside pavement edge when the drop-off exceeds 2 inches.

Do not the cover/place over the asphalt treated base material until the ATB material throughout that section, as defined by the Paving Plan, is placed and accepted.

Do not pave against new Portland cement concrete curbing until it has cured for at least 72 hours.

Do not place ATB over bridge deck membranes, except as directed by the Engineer.

306-3.13 COMPACTION. Compact the ATB by rolling thoroughly and uniformly. In areas not accessible to large rollers, compact with mechanical tampers or trench rollers. Prevent indentation of ATB. Do not leave rollers or other equipment standing on ATB that is not sufficiently cooled to prevent indentation.

A mat area with density lower than 92% MSG is considered segregated and not in conformance with the requirements of the Contract. The work shall be deemed unacceptable by the Engineer according to Subsection 105-1.11 unless, the Engineer determines that reasonably acceptable work has been produced as permitted in Subsection 105-1.03.

The density TV is 95% of the MSG, as determined by WAQTC FOP for AASHTO T 209. The MSG of the JMD will be used for the first lot of ATB. The MSG for additional lots will be determined from the first sublot of each lot.

Acceptance testing for density will be performed according to WAQTC FOP for AASHTO T 166/T 275 using a 6 inch diameter core.

306-3.14 JOINTS. Minimize the number of joints. Do not construct longitudinal joints in the driving lanes unless approved by the Engineer in writing at the Pre-paving meeting. Place and compact the ATB to provide a continuous bond, texture, and smoothness between adjacent sections of the ATB.

Coordinate the joints in the ATB pavement layer with the layer of HMA pavement above. Offset the longitudinal joints in the HMA pavement layer above from the joint in the ATB asphalt pavement layer immediately below by at least 6 inches.

Form transverse joints by cutting back on the previous run to expose the full depth of the layer. Saw cut the joint, use a removable bulkhead or other method approved by the Engineer.

Remove to full depth improperly formed joints resulting in surface irregularities. Before removing pavement, cut a neat straight line along the pavement to be removed and the pavement to remain. Use a power saw or other method approved by the Engineer. Replace the removed asphalt with new ATB and thoroughly compact.

306-3.15 SURFACE TOLERANCE. Costs associated with meeting surface tolerances are subsidiary to the ATB Pay Items.

The Engineer will test the finished surface after final rolling at selected locations using a 10 ft straightedge. Correct variations from the testing edge, between any two contacts, of more than 1/4 inch.

306-3.16 PATCHING DEFECTIVE AREAS. Costs associated with patching defective areas are subsidiary to the ATB Pay Items.

Remove defective ATB for the full thickness of the course, do not skin patch. Cut the pavement so that edges are vertical and the sides are parallel to the direction of traffic. Coat edges with a tack coat meeting Section 402 and allow to cure. Place and compact fresh ATB to grade (Subsection 306-3.13) and surface tolerance requirements (Subsection 306-3.15).

306-4.01 METHOD OF MEASUREMENT. Section 109 and the following:

1. Asphalt Treated Base.
   a) By weighing. No deduction will be made for the weight of asphalt cement or anti stripping additive or cutting back joints.

2. Asphalt Cement. By the ton, as follows.
   Method 1:
   Percent of asphalt cement for each sublot multiplied by the total weight represented by that sublot. ATM 405 or WAQTC FOP for AASHTO T 308 will determine the percent of asphalt cement, except ATM 405 will not be used when RAP is included in the mixture. The same tests used for the acceptance testing of the sublot will be used for computation of the asphalt cement quantity. If no acceptance testing is required, the percent of asphalt cement is the target value for asphalt cement in the JMD.

   Method 2:
   Supplier's invoices minus waste, diversion and remnant. This procedure may be used on projects where deliveries are made in tankers and the asphalt plant is producing ATB for one project only.

   The Engineer may direct, at any time that tankers be weighed in the Engineer's presence before and after unloading. If the weight determined at the project varies more than 1% from the invoice amount, payment will be based on the weight determined at the project.

   Any remnant or diversion will be calculated based on tank stickings or weighing the remaining asphalt cement. The Engineer will determine the method. The weight of asphalt cement in waste ATB will be calculated using the target value for asphalt cement as specified in the JMD.

   Method 1 will be used for determining asphalt cement quantity unless otherwise directed in writing. The procedure initially used will be the one used for the duration of the project. No payment will be made for any asphalt cement more than 0.4% above the optimal asphalt cement content specified in the JMD.

3. Asphalt Price Adjustment - Quality. Determined under Subsection 306-4.03 Evaluation of Materials for Acceptance. Also included in the measurement are the fees specified in Subsections 306-2.01, 4.02, 4.03 and 5.01.

306-4.02 ACCEPTANCE SAMPLING AND TESTING. The total price adjustment is the sum of the individual lot price adjustments as determined in Subsection 306-4.03 Evaluation of Materials for Acceptance, and is included in Item 306(6) Asphalt Price Adjustment - Quality. Fees assessed are also included in Item 306(6).

ASPHALT TREATED BASE

The quantity of ATB produced and placed will be divided into lots and the lots evaluated individually for acceptance.

A lot will normally be 10,000 tons. The lot will be divided into sublots of 1000 tons; each randomly sampled and tested for asphalt cement content, density, and gradation according to this subsection.

If the project has more than 1 lot, and less than 8 additional sublots have been sampled at the time a lot is terminated, either due to completion of paving operations or the end of the construction season (winter shutdown), the material in the shortened lot will be included as part of the prior lot. The price adjustment computed, according to Subsection 306-4.03, for the prior lot will include the samples from the shortened lot.

If 8 or 9 samples have been obtained at the time a lot is terminated, they will be considered as a lot and the price adjustment will be based on the actual number of test results (excluding outliers) in the shortened lot.

If the contract quantity is between 3,000 tons and 10,000 tons, the Contract quantity will be considered one lot. The lot will be divided into sublots of 1000 tons and randomly sampled for asphalt cement content, density, and gradation according to this subsection except that a determination for outliers will not be performed. ATB quantities of less than 600 tons remaining after dividing the Contract quantity into sublots will be included in the last sublot. ATB quantities of 600 tons or greater will be treated as an individual sublot. The lot will be evaluated for price adjustment according to Subsection 306-4.03 except as noted.

For Contract quantity of less than 3,000 tons, ATB will be accepted for payment based on the Engineer's approval of a JMD and the placement and compaction of the ATB to the specified depth and finished surface requirements and tolerances. The Engineer reserves the right to perform any testing required in order to determine acceptance. Remove and replace any ATB that does not conform to the approved JMD.

Samples collected at the plant from dry batched aggregates, the conveyor system, or the asphalt cement supply line shall be taken by the Contractor in the presence of the Engineer. The Engineer will take immediate possession of the samples.

The Engineer will determine where samples are taken.

1. Asphalt Cement Content. Asphalt treated base mix samples taken for the determination of asphalt cement content will be taken randomly from behind the paver screed before initial compaction, or from the windrow according to WAQTC FOP for AASHTO T 168 and ATM 403, as directed by the Engineer.

   Two separate samples will be taken, one for acceptance testing and one held in reserve for retesting if applicable. At the discretion of the Engineer, asphalt cement content will be determined according to ATM 405 or WAQTC FOP for AASHTO T 308, except ATM 405 will not be used when RAP is included in the mixture.

2. Aggregate Gradation.

ATB without RAP. Samples taken for the determination of virgin aggregate (aggregate) gradation will be from the combined aggregate cold feed conveyor via a diverter device or from the stopped conveyor belt according to WAQTC FOP for AASHTO T 2. Locate diverter devices for obtaining aggregate samples on the conveyor system delivering combined aggregates, not including RAP, into the drum. Divert aggregate from the full width of the conveyor system and maintain the diverter device to provide a representative sample of aggregate incorporated into the ATB. Two separate samples will be taken, one for acceptance testing and one held in reserve for retesting if applicable. Aggregate samples from the cold feed conveyor will be used to determined the gradation according to WAQTC FOP for AASHTO T 27/T 11 or the gradation will be determined according to WAQTC FOP for AASHTO T 30 from the aggregate remaining after the ignition oven (WAQTC FOP for AASHTO T 308) has burned off the asphalt cement.

ATB with RAP. For ATB samples, the gradation will be determined according to WAQTC FOP for AASHTO T 30 from the aggregate remaining after the ignition oven (WAQTC FOP for AASHTO T 308) has burned off the asphalt cement.

3. Density.

The Engineer will determine and mark the location(s) where the Contractor will take each mat core sample. The location(s) for taking mat core samples will be determined using a set of random numbers and the Engineer's judgment.

Cut full depth core samples centered on the marks from the finished ATB within 24 hours after final rolling. Neatly core drill one six inch diameter sample at each marked location. Use a core extractor to remove the core - do not damage the core. Backfill and compact voids left by coring with new ATB within 24 hours.

The Engineer will immediately take possession of the samples. Density of the samples will be determined, by the Engineer, according to WAQTC FOP for AASHTO T 166/T 275.

A fee will be assessed for each failure to take core samples, backfill core sample voids, backfill core samples within the specified period, or take core samples at the location marked by the Engineer.

4. Retesting.

A retest of any sample outside the limits specified in Table 306-2 may be requested provided the quality control requirements of 306-2.05 are met. Deliver this request in writing to the Engineer within 7 days of receipt of the final test of the lot. The Engineer will mark the sample location for the density retest within a 2 foot radius of the original core. The original test results will be discarded and the retest result will be used in the price adjustment calculation regardless of whether the retest result gives a higher or lower pay factor. Only one retest per sample is allowed. Except for the first lot, when gradation and asphalt cement content are determined from the same sample, retesting for gradation or asphalt cement from the first sublot of a lot will include retesting for the MSG; when separate samples are used, retesting for asphalt cement content will include retesting for MSG.

ASPHALT CEMENT

The lot size for asphalt cement will normally be 200 tons. If a project has more than one lot and the remaining asphalt cement quantity is less than 150 tons, it will be added to the previous lot and that total quantity will be evaluated for price adjustment as one lot. If the remaining asphalt cement quantity is 150 tons or greater, it will be sampled, tested and evaluated as a separate lot.

If the contract quantity of asphalt cement is between 85 – 200 tons, the contract quantity will be considered as one lot and sampled, tested, and evaluated according to this subsection. Quantities of asphalt cement less than 85 tons will be accepted based on manufacturer's certified test reports and certification of compliance.

Asphalt cement will be sampled according to WAQTC FOP for AASHTO T 40, tested for conformance to the specifications in Section 702, and evaluated for price adjustment in accordance with 306-4.03. Asphalt cement pay reduction factors for each sample will be determined from Table 306-4. Three separate samples from each lot will be taken, one for acceptance testing, one for Contractor retesting, and one held in reserve for referee testing if applicable.

306-4.03 EVALUATION OF MATERIALS FOR ACCEPTANCE. A mat area of finished surfacing that is contaminated with foreign material; is segregated (determined visually or by testing), has a lower density than specified, fails to meet surface tolerance requirements, is flushing or bleeding asphalt cement after compaction is complete, or in any other way determined to be defective is unacceptable according to Subsection 105-1.11. Correct unacceptable work and materials according to Subsection 306-3.16 and as directed by the Engineer.

Price adjustments in this subsection are addressed under Pay Item 306(6) Asphalt Price Adjustment-Quality.

Price Adjustment Base (PAB)

PAB = $144 per ton

ASPHALT TREATED BASE

The total Asphalt Treated Base price adjustment is the sum of all price adjustments for each lot.

The following method of price adjustment will be applied to ATB when the contract quantity equals or exceeds 3000 tons, except as specified in Subsection 306-4.02.

Acceptance test results for a lot will be analyzed collectively and statistically by the Quality Level Analysis method as specified in Subsection 106-1.03.3 to determine the total estimated percent of the lot that is within specification limits.

The price adjustment is based on the lower of two pay factors for the ATB. The first factor is the composite pay factor (CPF) and includes gradation and asphalt cement content. The second factor is the density pay factor (DPF).

A lot containing ATB with a pay factor less than 1.00 will be accepted at an adjusted price, provided the pay factor is at least 0.75 and there are no isolated defects identified by the Engineer. A lot containing ATB that fails to obtain at least a 0.75 pay factor will be considered unacceptable and rejected under Subsection 105-1.11.

ATB rejected based on visual inspection will be tested if requested by the Contractor. A minimum of two samples will be collected from the rejected ATB and tested. If test results are within specification limits, payment will be made for the ATB. If any of the test results fail to meet specifications, no payment will be made and the cost of the testing will be assessed as a fee and paid by the Contractor under Pay Item 306(6) Asphalt Price Adjustment - Quality. Costs associated with removal and disposal of the rejected ATB are subsidiary to the Asphalt Treated Base Pay Items.

Outlier Test. Before computing the price adjustment, the validity of the test results will be determined by SP-7, the Standard Practice for Determination of Outlier Test Results. Outlier test results will not be included in the price adjustment calculations.

When gradation and asphalt cement content are determined from the same sample, if any size on the gradations test or the asphalt cement content is an outlier, then the gradation test results and the asphalt cement content results for that sublot will not be included in the price adjustment. The density test result for that sublot will be included in the price adjustment provided it is not an outlier.

For a sublot, when gradation and asphalt cement content are determined from separate samples, the individual test results for density, gradation, and cement content, that are not an outlier, will be included in price adjustment.

Quality Level Analysis (QLA).

Outliers (determined by SP-7), and any test results on material not incorporated into the work, are eliminated from the quality level analysis.

Pay factors for the remaining test results are computed as follows:

1. Arithmetic mean: $\bar{x}$

$$\bar{x} = \frac{\sum x}{n}$$

Where: $\sum$ = summation of
x = individual test value to x_n
n = total number of test values

$\bar{x}$ is rounded to the nearest tenth for density and sieve sizes except the No. 200 sieve.
$\bar{x}$ is rounded to the nearest hundredth for asphalt cement content and the No. 200 sieve.

2. The sample standard deviation: s

$$s = \sqrt{\frac{n\sum(x^2) - (\sum x)^2}{n(n-1)}}$$

Where: $\sum(x^2)$ = sum of the squares of individual test values.
$(\sum x)^2$ = square of the sum of the individual test values.

s is rounded to the nearest hundredth for density and all sieve sizes except the No. 200 sieve.
s is rounded to the nearest 0.001 for asphalt cement content and the No. 200 sieve.

If $s < 0.001$:
- Density and all sieves, except the No. 200, $s = 0.20$.
- Asphalt cement content and the No. 200 sieve, $s = 0.02$.

3. The USL and LSL are computed. For aggregate gradation and asphalt cement content, the Specification Limits (USL and LSL) are equal to the Target Value (TV) plus and minus the allowable tolerances in Table 306-2. The TV is the specified value in the approved JMD. Specification tolerance limits for the largest sieve specified will be plus 0 and minus 1 when performing Percent Within Limits (PWL) calculations. The TV for density is 95% of the MSG and the LSL is 92% of MSG.

TABLE 306-2

LOWER SPECIFICATION LIMIT (LSL) & UPPER SPECIFICATION LIMIT (USL)

Measured Characteristics	LSL	USL
3/4 inch sieve	TV -6.0	TV + 6.0
1/2 inch sieve	TV -6.0	TV + 6.0
3/8 inch sieve	TV -6.0	TV + 6.0
No. 4 sieve	TV -6.0	TV + 6.0
No. 8 sieve	TV -6.0	TV + 6.0
No. 16 sieve	TV -5.0	TV + 5.0
No. 30 sieve	TV -4.0	TV + 4.0
No. 50 sieve	TV -4.0	TV + 4.0
No. 100 sieve	TV -3.0	TV + 3.0
No. 200 sieve*	TV -2.0	TV + 2.0
Asphalt %	TV -0.4	TV + 0.4
Mat Density %	92	100

*Tolerances for the No. 200 sieve may not exceed the broad band limits in Table 703-3.

4. The Upper Quality Index: Q_U

$$Q_U = \frac{USL - \bar{x}}{s}$$

Where: USL = Upper Specification Limit
Q_U is rounded to the nearest hundredth.

5. The Lower Quality Index: Q_L

$$Q_L = \frac{\bar{x} - LSL}{s}$$

Where: LSL = Lower Specification Limit
Q_L is rounded to the nearest hundredth.

6. P_U (percent within the upper specification limit corresponding to a given Q_U), Subsection 106-1.03.

7. P_L (percent within the lower specification limit corresponding to a given Q_L), Subsection 106-1.03.

8. The Quality Level (the total percent within specification limits) for aggregate gradation, asphalt cement content, and density.

Quality Level = $(P_L + P_U) - 100$

9. Using the Quality Levels from Step 8, the lot Pay Factor (PF) is determined for Density (DPF) and gradation ($PF_{sieve\ size}$) and asphalt cement content (PF_{ac}) from Table 106-2. The maximum pay factor for the largest sieve size specification for gradation is 1.00.

10. The Composite Pay Factor (CPF) combines the gradation and asphalt cement content pay factor from Step 9 for the lot and is determined using the following formula:

$$CPF = \frac{[f_{3/4\ inch}\ (PF_{3/4\ inch}) + f_{1/2\ inch}\ (PF_{1/2\ inch}) + \ldots f_{ac}\ (PF_{ac})]}{\Sigma f}$$

The CPF is rounded to the nearest hundredth.

Table 306-3 gives the weight factor (f), for each sieve size and asphalt cement content.

TABLE 306-3
WEIGHT FACTORS

Sieve Size	Type II Factor "f"
1 inch sieve	-
3/4 inch sieve	4
1/2 inch sieve	5
3/8 inch sieve	5
No. 4 sieve	4
No. 8 sieve	4
No. 16 sieve	4
No. 30 sieve	5
No. 50 sieve	5
No. 100 sieve	4
No. 200 sieve	20
Asphalt %	40

Asphalt Treated Base Price Adjustment = $PAB \times Q \times 0.5 \times [(CPF\ or\ DPF)^* - 1.00]$

PAB = Price Adjustment Base
Q = tons in Lot
CPF = Composite Pay Factor
DPF = Density Pay Factor

*CPF or DPF, whichever is lower.

ASPHALT CEMENT

The total asphalt cement price adjustment is the sum of all price adjustments for each lot.

Asphalt cement will be randomly sampled and tested in accordance with Subsection 306-4.02. Asphalt cement pay reduction factors for each sample will be determined from Table 306-4.

Table 306-4
ASPHALT CEMENT PAY REDUCTION FACTORS
(Use the single, highest pay reduction factor)

Test	Spec	Pay Reduction Factor (PRF)								
		0.00	**0.04**	**0.05**	**0.06**	**0.07**	**0.08**	**0.10**	**0.25**	**Reject or Engr Eval**
Tests On Original Binder										
Viscosity	< 3 Pa-s	≤ 3	---	> 3	---	---	---	---	---	---
Dynamic Shear	> 1.00 kPa	> 1.00	---	0.88-0.99	---	---	---	0.71-0.89	0.50-0.70	< 0.50
Toughness	> 110 in-lbs	> 93.5	90.0-93.4	85.0-89.9	80.0-84.9	75.0-79.9	70.0-74.9	---	---	< 70.0
Tenacity	> 75 in-lbs	> 63.8	61.0-63.7	58.0-60.9	55.0-57.9	52.0-54.9	48.0-51.9	---	---	< 48.0
Tests On RTFO										
Mass Loss	< 1.00 %	< 1.00	---	1.001-1.092	---	---	---	1.093-1.184	1.185-1.276	> 1.276
Dynamic Shear	> 2.20 kPa	> 2.20	---	1.816-2.199	---	---	---	1.432-1.815	1.048-1.431	< 1.048
Test On PAV										
Dynamic Shear	< 5000 kPa	< 5000	---	5001-5289	---	---	---	5290-5578	5579-5867	> 5867
Creep Stiffness, S	< 300 MPa	< 300	---	301-338	---	---	---	339-388	389-450	> 450
Creep Stiffness, m-value	> 0.300	> 0.300	---	0.287-0.299	---	---	---	0.274-0.286	0.261-0.273	< 0.261

Asphalt Cement Price Adjustment = $5 \times PAB \times Qty \times PRF$ (for each sample)
PAB = Price Adjustment Base
Qty = Quantity of asphalt cement represented by asphalt cement sample
PRF = Pay Reduction Factor from Table 306-4

Asphalt Cement Appeal Procedure. Once notified of a failing test result of an asphalt cement sample, the Contractor has 21 days to issue a written appeal. The appeal must be accompanied by all of the Contactor's quality control test results and a test result of Contactor's sample of this lot tested by an AASHTO accredited asphalt laboratory (accredited in the test procedure in question). The Engineer will review these test results using ASTM D3244 to determine a test value upon which to base a price reduction.

If the Contractor challenges this value, then the referee sample held by the Engineer will be sent to, a mutually agreed upon independent AASHTO accredited laboratory for testing. This test result will be incorporated into the ASTM D3244 procedure to determine a test value upon which to base a price reduction. If this final value incurs a price adjustment, the Contractor shall pay the cost of testing the referee sample.

306-4.04 ASPHALT MATERIAL PRICE ADJUSTMENT – UNIT PRICE.

This subsection provides a price adjustment for asphalt material by:
(a) additional compensation to the Contractor or
(b) a deduction from the Contract amount.

1. This provision shall apply to asphalt material meeting the criteria of Section 702, and is included in items listed in the bid schedule of Sections 306, 307, 308, 318 and 401 through 409, except Section 402. Also included is the asphalt material in the Prelevel/Leveling Course (rut repair) HMA and Temporary HMA as part of 401, Approach HMA as included in 401 or 639 and Pathway HMA as part of 608.

2. This provision shall only apply to cost changes in asphalt material that occur between the date of bid opening and the date the asphalt material is incorporated into the project.

3. The asphalt material price adjustment will only apply when:
   a. More than a 7.5% increase or decrease in the Alaska Asphalt Material Price Index, from the date of bid opening to the date the asphalt material is incorporated into the project.

4. The Alaska Asphalt Material Price Index (AAMPI) is posted on the Department's Materials website along with the formula used to calculate the Index. The AAMPI as used in the determination of the "Asphalt Material Price Adjustment – Unit Price" is calculated for the first and third Friday of each month. The index applies from the beginning of the period start day 00:00 hrs, and ends 00:00 hrs the start of the next period. Other calculation and or period start/end days, including the post day (except as fall on the 1st and 3rd Friday) are not permitted.

5. Price adjustment will be cumulative and calculated with each progress payment. Use the price index in effect on the last day of the pay period, to calculate the price adjustment for asphalt material incorporated into the project during that pay period. The Department will increase or decrease payment under this Contract by the amount determined with the following asphalt material price adjustment formula:

   For an increase exceeding 7.5%, additional compensation = $[(IPP-IB)-(0.075 \times IB)] \times Q$
   For a decrease exceeding 7.5%, deduction from contract = $[(IB-IPP)-(0.075 \times IB)] \times Q$

   Where: Q = Quantity of Asphalt Material incorporated into project during the pay period, in tons
   IB = Index at Bid: the bimonthly Alaska Asphalt Material Price Index in effect on date of bid, in dollars per ton
   IPP = Index at Pay Period: the bimonthly Alaska Asphalt Material Price Index in effect on the last day of the pay period, in dollars per ton

   Method of measurement for determining Q (quantity) is the weight of asphalt material meeting the criteria of this subsection and is incorporated into the project. The quantity does not include aggregate, mineral filler, blotter material, thinning agents added after material qualification, or water for emulsified asphalt.

306-5.01 BASIS OF PAYMENT.

Except where specified as individual Pay Items the work and materials associated with:
Asphalt cement, anti-stripping additives, surface tolerance corrections, patching defective areas; removal and disposal of rejected ATB, and the hauling equipment are subsidiary to the Asphalt Treated Base Pay Items.

Item 306(6) Asphalt Price Adjustment - Quality: is the sum of the price adjustments for each material lot and for fees assessed the Contractor including:

- Each mix design subsequent to the approved Job Mix Design (Subsection 306-2.01) will result in a fee of $2500.00 each.
- Failure to cut core samples within the specified period will result in a fee of $100.00 per sample per day (Subsection 306-4.02).
- Failure to backfill voids left by sampling within the specified period will result in a fee of $100 per hole per day (Subsection 306-4.02).
- Contractor retesting, referee sample testing and Contractor requested testing for visually inspected and rejected asphalt treated base failing to meet specifications will result in a fee being assessed for all costs associated with the test (Subsection 306-4.02, 4.03).

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
306(1)	ATB	Ton
306(2)	Asphalt Cement, Grade PG 52-28	Ton
306(6)	Asphalt Price Adjustment - Quality	Contingent Sum
306(10)	Asphalt Material Price Adjustment – Unit Price	Contingent Sum

CR306-101512

Special Provisions

Replace Section 401 with the following:

SECTION 401

HOT MIX ASPHALT AND SURFACE TREATMENTS

401-1.01 DESCRIPTION. Construct one or more layers of plant-mixed Hot Mix Asphalt (HMA) pavement on an approved surface, to the lines, grades, and depths shown in the Plans.

1. In this Section, HMA refers to Type I, II, III and IV.
   a. Temporary Asphalt Pavement: HMA, Type II, Class B, minimum.
   b. Preleveling/Leveling Course: HMA, Type IV, Class B.
   c. Use of Recycled Asphalt Pavement (RAP) is not permitted in HMA, except RAP may be used in HMA, Type II, Class B.
   d. Warm Mix Asphalt (WMA) is not permitted in HMA.

MATERIALS

401-2.01 COMPOSITION OF MIXTURE - JOB MIX DESIGN (JMD). Design the JMD according to the Alaska Test Manual (ATM) 417 using the design requirements of Table 401-1.

TABLE 401-1

HMA DESIGN REQUIREMENTS

DESIGN PARAMETERS	CLASS "A"	CLASS "B"
HMA (Including Asphalt Cement)		
Stability, Pounds	1800 Min.	1200 min.
Flow, 0.01 Inch	8 – 14	8 - 16
Voids in Total Mix, %	3 - 5	3 – 5
Compaction, Number of Blows Each Side of Test Specimen	75	50
Asphalt Cement		
Percent Voids Filled with Asphalt Cement (VFA)	65 - 75	65 - 78
Asphalt Cement Content, Min. % @ 4% VTM	5.0	5.0
Dust-Asphalt Ratio*	0.6 - 1.4	0.6 - 1.4
Voids in the Mineral Aggregate (VMA), %, Min.		
Type I	12.0	11.0
Type II	13.0	12.0
Type III, IV	14.0	13.0

*Dust-asphalt ratio is the percent of material passing the No. 200 sieve divided by the percent of effective asphalt cement.

The JMD will specify the Target Values (TV) for gradation, the TV for asphalt cement content, the Maximum Specific Gravity (MSG) of the HMA, the additives, and the allowable mixing temperature range.

Target values for gradation in the JMD must be within the broad band limits shown in Table 703-3, for the Type of HMA specified. For acceptance testing, HMA mixture will have the full tolerances in Table 401-2 applied. The tolerance limits will apply even if they fall outside the broad band limits shown in Table 703-3, except the tolerance limit of the No. 200 sieve is restricted by the broad band limits. Tolerance limits will not be applied to the largest sieve specified.

Do not mix HMA produced from different plants for testing or production paving. HMA from different plants will be rejected.

Submit the following to the Engineer at least 15 days before the production of HMA:

1. A letter stating the location, size, and type of mixing plant, the proposed gradation for the JMD, gradations for individual stockpiles with supporting process quality control information, and the blend ratio of each aggregate stockpile. The proposed gradation must meet the requirements of Table 703-3 for each Type of HMA specified in the Contract.

2. Representative samples of each aggregate (coarse, intermediate, fine, and blend material and mineral filler, if any) in the proportions required for the proposed mix design. Furnish a total of 500 pounds of material.

3. Five separate 1-gallon samples of the asphalt cement proposed for use in the HMA. Include name of product, manufacturer, test results of the applicable quality requirements of Subsection 702-2.01, manufacturer's certificate of compliance according to Subsection 106-1.05, a temperature viscosity curve for the asphalt cement or manufacturer's recommended mixing and compaction temperatures, and current Material Safety Data Sheet.

4. One sample, of at least 1/2 pint, of the anti-strip additive proposed, including name of product, manufacturer, and manufacturer's data sheet, and current Material Safety Data Sheet.

The Engineer will evaluate the material and the proposed gradation using ATM 417 and the requirements of Table 401-1 for the appropriate Type and Class of HMA specified. The mix, the materials and proposed gradation meeting the specification requirements will become part of the Contract when approved, in writing, by the Engineer.

The Engineer has the option to require further verification of the JMD. Evaluation of the JMD may be included in the Process Quality Controls, Supplemental Process Quality Controls, Subsection 401-2.05, Test Strip construction.

FAILURE TO MEET SPECIFICATION REQUIREMENTS

Submit a new JMD with changes noted and new samples in the same manner as the original JMD when:

- The results do not achieve the requirements specified in Table 401-1
- The asphalt cement source is changed
- The source of aggregate, aggregate quality, gradation, or blend ratio is changed
- The results of a Test Strip do not meet the requirements of the specification – the Engineer may require a new JMD.

Do not produce HMA for production paving and payment before the Engineer provides written approval of the JMD, the original or a new replacement JMD. If a Test Strip(s) is required, do not produce HMA for production paving and payment before the Engineer provides written approval of the Test Strip construction, construction process, the materials, and the JMD, Subsection 401-2.05.

Payment for HMA will not be made until the new JMD and the Test Strip, when required, is approved. Approved changes apply only to HMA produced after the submittal of changes.

The Engineer will assess a fee for each mix design subsequent to the approved Job Mix Design. The fee will be included under Item 401(6) Asphalt Price Adjustment – Quality.

401-2.02 AGGREGATES. Conform to Subsection 703-2.04.

Use a minimum of three stockpiles for crushed HMA aggregate (coarse, intermediate, and fine).

401-2.03 ASPHALT CEMENT. Conform to 702-2.01. If not specified, use PG 52-28.

Provide test reports for each batch of asphalt cement showing conformance to the specifications in Section 702 before delivery to the project. Require that the storage tanks used for each batch be noted on the test report, the anti-strip additives required by the mix design be added during load out for delivery to the project, and a printed weight ticket for anti-strip is included with the asphalt cement weight ticket. The location where anti-strip is added may be changed with the written approval of the Engineer.

Furnish the following documents at delivery:
1. Manufacturer's certificate of compliance (Subsection 106-1.05).
2. Conformance test reports for the batch (provide prior to delivery as noted above).
3. Batch number and storage tanks used.
4. Date and time of load out for delivery.
5. Type, grade, temperature, and quantity of asphalt cement loaded.
6. Type and percent of anti-strip added.

401-2.04 ANTI-STRIP ADDITIVES. Use anti-strip agents in the proportions determined by ATM 414 and included in the approved JMD. At least 70% of the aggregate must remain coated when tested according to ATM 414. A minimum of 0.25% by weight of asphalt cement is required.

401-2.05 PROCESS QUALITY CONTROL. Sample and test materials for quality control of the HMA according to Subsection 106-1.03. Submit to the Engineer, with the JMD, a documentation plan that will provide a complete, accurate, and clear record of the sampling and testing results. When directed by the Engineer, make adjustments to the plan and resubmit.

Submit a paving and plant control plan at the pre-paving meeting to be held a minimum of 5 working days before initiating paving operations. Address the sequence of operations and joint construction. Outline steps to provide product consistency, to minimize segregation, to prevent premature cooling of the HMA and to provide the mat and longitudinal density required by these specifications. Include a proposed quality control testing frequency for gradation, asphalt cement content, and compaction.

Failure to perform quality control forfeits the Contractor's right to a retest under Subsection 401-4.02.

Provide copies of the documented sampling and testing results no more than 24 hours from the time taken.

SUPPLEMENTAL PROCESS QUALITY CONTROL

The Engineer has the option to require supplemental process quality controls including additional sampling and testing. Include the supplemental process quality controls in the documentation plan.

When directed by the Engineer: provide "Density Profiles" and or "Test Strips."

1. Density Profiles. Provide density profile testing, with a nuclear density gauge, of the mat and longitudinal joints. Include the frequency of the test groups, configuration of the test groups for mat density and joint density individually or combined. Indicate the number of tests in a test group intended to confirm the density of the mat and joints.

   Locations that may require testing include: all lanes on bridge decks, adjacent to longitudinal joints, areas where segregation is visible, thermal segregation potential exists, where mat density is lower than the minimum (considered segregated), and the paver starts/stops. The Engineer will identify these and other areas that require density testing.

2. Test Strips. Construct test strips (ATM 412) using the approved job mix HMA a minimum of 5 working days prior to planned production paving, except use the proposed JMD when the test strip is being constructed to help evaluate the JMD as part of the mix performance analysis. Submit a proposed test strip location to the Engineer for coordination, and approval; include in the process control documentation plan. The Engineers approval and written authorization of the location, date, and time, is required before construction of a test strip.

   Establish roller patterns and the number of passes required to assure that proper placement and compaction is achieved. The test strip shall include no less than 300 tons and no more than 1000 tons, except as may be authorized, in writing, by the Engineer. The full complement of the paving train will be on site to receive instructions from the Engineer as needed to complete the mix performance analysis. Make the equipment available for inspection as required by Subsection 401-3.02. Provide an onsite process control representative with authority to modify mix components as instructed by the Engineer.

   Payment for Test Strips: Subsection 401-5.01 Basis of Payment and as noted here.
   a. Approved. Test strip construction and material, approved by the Engineer in writing, as meeting the specification requirements will be paid for at the Contract unit prices. Price adjustments will not be included for quality, unit price, or other.
   b. Failed. The Engineer may direct the Contractor to remove and dispose of test strips not meeting specification requirements. Contractor, construct a new test strip or return the surface materials and grade to their original condition as directed by the Engineer. The materials, construction of, removal and disposal of a failed test strip will be at the Contractor's expense.

   Only after the Engineer approves the test strip may HMA be produced for production paving and payment.

CONSTRUCTION REQUIREMENTS

401-3.01 WEATHER LIMITATIONS. Do not place the HMA on a wet surface, on an unstable/yielding roadbed, when the base material is frozen, or when weather conditions prevent proper handling or finishing of the mix. Do not place HMA unless the roadway surface temperature is a minimum of 40° F or warmer. HMA Type II, Class A - Do not place mix after September 15 unless approved by the Engineer in writing.

401-3.02 EQUIPMENT, GENERAL. Use equipment in good working order and free of HMA buildup. Make equipment available for inspection and demonstration of operation a minimum of 24 hours before placement of production HMA, except when a test strip is required, 24 hours before placement of the test strip HMA.

401-3.03 ASPHALT MIXING PLANT. Meet AASHTO M 156. Use an asphalt plant designed to dry aggregates, maintain accurate temperature control, and accurately proportion asphalt cement and aggregates. Calibrate the asphalt plant and furnish copies of the calibration data to the Engineer at least 4 hours before HMA production. Provide daily burner charts to the Engineer showing start/stop times and temperatures.

Provide a scalping screen at the asphalt plant to prevent oversize material or debris from being incorporated into the HMA.

Provide a tap on the asphalt cement supply line just before it enters the plant (after the 3-way valve) for sampling asphalt cement.

Provide aggregate and asphalt cement sampling equipment meeting OSHA safety requirements.

401-3.04 HAULING EQUIPMENT. Costs associated with Subsection 401-3.04 are subsidiary to Section 401 Pay Items.

Vehicles/Equipment. Haul HMA in trucks with tight, clean, smooth metal beds, thinly coated with a minimum amount of paraffin oil, lime water solution, or an approved manufactured asphalt release agent. Do not use petroleum fuel as an asphalt release agent.

During HMA hauling activities, the hauling vehicle will have covers attached and available for use. Be prepared to demonstrate deployment of the cover when hauling material or empty. Illustrate the efficiency of deployment and how the materials are protected from the environment and the environment is protected from the materials. When directed by the Engineer cover the HMA in the hauling vehicle(s).

Roadway Maintenance. Daily inspect, remove/clean, and dispose of project materials deposited on existing and new pavement surfaces(s) inside and outside the project area including haul routes.

The inspection plan and method of removal/cleaning and disposal shall be submitted in writing to the Engineer and approved by the Engineer 5 days before initiating paving operations. Include alternatives, options to immediately correct deficiencies in the inspection plan and methods of removal/cleaning and disposal that may be discovered as the work is being performed.

The Engineer may require the Contractor to include a vehicle/equipment cleaning station(s), to be added at the project site and or at the plant, in the basic plan or as one of the corrective alternatives/options. At a minimum, the cleaning station will include the materials and means to:

(1) Spray truck tires with an environmental degradable release agent if mix adheres to tires before dumping in front of the paver.
(2) Clean off loose mix from gates, chains, and tires that might fall on the pavement of the haul route.
(3) Contain, collect and disposal of (1) and (2).

The Contractor is responsible for the inspection plan, the means, and methods used for removal/cleaning and disposal of fugitive materials/debris. The Contractor is responsible for the damage as a result of not removing these materials (to the roadway material and the users and others) and the damage to the roadway materials from the removal method(s). Approval does not change the Contractor's responsibility, nor add responsibility to the Department for this work.

Repair damage to the existing roadway materials (asphalt type) as a result of the fugitive materials or their removal as specified in Subsection 401-3.16 Patching Defective Areas.

401-3.05 ASPHALT PAVERS. Use self-propelled pavers equipped with a heated vibratory screed. Control grade and cross slope with automatic grade and slope control devices. Use an erected string line, a 30-foot minimum mobile stringline (ski), or other approved grade follower, to automatically actuate the paver screed control system. Use grade control on either (a) both the high and low sides or (b) grade control on the high side and slope control on the low side.

Equip the paver with a receiving hopper having sufficient capacity for a uniform spreading operation and a distribution system to place the HMA uniformly in front of screed.

Use a screed assembly that produces a finished surface of the required smoothness, thickness, and texture without tearing, shoving, or displacing the HMA.

Equip the paver with a means of preventing segregation of the coarse aggregate particles from the remainder of the HMA when carried from the paver hopper back to the augers. Use means and methods approved by the paver manufacturer. Means and methods may consist of chain curtains, deflector plates, or other similar devices or combination of devices. When required by the Engineer, provide a Certificate of Compliance that verifies the means and methods required to prevent segregation are being used.

The use of a "Layton Box" or equivalent towed paver is allowed on bike paths, sidewalks, and driveways.

401-3.06 ROLLERS. Use both steel-wheel (static or vibratory) and pneumatic-tire rollers. Avoid crushing or fracturing of aggregate. Use rollers designed to compact HMA mixtures and reverse without backlash.

Use pneumatic rollers to compact the prelevel/leveling course.

All rollers shall have an attached infrared thermometer that measures and displays the surface temperature to the operator.

Use fully skirted pneumatic-tire rollers having a minimum operating weight of 3000 pounds per tire.

401-3.07 PREPARATION OF EXISTING SURFACE. Prepare existing surfaces conforming to the Plans and Specifications. Before applying tack coat to an existing paved surface, clean loose material from cracks for the depth of the cracks. Fill the cleaned cracks, wider than 1 inch, with an approved HMA tamped in place. Wash and or sweep the paved surface clean and free of loose materials.

Preparation of a milled surface:

- Prelevel remaining ruts, pavement delaminations, or depressions having a depth greater than 1/2 inch with HMA, Type IV. Compact the prelevel/leveling course using pneumatic-tire rollers. The Engineer's approval of the material and material installation is required. The Engineer will inspect the material and material installation. Correct material and material installations identified by the Engineer as required by the Engineer for approval. Density testing is not required for the leveling course (prelevel) material, material installation.

- Where the planing equipment breaks through existing pavement, remove 2 inches of existing base material depth and replace with HMA, Type II, Class B. Cold mix HMA prohibited.

  During the planing operation, notify the Engineer of pavement areas that may be thin or unstable.

Placement and locations of prelevel/leveling course will be determined and approved by the Engineer.

Do not apply the tack coat material until the Engineer approves the existing surface including, not limited to; the existing paved surface, the milled surface, and a prior layer of HMA pavement.

Before placing the hot asphalt mix, apply tack coat material (Section 702) as specified here and in Section 402. Uniformly coat contact surfaces of curbing, gutters, sawcut pavement, cold joints, manholes, and other structures with tack coat material. Allow tack coat to break before placement of HMA on these surfaces.

401-3.08 PREPARATION OF ASPHALT. Provide a continuous supply of asphalt cement to the asphalt mixing plant at a uniform temperature, within the allowable mixing temperature range.

401-3.09 PREPARATION OF AGGREGATES. Dry the aggregate so the moisture content of the HMA, sampled at the point of acceptance for asphalt cement content, does not exceed 0.5% (by total weight of mix), as determined by WAQTC FOP for AASHTO T 329.

Heat the aggregate for the HMA to a temperature compatible with the mix requirements specified.

Adjust the burner on the dryer to avoid damage to the aggregate and to prevent the presence of unburned fuel on the aggregate. HMA containing soot or fuel is unacceptable (Subsection 105-1.11).

401-3.10 MIXING. Combine the aggregate, asphalt cement, and additives in the mixer in the amounts required by the JMD. Mix to obtain 98% coated particles when tested according to AASHTO T195.

For batch plants, put the dry aggregate in motion before addition of asphalt cement.

401-3.11 TEMPORARY STORAGE. Silo type storage bins may be used, provided the characteristics of the HMA remain unaltered. Changes in the JMD, visible or otherwise, are cause for rejection. Changes may include: visible segregation, heat loss, and the physical characteristics of the asphalt cement, lumpiness, or stiffness of the HMA or similar.

401-3.12 PLACING AND SPREADING. Use asphalt pavers to distribute HMA, including leveling (preleveling) course and temporary HMA. Place the HMA upon the approved surface, spread, strike off, and adjust surface irregularities. The maximum compacted lift thickness allowed is 3 inches.

During placement, the Engineer, using an infrared camera, may evaluate the HMA surface immediately behind the paver for temperature uniformity. Areas with temperature differences more than 25° F lower than the surrounding HMA may produce areas of low density. Contractor shall immediately adjust laydown procedure to maintain a temperature differential of 25° F or less. Thermal images and thermal profile data will become part of the project record and shared with the Contractor.

Use hand tools to spread, rake, and lute the HMA in areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impracticable.

When the section of roadway being paved is open to traffic, pave adjacent traffic lanes to the same elevation within 24 hours. Place approved material against the outside pavement edge when the drop off exceeds 2 inches.

When multiple lifts are specified in the Contract, do not place the final lift until lower lifts throughout that section, as defined by the Paving Plan, are placed and accepted.

Do not pave against new Portland cement concrete curbing until it has cured for at least 72 hours.

Do not place the final lift until curb and gutter, all types, are installed complete, except as approved by the Engineer.

Place HMA over bridge deck membranes according to Section 508 and the manufacturer's specifications.

401-3.13 COMPACTION. Thoroughly and uniformly, compact the HMA by rolling. In areas not accessible to large rollers, compact with mechanical tampers or trench rollers. Do not leave rollers or other equipment standing on HMA that has not sufficiently cooled to prevent indentation.

A mat area with density lower than 92% MSG is considered segregated and not in conformance with the requirements of the Contract. The work shall be deemed unacceptable by the Engineer according to Subsection 105-1.11 unless, the Engineer determines that reasonably acceptable work has been produced as permitted in Subsection 105-1.03.

The density TV is 95% of the MSG, as determined by WAQTC FOP for AASHTO T 209. The MSG of the JMD will be used for the first lot of each Type of HMA. The MSG for additional lots will be determined from the first sublot of each lot.

Acceptance testing for density will be performed according to WAQTC FOP for AASHTO T 166/T 275 using a 6 inch diameter core. (Acceptance testing for density of leveling course or temporary pavement is not required).

When directed by the Engineer, provide density profiles of the mat and longitudinal joints with a nuclear density gauge. Deliver the results of density tests to the Engineer at the time of the testing, in writing in the format detailed in the Quality Control Plan Subsection 401-2.05.

401-3.14 JOINTS. Minimize the number of joints. Do not construct longitudinal joints in the driving lanes unless approved by the Engineer in writing at the Pre-paving meeting. Place and compact the HMA to provide a continuous bond, texture, and smoothness between adjacent sections of the HMA.

Remove to full depth improperly formed joints resulting in surface irregularities. Before removing pavement, cut a neat, straight line along the pavement to be removed and the pavement to remain. Use a power saw or other method approved by the Engineer. Replace the removed asphalt with new HMA and thoroughly compact.

Form transverse joints by cutting back on the previous run to expose the full depth of the layer. Saw cut the joint, use a removable bulkhead or other method approved by the Engineer. The transverse joint will

be heated with and infrared heater (310° F max), paved against and compacted in order to uniformly seal the existing and new pavement layers at the joint.

Offset the longitudinal joints in one layer from the joint in the layer immediately below by at least 6 inches. Align the joints of the top layer at the centerline or lane lines. Where preformed marking tape striping is required, offset the longitudinal joint in the top layer not more than 6 inches from the edge of the stripe.

On the final lift, before paving against the longitudinal joint (completing the joint) uniformly coat the surface below the final lift with tack coat material conforming to Section 702. Coat the vertical edge of pavement (including milled edges) with Crafco Pavement Joint Adhesive No. 34524, Deery Cold Joint Adhesive, or approved equal. Apply a 1/8 inch thick band of joint adhesive over the cold mat according to manufacturer's recommendations.

Costs associated with longitudinal joint adhesive will be subsidiary to the HMA pay item.

The Engineer shall evaluate the difference in elevation of the final surface of adjacent mats each side of the longitudinal joint, at the joint, with a straight edge and by requiring the Contractor to flood the joint surface with water. The Engineer will determine where and how often to evaluate the joint. All differences in the surface elevations greater than 1/8 inch or that pond water shall be repaired at no cost to the Department. Heat the HMA pavement to be repaired with an infrared heater (310° F max) and roll flat or add HMA until the joint differential is within tolerance.

For the top layer of HMA, the minimum specification limit for longitudinal joint density is 91% of the MSG of the panel completing the joint. Cut one 6 inch diameter core centered on the longitudinal joint at each location the panel completing the joint is cored for acceptance density testing. Density will be determined according to WAQTC FOP for AASHTO T 166/T 275.

For areas that fail to achieve the prescribed joint density seal the surface of the longitudinal joints with Asphalt Systems GSB-88 or approved equal, while the HMA is clean, free of moisture, and before traffic marking. Longitudinal joint sealing shall be according to the manufacturer's recommendations and a maximum application rate of 0.15 gallons per square yard. Apply the sealant at least 12 inches wide centered on the longitudinal joint.

Hot lapped joints formed by paving in echelon must be completed while the mat temperature is over 150°F. These joints do not need to be tacked and will not be measured or evaluated for joint density.

Longitudinal joints will be evaluated for acceptance according to Subsection 401-4.03.

401-3.15 SURFACE TOLERANCE. The Engineer will test the finished surface after final rolling at selected locations using a 10 foot straightedge. Correct variations from the testing edge, between any two contacts of more than 1/4 inch.

Costs associated with meeting surface tolerances are subsidiary to the HMA pay item.

401-3.16 PATCHING DEFECTIVE AREAS. Remove HMA that is contaminated with foreign material, is segregated (determined visually or by testing), flushing, or bleeding asphalt after compaction is completed or is in any way determined to be defective. Do not skin patch. Remove defective HMA for the full thickness of the course. Cut the pavement so that edges are vertical, the sides are parallel to the direction of traffic. Coat edges with a tack coat meeting Section 402 and allow to cure. Place and compact fresh HMA according to Subsection 401-3.13 to grade, and smoothness requirements.

Costs associated with patching defective areas are subsidiary to the HMA Pay Item.

401-4.01 METHOD OF MEASUREMENT. Section 109 and the following:

1. Hot Mix Asphalt.
   a) By weighing. No deduction will be made for the weight of asphalt cement or anti stripping additive or cutting back joints.
   b) By the final HMA surface.

2. Asphalt Cement. By the ton, as follows.
   Method 1:
   Percent of asphalt cement for each sublot multiplied by the total weight represented by that sublot. ATM 405 or WAQTC FOP for AASHTO T 308 will determine the percent of asphalt cement. The same tests used for the acceptance testing of the sublot will be used for computation of the asphalt cement quantity. If no acceptance testing is required, the percent of asphalt cement is the target value for asphalt cement in the JMD.

   Method 2:
   Supplier's invoices minus waste, diversion and remnant. This procedure may be used on projects where deliveries are made in tankers and the asphalt plant is producing HMA for one project only.

   The Engineer may direct, at any time that tankers be weighed in the Engineer's presence before and after unloading. If the weight determined at the project varies more than 1% from the invoice amount, payment will be based on the weight determined at the project.

   Any remnant or diversion will be calculated based on tank stickings or weighing the remaining asphalt cement. The Engineer will determine the method. The weight of asphalt cement in waste HMA will be calculated using the target value for asphalt cement as specified in the JMD.

   Method 1 will be used for determining asphalt cement quantity unless otherwise directed in writing. The procedure initially used will be the one used for the duration of the project. No payment will be made for any asphalt cement more than 0.4% above the optimum asphalt cement content specified in the JMD.

3. Job Mix Design. When specified, Contractor furnished JMD(s) will be measured as one according to the HMA Class and Type.

4. Temporary Pavement. By weighing. No deduction will be made for the weight of asphalt cement or anti-stripping additive.

5. Preleveling/Leveling Course. By weight or Lane-Station (12 foot width). No deduction will be made for the weight of asphalt cement or anti stripping additive.

6. Asphalt Price Adjustment – Quality. Calculated by quality level analysis under Subsection 401-4.03. Also included in the measurement are the fees and deductions specified in Subsection 401-2.01 and Subsection 401-4.02.

   Asphalt Price Adjustment – Quality, does not apply to, and measurements will not be made for: 1) Leveling Course/Prelevel (rut repair) HMA, 2) Temporary HMA, 3) Approach HMA.

7. Longitudinal Joint and Joint Adhesive. No measurements will be made.

401-4.02 ACCEPTANCE SAMPLING AND TESTING. The total price adjustment is the sum of the individual lot price adjustments as determined in Subsection 401-4.03 Evaluation of Materials for Acceptance, and is included in Item 401(6) Asphalt Price Adjustment-Quality. Penalties assessed are also included in Item 401(6).

A mat area of finished surfacing that is visibly segregated, has a lower density than specified (Subsection 401-3.13), fails to meet surface tolerance requirements, or is flushing asphalt cement is considered unacceptable according to Subsection 105-1.11.

HOT MIX ASPHALT

The quantity of each class and Type of HMA produced and placed will be divided into lots and the lots evaluated individually for acceptance.

A lot will normally be 5,000 tons. The lot will be divided into sublots of 500 tons; each randomly sampled and tested for asphalt cement content, density, and gradation according to this subsection. If the project has more than 1 lot, and less than 8 additional sublots have been sampled at the time a lot is terminated, either due to completion of paving operations or the end of the construction season (winter shutdown), the material in the shortened lot will be included as part of the prior lot. The price adjustment computed, according to Subsection 401-4.03, for the prior lot will include the samples from the shortened lot.

If 8 or 9 samples have been obtained at the time a lot is terminated, they will be considered as a lot and the price adjustment will be based on the actual number of test results (excluding outliers) in the shortened lot.

If the contract quantity is between 1,500 tons and 5,000 tons, the Contract quantity will be considered one lot. The lot will be divided into sublots of 500 tons and randomly sampled for asphalt cement content, density, and gradation according to this subsection except that a determination for outliers will not be performed. HMA quantities of less than 300 tons remaining after dividing the Contract quantity into sublots will be included in the last sublot. HMA quantities of 300 tons or greater will be treated as an individual sublot. The lot will be evaluated for price adjustment according to Subsection 401-4.03 except as noted.

For Contract quantity of less than 1,500 tons (also for approaches and temporary pavement), HMA will be accepted for payment based on the Engineer's approval of a JMD and the placement and compaction of the HMA to the specified depth and finished surface requirements and tolerances. The Engineer reserves the right to perform any testing required in order to determine acceptance. Remove and replace any HMA that does not conform to the approved JMD.

Samples collected at the plant from dry batched aggregates, the conveyor system, or the asphalt cement supply line shall be taken by the Contractor in the presence of the Engineer. The Engineer will take immediate possession of the samples.

The Engineer will determine where samples are taken.

1. Asphalt Cement Content. Hot mix samples taken for the determination of asphalt cement content will be taken randomly from behind the screed before initial compaction, or from the windrow according to WAQTC FOP for AASHTO T 168 and ATM 403, as directed by the Engineer. HMA samples taken for the determination of both asphalt cement content and gradation will be taken randomly from behind the screed before initial compaction or from the windrow according to WAQTC FOP for AASHTO T 168 and ATM 403.

   Two separate samples will be taken, one for acceptance testing and one held in reserve for retesting if applicable. At the discretion of the Engineer, asphalt cement content will be determined according to ATM 405 or WAQTC FOP for AASHTO T 308.

2. Aggregate Gradation.

   a. Drum Mix Plants. Samples taken for the determination of aggregate gradation from drum mix plants will be from the combined aggregate cold feed conveyor via a diverter device or from the stopped conveyor belt according to WAQTC FOP for AASHTO T2 or from the same location as samples for the determination of asphalt cement content. Locate diverter devices for obtaining aggregate samples from drum mix plants on the conveyor system delivering combined aggregates into the drum. Divert aggregate from the full width of the conveyor system and maintain the diverter device to provide a representative sample of aggregate incorporated into the HMA. Two separate samples will be taken, one for acceptance testing and one held in reserve for retesting if applicable. The aggregate gradation for samples from the conveyor system will be determined according to WAQTC FOP for AASHTO T 27/T 11. For HMA samples, the gradation will be determined according to WAQTC FOP for AASHTO T 30 from the aggregate remaining after the ignition oven (WAQTC FOP for AASHTO T 308) has burned off the asphalt cement.

   b. Batch Plants. Samples taken for the determination of aggregate gradation from batch plants will be from the same location as samples for the determination of asphalt cement content, or from dry batched aggregates according to WAQTC FOP for AASHTO T 2. Two separate samples will be taken, one for acceptance testing and one held in reserve for retesting if applicable. Dry batched aggregate gradations will be determined according to WAQTC FOP for AASHTO T 27/T 11. For HMA samples, the aggregate gradation will be determined according to WAQTC FOP for AASHTO T 30 from the aggregate remaining after the ignition oven (WAQTC FOP for AASHTO T 308) has burned off the asphalt cement.

3. Density.

   a. Acceptance Testing.

      The Engineer will determine and mark the location(s) where the Contractor will take each core sample. Core samples will not be taken at bridge decks or the milled edge of existing pavement.

      1) Mat Cores: The location(s) for taking core samples will be determined using a set of random numbers and the Engineer's judgment.

      2) Longitudinal Joint Cores: The Engineer will mark the location(s) to take the core sample, centered on the visible surface joint, and adjacent to the mat core sample taken in the panel completing the joint. Take joint core samples in the presence of the Engineer.

      Cut full depth core samples, centered on the marks and as noted above, from the finished HMA within 24 hours after final rolling. Neatly core drill one six inch diameter sample at each marked location. Use a core extractor to remove the core - do not damage the core. Backfill and compact voids left by coring with new HMA within 24 hours.

      The Engineer will immediately take possession of the samples. Density of the samples will be determined, by the Engineer, according to WAQTC FOP for AASHTO T 166/T 275.

      A penalty will be assessed for each failure to take core samples or backfill core sample voids within the specified period, or take core samples at the location marked by the Engineer.

4. Retesting. A retest of any sample outside the limits specified in Table 401-2 may be requested provided the quality control requirements of 401-2.05 are met. Deliver this request in writing to the Engineer within 7 days of receipt of the final test of the lot. The Engineer will mark the sample location for the density retest within a 2 foot radius of the original core. The original test results will be discarded and the retest result will be used in the price adjustment calculation regardless of whether the retest result gives a higher or lower pay factor. Only one retest per sample is allowed. Except for the first lot, when gradation and asphalt cement content are determined from the same sample, retesting for gradation or asphalt cement from the first sublot of a lot will include retesting for the MSG; when separate samples are used, retesting for asphalt cement content will include retesting for MSG.

ASPHALT CEMENT

The lot size for asphalt cement will normally be 200 tons. If a project has more than one lot and the remaining asphalt cement quantity is less than 150 tons, it will be added to the previous lot and that total quantity will be evaluated for price adjustment as one lot. If the remaining asphalt cement quantity is 150 tons or greater, it will be sampled, tested and evaluated as a separate lot.

If the contract quantity of asphalt cement is between 85 – 200 tons, the contract quantity will be considered as one lot and sampled, tested, and evaluated according to this subsection. Quantities of asphalt cement less than 85 tons will be accepted based on manufacturer's certified test reports and certification of compliance.

Asphalt cement will be sampled according to WAQTC FOP for AASHTO T 40, tested for conformance to the specifications in Section 702, and evaluated for price adjustment in accordance with 401-4.03. Asphalt cement pay reduction factors for each sample will be determined from Table 401-4. Three separate samples from each lot will be taken, one for acceptance testing, one for Contractor retesting, and one held in reserve for referee testing if applicable.

401-4.03 EVALUATION OF MATERIALS FOR ACCEPTANCE.

Price adjustments in this subsection are addressed under Item 401(6) Asphalt Price Adjustment-Quality.

HOT MIX ASPHALT

The total Hot Mix Asphalt price adjustment is the sum of all price adjustments for each lot.

The following method of price adjustment will be applied to each Type of HMA when the contract quantity equals or exceeds 1,500 tons, except as specified in Subsection 401-4.02.

Acceptance test results for a lot will be analyzed collectively and statistically by the Quality Level Analysis method as specified in Subsection 106-1.03 to determine the total estimated percent of the lot that is within specification limits.

The price adjustment is based on the lower of two pay factors. The first factor is a composite pay factor for HMA that includes gradation and asphalt cement content. The second factor is for density.

A lot containing HMA with less than a 1.00 pay factor will be accepted at an adjusted price, provided the pay factor is at least 0.75 and there are no isolated defects identified by the Engineer. A lot containing HMA that fails to obtain at least a 0.75 pay factor will be considered unacceptable and rejected under Subsection 105-1.11.

The Engineer will reject HMA that appears to be defective based on visual inspection. A minimum of two samples will be collected from the rejected HMA and tested if requested. If test results are within specification limits, payment will be made for the HMA. If any of the test results fail to meet specifications, no payment will be made and the cost of the testing will be subtracted as a price adjustment. Costs associated with removal and disposal of the rejected HMA are subsidiary to the Hot Mix Asphalt Pay Item.

Outlier Test. Before computing the price adjustment, the validity of the test results will be determined by SP-7, the Standard Practice for Determination of Outlier Test Results. Outlier test results will not be included in the price adjustment calculations.

When gradation and asphalt cement content are determined from the same sample, if any size on the gradations test or the asphalt cement content is an outlier, then the gradation test results and the asphalt cement content results for that sublot will not be included in the price adjustment. The density test result for that sublot will be included in the price adjustment provided it is not an outlier.

When gradation and asphalt cement content are determined from separate samples, if any sieve size on the gradation test is an outlier, then the gradation test results for that sample will not be included in the price adjustment. The asphalt cement content and density test results for that sublot will be included in the price adjustment provided neither is an outlier. If the asphalt cement content test result is an outlier, it will not be included in the price adjustment but the gradation and density test results for the sublot will be included provided neither is an outlier. If the density test result is an outlier, it will not be included in the price adjustment but the gradation and asphalt cement content test results will be included provided neither is an outlier.

Quality Level Analysis. Pay factors are computed as follows:

1. Outliers (determined by SP-7), and any test results on material not incorporated into the work, are eliminated from the quality level analysis.

   The arithmetic mean ($\bar{x}$) of the remaining test results is determined:

   $$\bar{x} = \frac{\sum x}{n}$$

   Where: $\sum$ = summation of
   x = individual test value to x_n
   n = total number of test values

   ($\bar{x}$) is rounded to the nearest tenth for density and sieve sizes except the No. 200 sieve.
   ($\bar{x}$) is rounded to the nearest hundredth for asphalt cement content and the No. 200 sieve.

2. The sample standard deviation (s) after the outliers have been excluded, is computed:

   $$s = \sqrt{\frac{n\sum(x^2) - (\sum x)^2}{n(n-1)}}$$

   Where: $\sum(x^2)$ = sum of the squares of individual test values.
   $(\sum x)^2$ = square of the sum of the individual test values.

   The sample standard deviation (s) is rounded to the nearest hundredth for density and all sieve sizes except the No. 200 sieve. The sample standard deviation (s) is rounded to the nearest 0.001 for asphalt cement content and the No. 200 sieve.

   If the computed sample standard deviation (s) is <0.001, then use s = 0.20 for density and all sieves except the No. 200. Use s = 0.020 for asphalt cement content and the No. 200 sieve.

3. The USL and LSL are computed. For aggregate gradation and asphalt cement content, the Specification Limits (USL and LSL) are equal to the Target Value (TV) plus and minus the allowable tolerances in Table 401-2. The TV is the specified value in the approved JMD. Specification tolerance limits for the largest sieve specified will be plus 0 and minus 1 when performing Percent Within Limits (PWL) calculations. The TV for density is 95% of the MSG and the LSL is 92% of MSG.

TABLE 401-2

LOWER SPECIFICATION LIMIT (LSL) & UPPER SPECIFICATION LIMIT (USL)

Measured Characteristics	LSL	USL
3/4 inch sieve	TV -6.0	TV + 6.0
1/2 inch sieve	TV -6.0	TV + 6.0
3/8 inch sieve	TV -6.0	TV + 6.0
No. 4 sieve	TV -6.0	TV + 6.0
No. 8 sieve	TV -6.0	TV + 6.0
No. 16 sieve	TV -5.0	TV + 5.0
No. 30 sieve	TV -4.0	TV + 4.0
No. 50 sieve	TV -4.0	TV + 4.0
No. 100 sieve	TV -3.0	TV + 3.0
No. 200 sieve*	TV -2.0	TV + 2.0
Asphalt %	TV -0.4	TV + 0.4
Mat Density %	92	100

*Tolerances for the No. 200 sieve may not exceed the broad band limits in Table 703-3.

4. The Upper Quality Index (Q_U) is computed:

$$Q_U = \frac{USL - \bar{x}}{S}$$

Where: USL = Upper Specification Limit
Q_U is rounded to the nearest hundredth.

5. The Lower Quality Index (Q_L) is computed:

$$Q_L = \frac{\bar{x} - LSL}{S}$$

Where: LSL = Lower Specification Limit
Q_L is rounded to the nearest hundredth.

6. P_U (percent within the upper specification limit which corresponds to a given Q_U) is determined. See Subsection 106-1.03.

7. P_L (percent within the lower specification limit which corresponds to a given Q_L) is determined. See Subsection 106-1.03.

8. The Quality Level (the total percent within specification limits) is determined for aggregate gradation, asphalt cement content, and density.

Quality Level = $(P_L + P_U) - 100$

9. Using the Quality Levels from Step 8, the lot Pay Factor (PF) is determined for Density (DPF) and gradation and asphalt cement content pay factors from Table 106-2. The maximum pay factor for the largest sieve size specification for gradation is 1.00.

10. The Composite Pay Factor (CPF) for the lot is determined using the following formula:

$$CPF = \frac{[f_{3/4\ inch}\ (PF_{3/4\ inch}) + f_{1/2\ inch}\ (PF_{1/2\ inch}) + \ldots f_{ac}\ (PF_{ac})]}{\Sigma f}$$

The CPF is rounded to the nearest hundredth.

Table 401-3 gives the weight factor (f), for each sieve size and asphalt cement content.

TABLE 401-3
WEIGHT FACTORS

Sieve Size	Type I Factor "f"	Type II Factor "f"	Type III Factor "f"
1 inch sieve	4	-	-
3/4 inch sieve	4	4	-
1/2 inch sieve	4	5	4
3/8 inch sieve	4	5	5
No. 4 sieve	4	4	5
No. 8 sieve	4	4	5
No. 16 sieve	4	4	5
No. 30 sieve	4	5	6
No. 50 sieve	4	5	6
No. 100 sieve	4	4	4
No. 200 sieve	20	20	20
Asphalt Cement Content, %	40	40	40

The price adjustment will be based on either the CPF or DPF, whichever is the lowest value. The price adjustment for each individual lot will be calculated as follows:

Price Adjustment = $[(CPF \text{ or } DPF)^{*} - 1.00] \times (\text{tons in lot}) \times (PAB)$

*CPF or DPF, whichever is lower.

PAB = Price Adjustment Base = $ 170.5 per ton

ASPHALT CEMENT

The total asphalt cement price adjustment is the sum of all price adjustments for each lot.

Asphalt cement will be randomly sampled and tested in accordance with Subsection 401-4.02. Asphalt cement pay reduction factors for each sample will be determined from Table 401-4.

Table 401-4
ASPHALT CEMENT PAY REDUCTION FACTORS
(Use the single, highest pay reduction factor)

Test	Spec	Pay Reduction Factor (PRF)								
		0.00	**0.04**	**0.05**	**0.06**	**0.07**	**0.08**	**0.10**	**0.25**	**Reject or Engr Eval**
Tests On Original Binder										
Viscosity	< 3 Pa-s	≤ 3		> 3						
Dynamic Shear	> 1.00 kPa	> 1.00		0.88-0.99				0.71-0.89	0.50-0.70	< 0.50
Toughness	> 110 in-lbs	> 93.5	90.0-93.4	85.0-89.9	80.0-84.9	75.0-79.9	70.0-74.9			< 70.0
Tenacity	> 75 in-lbs	> 63.8	61.0-63.7	58.0-60.9	55.0-57.9	52.0-54.9	48.0-51.9			< 48.0
Tests On RTFO										
Mass Loss	< 1.00 %	< 1.00		1.001-1.092				1.093-1.184	1.185-1.276	> 1.276
Dynamic Shear	> 2.20 kPa	> 2.20		1.816-2.199				1.432-1.815	1.048-1.431	< 1.048
Test On PAV										
Dynamic Shear	< 5000 kPa	< 5000		5001-5289				5290-5578	5579-5867	> 5867
Creep Stiffness, S	< 300 MPa	< 300		301-338				339-388	389-450	> 450
Creep Stiffness, m-value	> 0.300	> 0.300		0.287-0.299				0.274-0.286	0.261-0.273	< 0.261

Asphalt Cement Price Adjustment = $5 \times PAB \times Qty \times PRF$ (for each sample)
PAB = Price Adjustment Base
Qty = Quantity of asphalt cement represented by asphalt cement sample
PRF = Pay Reduction Factor from Table 401-4

Asphalt Cement Appeal Procedure. Once notified of a failing test result of an asphalt cement sample, the Contractor has 21 days to issue a written appeal. The appeal must be accompanied by all of the Contactor's quality control test results and a test result of Contactor's sample of this lot tested by an AASHTO accredited asphalt laboratory (accredited in the test procedure in question). The Engineer will review these test results using ASTM D3244 to determine a test value upon which to base a price reduction.

If the Contractor challenges this value, then the referee sample held by the Engineer will be sent to a mutually agreed upon independent AASHTO accredited laboratory for testing. This test result will be incorporated into the ASTM D3244 procedure to determine a test value upon which to base a price reduction. If this final value incurs a price adjustment, the Contractor shall pay the cost of testing the referee sample.

LONGITUDINAL JOINT DENSITY

Longitudinal joint density price adjustments apply when HMA quantities equal or greater than 1,500 tons. A longitudinal joint density price adjustment for the top layer will be based on the average of all the joint densities on a project and determined as follows:

1. If project average joint density is less than 91% MSG, apply the following disincentive:
   a. Longitudinal joint density price adjustment equal to $3.00 per lineal foot is deducted.

   Sections of longitudinal joint represented by cores with less than 91% density shall be surface sealed according to Subsection 401-3.14.

2. If project average joint density is greater than 92% MSG, apply the following incentive:
   a. Longitudinal joint density price adjustment equal to $1.50 per linear foot is added.

401-4.04 ASPHALT MATERIAL PRICE ADJUSTMENT – UNIT PRICE.

This subsection provides a price adjustment for asphalt material by:
(a) additional compensation to the Contractor or
(b) a deduction from the Contract amount.

1. This provision shall apply to asphalt material meeting the criteria of Section 702, and is included in items listed in the bid schedule of Sections 306, 307, 308, 318 and 401 through 409, except Section 402. Also included is the asphalt material in the Prelevel/Leveling Course (rut repair) HMA and Temporary HMA as part of 401, Approach HMA as included in 401 or 639 and Pathway HMA as part of 608.

2. This provision shall only apply to cost changes in asphalt material that occur between the date of bid opening and the date the asphalt material is incorporated into the project.

3. The asphalt material price adjustment will only apply when:
   a. More than a 7.5% increase or decrease in the Alaska Asphalt Material Price Index, from the date of bid opening to the date the asphalt material is incorporated into the project.

4. The Alaska Asphalt Material Price Index (AAMPI) is posted on the Department's Materials website along with the formula used to calculate the Index. The AAMPI as used in the determination of the "Asphalt Material Price Adjustment – Unit Price" is calculated for the first and third Friday of each month. The index applies from the beginning of the period start day 00:00 hrs, and ends 00:00 hrs the start of the next period. Other calculation and or period start/end days, including the post day (except as fall on the 1st and 3rd Friday) are not permitted.

5. Price adjustment will be cumulative and calculated with each progress payment. Use the price index in effect on the last day of the pay period, to calculate the price adjustment for asphalt material incorporated into the project during that pay period. The Department will increase or decrease payment under this Contract by the amount determined with the following asphalt material price adjustment formula:

   For an increase exceeding 7.5%, additional compensation = $[(IPP-IB)-(0.075 \times IB)] \times Q$
   For a decrease exceeding 7.5%, deduction from contract = $[(IB-IPP)-(0.075 \times IB)] \times Q$

   Where: Q = Quantity of Asphalt Material incorporated into project during the pay period, in tons
   IB = Index at Bid: the bimonthly Alaska Asphalt Material Price Index in effect on date of bid, in dollars per ton
   IPP = Index at Pay Period: the bimonthly Alaska Asphalt Material Price Index in effect on the last day of the pay period, in dollars per ton

   Method of measurement for determining Q (quantity) is the weight of asphalt material meeting the criteria of this subsection and is incorporated into the project. The quantity does not include aggregate, mineral filler, blotter material, thinning agents added after material qualification, or water for emulsified asphalt.

401-5.01 BASIS OF PAYMENT.

Except where specified as individual Pay Items:

Asphalt cement, anti-stripping additives, tack coat, crack sealing, surface sealing of longitudinal joints, surface tolerance corrections, patching defective areas, repair work and materials when planing equipment breaks through existing pavement - Subsection 401-3.07 Preparation of Existing Surface, and the work and materials associated with Subsection 401-3.04 Hauling Equipment are subsidiary to the associated Hot Mix Asphalt Pay Items.

Item 401(1F) Hot Mix Asphalt, Preleveling/Leveling Course, Type IV: Asphalt Cement, anti-stripping additives are subsidiary.

Item 401(3) Hot Mix Asphalt, Temporary, Type II, Class B: Asphalt cement, anti-stripping additives, removal and disposal are subsidiary.

Item 401(6) Asphalt Price Adjustment – Quality: is the sum of the price adjustments for each material lot (excluding the Preleveling/Leveling Course (rut repair) HMA, Temporary HMA and Approach HMA) and for deductions and fees assessed.

Deductions and fees assessed:

- Each mix design subsequent to the approved Job Mix Design (Subsection 401-2.01) for each Type and Class of Hot Mix Asphalt specified will result in a fee of $2500.00 each.
- Failure to cut core samples within the specified period will result in a deduction of $100.00 per sample per day (Subsection 401-4.02).
- Failure to backfill voids left by sampling within the specified period will result in a deduction of $100 per hole per day (Subsection 401-4.02).

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
401(1)	Hot Mix Asphalt, Type II; Class A	Ton
401(1F)	Hot Mix Asphalt, Preleveling/Leveling Course, Type IV; Class B	Lane-Station
401(2)	Asphalt Cement, Grade PG 52-28	Ton
401(6)	Asphalt Price Adjustment – Quality	Contingent Sum
401(10)	Asphalt Material Price Adjustment – Unit Price	Contingent Sum

54149-032513

SECTION 603

CULVERTS AND STORM DRAINS

Special Provisions

603-1.01 DESCRIPTION. Add the following:

This work shall also consist of installing culvert marker posts.

603-2.01 MATERIALS. Delete the second paragraph and substitute the following:

When Item 603(17-36), Pipe, is listed in the bid schedule, furnish either Corrugated Steel Pipe (CSP) or Reinforced Concrete Pipe. Corrugated Polyethylene Pipe is not allowed. End Sections for Metal Pipe must be of the same material as the pipe.

Add the following:

Culvert marker posts shall meet the requirements of subsection 730-2.05, Flexible Delineator Posts. The color shall be blue with no other markings. The 2.5 inch by 6 foot post shall be rectangular in cross section with reinforcing ribs capable of a minimum bending radius of 9 inches.

CR42-082703

603-3.03 JOINING PIPE.

2. Metal Pipe. Add the following after the 2nd sentence:

   Install a gasket in all pipe joints; joints between new sections of pipe and joints between new and existing sections of pipe of similar or dissimilar materials, regardless of the type of coupling band. Except, the end section joint does not require a gasket. Use flexible watertight gaskets (ASTM D 1056 2B3) as specified in Subsection 705-2.05.

3. Polyethylene Pipe. Add the following after the 1st sentence:

   Install a gasket in all pipe joints; joints between new sections of pipe and joints between new and existing sections of pipe. Except, the end section joint, and where the pipe is manufactured with a locking joint such that the joint seals watertight, a gasket is not required. Use flexible watertight gaskets (ASTM D 1056 2B3) as specified in Subsection 705-2.05.

CR6031-032411

Add the following subsection:

603-3.06 CULVERT MARKER POSTS. Culvert marker posts shall be installed on the approach side of storm drain outfalls 30 inches and smaller, field inlets not in paved parking lots, all end sections to cross culverts, or as directed by the Engineer. Forty-two inches of post shall remain above the ground after driving.

603-4.01 METHOD OF MEASUREMENT. Add the following:

Culvert marker posts will not be measured for payment.

CR42-082703

603-5.01 BASIS OF PAYMENT. Replace the first sentence with:

Coupling bands, gaskets and other items necessary for the proper joining of the sections are subsidiary.

CR6031-032411

Add the following:

Culvert marker posts will not be paid for directly, but will be subsidiary to pipe items.

CR42-082703

SECTION 604

MANHOLES AND INLETS

Special Provisions

604-1.01 DESCRIPTION. Add the following:

Contact the City of Kodiak (COK) to coordinate a pre-construction condition inspection of the manholes located within the project limits before pavement removal begins, and a post-construction condition inspection of each manhole after paving operations are complete. Note deficiencies found during the pre-inspection and before beginning work on the project.

604-3.01 CONSTRUCTION REQUIREMENTS Add the following:

If Manhole frames and covers are raised after placement of pavement, cut a neat, straight line along the pavement to be removed and the pavement to remain. Use a power saw or other method approved by the Engineer. Use an infrared heater (310° F max) to heat the existing pavement, replace the removed asphalt with new HMA and thoroughly compact. Seal the surface of the joints with Asphalt Systems GSB-88 or approved equal, while the HMA is clean, free of moisture, and before traffic marking. Longitudinal joint sealing shall be according to the manufacturer's recommendations and a maximum application rate of 0.15 gallons per square yard. Apply the sealant at least 12 inches wide centered on the joint.

In roadways, set the manhole frame and cover to ½ inch minimum to ¾ inch maximum below the finished pavement surface.

Contact City of Kodiak representative in writing a minimum of 3 working days in advance of removing any pavement to schedule a pre-inspection of the manholes. Provide written notice to the City of Kodiak scheduling a post-construction inspection of the facilities, after the paving operations are complete and 3 days in advance of the inspection. Provide the Engineer with copies of the written notices. The Contractor is responsible for furnishing the required traffic control and personnel to assist City of Kodiak while locating and performing the pre-construction and post construction inspections. Both the Contractor and the Engineer shall witness the condition and location of each manhole. The Contractor forfeits rights to deny damages done by the Contractor or the Contractor's agents during the course of work if the Contractor fails to participate in this inspection.

To obtain a point of contact and determine where to send the written notices, contact the City of Kodiak directly, at: (907) 486-8060.

604-4.01 METHOD OF MEASUREMENT. Add the following:

The number of existing manholes adjusted and accepted as complete-in-place.

54142-071312

SECTION 606

GUARDRAIL

Special Provisions

606-1.01 DESCRIPTION. Add the following:

Furnish and install bollard(s) included in the Plans and Specifications.

CR6069-062911

Delete Subsection 606-2.01 and replace with the following:

606-2.01 MATERIALS. Use materials that conform to the following:

Concrete, Class A or W (or an approved, pre-mixed, sacked concrete)	Subsection 501-3.01
Wire Cable	Subsection 709-2.02
Metal Beam Rail	Subsection 710-2.04
Guardrail Posts and Blocks	Subsection 710-2.06
Guardrail Hardware	Subsection 710-2.07
Guardrail Terminals	Subsection 710-2.11

Terminal Markers - Flexible (marker). The marker includes the pole/post/rod (pole), reflective and retroreflective sheeting and mounting hardware.

The marker materials shall be durable, resistant to impact from (snow and vehicle), vandals, ultraviolet light, moisture, ozone, and hydrocarbons.

When the pole is loaded, the marker shall bend/flex, remain flexible and oriented as installed continuing to function as designed without permanent displacement along the length of the member. The flexibility may be in the primary vertical element, a connecting device between the vertical element and connection to the support member (spring or other) or a combination.

Provide a connection sufficient to transfer the loads from the pole to the supporting member without reducing the strength, flexibility, or durability of either. The connection shall not negatively impact the performance of the guardrail. Provide approval of the connection from the marker manufacturer and support member manufacturer (if proprietary).

- Design Loads:
  - Impact load from snow thrown by snowplows
  - Weight of snow covering the pole as a result of snow thrown from snowplows
  - Wind loads (100 mph, 3 sec gust)

- Service Temperature Range: -40° F to +140° F.

- Pole:
  1. Material:
     - Steel, or
     - Stainless Steel, or
     - Other Poles:
       (a) Continuous glass fiber and marble reinforced thermosetting composite, or
       (b) Engineered plastic alloy, or
       (c) Fiberglass Reinforced Polyester (FRP)
       (d) High-Impact Polyolefins

2. Dimensions
   - Top of Pole: 60 inches to 84 inches above top of guardrail
   - Width/Diameter: minimum = 1 1/4 inches, maximum = 2 inches (steel/stainless steel may not be greater than 5/8 inch diameter)
   - Thickness: as required by design
3. Visibility:
   - Daytime: Pole - color orange
     a. Steel and Stainless Steel Poles: Applied permanent finish.
     b. Other Poles: Color pigment ultraviolet stabilized and solid through the cross section from end to end.
   - Nighttime: Added retroreflective sheeting - color white
     a. Approximately 12 square inches visible from the traveled way before and after the marker. Applied to a flag attached to the pole or as banding applied directly to the pole. (A flag is required when using steel/stainless steel poles.)
     b. Place top edge of flag/banding 1 inch from top of pole.
        (1) Flag: Single retroreflective sheet each face
        (2) Banding: Two bands completely around marker, 4 inches between bands

- Hardware and Fasteners:
  - Steel, and/or
  - Stainless Steel, or
  - Aluminum alloy (hardware only)

Manufacturers of flexible markers (snowpoles):

Manufacturer	Model	Type	Contact
Nordic Fiberglass, Inc.	FF2	Steel Pole w/ Flag	Ph: (218) 745-5095
PEXCO	Model 3639	High-Impact Polyolefins	Ph: (404) 564-8560
New Century Northwest, LLC	NCN2549	Engineered Plastic Alloy	Ph: (541) 485-5566
Carsonite Composites, LLC	SNFB	Continuous glass fiber and marble reinforced thermosetting composite	Ph: (800) 648-7916

Submit manufacturer's specifications to the Engineer for review and approval before ordering markers.

Guardrail Reflector Assembly Brackets..... Section 730

Fabricate from aluminum alloy or galvanized steel.

Retroreflective Sheeting ..... AASHTO M 268, Type VIII or IX

CR6062-033012

CONSTRUCTION REQUIREMENTS

606-3.01 GENERAL. Replace the first sentence in the first paragraph with:

Install bollards, guardrail, and terminals at the locations shown in the Plans.

CR6069-062911

Replace the second paragraph with the following:

At locations where public traffic is adjacent to guardrail work, have all materials on site, including crashworthy terminals that are required to completely install a segment of guardrail before beginning work on the segment.

Start guardrail installation at the "upstream" end (the end adjacent traffic will encounter first) by either installing a crashworthy terminal, connecting to an existing barrier or shielding the end with a truck

mounted attenuator (TMA) meeting NCHRP 350, Test Level 3. Continue installation in the direction of traffic. Exception: if the guardrail run will connect to existing barrier, buried in the backslope, or guardrail, existing or new bridge railing, or other existing structure at the "downstream" end, guardrail installation may be started at the point of connection. The exception allows for starting at the downstream end, a temporary crash cushion or TMA is required at all incomplete upstream guardrail ends.

Do not leave posts installed for guardrail within the clear zone for more than 48 hours before installing the rail.

If guardrail runs are not completed within 10 calendar days after beginning installation, install temporary crash cushions meeting NCHRP 350 or MASH test Level 3 at all non-crashworthy guardrail ends within the clear zone. Apply Traffic Price Adjustment if the Contractor does not comply with the crash cushion requirement.

CR6063-110410

606-3.02 POSTS. Delete the first two numbered items and replace with:

1. Exclusive of end treatments, use one type of post in each run of guardrail.

Replace 3.a. with:

   a. The underlying material is no larger than six inches; and

Replace No. 4. with:

4. Backfill and compact around posts with material as specified in the typical section to firmly support the post laterally and vertically. Compact under and around posts to the Engineer's satisfaction.

CR6064-110410

606-3.03 BEAM RAIL. In the first paragraph, second sentence, replace "150 feet" with "100 feet"

CR6065-110410

606-3.05 TERMINAL SECTIONS. Delete the second paragraph.

Replace the fourth paragraph with the following:

Attach flexible markers, in a vertical position, to the terminal end directly to the backside of the rail face, the face away from the traveled way, or the first post of each parallel guardrail terminal. Attach flexible markers to the "P.T." post of the Controlled Release Terminals. Provide an additional marker where the flare begins for guardrail terminal widening. Provide two markers at the end of each run of guardrail; coordinate the locations with the Engineer.

The connection shall not negatively impact the performance of the guardrail as noted in 606-2.01.

CR6062-033012

606-3.06 REMOVAL AND RECONSTRUCTION OF GUARDRAIL. Add the following:

Guardrail removed and to be replaced with new guardrail shall have the entire new run installed within 14 calendar days after removal.

Guardrail located within 50 feet of bridge ends shall have the new guardrail installed by the end of the shift in which the existing guardrail is removed.

CR6066-110410

606-3.07 REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL. Delete the last sentence and replace with:

Notify the Engineer a minimum of 5 days before removing guardrail for disposal. The Engineer will notify the ADOT & PF, M & O, and have an M & O representative designate portions of guardrail for salvage. Deliver salvaged guardrail and associated hardware to the M & O yard located at 1500 Anton Larson Way, Kodiak Alaska 99615. Remaining items removed become the Contractor's property.

CR6067-032311

Add the following Subsection 606-3.09 Flexible Markers:

606-3.09 FLEXIBLE MARKERS. For each parallel rail terminal, a flexible marker shall be attached to the extreme piece of rail. The flexible markers shall be attached using hardware and attachment methods recommended by the manufacturer.

CR6062-033012

Add the following Subsection 606-3.10 Length of Need Verification.

606-3.10 LENGTH OF NEED VERIFICATION. After shaping the slopes and staking the proposed guardrail locations, notify the Engineer to field verify the beginning and ends. The Engineer will approve the staked location of the guardrail before installation. The Engineer may determine additional guardrail is necessary and the Contractor shall comply without delay.

CR6068-110410

606-5.01 BASIS OF PAYMENT. Add the following:

Payment for temporary crash cushions or TMA installed to protect motorists from guardrail installations that have not been completed within 10 calendar days of beginning installation is subsidiary to other items.

2. Terminal Sections. Replace a. with the following:

   a. Parallel Guardrail Terminal. The contract price includes rail elements, posts, blocks, pipe sleeves, cable assemblies, guardrail extruders, terminal markers, and all associated hardware required for a complete installation.

   Delete b.

   c. Controlled Release Terminals (CRT).

   Replace "object markers" with "terminal markers"

   Add d.:

   d. Buried in Backslope Guardrail Terminal. The contract price includes rail elements, posts, blocks, concrete, rebar, anchors, and all associated hardware required for a complete installation.

CR6061-110410

Add the following:

Guardrail salvage is subsidiary to Pay Item 606(6) Removing and Disposing of Guardrail.

CR6067-032311

Payment will be made under:

Delete Pay Item 606(10) Slotted Rail Terminal and 606(11) Extruder Terminals.

Add Pay Item 606(13) Parallel Guardrail Terminal:

Pay Item No.	Pay Item	Pay Unit
606(13)	Parallel Guardrail Terminal	Each

CR6061-110410

SECTION 611

RIPRAP

Special Provision

611-2.01 MATERIALS. Add the following after the first sentence:

Apparent specific gravity will be determined by WAQTC FOP for AASHTO T85.

CR277-110705

SECTION 615

STANDARD SIGNS

Special Provisions

615-2.01 MATERIALS. Delete first paragraph of Item 2. Including subitems a., b., c., and replace with:

2. Sign Fabrication. Use Type IV reflective sheeting (for lettering symbols, borders, and background) on sheet aluminum panels for all signs except the following:

   a. Orange Background Signs. Use Type IX fluorescent orange reflective sheeting placed on sheet aluminum panels, except:
      (1) For temporary installations, the reflective sheeting may be placed on aluminum, plastic, or plywood sheet panels.
      (2) For flexible signs, (Roll-Up Signs) use fluorescent reflective sheeting Type VI or better (based on durability and reflectivity, as determined by the Engineer). Roll-Up Sign – 3M Series RS 24, Reflexite Marathon Orange, or approved equal.

   b. Railroad Crossbucks and Vertical Crossbuck Supports. Use white Type VIII or Type IX reflective sheeting for background of sign and stripes.

   c. Non-illuminated Overhead Signs with White Legends on Green Backgrounds. Use Type IX reflective sheeting for legends and background. Create the legend in one of the following ways:
      (1) Cut border and legend from white Type IX reflective sheeting and adhere to a green Type IX background, or
      (2) Cut stencil of border and legend out of green transparent acrylic film and use transparent adhesive to overlay the film on a white Type IX reflective background.

   d. Fluorescent Yellow Green School Area Signs. Use Type VIII or Type IX reflective sheeting for background.

   Reflective Sheeting Warranty. Supply manufacturer's warranty for reflective sheeting including retention of fluorescent yellow green (measured according to ASTM E 2301) for ten years according to the following criteria:

   - Minimum Fluorescent Luminance Factor: $Y_F = 20\%$
   - Minimum Total Luminance Factor: $Y_T = 35\%$

   The warranty shall stipulate: If the sheeting fails to meet the minimum fluorescence values within the first 7 years from the date of fabrication, the manufacturer shall, at the manufacturer's expense, restore the sign surface to its original effectiveness. If the reflective sheeting fails to meet the minimum fluorescence values within the 8th through the 10th year from the date of fabrication, the manufacturer shall, at the manufacturer's expense, provide enough new replacement sign sheeting to the Department to restore the sign surface to its original effectiveness.

CR6151-091311

615-3.01 CONSTRUCTION REQUIREMENTS.

7. Add the following after the first paragraph:

   Deliver salvaged signs panels, posts, and hardware to the State Maintenance Yard, located at:

   1500 Anton Larson Way, Kodiak Alaska 99615

CR6152-091311

SECTION 618

SEEDING

Special Provisions

618-1.01 DESCRIPTION. Replace the 1st sentence with: Establish a perennial stand of grass or other specified living vegetative cover, by clearing, applying compost and seeding the area(s) shown in the Plans, including new and disturbed area(s), and area(s) identified by the Engineer.

618-2.01 MATERIALS. Add the following to the list of material specifications:

Mulch	Subsection 727-2.01
Soil Stabilization Material	Section 727

54142-110812

Replace Subsection 618-3.01 with the following:

618-3.01 SOIL PREPARATION. Clear all areas(s) to be seeded; make the areas reasonably free of ruts, holes, and humps; apply compost to each area. Prepare the compost for seeding immediately after placing.

Clear all areas to be seeded of stones 4 inches in diameter and larger and of all weeds, plant growth, sticks, stumps, and other debris or irregularities that might interfere with the seeding operation, growth of cover, or subsequent maintenance of the vegetative-covered areas.

Compost (Section 619) each area after clearing is complete. Prepare the soil by grooving the soil in a uniform pattern that is perpendicular to the fall of the slope. Use one or more of the following grooving methods with associated equipment before the application of seed:

1. Manual raking with landscaping rakes;
2. Mechanical track walking with track equipment; or
3. Mechanical raking with a scarifying slope board. Form one inch wide grooves spaced no more than six inches apart.

Rounding the top and bottom of slopes to facilitate tracking or raking and to create a pleasant appearance is acceptable, but disrupting drainage flow lines is not.

54142-110812

618-3.02 SEEDING SEASONS. Replace the 1st sentence with the following: Seed disturbed areas after permanent cessation of ground disturbing activities in that area, within the time period specified in the Alaska Department of Environmental Conservation (ADEC) Alaska Pollutant Discharge Elimination System (APDES) Construction General Permit (CGP) for Alaska, Section 4.4 Final Stabilization, and Section 641 Erosion, Sediment, and Pollution Control.

Seed between May 15 and August 15, or obtain written approval from the Engineer to seed at a different date.

CR6183-101711

618-3.03 APPLICATION. Replace the first three sentences with the following: Seed, seeding, reseeding includes the application of seed, fertilizer and when specified or included in the Alaska Department of Natural Resources (ADNR) Revegetation Manual for Alaska, mulch.

Apply seed mix, fertilizer, and mulch at the rate specified. If the seed mix, fertilizer and mulch are not included in the Plans or Specifications, including their application rates, use the recommendations of the ADNR and the Revegetation Manual for Alaska.

Do not seed areas of bedrock, plant beds, and areas indicated in the plans as "no seeding."

Add the following:

Apply seed and mulch in one application when using the hydraulic method. Apply fertilizer with the hydraulic method. Include the fertilizer with the seed and mulch or apply separately.

TABLE 618-1
APPLICATION RATES

Component	Ingredients	Application Rate (per MSF)
Seed	Chamerion Latifolium	0.10 lbs.
	Norcoast Bearing Hairgrass	0.40 lbs.
	Red Fescue (Arctared)	0.30 lbs.
	Annual Ryegrass (Lolium)	0.10 lbs.
	Polemonium Pulcherrimum	0.10 lbs.
		Total = 1.00 lbs.
Soil Stabilizer		
Slope ≤ 3:1	Mulch	46 lbs.
Slope >3:1	Mulch with tackifier	45-58 lbs.
Fertilizer	20-20-10	12 lbs.

Do not remove required tags from seed bags.

Upon the Engineer's approval, Nortran Tufted Hairgrass may be used as a substitute for Slender Wheatgrass (Wainwright) if Slender Wheatgrass (Wainwright) is commercially unavailable. If this substitution is made, apply at the same application rate.

CR6181-101711

Replace Subsection 3.04 with the following:

618-3.04 MAINTENANCE. Maintain seeded areas in a satisfactory condition for the term of the Contract, including warranty obligations.

Maintenance includes but is not limited to:

1. Protecting seeded areas against traffic by approved warning signs or barricades and against erosion.

2. Repairing surfaces gullied or otherwise damaged following seeding. Fill, compost, prepare compost, and reseed erosion gullies over 4 inches deep, Subsection 618-3.01 & 3.03. Fill the entire erosion gully to surrounding grade, including the portions less than 4 inches deep. Reseed repaired areas.

3. Reseeding areas not showing evidence of satisfactory growth within 3 weeks of seeding and after repairs are complete. Reseed bare patches of soil more than 10 square feet in area. Contact ADNR for advice or corrective measures, when seeded areas are not showing evidence of satisfactory growth.

4. Watering seeded areas for growth of vegetative cover. If in the opinion of the Engineer, too little or too much water is being applied, adjust the amount of water as directed.

Add Subsections 618-3.05:

618-3.05 ACCEPTANCE. The Engineer will perform a visual inspection of the vegetative mat considering each station and each side of the road a separate area. Acceptance of the vegetative mat requires a minimum of 70% cover density in the inspection area, gullies repaired and reseeded, and no bare patches of soil more than 10 square feet in area.

Repair/reseed areas that are not accepted.

Add Subsection 618-3.06:

618-3.06 PERIOD OF ESTABLISHMENT. For each area accepted, the establishment period extends one complete growing season following the date of acceptance. Employ all possible means to preserve/maintain the new vegetative mat in a healthy and vigorous condition to ensure successful establishment. Maintain the vegetative mat, according to Subsection 618-3.04, to not less than the requirements for acceptance, Subsection 618-3.05.

Delete Subsection 618-4.01 and replace with the following:

618-4.01 METHOD OF MEASUREMENT.

Seeding and water for seeding shall not be measured for payment, but will be subsidiary to 641 items.

Delete Subsection 618-5.01 and replace with the following:

618-5.01 BASIS OF PAYMENT.

Seeding: Payment is for established vegetative mat. compost preparation and materials (seed, fertilizer, mulch, and the water required for all hydraulic applications) are subsidiary. Maintenance including: 1. Protection, 2. Repairs, 3. Reseeding, is also subsidiary. Repairs and reseeding include, but are not limited to: fill, compost and compost preparation, seed, fertilizer, mulch, and the water required for hydraulic application. Seeding is subsidiary to other items.

Water for Seeding.

- Water for hydraulic application is subsidiary to other items, and includes, but is not limited to: the initial application of seed, fertilizer, and mulch and the reapplication for repairs and reseeding.
- Water applied for growth of vegetative mat (Subsection 618-3.04.4 Watering), for the term of the Contract, including warranty obligations, is subsidiary to other items.

54149-032613

SECTION 627

WATER SYSTEM

Special Provisions

627-1.01 DESCRIPTION. Add the following:

Contact the City of Kodiak (COK) to coordinate a pre-construction condition inspection of the valves and valve boxes located within the project limits before pavement removal begins, and a post-construction condition inspection after paving operations are complete. Note deficiencies found during the pre-inspection and before beginning work on the project.

627-3.01 GENERAL. Add the following:

In roadways, set the valve box frame and cover to ½ inch minimum to ¾ inch maximum below the finished pavement surface.

Contact City of Kodiak representative in writing a minimum of 3 working days in advance of removing any pavement to schedule a pre-inspection of the valves and valve boxes. Provide written notice to the City of Kodiak scheduling a post-construction inspection of the facilities, after the paving operations are complete and 3 days in advance of the inspection. Provide the Engineer with copies of the written notices. The Contractor is responsible for furnishing the required traffic control and personnel to assist City of Kodiak while locating and performing the pre-construction and post construction inspections. Both the Contractor and the Engineer shall witness the condition and location of each valve box. The Contractor forfeits rights to deny damages done by the Contractor or the Contractor's agents during the course of work if the Contractor fails to participate in this inspection. It is the Contractor's responsibility to protect and maintain valves and valve boxes in an operable condition during all phases of construction. If the City of Kodiak finds any valves or valve boxes damaged or rendered inoperable after the above inspection and before final inspection the Contractor will repair the valves and valve boxes at the Contractor's expense.

To obtain a point of contact and determine where to send the written notices, contact the City of Kodiak directly, at: (907) 486-8060.

627-4.01 METHOD OF MEASUREMENT. Add the following:

One adjustment includes the adjustment of the valve box one time down and up.

627-5.01 BASIS OF PAYMENT. Add the following:

Payment for item 627(10) includes full compensation for labor, equipment, and incidental materials for:

- adjusting existing valve boxes down prior to the pavement removal operation, and up prior to the paving operation

The pre inspections and post inspections are subsidiary to Pay Item 627(10).

Traffic control required for pre inspections and post inspections will be paid under the 643 Pay Items.

55966-050913

Special Provisions

Replace Section 639 with the following:

SECTION 639

DRIVEWAYS

639-1.01 DESCRIPTION. Construct approaches, residential or commercial driveways at the locations shown in the Plans.

639-2.01 MATERIALS. Use materials that conform to the standards for the main roadway.

639-3.01 CONSTRUCTION. Construct driveways and approaches to the dimensions shown on the Plans.

639-4.01 METHOD OF MEASUREMENT. By the number of driveways and approaches constructed as shown on the Plans or as directed. Pavement removal and excavation required beyond the limits of the adjacent mainline will be subsidiary.

639-5.01 BASIS OF PAYMENT. At the contract unit price shown in the bid schedule. The contract unit price for driveways and approaches shall be full compensation for furnishing equipment and labor necessary to complete the work as specified.

Materials required to construct driveways and approaches will be paid for separately under the respective items listed in the bid schedule.

Native material meeting the minimum requirements of Selected Material, Type C will not be paid for directly, but will be considered subsidiary to 639 Items.

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
639(6)	Approach	Each

CR58-050902

SECTION 640

MOBILIZATION AND DEMOBILIZATION

Special Provisions

640-1.01 DESCRIPTION. Add the following:

6. Comply with the Alaska Department of Labor and Workforce Development (DOLWD) requirements for Worker Meals and Lodging, or Per Diem; as described in their September 1, 2009 memo WHPL #197 (A3) and the State Laborer's and Mechanic's Minimum Rates of Pay (current issue). On Federal-aid projects, PL 109-59, 119 STAT. 1233, Sec. 1409(c) also applies.

   Ensure subcontractors comply with the Federal and State DOLWD requirements.

   Ensure facilities meet the Alaska Administrative Code 8 AAC 61.1010 and 8 AAC 61.1040 *Occupational Safety and Health Standards,* 18 AAC *31 Alaska Food Code,* and U.S. Code of Federal Regulations 29 CFR Section 1910.142 *Temporary Labor Camps.*

   Do not consider the cost of Meals and Lodging, or Per Diem in setting wages for the worker or in meeting wage requirements under AS 23.10.065 or AS 36.05.

640-4.01 METHOD OF MEASUREMENT. Delete the numbered paragraph 3 and substitute the following:

3. The remaining balance of the amount bid for Mobilization and Demobilization will be paid after all submittals required under the Contract are received and approved.

Add the following:

4. Progress payments for Worker Meals and Lodging, or Per Diem will be computed as equivalent to the percentage, rounded to the nearest whole percent, of the original Contract amount earned.

640-5.01 BASIS OF PAYMENT. Add the following Pay Item:

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
640(4)	Worker Meals and Lodging, or Per Diem	Lump Sum

CR6401-033012

Special Provisions

Replace Section 641 with the following:

SECTION 641

EROSION, SEDIMENT, AND POLLUTION CONTROL

641-1.01 DESCRIPTION.

Provide project administration and Work relating to control of erosion, sedimentation, and discharge of pollutants, according to this section and applicable local, state, and federal requirements, including the Construction General Permit.

641-1.02 DEFINITIONS.

These definitions apply only to Section 641.

Active Treatment System Operator. The Contractor's qualified representative who is responsible for maintaining and operating an active treatment system (as defined in the CGP) for storm water runoff.

Alaska Certified Erosion and Sediment Control Lead (AK-CESCL). A person who has completed training, testing, and other requirements of, and is currently certified as, an AK-CESCL from an AK-CESCL Training Program (a program developed under a Memorandum of Understanding between the Department and others). The Department recognizes AK-CESCLs as "qualified personnel" required by the CGP. An AK-CESCL must be recertified every three years.

Alaska Department of Environmental Conservation (ADEC). The state agency authorized by EPA to administer the Clean Water Act's National Pollutant Discharge Elimination System.

Alaska Pollutant Discharge Elimination System (APDES). A system administered by ADEC that issues and tracks permits for storm water discharges.

Best Management Practices (BMPs). Temporary or permanent structural and non-structural devices, schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or minimize the discharge of pollutants to waters of the United States. BMPs also include, but are not limited to, treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from material storage.

Clean Water Act (CWA). Federal Water Pollution Control Amendments of 1972, as amended (33 U.S.C. 1251 et seq.).

Consent Decree. The decree entered by the United States District Court for the District of Alaska on September 21, 2010, regarding compliance with the CWA and implementation of the CGP, to which the United States and the Department are parties.

Construction Activity. Physical activity by the Contractor, Subcontractor, or utility company; that may result in erosion, sedimentation, or a discharge of pollutants into storm water. Construction Activity includes soil disturbing activities (e.g. clearing, grubbing, grading, excavating); and establishment of construction materials or equipment storage or maintenance areas (e.g. material piles, borrow area, concrete truck chute washdown, fueling); and industrial activities that may discharge storm water and are directly related to the construction process (e.g. concrete or asphalt batch plants).

Construction General Permit (CGP). The permit authorizing storm water discharges from Construction Activities, issued and enforced by ADEC. It authorizes stormwater discharges provided permit conditions and water quality standards are met.

Corp of Engineers Permit (COE Permit). A U.S. Army Corp of Engineers Permit for construction in waters of the US. Such permit may be issued under Section 10 of the Rivers and Harbors Act of 1899, or Section 404 of the Clean Water Act.

Electronic Notice of Intent (eNOI). The electronic Notice of Intent submitted to ADEC, to obtain coverage under the CGP.

Electronic Notice of Termination (eNOT). The electronic Notice of Termination submitted to ADEC, to end coverage under the CGP.

Environmental Protection Agency (EPA). A federal agency charged to protect human health and the environment.

Erosion and Sediment Control Plan (ESCP). The Department's project specific document that illustrates measures to control erosion and sediment on the project. The ESCP provides bidders with the basis for cost estimating and guidance for developing an acceptable Storm Water Pollutant Prevention Plan (SWPPP).

Final Stabilization. Is defined in this section as it is defined in the CGP.

Hazardous Material Control Plan (HMCP). The Contractor's detailed project specific plan for prevention of pollution from storage, use, transfer, containment, cleanup, and disposal of hazardous material (including, but are not limited to, petroleum products related to construction activities and equipment). The HMCP is included as an appendix to the SWPPP.

Inspection. An inspection required by the CGP or the SWPPP, usually performed together by the Contractor's SWPPP Manager and Department's Stormwater Inspector.

Municipal Separate Storm Sewer System (MS4) Permit. An ADEC storm water discharge permit issued to certain local governments and other public bodies, for operation of storm water conveyances and drainage systems. See CGP for further definition.

Multi-Sector General Permit (MSGP). The Alaska Pollutant Discharge Elimination System General Permit for storm water discharges associated with industrial activity.

Operator(s). The party or co-parties associated with a regulated activity that has responsibility to obtain permit coverage under the CGP. "Operator" for the purpose of the CGP and in the context of storm water associated with construction activity, means any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

2. The party has day to day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

Pollutant. Any substance or item meeting the definition of pollutant contained in 40 CFR § 122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, wrecked or discarded equipment, rock, sand, cellar dirt and industrial or municipal waste.

Project Zone. The physical area provided by the Department for Construction. The Project Zone includes the area of highway or facility under construction, project staging and equipment areas, and material and disposal sites; when those areas, routes and sites, are provided by the Department by the Contract and are directly related to the Contract.

Material sites, material processing sites, disposal sites, haul routes, staging and equipment storage areas; that are furnished by the Contractor or a commercial operator, are not included in the Project Zone.

Records. Any record, report, information, document, or photograph required to be created or maintained pursuant to the requirements of the Consent Decree, the CGP, the CGP storm water requirements of the Clean Water Act; and applicable local, state, and federal laws and regulations regarding document preservation.

Spill Prevention, Control, and Countermeasure Plan (SPCC Plan). The Contractor's detailed plan for petroleum spill prevention and control measures that meet the requirements of 40 CFR 112.

Spill Response Field Representative. The Contractor's representative with authority and responsibility for managing, implementing, and executing the HMCP and SPCC Plan.

Storm Event. A rainfall event that produces more than 0.5 inch of precipitation in 24 hours and that is separated from the previous storm event by at least 3 days of dry weather.

Storm Water Pollution Prevention Plan (SWPPP). The Contractor's detailed project specific plan to minimize erosion and contain sediment within the Project Zone, and to prevent discharge of pollutants that exceed applicable water quality standards. The SWPPP includes, but is not limited to, amendments, records of activities, inspection schedules, and reports, qualifications of key personnel, and all other documentation, required by the CGP and this specification, and other applicable local, state, and federal laws and regulations.

Storm Water Pollution Prevention Plan Two (SWPPP2). The Contractor's detailed project specific plan to comply with CGP or MSGP requirements, for Contractor construction-related activities outside the Project Zone.

Subcontractor Spill Response Coordinator. The subcontractor's representative with authority and responsibility for coordinating the subcontractor's activities in compliance with the HMCP and SPCC Plan.

Subcontractor SWPPP Coordinator. The subcontractor's representative with authority to direct the subcontractor's work, and who is responsible for coordination with the Superintendent and SWPPP Manager, and for the subcontractor's compliance with the SWPPP.

Superintendent. The Contractor's duly authorized representative in responsible charge of the work. The Superintendent has responsibility and authority for the overall operation of the Project and for Contractor furnished sites and facilities directly related to the Project.

SWPPP Amendment. A revision or document that adds to, deletes from, or modifies the SWPPP.

SWPPP Manager. The Contractor's qualified representative who conducts Inspections, updates SWPPP records, and has authority to suspend work and to implement corrective actions required for CGP compliance.

SWPPP Preparer. The Contractor's qualified representative who is responsible for developing the initial SWPPP.

Utility Spill Response Coordinator. The Utility's representative with authority and responsibility for coordinating the Utility's activities in compliance with the HMCP and SPCC Plan.

Utility SWPPP Coordinator. The Utility's representative with authority to direct the Utility's work, and who is responsible for coordination with the Superintendent and SWPPP Manager, and for the Utility's compliance with the SWPPP.

641-1.03 PLAN AND PERMIT SUBMITTALS.

For plans listed in Subsection 108-1.03.5 (SWPPP and HMCP) use the Contractor submission and Department review deadlines identified in Subsection 641-1.03.

Partial and incomplete submittals will not be accepted for review. Any submittal that is re-submitted or revised after submission, but before the review is completed, will restart the submittal review timeline. No additional Contract time or additional compensation will be allowed due to delays caused by partial or incomplete submittals, or required re-submittals.

1. Storm Water Pollution Prevention Plan. Submit an electronic copy and three hard copies of the SWPPP to the Engineer for approval. Deliver these documents to the Engineer at least 21 days before beginning Construction Activity. Organize and bind the SWPPP and related documents for submittal according to the requirements of Subsection 641-2.01.2.

   The Department will review the SWPPP submittals within 14 days after they are received. Submittals will be returned to the Contractor, and marked as either "rejected" with reasons listed or as "approved" by the Department. When the submittal is rejected, the Contractor must revise and resubmit the SWPPP. The 14 day review period will restart when the contractor submits an electronic copy and three hard copies of the revised SWPPP to the Engineer for approval.

   After the SWPPP is approved by the Department, the Contractor must sign and certify the approved SWPPP. See Item 4 for further SWPPP submittal requirements.

2. Hazardous Material Control Plan. Submit an electronic copy and three hard copies of the HMCP, as an appendix to the SWPPP, to the Engineer for approval. The HMCP submittal and review timeline, and signature requirements are the same as the SWPPP.

3. Spill Prevention, Control, and Countermeasure Plan. When a SPCC Plan is required under Subsection 641-2.03, submit an electronic copy and three signed hard copies of the SPCC Plan to the Engineer. Deliver these documents to the Engineer at least 21 days before beginning Construction Activity. The Department reserves the right to review the SPCC Plan and require modifications.

4. CGP Coverage. The Contractor is responsible for permitting of Contractor and subcontractor Construction Activities related to the Project. Do not use the SWPPP for Construction Activities outside the Project Zone where the Department is not an operator. Use a SWPPP2 for Construction Activities outside the Project Zone.

   After Department approval of the SWPPP and prior to beginning Construction Activity, submit an eNOI with the required fee to ADEC for coverage under the Construction General Permit (CGP). Submit a copy of the signed eNOI and ADEC's written acknowledgement (by letter or other document), to the Engineer as soon as practicable and no later than three days after filing eNOI or receiving a written response.

   Do not begin Construction Activity until the conditions listed in Subsection 641-3.01.1 are completed.

   The Department will submit an eNOI to ADEC for Construction Activities inside the Project Zone. The Engineer will provide the Contractor with a copy of the Department's eNOI and ADEC's written acknowledgment (by letter or other document), for inclusion in the SWPPP.

   Before Construction Activities occur, transmit to the Engineer an electronic copy of the approved and certified SWPPP, with signed Delegations of Signature Authorities, SWPPP Certifications, both permittee's signed eNOIs and ADEC's written acknowledgement.

5. Ending CGP Coverage. Submit an eNOT to ADEC within 30 days after the Engineer has determined the conditions listed in Subsection 641-3.01.6 have been met. Submit a copy of the signed eNOT and ADEC's acknowledgement letter to the Department within three days of filing the eNOT or receiving a written response.

6. ADEC SWPPP Review. When CGP Part 2.1.3, requires ADEC SWPPP review:
   a. Transmit a copy of the Department-approved SWPPP to ADEC using delivery receipt confirmation;
   b. Transmit a copy of the delivery receipt confirmation to the Engineer within seven days of receiving the confirmation; and
   c. Retain a copy of delivery receipt confirmation in the SWPPP.

7. Local Government SWPPP Review. When local government or the CGP Part 2.1.4, requires local government review:
   a. Transmit a copy of the Department-approved SWPPP and other information as required to local government, with the required fee. Use delivery receipt confirmation;
   b. Transmit a copy of the delivery receipt confirmation to the Engineer within seven days of receiving the confirmation;
   c. Transmit a copy of any comments by the local government to the Engineer within seven days of receipt;
   d. Amend the SWPPP as necessary to address local government comments and transmit SWPPP Amendments to the Engineer within seven days of receipt of the comments;
   e. Include a copy of local government SWPPP review letter in the SWPPP; and
   f. File a notification with local government that the project is ending.

8. Modifying Contractor's eNOI. When required by The CGP Part 2.7, modify your eNOI to update or correct information. Reasons for modification include a change in start or end dates, small changes in number of acres to be disturbed, change in decision to use or not use treatment chemicals, or change in location of SWPPP Records.

   The Contractor must submit an eNOT and then submit a new eNOI instead of an eNOI modification when: the operator has changed, the original eNOI indicates disturbed area less than five acres and the project will disturb more than five acres, or a project over five disturbed acres grows by more than 50%.

641-1.04 PERSONNEL QUALIFICATIONS.

Provide documentation in the SWPPP that the individuals serving in these positions meet the personnel qualifications.

The SWPPP Preparer must meet at least one of the following qualifications:
   a. Current certification as a Certified Professional in Erosion and Sediment Control (CPESC);
   b. Current certification as AK-CESCL, and at least two years experience in erosion and sediment control, as a SWPPP Manager or SWPPP writer, or equivalent. Provide documentation including project names, project timelines, and work responsibilities demonstrating the experience requirement; or
   c. Professional Engineer registered in the State of Alaska with current certification as AK-CESCL.

   For Projects disturbing more than 20 acres, the SWPPP Preparer must also have completed a SWPPP Preparation course.

The Superintendent must meet the following qualifications:
   a. Current certification as AK-CESCL; and
   b. Duly authorized representative, as defined in the CGP, Appendix A, Part 1.12.3.

The SWPPP Manager must have current certification as AK-CESCL and must meet the CGP experience, training, and authority requirements identified for the Storm Water Lead and Storm Water Inspector positions as defined in the CGP, Appendix C, Qualified Person.

The Active Treatment System (ATS) operator must have current certification as AK-CESCL, and be knowledgeable in the principals and practices of treatment systems in general, and the operation of the project-specific ATS. The ATS operator must have at least three months field experience with ATS, or completion of an ATS manufacturer's training course, or completion of system operator's certification course.

The Department accepts people having any of the following certificates as equivalent to AK-CESCL, if the certificates are current according to the sponsoring organization's policies:

a. CPESC, Certified Professional in Erosion and Sediment Control; or
b. CISEC, Certified Inspector in Sediment and Erosion Control.

641-1.05 SIGNATURE/CERTIFICATION REQUIREMENTS AND DELEGATIONS.

1. eNOI and eNOT. The eNOI and eNOT must be signed and certified by a responsible corporate officer according to CGP Appendix A, Part 1.12.2. Signature and certification authority for the eNOI and eNOT cannot be delegated.

2. Delegation of Signature Authority for Other SWPPP Documents and Reports. Use Form 25D-108 to delegate signature authority and certification authority to the Superintendent position, according to CGP Appendix A, Part 1.12.3, for the SWPPP, Inspection Reports and other reports required by the CGP. The Superintendent position is responsible for signing and certifying the SWPPP, Inspection Reports, and other reports required by the CGP, except the eNOI and eNOT.

   The Engineer will provide the Department's delegation Form 25D-107, which the Contractor must include in the SWPPP.

3. Subcontractor Certification. Subcontractors must certify that they have read and will abide by the CGP and the conditions of the project SWPPP.

4. Signatures and Initials. Handwrite signatures or initials on CGP documents and SWPPP forms, wherever a signature or initial is required.

641-1.06 RESPONSIBILITY FOR STORM WATER PERMIT COVERAGE.

1. The Department and the Contractor are jointly responsible for permitting and permit compliance within the Project Zone.

2. The Contractor is responsible for permitting and permit compliance outside the Project Zone. The Contractor has sole responsibility for compliance with ADEC, COE and other applicable federal, state, and local requirements, and for securing all necessary clearances, rights, and permits. Subsection 107-1.02 describes the requirement to obtain permits, and to provide permit documents to the Engineer.

3. An entity that owns or operates, a commercial plant (as defined in Subsection 108-1.01.3) or material source or disposal site outside the Project Zone, is responsible for permitting and permit compliance. The Contractor has sole responsibility to verify that the entity has appropriate permit coverage. Subsection 107-1.02 describes the requirement to obtain permits, and to provide permit documents to the Engineer.

4. The Department is not responsible for permitting or permit compliance, and is not liable for fines resulting from noncompliance with permit conditions:
   a. For areas outside the Project Zone;
   b. For Construction Activity and Support Activities outside the Project Zone; and
   c. For commercial plants, commercial material sources, and commercial disposal sites.

641-1.07 UTILITY.

Relocation Coverage. A Utility company is not an Operator when utility relocation is performed concurrently with the Project, as outlined in Section 105-1.06. The Department maintains operational control over the Utility's plans and specifications for coordination with project construction elements, and the Contractor has day-to-day control over the various utility construction activities that occur in support of the Project. A Utility company is considered a subcontractor for concurrent relocation.

After the Contractor has an active NOI for the Project, a Utility Company performing advance relocation work under a separate SWPPP no longer has Operator status and files the NOT for the Utility Company's SWPPP covering only the completed utility work. Remaining utility relocation work is included in and performed under the Project SWPPP.

641-2.01 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS.

1. SWPPP Preparer and Pre-Construction Site Visit.

   Use a SWPPP Preparer to develop the SWPPP and associated documents, according to the requirements of the CGP and COE permit. The SWPPP Preparer must put their name, qualifications (including the expiration date of any certifications), title and company name in the SWPPP.

   The SWPPP Preparer must conduct a pre-construction inspection at the Project site before construction activity begins. If the SWPPP Preparer is not a Contractor employee, the SWPPP Preparer must visit the site accompanied by the Contractor. Give the Department at least seven days notice of the site visit, so that the Department may participate.

   During the pre-construction inspection, the SWPPP Preparer must identify, or if a draft of the SWPPP has already been prepared verify that the SWPPP fully addresses and describes:
   1. Opportunities to phase construction activities;
   2. Appropriate BMPs and their sequencing; and
   3. Sediment controls that must be installed prior to beginning Construction Activities.

   Document the SWPPP Preparer's pre-construction inspection in the SWPPP on Form 25D-106, SWPPP Pre-Construction Site Visit, including the names of attendees and the date.

2. Developing the SWPPP.

   Use the Department's ESCP, Environmental commitments, and other Contract documents as a starting point for developing the SWPPP. The approved SWPPP replaces the ESCP.

   Develop the SWPPP with sections and appendices, according to the current DOT&PF SWPPP template. Include information required by the Contract and the CGP.

   Obtain the following forms after they have been completed by the Department and include them in the SWPPP:
   - SWPPP Delegation of Signature Authority – DOT&PF (25D-107)
   - SWPPP Certification for DOT&PF (25D-109)
   - SWPPP Delayed Action Item Report (25D-113)

   Use the following Department forms for recording information in the SWPPP:
   - SWPPP Amendment Log (25D-114)
   - SWPPP Certification for Contractor (25D-111)
   - SWPPP Construction Site Inspection Report (25D-100)
   - SWPPP Corrective Action Log (25D-112)
   - SWPPP Daily Record of Rainfall (25D-115)
   - SWPPP Delegation of Signature Authority – Contractor (25D-108)
   - SWPPP Grading and Stabilization Activities Log (25D-110)
   - SWPPP Pre-Construction Site Visit (25D-106)
   - SWPPP Project Staff Tracking (25D-127)
   - SWPPP Subcontractor Certification (25D-105)
   - SWPPP Training Log (25D-125)

   SWPPP Template and Forms are available online at:
   http://www.dot.state.ak.us/stwddes/dcsconst/pop_constforms.shtml

   Compile the SWPPP in three ring binders with tabbed and labeled dividers for each section and appendix.

3. SWPPP Considerations and Contents.

The SWPPP must provide erosion and sediment control measures for all Construction Activity within the Project Zone. Construction activity outside the Project Zone must have permit coverage, using a separate SWPPP2, and separate Contractor Inspections.

The SWPPP must consider the activities of the Contractor and all subcontractors and utility companies performing work in the Project Zone. The SWPPP must describe the roles and responsibilities of the Contractor, subcontractors, utility companies, and the Department with regard to implementation of the SWPPP. The SWPPP must identify all operators for the Project, including utility companies performing Construction Activity, and identify the areas:
a. Over which each operator has operational control; and
b. Where the Department and Contractor are co-operators.

For work outside the Project Zone, the SWPPP must identify the entity that has stormwater permit coverage, the operator, and the areas that are:
a. Dedicated to the Project and where the Department is not an operator; and
b. Not dedicated to the project, but used for the project.

Develop the SWPPP according to the requirements of the CGP and this specification. Account for the Contractor's construction methods and phasing. Identify the amount of mean annual precipitation.

Comply with the CGP Part 1.4 .2 Allowable Non-Storm Water Discharges. List locations where authorized non-storm water will be used, including the types of water that will be used on-site.

Include the Department's Antidegradation Analysis in the SWPPP if storm water from the Project Zone discharges into receiving water that is considered high quality water and that constitutes an outstanding national resource, according to CGP Part 2.1.5.

There are special requirements in the CGP Part 3.2, for storm water discharges into an impaired water body, and they may include monitoring of storm water discharges. For Projects meeting the permit criteria, the Department will initiate a monitoring program for the storm water within the Project Zone, and will provide the required information and reports for inclusion in the SWPPP. The Contractor is responsible for monitoring and reporting outside the Project Zone.

Preserve natural topsoil unless infeasible. Delineate the site according to CGP Part 4.1. Use stakes, flags, or silt fence, etc. to identifying areas where land disturbing activities will occur and areas that will be left undisturbed. Minimize the amount of soil exposed during Construction activity according to CGP Part 4.1.2.

Comply with CGP Part 4.3, requirements for dewatering for trenches and excavations.

The SWPPP must identify specific areas where potential erosion, sedimentation, or pollution may occur. The potential for wind erosion must be addressed. The potential for erosion at drainage structures must be addressed.

Describe methods and time limits, to initiate temporary or permanent soil stabilization. For areas with mean annual precipitation of:
a. 40 inches or less, initiate stabilization as soon as practicable and within 14 days; or
b. Greater than 40 inches, initiate stabilization as soon as practicable and within seven days.

Within seven days of initiating final stabilization, either complete final stabilization or continue maintenance of work until final stabilization is complete.

Include in the "Stabilize Soils" section of the SWPPP, a description of how you will minimize the amount of disturbed and unstabilized ground in the fall season. Identify anticipated dates of fall freeze-up and spring thaw. Describe how you will stabilize areas when it is close to or past the seasonal time of snow cover or frozen conditions, and before the first seasonal thaw. Include a plan for final stabilization.

Plans for Active Treatment Systems must be submitted to DEC for review at least 14 days prior to their use and the Operator of the ATS identified in the SWPPP. Any use of treatment chemicals must be identified on the NOI.

The SWPPP must provide designated areas for equipment and wheel washing, equipment fueling and maintenance, chemical storage, staging or material storage, waste or disposal sites, concrete washouts, paint and stucco washouts, and sanitary toilets. These activities must be done in designated areas that are located, to the extent practicable, away from drain inlets, conveyance channels, and waters of the US. No discharges are allowed from concrete washout, paint and stucco washout; or from release oils, curing compounds, fuels, oils, soaps, and solvents. Equipment and wheel washing water that doesn't contain detergent may be discharged on-site if it is treated before discharge.

Design temporary BMPs for a 2 year 24 hour precipitation amount. Describe BMPs in the SWPPP and in SWPPP Amendments, including source controls, sediment controls, discharge points, and temporary and permanent stabilization measures. Describe the design, placement, installation, and maintenance of each BMP, using words, and drawings as appropriate. Describe the design capacity of sediment basins (including sediment ponds and traps). Provide a citation to the BMP Manual or publication used as a source for the BMP, including the title of the BMP Manual or publication, the author (individual or agency), and date of publication. If no published source was used to select or design a BMP, then the SWPPP or SWPPP amendment must state that "No BMP manual or publication was used for this design."

Describe the sequence and timing of activities that disturb soils and of BMP implementation and removal. Phase earth disturbing activities to minimize unstabilized areas, and to achieve temporary or final stabilization quickly. Whenever practicable incorporate final stabilization work into excavation, embankment, and grading activities.

Identify the inspection frequency in the SWPPP:

- For areas where the mean annual precipitation is 15 inches or less, inspect at least once every 14 days during construction and within 24 hours of the end of a storm event that resulted in a discharge.
- For areas where the mean annual precipitation is between 15 to 40 inches, inspect once every seven days.
- For areas where the mean annual precipitation is 40 inches or greater, inspect twice every seven days.

Linear Project Inspections, described in CGP Part 6.5, are not applicable to this project.

The SWPPP must cite and incorporate applicable requirements of the Project permits, environmental commitments, COE permit, and commitments related to historic preservation. Make additional consultations or obtain permits as necessary for Contractor specific activities which were not included in the Department's permitting and consultation.

The SWPPP is a dynamic document. Keep the SWPPP current by noting installation, modification, and removal of BMPs, and by using amendments, SWPPP amendment logs, Inspection Reports, corrective action logs, records of land disturbance and stabilization, and any other records necessary to document storm water pollution prevention activities and to satisfy the requirements of the Consent Decree, CGP and this specification. See Subsection 641-3.03 for more information.

4. Recording Personnel and Contact Information in the SWPPP.

Identify the SWPPP Manager as the Storm Water Lead and Storm Water Inspector positions in the SWPPP. Document the SWPPP Manager's responsibilities in Section 2.0 Storm Water Contacts, of the SWPPP template and:

a. Identify that the SWPPP Manager does not have authority to sign inspection reports (unless the SWPPP Manager is also the designated project Superintendent).

b. Identify that the SWPPP Manager cannot prepare the SWPPP unless the SWPPP Manager meets the Contract requirements for the SWPPP Preparer.

Include in the SWPPP, Records of the AK-CESCL cards or certificates for the Superintendent and SWPPP Manager, and for any acting Superintendent and acting SWPPP Managers. If the Superintendent or SWPPP Manager is replaced permanently or temporarily, by an acting Superintendent or acting SWPPP Manager, record in the SWPPP (use Form 25D-127) the names of the replacement personnel, the date of the replacement. For temporary personnel record their beginning and ending dates.

Provide 24 hour contact information for the Superintendent and SWPPP Manager. The Superintendent and SWPPP Manager must have 24 hour contact information for all Subcontractor SWPPP Coordinators and Utility SWPPP Coordinators.

Include in the SWPPP, Records of the AK-CESCL cards or certificates of ATS operators. Record the names of ATS operators and their beginning and ending dates, on Form 25D-127.

The Department will provide Records of AK-CESCL cards or certificates for the Project Engineer, Stormwater Inspectors, and Monitoring Person (if applicable), and names and dates they are acting in that position. Include the Department's Records in the SWPPP Appendix. Include the department's Storm Water Inspector and Storm Water Monitoring Person (if applicable) in section 2.0 of the SWPPP.

641-2.02 HAZARDOUS MATERIAL CONTROL PLAN (HMCP) REQUIREMENTS.

Prepare the HMCP for prevention of pollution from storage, use, containment, cleanup, and disposal of all hazardous material, including petroleum products related to construction activities and equipment. Include the HMCP as an appendix to the SWPPP. Compile Material Safety Data Sheets in one location and reference that location in the HMCP.

Designate a Contractor's Spill Response Field Representative with 24 hour contact information. Designate a Subcontractor Spill Response Coordinator for each subcontractor. The Superintendent and Contractor's Spill Response Field Representative must have 24 hour contact information for each Subcontractor Spill Response Coordinator and the Utility Spill Response Coordinator.

List and give the location and estimated quantities of hazardous materials (Including materials or substances listed in 40 CFR 117 and 302, and petroleum products) to be used or stored on the Project. Hazardous materials must be stored in covered storage areas. Include secondary containment for all hazardous material storage areas.

Identify the locations where fueling and maintenance activities will take place, describe the activities, and list controls to prevent the accidental spillage of petroleum products and other hazardous materials. Controls include placing absorbent pads or other suitable containment under fill ports while fueling, under equipment during maintenance or repairs, and under leaky equipment.

List the types and approximate quantities of response equipment and cleanup materials available on the Project. Include a list and location map of cleanup materials, at each different work site and readily available off site (materials sources, material processing sites, disposal sites, staging areas, etc). Spill response materials must be stored in sufficient quantity at each work location, appropriate to the hazards associated with that site.

Describe procedures for containment and cleanup of hazardous materials. Describe a plan for the prevention, containment, cleanup, and disposal of soil and water contaminated by spills. Describe a plan for dealing with contaminated soil and water encountered during construction. Clean up spills or contaminated surfaces immediately.

Describe methods of disposing of waste petroleum products and other hazardous materials generated by the Project, including routine maintenance. Identify haul methods and final disposal areas. Assure final disposal areas are permitted for hazardous material disposal.

Describe methods of complying with the requirements of AS 46.04.010-900, Oil and Hazardous Substances Pollution Control, and 18 AAC 75. Include contact information for reporting hazardous materials and petroleum product spills to the Project Engineer and reporting to federal, state, and local agencies.

641-2.03 SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN (SPCC Plan) REQUIREMENTS.

Prepare and implement an SPCC Plan when required by 40 CFR 112; when both of the following conditions are present on the Project:

a. Oil or petroleum products from a spill may reach navigable waters (as defined in 40 CFR 112); and
b. Total above ground storage capacity for oil and any petroleum products is greater than 1,320 gallons (not including onboard tanks for fuel or hydraulic fluid used primarily to power the movement of a motor vehicle or ancillary onboard oil-filled operational equipment, and not including containers with a storage capacity of less than 55 gallons).

Reference the SPCC Plan in the HMCP and SWPPP.

641-2.04 RESPONSIBILITY AND AUTHORITY OF THE SUPERINTENDENT AND SWPPP MANAGER.

The Superintendent is responsible for the overall operation of the Project and all Contractor furnished sites and facilities directly related to the Project. The Superintendent shall sign and certify the SWPPP, Inspection Reports, and other reports required by the CGP, except the NOI and NOT. The Superintendent may not delegate the task or responsibility of signing and certifying the SWPPP submitted under Subsection 641-1.03.1, Inspection Reports, and other reports required by the CGP.

The Superintendent may assign certain duties to the SWPPP Manager those duties may include:

a. Ensuring Contractor's and subcontractor's compliance with the SWPPP and CGP;
b. Ensuring the control of erosion, sedimentation, or discharge of pollutants;
c. Directing and overseeing installation, maintenance, and removal of BMPs;
d. Performing Inspections; and
e. Updating the SWPPP including adding amendments and forms.

When Bid Item 641(7) is part of the Contract, the SWPPP Manager must be available at all times to administer SWPPP requirements, and be physically present within the Project Zone or the project office, for at least eight hours per day when construction activities are occurring.

The Superintendent and SWPPP Manager shall be knowledgeable in the requirements of this Section 641, the SWPPP, CGP, BMPs, HMCP, SPCC Plan, environmental permits, environmental commitments, and historic preservation commitments.

The Superintendent and SWPPP Manager shall have the Contractor's complete authority and be responsible for suspending construction activities that do not conform to the SWPPP or CGP.

641-2.05 MATERIALS.

Use materials suitable to withstand hydraulic, wind, and soil forces, and to control erosion and trap sediments according to the requirements of the CGP and the Specifications.

Use the temporary seed mixture specified by special provision, or use annual rye grass if no temporary seed mix is specified.

Use soil stabilization material as specified in Section 727.

Use silt fences as specified in Section 729.

Use straw that is certified as free of noxious weed by the United States Department of Agriculture, Natural Resources Conservation Service, Local Soil, and Water Conservative District. Alaska Weed Free Forage Certification Program must be used when available. Hay may not be substituted for straw.

Use Oregon Scientific RGR126 wireless rain gauge with temperature, or Taylor 2751 Digital Wireless Rain Gauge with Thermometer, or approved equivalent.

641-2.06 CONTRACTOR REQUIREMENTS.

The Contractor must be familiar with the requirements of the CGP and Consent Decree because Contractor's employees will be conducting duties that relate to compliance with the CGP and the Consent Decree. A copy of the Consent Decree is available on the Department's Statewide Environmental Office web page.

641-3.01 CONSTRUCTION REQUIREMENTS.

Comply with the SWPPP and the requirements of the CGP.

1. Before Construction Activity may Begin.

   The following actions must be completed before Construction Activity begins:
   a. The SWPPP Preparer must visit the Project, the visit must be documented in the SWPPP, and the SWPPP must be developed (or amended) with findings from the visit;
   b. The SWPPP must be approved by the Engineer;
   c. The Contractor must be authorized to begin by the Engineer;
   d. The Project eNOIs for the Department and for the Contractor, as well as any other eNOIs if there are additional operators, must be listed as Active Status on the ADEC website;
   e. The Department approved SWPPP must be submitted to ADEC and Local Government (when required); and
   f. The Contractor has transmitted to the Engineer an electronic copy of the approved SWPPP.

   You may begin Winter Construction activity according to CGP Part 4.10.3, provided actions a through c above is completed before winter construction activity begins.

   Post notices containing the following information:
   a. Copy of all eNOIs related to this project;
   b. Name and 24 hour phone number of SWPPP Manager; and
   c. Location of the SWPPP.

   Post notices on the outside wall of the Contractor's project office, and near the main entrances of the construction project. Protect postings from the weather. Locate postings so the public can read them without obstructing construction activities or the traveling public (for example, at an existing pullout). Do not use retroreflective signs for the SWPPP posting. Do not locate SWPPP signs in locations where the signs may be confused with traffic control signs or devices. Update the notices if the listed information changes.

   Install an outdoor rain gauge in per manufacturer's guidance in a readily accessible location on the Project.

   Delineate the site for both land disturbing activities and areas that will be left undisturbed. Install sediment controls and other BMPs that must be placed prior to the initiation of Construction Activity.

2. During Construction.

Before subcontractors or utility companies begin soil disturbing activities, provide to them copies of applicable portions of the SWPPP, and require them to sign a SWPPP Subcontractor Certification, Form 25D-105. Include SWPPP Subcontractor Certifications as an appendix to the SWPPP. Ensure subcontractors and utility companies understand and comply with the SWPPP and the CGP. Inform subcontractors and utility companies of SWPPP amendments that affect them in a timely manner. Coordinate with subcontractors and utility companies doing work in the Project Zone so BMPs, including temporary and permanent stabilization are installed, maintained, and protected from damage.

Provide on-going training to employees and subcontractors, on control measures at the site and applicable storm water pollution prevention procedures. Training must be specific to the installation, maintenance, protection, and removal of control measures. Training must be given at a frequency that will be adequate to ensure proper implementation and protection of control measures, and no less frequently than once a month during construction activity. Document on the SWPPP Training Log. Form 25D-125, the dates, and attendees to these trainings. Include the SWPPP Training Log as an appendix to the SWPPP.

Notify the Engineer immediately if the actions of any utility company or subcontractor do not comply with the SWPPP and the CGP.

Comply with Subsection 107-1.11 Protection and Restoration of Property and Landscape. Concrete washout must be fully contained.

Fuel the equipment in designated areas. Place absorbent pads or other suitable containment under fill ports while fueling, under equipment during maintenance or repairs, and under leaky equipment.

Comply with requirements of the HMCP and SPCC Plan, and all local, state, and federal regulations that pertain to the handling, storage, containment, cleanup, and disposal of petroleum products or other hazardous materials.

Keep the SWPPP and HMCP current (refer to Subsection 641-2.01.3, SWPPP Considerations and Contents).

3. Pollutant and Hazardous Materials Reporting Requirements.

If there has been an incident of non-compliance with the CGP that may endanger health or the environment, immediately report the incident to ADEC according to the CGP, Appendix A, Part 3.0. Notify the Engineer immediately and to the extent possible coordinate reports to ADEC with the Engineer.

The report must include:
a. A description of the noncompliance and its causes;
b. The exact dates and times of noncompliance;
c. If not yet corrected the anticipated time the project will be brought back into compliance; and
d. The corrective action taken or planned to reduce, eliminate and prevent reoccurrence.

If there has been an incident of non-compliance with COE Permits, then notify the Engineer immediately of the non-compliance.

Report spills of petroleum products or other hazardous materials to the Engineer and other agencies as required by law. Use the HMCP and SPCC Plan (if available) for contact information to report spills to regulatory agencies.

4. Corrective Action and Maintenance of BMPs.

Implement maintenance as required by the CGP, SWPPP, and manufacturer's specifications, whichever is more restrictive.

Implement corrective action:

a. If an incident of non-compliance with the SWPPP or CGP is identified;
b. If an Inspection or the Engineer identifies the SWPPP or any part of the SWPPP is ineffective in preventing erosion, sedimentation or the discharge of pollutants;
c. If a required BMP was not installed according to the SWPPP schedule or phasing, or was installed incorrectly, or was not installed according to the CGP Part 4.0;
d. If a BMP is not operating as intended, has not been maintained in an effective operation condition, or is unable to effectively perform the intended function;
e. If a prohibited discharge of pollutants, as specified in CGP Part 4.6, is occurring or will occur; or
f. If there is accumulation of sediment or other pollutants, that is in or near any storm water conveyance channels, or that may enter a discharge point or storm sewer system. If there is accumulation of sediment or other pollutants that is being tracked outside the project zone.

Implement corrective actions so that they comply with the following time requirements:

a. For conditions that are easily remedied (i.e. removal of tracked sediment, maintenance of control measure, or spill clean-up), initiate corrective action within 24 hours and complete as soon as possible;
b. For all other conditions, meet both requirements:
   (1) Corrective action is completed in time to protect water quality; and
   (2) Corrective action is completed no later than the Complete-by-Date that was entered in an Inspection Report (see Subsection 641-3.03.2 for more information).

If a corrective action is not implemented within the time requirements of this section, document the situation in the SWPPP, notify the Engineer, and implement corrective action as soon as possible.

If a corrective action could affect a subcontractor, notify the subcontractor within three days of taking the corrective action. Require in your written subcontract, that subcontractors must notify the Contractor within 24 hours of becoming aware of a condition that requires a corrective action.

5. Stabilization.

Stabilization may be accomplished using temporary or permanent measures. Initiate stabilization of disturbed soils, erodible stockpiles, disposal sites, and of erodible aggregate layers so that all of the following conditions are satisfied:

a. As soon as practicable;
b. As soon as necessary to avoid erosion, sedimentation, or the discharge of pollutants; and
c. As identified in the SWPPP.

Land may be disturbed and stabilized multiple times during a project. Coordinate work to minimize the amount of disturbed soil at any one time. Do not disturb more soil than you can stabilize with the resources available.

Temporarily stabilize from wind and water erosion portions of disturbed soils, portions of stockpiles, and portions of disposal sites, that are not in active construction. Temporary stabilization measures may require a combination of measures including but not limited to vegetative cover, mulch, stabilizing emulsions, blankets, mats, soil binders, non-erodible cover, dust palliatives, or other approved methods.

When temporary or permanent seeding is required, provide a working hydro seeding equipment located within 100 miles of the project by road; with 1,000 gallon or more tank capacity, paddle agitation of tank, and the capability to reach the seed areas with an uniform mixture of water, seed, mulch and tackifier. If the project is located in an isolated community, the hydro-seeder must be located at the project.

Before applying temporary or permanent seeding, prepare the surface to be seeded to reduce erosion potential and to facilitate germination and growth of vegetative cover. Apply seed and maintain seeded areas. Reseed areas where growth of temporary vegetative cover is inadequate to stabilize disturbed ground.

Apply permanent seed according to Sections 618 and 724, within the time periods allowed by the CGP and the contract, at locations where seeding is indicated on the plans and after land-disturbing activity is permanently ceased.

When installing a culvert or other drainage structure where stream bypass is not used, install temporary or permanent stabilization concurrently or immediately after placing the culvert or drainage structure in a manner that complies with the SWPPP, applicable project permits and prevents discharge of pollutants. Install temporary and permanent stabilization:

a. At the culvert or drainage structure inlet and outlet; and
b. In the areas upstream and downstream, that may be disturbed by the process of installing the culvert, culvert end walls, culvert end sections, or drainage structure.

Before deactivating a stream bypass or stream diversion used for construction of a bridge, culvert, or drainage structure, install permanent stabilization:

a. At the inlet and outlet of the culvert, drainage structure, or bridge;
b. In the area upstream and downstream of the culvert, drainage structure, or bridge, that is disturbed during installation or construction of the culvert, drainage structure, or bridge; and
c. Under the bridge.

Within seven days of initiating final stabilization, either complete final stabilization or continue maintenance of work until final stabilization is complete.

6. Ending CGP Coverage and BMP Maintenance.

The Engineer will determine the date that all the following conditions for ending CGP coverage have been met within the Project Zone:

a. Land disturbing activities have ceased;
b. Final Stabilization has been achieved (including at Department furnished material sources, disposal sites, staging areas, equipment areas, etc.); and
c. Temporary BMPs have been removed.

After the Engineer has determined the conditions for ending CGP coverage have been met, the Department will:

a. Send written notice to the Contractor with the date that the conditions were met;
b. Submit an eNOT to ADEC; and
c. Provide a copy of the eNOT and ADEC's acknowledgement letter to the Contractor.

The Contractor is responsible for ending permit coverage within the Project Zone, by submitting an eNOT to ADEC within 30 days of meeting the conditions for ending CGP coverage. The Contractor is responsible for BMP maintenance and SWPPP updates until permit coverage is ended.

If the Contractor's CGP eNOI acreage includes Support Activities and any other areas where the Department is not an Operator, the Contractor may not be able to file an eNOT at the same time as the Department. In this case, the Contractor must amend the SWPPP and separate SWPPP2(s), to indicate the Department's CGP coverage has ended, and the Department is no longer an Operator within the Project Zone.

The Contractor must indicate in the SWPPP the areas that have reached Final Stabilization, and the dates land disturbing activities ended and Final Stabilization was achieved. The Contractor must submit an eNOT to ADEC, and insert copies of the Department's and the Contractor's eNOTs with ADEC's acknowledgement letters in the appendix of the SWPPP.

The Contractor must submit a copy of each signed eNOT and ADEC's acknowledgement letter to the Department within three days of filing the eNOT or receiving a written response.

The Contractor is responsible for coordinating local government inspections of work and ending permit coverage with local government. See Subsection 641-1.03.5 for more information.

7. Transmit final SWPPP.

   Transmit one copy of the final SWPPP, including all amendments, appendices, and maps, to the Engineer; when the project eNOTs are filed, or within 30 days of the Department's eNOT being filed, whichever is sooner. Transmittal must be by both electronic and hard copy.

641-3.02 SWPPP DOCUMENTS, LOCATION ON-SITE, AVAILABILITY, AND RECORD RETENTION.

The SWPPP and related documents maintained by the Contractor are the Record for demonstrating compliance with the CGP and the Consent Decree. Copies of SWPPP documents transmitted to the Engineer under the requirements of this specification are informational and do not relieve the Contractor's responsibility to maintain complete records as required by the CGP and this specification.

Keep the SWPPP, HMCP, and SPCC Plan at the on-site project office. If there is not an on-site project office, keep the documents at a locally available location that meets CGP requirements and is approved by the Engineer. Records may be moved to another office for record retention after the eNOTs are filed. Records may be moved to another office during winter shutdown. Update on-site postings if records are relocated during winter shutdown. Provide the Department with copies of all Records.

Retain Records and a copy of the SWPPP, for at least three years after the date of eNOT. If EPA or ADEC inspects the project, issues a Notice of Violation (NOV), or begins investigation for a potential NOV before the retention period expires, retain the SWPPP and all Records related to the SWPPP and CGP until at least three years after EPA and/or ADEC has determined all issues related to the investigation are settled.

The SWPPP and related documents must be made available for review and copy, to the Department and other regulatory agencies that request them. See CGP Parts 5.10, 6.6 and 9.4.

641-3.03 SWPPP INSPECTIONS, AMENDMENTS, REPORTS, AND LOGS.

Perform Inspections, prepare Inspection Reports, and prepare SWPPP Amendments in compliance with the SWPPP and the CGP. Update SWPPP Corrective Action Log, SWPPP Amendment Log, SWPPP Grading and Stabilization Activities Log, and SWPPP Daily Record of Rainfall forms. For active projects, update the Records daily.

1. Inspection during Construction.

   Conduct Inspections according to the schedule and requirements of the SWPPP and CGP.

   Inspections required by the CGP and SWPPP must be performed by the Contractor's SWPPP Manager and the Department's Stormwater Inspector jointly, unless impracticable. For this paragraph, "impracticable" means when both inspectors must fly to a remote area in the winter or when one inspector is sick or unable to travel to the site due to weather. When this is the case, the Operator who conducts the Inspection must provide a copy of the Inspection Report to the other Operator within three days of the Inspection date and document the date of the report transmittal.

2. Inspection Reports.

   Use only the DOT&PF SWPPP Construction Site Inspection Report, Form 25D-100 to record Inspections. Changes or revisions to Form 25D-100 are not permitted; except for adding or deleting data fields that list: Location of Discharge Points and Site Specific BMPs. Complete all fields included on the Inspection Report form; do not leave any field blank.

Unless otherwise directed by the Engineer, insert a Complete-by-Date for each corrective action listed that complies with:
a. In time to protect water quality;
b. less than seven calendar days after the date the inspection was performed; and
c. before the next scheduled inspection.

Provide a copy of the completed, unsigned Inspection Report to the Engineer by noon on the day following the inspection.

The Superintendent must review, correct errors, and sign and certify the Inspection Report, within three days of the date of Inspection. The Engineer may coordinate with the Superintendent to review and correct any errors or omissions before the Superintendent signs the report. Corrections are limited to adding missing information or correcting entries to match field notes and conditions present at the time the Inspection was performed. Deliver the signed and certified Inspection Report to the Engineer on the same day the Superintendent signs it.

The Engineer will sign and certify the Inspection Report and will return the original to the Contractor within three working days.

The Engineer may make corrections after the Superintendent has signed and certified the Inspection Report. The Engineer will initial and date each correction. If the Engineer makes corrections, the Superintendent must recertify the Inspection Report by entering a new signature and date in the white space below the original signature and date lines. Send a copy of the recertified Inspection Report to the Engineer on the day it is recertified.

If subsequent corrections to the certified Inspection Report are needed, document the corrections in an addendum that addresses only the omitted or erroneous portions of the original Inspection Report. The Superintendent and the Engineer must both sign and certify the addendum.

3. Inspection before Seasonal Suspension of Work.

Conduct an Inspection before seasonal suspension of work to confirm BMPs are installed and functioning according to the requirements of the SWPPP and CGP.

4. Reduced Inspection Frequencies.

Conduct Inspections according to the inspection schedule indicated in the approved SWPPP. Any change in inspection frequency must be approved by the Engineer, and beginning and ending dates documented as an amendment to the SWPPP.

Inspection frequency may be reduced to at least one Inspection every 30 days if approved by the Engineer and the entire site is temporarily stabilized.

When work is suspended due to freezing conditions, the Engineer may suspend inspection requirements after fourteen days of freezing conditions if:
a. Soil disturbing activities are suspended; and
b. Soil stabilizing activities are suspended.

Inspections must resume according to the normal inspection schedule identified in the SWPPP, at least 21 days before anticipated spring thaw.

The Engineer may waive requirements for updating the Grading and Stabilization Activities Log and Daily Record of Rainfall during seasonal suspension of work. If so, resume collecting and recording weather data on the Daily Record of Rainfall form one month before thawing conditions are expected to result in runoff. Resume recording land disturbance and stabilization activities on the Grading and Stabilization Activities Log when Construction Activity resumes.

5. Stabilization before Seasonal Thaw.

   Construction Activities within the Project Zone must be stabilized with appropriate BMPs prior to seasonal thaw. Seasonal thaw is the annual (first) recurrence of snow and ice melting after a prolonged period of freezing conditions.

6. Inspection before Project Completion.

   Conduct Inspection to ensure Final Stabilization is complete throughout the Project, and temporary BMPs that are required to be removed are removed. Temporary BMPs that are biodegradable and are specifically designed and installed with the intent of remaining in place until they degrade, may remain in place after project completion.

7. Items and Areas to Inspect.

   Conduct Inspections of the areas required by the CGP and SWPPP.

8. SWPPP Amendments and SWPPP Amendment Log.

   The Superintendent and the SWPPP Manager are the only persons authorized to amend the SWPPP and update the SWPPP Amendment Log, Form 25D-114. The Superintendent or the SWPPP Manager must sign and date amendments to the SWPPP and updates to the SWPPP Amendment Log.

   SWPPP Amendments must be approved by the Engineer.

   Amendments must occur:
   a. Whenever there is a change in design, construction operation, or maintenance at the construction site that has or could cause erosion, sedimentation or the discharge of pollutants that has not been previously addressed in the SWPPP;
   b. If an Inspection identifies that any portion of the SWPPP is ineffective in preventing erosion, sedimentation, or the discharge of pollutants;
   c. Whenever an Inspection identifies a problem that requires additional or modified BMPs
   d. Whenever a BMP is modified during construction or a BMP not shown in the original SWPPP is added;
   e. If the Inspection frequency is modified (note beginning and ending dates); or
   f. When there is a change in personnel who are named in the SWPPP, according to Subsection 641-2.01.4.

   Do not record removal of BMPs as amendments to the SWPPP. See Subsection 641-3.03.9 for documenting removal of BMPs.

   Amend the SWPPP narrative as soon as practicable after any change or modification, but in no case, later than seven days following identification of the need for an amendment. Every SWPPP Amendment must be signed and dated. Cross-reference the amendment number with the Corrective Action Log or SWPPP page number, as applicable. When a BMP is modified or added, describe the BMP according to Subsection 641-2.01.3.

   Keep the SWPPP Amendment Log current. Prior to performing each scheduled Inspection, submit to the Engineer a copy of the pages of the Amendment Log that contain new entries since the last submittal. Include copies of any documents amending the SWPPP.

   Keep the SWPPP Amendment Log as an appendix to the SWPPP.

9. Site Maps.

Document the installation, routine maintenance, and removal of BMPs by making notes on the SWPPP Site Maps. Include the date and the recording person's initials by these notes. Identify areas where Construction Activities begin, areas where Construction Activities temporarily or permanently cease, and areas that are temporarily or permanently stabilized.

10. Corrective Action Log.

The Superintendent and SWPPP Manager are the only persons authorized to make entries on the SWPPP Corrective Action Log, Form 25D-112. Document the need for corrective action within 24 hours of either:

a. Identification during an inspection; or
b. Discovery by the Department's or Contractor's staff, a subcontractor, or a regulatory agency inspector.

Modification or replacement of a BMP, installation of a new BMP not shown in the original SWPPP, or overdue maintenance (after sediment accumulated in sediment basins (including sediment traps and ponds) exceeds 50% of design capacity; or after sediment accumulates to more than half the above ground height on silt fences, check dams, or berms) is a corrective action and must be documented on the Corrective Action Log. Do not record removal of BMPs on the Corrective Action Log.

Within 24 hours of discovery, update the Corrective Action Log with the date of discovery and proposed corrective action. If discovered during an inspection, update log with inspection date and proposed corrective actions noted on the Inspection Report.

After the corrective action has been accomplished, note in the Corrective Action Log the action taken and if a SWPPP amendment was needed. Date and initial the entry.

Keep the Corrective Action Log current and submit a copy to the Engineer prior to performing each scheduled SWPPP Inspection.

Keep the Corrective Action Log as an appendix to the SWPPP.

11. Grading and Stabilization Activities Log.

The Superintendent and SWPPP Manager are the only persons authorized to date and initial entries on the SWPPP Grading and Stabilization Activities Log, Form 25D-110. Use the SWPPP Grading and Stabilization Activities Log, to record land disturbance and stabilization activities.

Keep the Grading and Stabilization Activities Log current and submit a copy to the Engineer prior to performing each scheduled SWPPP Inspection. Keep the Grading and Stabilization Activities Log organized and completed to demonstrate compliance with the CGP Part 4.4.

Keep the Grading and Stabilization Activities Log as an appendix to the SWPPP.

12. Daily Record of Rainfall.

Use SWPPP Daily Record of Rainfall, Form 25D-115, to record weather conditions at the Project. Update the form daily and include the initials of the person recording each day's entry. Submit a copy to the Engineer prior to performing each scheduled Inspection. Keep the Daily Record of Rainfall as an appendix to the SWPPP.

641-3.04 FAILURE TO PERFORM WORK.

The Engineer has authority to suspend work and withhold monies, for an incident of non-compliance with the CGP, Consent Decree, or SWPPP, that may endanger health or the environment or for failure to perform work related to this Section 641. If the suspension is to protect workers, the public, or the environment from imminent harm, the Engineer may orally order the suspension of work. Following an oral order of suspension, the Engineer will promptly give written notice of suspension. In other circumstances, the Engineer will give the Contractor written notice of suspension before suspension of work. A notice of suspension will state the defects or reasons for a suspension, the corrective actions required to stop suspension, and the time allowed to complete corrective actions.

If the Contractor fails to take the corrective action within the specified time, the Engineer may:

a. Suspend the work until corrective action is completed;
b. Withhold monies due the Contractor until corrective action is completed;
c. Assess damages or equitable adjustments against the Contract Amount; and
d. Employ others to perform the corrective action and deduct the cost from the Contract amount.

Reasons for the Engineer to take action under this section include, but are not limited to, the Contractor's failure to:

a. Obtain appropriate permits before Construction Activities occur;
b. Perform SWPPP Administration;
c. Perform timely Inspections;
d. Update the SWPPP;
e. Transmit updated SWPPP, Inspection Reports, and other updated SWPPP forms to the Engineer;
f. Maintain effective BMPs to control erosion, sedimentation, and pollution in accordance with the SWPPP, the CGP, and applicable local, state, and federal requirements;
g. Perform duties according to the requirements of this Section 641; or
h. Meet requirements of the CGP, SWPPP, or other permits, laws, and regulations related to erosion, sediment, or pollution control.

No additional Contract time or additional compensation will be allowed due to delays caused by the Engineer's suspension of work under this subsection.

641-3.05 ACCESS TO WORK.

The Project, including any related off-site areas or support activities, must be made available for inspection, or sampling and monitoring, by the Department and other regulatory agencies. See CGP Part 6.6.

641-4.01 METHOD OF MEASUREMENT.

Section 109 and as follows:

Item 641(1), 641(3) and 641(7), are lump sum.

Items 641(2), 641(4) and 641(5), will be measured on a contingent sum basis as specified by the Directive authorizing the work.

Item 641(6) will be measured on a contingent sum basis with withholding determined by the Department.

TABLE 641-1 BMP VALUES - (Reserved)

Liquidated Damages assessed according to Table 641-2 are not an adjustment to the Contract amount. These damages charges are related to Contract performance but are billed by the Department independent of the Contract amount. An amount equal to the Liquidated Damages may be withheld for unsatisfactory performance, from payment due under the Contract, until the Contractor remits payment for billed Liquidated Damages.

TABLE 641-2 Version B
EROSION, SEDIMENT, AND POLLUTION CONTROL – LIQUIDATED DAMAGES

Code	Specification Subsection Number and Description	Deductable Dollars	Cumulative Deductable Dollars
A	641-1.04 Failure to have a qualified (AK-CESCL or equivalent) Superintendent or SWPPP Manager	Calculated in Code B or F	
B	Failure to meet SWPPP requirements of: (1) 641-2.01.1 Name of SWPPP Preparer and Date of Pre-Construction Inspection (2) Not Applicable (3) 641-3.03.8 Sign and Date SWPPP amendments with qualified person. 641-2.01.4 SWPPP Include approving person's name and AK-CESCL expiration date. (4) 641-3.02 Records maintained at project and made available for review	$750 per omission	
C	641-2.01.3 and 641-303.8 Failure to either reference a BMP manual or publication, or state that no BMP manual or publication was used	$250 per omission	
D	641-3.03.5 Failure to stabilize a Project prior to Seasonal Thaw	$5,000 per Project per year	
E	641-2.01.1 Failure to conduct pre-construction inspections before Construction Activities	$2,000 per Project	
F	641-3.03. Failure to conduct and record CGP Inspections 641-3.03.1 Personnel conducting Inspections and Frequency 641-3.03.2 Inspection Reports, use Form 25D-100, completed with all required information according to the Consent Decree paragraph 7.c, parts (1) through (11)	$750 per Inspection	
G	641-3.01.4 Failure to timely accomplish BMP maintenance and/or repairs, In effect until BMP maintenance and/or repairs is completed.	$500 per Project per day	Not to exceed $250,000 per year for all projects
H	641-3.01.3 Failure to provide to the Engineer and ADEC a timely oral endangerment report of violations or for a deficient oral endangerment report	$750 for the first day the report is late or deficient	Additional $750 for every 14 day period without the required information
I	641-3.01.3 Failure to provide to the Engineer and ADEC a timely written endangerment report of violations or for a deficient written endangerment report	$750 for the first day the report is late or deficient	Additional $750 for every 14 day period without the required information
J	641-3.04 Failure to comply with the most restrictive requirements of the CGP, approved SWPPP, or Section 641, except as listed above	$750 per occurrence for the first day of noncompliance	Additional $750 for every day the deficiency remains uncorrected

641-5.01 BASIS OF PAYMENT.

See Subsection 641-3.04 Failure to Perform Work, for additional work and payment requirements.

Item 641(1) Erosion, Sediment, and Pollution Control Administration. At the Contract lump sum price for administration of all work under this Section. Includes, but is not limited to, SWPPP and HMCP and SPCC Plan preparation, agency fees for SWPPP reviews, SWPPP amendments, pre-construction Inspections, Inspections, monitoring, reporting, and Record keeping or copying Records related to the SWPPP and required by the CGP, and Record retention.

Item 641(2) Temporary Erosion, Sediment, and Pollution Control. At the contingent sum prices specified for all labor, supervision, material, equipment, and incidentals to install, maintain, remove, and dispose of approved temporary erosion, sedimentation, and pollution control BMPs required to implement the SWPPP and SPCC Plan.

Item 641(3) Temporary Erosion, Sediment, and Pollution Control. At the Contract lump sum price for all labor, supervision, material, equipment, and incidentals to install, maintain, remove, and dispose of temporary erosion, sedimentation, and pollution control BMPs identified in the SWPPP and SPCC Plan.

Item 641(4) Temporary Erosion Sediment and Pollution Control Additives. At the contingent sum prices specified in the Directive to authorize the work, for all labor, supervision, materials, equipment, and incidentals for extra, additional, or unanticipated work, to install, maintain, remove and dispose of temporary erosion, sedimentation, and pollution control BMPs. All additional Erosion, Sediment, and Pollution Control Administration necessary due to this item will not be paid for separately but will be subsidiary to other bid items.

Item 641(5) Temporary Erosion Sediment and Pollution Control by Directive. At the contingent sum prices specified in the Directive using time and materials to authorize the work, for all labor, supervision, materials, equipment, and incidentals to install, maintain, remove and dispose of temporary erosion, sedimentation, and pollution control BMPs. Prices for this item will by time and materials according to Subsection 109-1.05, or by mutual agreement between the Engineer and Contractor. All additional Erosion, Sediment, and Pollution Control Administration necessary due to this item will not be paid for separately but will be subsidiary to other bid items.

Item 641(6) Withholding. The Engineer may withhold an amount equal to Liquidated Damages, assessed according to Section 641, from payment due the Contractor. Liquidated Damages for violations of the Contract, CWA, CGP, or Consent Decree are determined by the Engineer according to Table 641-2. The Engineer may withhold payment due the Contractors until the Contractor pays the Liquidated Damages to the Department.

The Department will not release performance bonds until Liquidated Damages assessed according to Section 641 are paid to the Department, and all requirements according to Subsection 103-1.05 are satisfied.

Item 641(7) SWPPP Manager. At the Contract lump sum price for a SWPPP Manager that conforms to this specification. When Item 641(7) appears in the Bid Schedule, the SWPPP Manager must be a different person than the superintendent, and must be physically present during construction activity with duties and authority as described in Subsection 641-2.04. When Item 641(7) does not appear in the Bid Schedule, the SWPPP Manager is subsidiary to Item 641(1).

Subsidiary Items. Temporary erosion, sediment, and pollution control measures that are required outside the Project Zone are subsidiary. Work required by the HMCP and SPCC Plan including hazardous material storage, containment, removal, cleanup and disposal, are subsidiary to Item 641(1) Erosion, Sediment and Pollution Control Administration.

Work under other pay items. Work that is paid for directly or indirectly under other pay items will not be measured and paid for under Section 641.

This work includes but is not limited to:

a. Dewatering;
b. Shoring;
c. Bailing;
d. Permanent seeding;
e. Installation and removal of temporary work pads;
f. Temporary accesses;
g. Temporary drainage pipes and structures;
h. Diversion channels;
i. Settling impoundment; and
j. Filtration.

Permanent erosion, sediment, and pollution control measures will be measured and paid for under other Contract items, when shown on the bid schedule.

Work at the Contractor's Expense. Temporary erosion, sediment, and pollution control measures that are required due to carelessness, negligence, or failure to install temporary or permanent controls as scheduled or ordered by the Engineer, or for the Contractor's convenience, are at the Contractor's expense.

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
641(1)	Erosion, Sediment, and Pollution Control Administration	Lump Sum
641(2)	Temporary Erosion, Sediment, and Pollution Control	Contingent Sum
641(3)	Temporary Erosion, Sediment, and Pollution Control	Lump Sum
641(4)	Temporary Erosion, Sediment, and Pollution Control Additives	Contingent Sum
641(5)	Temporary Erosion, Sediment, and Pollution Control by Directive	Contingent Sum
641(6)	Withholding	Contingent Sum
641(7)	SWPPP Manager	Lump Sum

CR641-041312

SECTION 642

CONSTRUCTION SURVEYING AND MONUMENTS

Special Provisions

642-2.01 MATERIALS. Add the following:

4. Digital Measuring Instrument: Nu-metrics, Nitestar DMI (www.nu-metrics.com)

642-3.01 GENERAL. Add No. 11:

11. Before work on the project starts, stake and reference the existing centerline on both sides of the roadway alignment. Stake the existing centerline on tangents at 100 ft, and 50 ft intervals on curves from the beginning and ending of super-elevation changes when the roadway is no longer at normal crown. Stake sign locations at proper offset. Stakes shall be a minimum of 1" x 2" x 2'-0" and be offset 4 to 8 ft from the shoulder on both sides of the roadway. Extend lath stakes a minimum of 2 ft above ground. Show the offset distance to centerline and the station from the beginning of the project. Maintain staking until the final roadway striping is completed. Staking accuracy work requires an electronic distance measuring instrument (DMI) be installed in the Contractor's vehicle. Calibrate the DMI to roadway alignments as stationed in the Plans before beginning work. Record the calibration and staking information in the field book.

    Install a reference sign every 500 ft. These reference signs shall meet the following requirements:

    1. mounted with the base a minimum of 5 ft above the shoulder,
    2. located a minimum of 10 ft from the edge of shoulder,
    3. marked with the station from the beginning of the project, in 6 inch high permanent black lettering with a letter proportion height to width ratio of 1:0.6 and a stroke width to height ratio of 1:6, on an orange background.

CR6421-110812

Standard Modifications

642-3.04 OFFICE ENGINEERING. Delete third sentence and replace with:

Perform the work by, or under the responsible charge of, a person registered in the State of Alaska as a Professional Land Surveyor or a Professional Engineer.

E53-050107

642-5.01 BASIS OF PAYMENT. Add the Following:

As-builting of the existing pavement widths will not be paid for directly, but will be subsidiary to the 642(1) Pay Item.

SECTION 643

TRAFFIC MAINTENANCE

Special Provisions

643-1.01 DESCRIPTION. Add the following:

Additional work:

- Illuminate construction activities listed in Table 643-3, Night Work Illumination Level, and Area of Coverage, during hours of night work on roads open to the public inside the project limits.

643-1.02 DEFINITIONS. Add the following paragraphs after paragraph titled "Construction Phasing Plan":

Balloon Light: Light surrounding's by a balloon-like enclosure kept inflated by pressurized air or helium, and producing uniform light through 360 horizontal degrees. The top half of the balloon enclosure shall be constructed of an opaque material.

Night Work: Work occurring between sunset and sunrise on all days, except the "No Lighting Required" period shown in Table 643-2, Night Work Lighting Requirements.

TABLE 643-2
NIGHT WORK LIGHTING REQUIREMENTS

Latitude (degrees)	No Lighting Required		Nearby Cities
	Start	End	
< 61	Lighting Required All Year		Everything South of Hope
61	June 11	July 1	Anchorage, Valdez, Girdwood
62	June 2	July 13	Wasilla, Palmer, Glennallen, Talkeetna
63	May 27	July 17	Cantwell, Paxson, McGrath
64	May 22	July 21	Delta Junction, Nome, Tok
65	May 18	July 25	Fairbanks
66	May 14	July 29	Circle
67	May 10	August 2	Coldfoot, Kotzebue
68	May 7	August 6	Galbraith Lake
69	May 3	August 9	Happy Valley
70	April 30	August 12	Deadhorse
71	April 27	August 15	Barrow
72	April 24	August 19	

ES14-031506

643-1.03 TRAFFIC CONTROL PLAN. Replace the last paragraph with the following:

A waiver may be requested, in writing, of regulation 17 AAC 25 regarding oversize and overweight vehicle movements inside the project limits. If the waiver is approved, movements of oversize and overweight vehicles in or near traffic inside the project limits will be done according to the provisions of an approved Traffic Control Plan. Maintain a minimum 12 foot lateral separation between the nonstreet legal vehicles and the motoring public. The Traffic Control Plan shall specify the traffic control devices required for these operations.

Add the following:

Road Closures and Major Traffic Sequencing (events). Submit a written request to the Engineer for review and approval of each proposed event and event date. Allow 7 days for the Engineer to review any proposed event or subsequent changes/corrections. The proposed event date will be no less than 14 days from the date of written approval.

CR6431-110812

643-1.04 WORKSITE SUPERVISOR.

1. Qualifications. Replace with the following:

   Qualifications. The Worksite Traffic Supervisor shall be knowledgeable and experienced regarding the requirements of the ATM and the implementation of those requirements. The Worksite Traffic Supervisor shall be familiar with the Plans, the Specifications, your proposed operations, and certified as one of the following:

   a. Traffic Control Supervisor, American Traffic Safety Services Association (ATSSA)

   b. Work Zone Safety Specialist, International Municipal Signal Association (IMSA)

   Certify according to Form 25D-124 that the Worksite Traffic Supervisor is competent and capable, and has the authority to perform the duties and responsibilities in accordance with this Section.

   Worksite Traffic Supervisors shall maintain current certification and be able to show their certification anytime they are on the project.

CR6432-110410

2. Duties. Add the following:

I. Supervise lighting of Night Work.

ES14-031506

Add No. 3:

3. Authority. The Worksite Traffic Supervisor shall have the Contractor's authority to stop work and implement immediate corrective action to unsafe traffic control, in locations where unsafe traffic control is present.

643-2.01 MATERIALS.

4. Portable Concrete Barriers. Replace with the following:

Portable Concrete and Steel F Shape Barriers. Use Portable Concrete and Steel F Shape Barriers that conform to the Plans. For each direction of traffic, equip each barrier section with at least two side-mounted retroreflective reflectors or a continuous 4-inch wide horizontal retroreflective stripe mounted 6 inches below the top of the barrier. Place the individual reflectors 2-foot or less from each end and space not more than 10-foot apart. Use yellow reflectors or stripe if you use barriers at centerline. Use white reflectors or stripe if you use barriers on the roadway shoulder.

CR6431-110812

Add the following:

Use reflective sheeting that meets AASHTO M 268 Type III, IV or V.

10. Temporary Crash Cushions. Replace with the following:

Temporary Crash Cushions. Must have FHWA Acceptance letter for National Cooperative Highway Research Program (NCHRP) 350 or Manual for Assessing Safety Hardware (MASH), Test Level 3. Use reflective sheeting that meets AASHTO M 268 Type III, IV or V. Application of crash cushion must be appropriate for the intended use and be installed per manufacturer's recommendation. Temporary crash cushions used as rail or barrier end treatments must be redirective. Temporary crash cushions that are barrels or barricade filled with sand or water are considered nonredirective and may only be used when the forecasted temperature during their use is above 32 degrees Fahrenheit.

CR6432-110410

12. Portable Changeable Message Board Sign. Replace with the following:

Portable Changeable Message Board Sign. Use new truck or trailer mounted portable changeable message board signs with self contained power supply for the sign and with:

a. Message sign panel large enough to display 3 lines of 18 inch high characters.
b. Eight character display per message module.
c. Fully programmable message module.
d. Remote control cellular, wireless radio frequency (RF), landline.
e. Waterproof, lockable cover for the controller keyboard.
f. Capacity for electric/hydraulic sign raising or lowering.
g. Radar over speed detection.
h. Variable flash and sequence rates.
i. Light emitting diode (LED) display, using Institute of Transportation Engineers (ITE) amber/yellow
j. The capacity for a minimum of 150 pre-programmed messages.
k. Battery-Pack Operation Duration: minimum of 55 hours under full load.
l. Power chords shall comply with the National Electrical Code (NEC) Article 600.10 Portable and Mobile Signs, paragraph 600.10(c) (2) ground fault circuit interrupter (GFCI). The chord will have integral GFCI protection located either in the attachment plug or 12 inches or less from the plug.

CR6431-110812

13. Plastic Safety Fence. Replace a., b., and c. with the following:

a. "Safety Fence" by Jackson Safety, Inc., Manufacturing and Distribution Center, 5801 Safety Drive NE, Belmont, Michigan, 49306. Phone (800) 428-8185.
b. "Flexible Safety Fencing" by Carsonite Composites, LLC, 19845 U.S. Highway 76, Newberry, South Carolina, 29108. Phone (800) 648-7916.
c. "Reflective Fencing" by Plastic Safety Systems, Inc., 2444 Baldwin Road, Cleveland, Ohio 44104. Phone (800) 662-6338.

16. Flagger Paddles. Replace the last sentence with the following:

    Use reflective sheeting that meets AASHTO M 268 Type VIII or IX. Use background colors of fluorescent orange on one side and red on the other side.

Add No. 17:

17. Truck Mounted Attenuator (TMA). The TMA shall be mounted on a vehicle with a minimum weight of 15,000 pounds and a maximum weight per the manufacturer's recommendations. The TMA shall comply with NCHRP 350 or MASH, Test Level 3 requirements.

CR6432-110410

Add No. 18:

18. Flexible Markers. Refer to Subsection 606-2.01 Materials.

CR6431-110812

Standard Modification

Replace Subsection 643-2.02 CRASHWORTHINESS with the following:

643-2.02 CRASHWORTHINESS. Submit documentation, by the method indicated, that the following devices comply with the requirements of National Cooperative Highway Research Program (NCHRP) Report 350 or Manual for Assessing Safety Hardware (MASH), Test Level 3 on the given schedule.

Submit documentation of compliance to the Engineer before installing devices on the project.

Work Zone Traffic Control Device Compliance with NCHRP 350 or MASH		
Category	**Devices**	**Method of Documentation**
1	Cones, candles, drums w/o attachments, delineators	Manufacturer's Certification for devices exceeding height and weight limits
2	Barricades, portable sign supports, drums w/lights, other devices weighing less than 100 pounds but not included in category 1	FHWA acceptance letter indicating acceptance at Test Level 3 (when no test level is specified in the letter; it is implied that the tests were run for Test Level 3),
3	Truck mounted attenuators, redirective and nondirective temporary crash cushions	FHWA acceptance letter indicating acceptance at Test Level 3 (when no test level is specified in the letter; it is implied that the tests were run for Test Level 3),
	Portable concrete barriers	FHWA acceptance letter specifying the Test Level required in the Plans or Specifications.

Category 1 devices that exceed the following weights and heights require certification that they meet the evaluation criteria of NCHRP Report 350 or MASH, Test Level 3. This certification may be a one-page affidavit signed by the vendor. Documentation supporting the certification (crash tests and/or engineering analysis) must be kept on file by the certifying organization. No certification is required for devices within the weight and height limitations.

Device	Composition	Weight	Height
Cones	Rubber	20 lb.	36 in.
	Plastic	20 lb.	48 in.
Candles	Rubber	13 lb.	36 in.
	Plastic	13 lb.	36 in.
Drums	Hi Density Plastic	77 lb.	36 in.
	Lo Density Plastic	77 lb.	36 in.
Delineators	Plastic or Fiberglass	N/A	48 in.

E77-100410

643-3.01 GENERAL CONSTRUCTION REQUIREMENTS. Add the following:

Immediately notify the Engineer of any traffic related accident that occurs within the project limits as soon as you, an employee, or a subcontractor becomes aware of the accident.

E90-100410

Add the following:

Where construction activity encroaches onto the safe route in a traffic control zone, station a flagger at the encroachment to assist pedestrians and bicyclists past the construction activity.

Maintain business access(s) during flagging operations.

643-3.02 ROADWAY CHARACTERISTICS DURING CONSTRUCTION. Add the following:

Traffic may not be maintained on a continuous gravel surface. Traffic may be maintained on planed pavement surface for up to 5 days. Pavement breaks, for culvert or utility work, and milling areas must be patched or filled with hot mix asphalt within 48 hours after removing existing pavement.

Pave lanes next to the median first. Pave lanes next to exit and entrance ramps last. Place temporary 12:1 sloped wedge of asphalt concrete against the abrupt pavement edge on lanes next to exit and entrance ramps. Do not open the roadway to traffic until slope wedges are in place.

54149-020413

Standard Modification

Replace Subsection 643-3.03 PUBLIC NOTICE with the following:

643-3.03 PUBLIC NOTICE. Make sure the Worksite Traffic Supervisor gives a minimum of 3 days notice before major changes, delays, lane restrictions, or road closures to local officials and transportation organizations, including but not necessarily limited to:

- Alaska Carriers Association
- Alaska Trucking Association
- Alaska State Troopers
- Division of Measurement Standards
- Local Police Department
- Local Fire Department
- Local Government Traffic Engineer
- School and Transit Authorities
- Local Emergency Medical Services
- Local Media (newspapers, radio, television)
- Railroads (where applicable)
- U.S. Postal Service
- Major Tour Operators

Provide local traffic enforcement and maintenance agencies 24 hour notice before shutting down a traffic signal system. Provide notice as required by utility companies before repairing or replacing a utility.

Provide the Alaska State Troopers, local police and fire department with the radio frequencies used on the project and the 24-hour telephone numbers of the Worksite Traffic Supervisor and the Project Superintendent. Tell them to use these numbers to alert you when emergency vehicles must pass through the project. When notified of emergencies, use all equipment and make every necessary effort to expedite rapid passage.

Additional notices may be given through the Navigator System for selected projects. Check the special provisions for those requirements.

E78-100410

643-3.04 TRAFFIC CONTROL DEVICES. Replace paragraphs 6 and 7 with the following:

Use only traffic control devices that meet the requirements of the "Acceptable" category in the American Traffic Safety Services Association (ATSSA) "Quality Guidelines for Temporary Traffic Control Devices" and meet crashworthiness requirements per Section 643-2.02.

Immediately replace any devices provided under this Section that are lost, stolen, destroyed, inoperable or deemed unacceptable while used on the project. Stock repair parts for each Temporary Crash Cushion used on the project. Repair damaged crash cushions within 24 hours.

Maintain pre-existing roadside safety hardware at an equivalent or better level than existed prior to project implementation until the progress of construction necessitates removing the hardware. All existing hazards that are currently protected with roadside safety hardware or new hazards which result from project improvements shall be protected or delineated as required in the Plans, Specifications, and approved TCPs until permanent roadside safety hardware is installed. All temporary roadside safety hardware shall meet NCHRP 350 or MASH, Test Level 3 unless otherwise noted.

CR6432-110410

Replace paragraph 8 with the following:

Items paid under this Section remain the Contractor's property unless stated otherwise. Remove them after completing the project.

1. Embankments. Add the following:

   Close trenches and excavations at the end of each continuous work shift, except as indicated by the Engineer.

3. Fixed Objects. Add the following:

   Remove obstructions greater than 4 inches above the nominal foreslope grade at the end of each continuous work shift.

4. Flagging. Replace with the following:

   Furnish trained and competent flaggers and all necessary equipment, including lighting of the flagging position during nighttime operations, to control traffic through the traffic control zone. The Engineer will approve each flagging operation before it begins and direct adjustments as conditions change.

   Flaggers must be certified as one of the following:

   a. Flagging Level I Certification by IMSA (International Municipal Signal Association)
   b. Flagger Certification by ATSSA (American Traffic Safety Services Association)
   c. Traffic Control Supervisor, ATSSA
   d. Work Zone Safety Specialist, IMSA
   e. ATSSA Flagging Instructor

   Flaggers shall maintain current flagger certification. Flaggers must be able to show their flagger certification anytime they are on the project.

   Flaggers must maintain their assigned posts at all times, unless another qualified flagger relieves them, or the approved traffic control plan terminates the flagging requirements. Remove, fully cover, or lay down flagger signs when no flagger is present. Keep the flaggers' area free of encumbrances, such as parked vehicles, so that flaggers can be seen easily.

   Provide approved equipment for two-way radio communications between flaggers when flaggers are not in plain, unobstructed view of each other.

   Obtain the Engineer's written approval before flagging signalized intersections. When you flag a signalized intersection, either turn off and cover the traffic signal or place it in the All-Red Flash mode. Coordinate changing traffic signal modes and turning off or turning on traffic signals with the agency responsible for signal maintenance and operation and the Engineer. Get their written approval in advance. Only uniformed police officers are permitted to direct traffic in an intersection with an operating traffic signal.

6. Street Sweeping and Power Brooming. Replace with the following:

   Keep free of loose material paved portions of the roadway and haul routes open to the public, including sections of roadway off the project where the Contractor's operations have deposited loose material. Use equipment for brooming and sweeping as recommended by the manufacturer and the following:

   Dirt, dust and construction materials, mobilized as a result of power brooming and or sweeping, shall not be pushed, ejected, thrown or drift beyond the lesser of, 2 feet from the equipment perimeter or the edge of the paved surface.

All equipment shall operate to typical industry standards. Maintain equipment to operate as designed by the manufacturer. Equipment will employ safety equipment, warning lights, and other as required by the Specifications and these Special Provisions.

Sweeper and Broom Options: Table 643-4, Traffic Control Rate Schedule, Street Sweeping.

a. Regenerative Sweeper: Sweeper that blows a stream of air at the paved surface causing fine particles to rise and be caught through a vacuum system.
b. Vacuum Sweeper: Sweeper that creates a vacuum at the paved surface sucking dirt, dust, and debris into the collection system.
c. Mechanical Broom Sweeper: Sweeper designed to pick up and collect larger size road debris, stones and litter, etc. In addition to the requirements noted in these Specifications, use of a mechanical broom sweeper requires the Engineer to approve the sweeper for the intended use.
d. Power Broom: Power brooming that wets, pushes and or ejects loose material directly into an attached collection/pickup container may be used when approved by the Engineer. The added moisture will be contained to the paved roadway surface.

   Dry Power Brooming is not permitted. Power brooming without direct/immediate means of collection/pickup is not permitted.

CR6431-110812

Add No. 9:

9. Truck Mounted Attenuator (TMA). TMAs are mounted on the rear of work vehicles. TMA shall be mounted on a vehicle with a minimum weight of 15,000 pounds and a maximum weight in accordance with the manufacturer's recommendations. TMA shall have an adjustable height so that it can be placed at the correct elevation during usage and to a safe height for transporting. Approach ends of TMAs shall have impact attenuator markings in accordance with the MUTCD. Do not use a damaged attenuator in the work. Replace at your expense, an attenuator damaged from an impact during work.

Add No. 10:

10. Parallel Guardrail Terminal. The price listed in the Traffic Control Rate Schedule, Table 643-4, will be full compensation for the purchase, installation, maintenance during construction, removal, and salvaging the Parallel Guardrail Terminal unit(s). Deliver the salvaged unit(s) to the nearest ADOT & PF Maintenance & Operations yard or as directed by the Engineer.

CR6432-110410

643-3.05 AUTHORITY OF THE ENGINEER. Replace the first sentence with:

When existing conditions adversely affect the public's safety or convenience, the Contractor will receive an oral notice. A written notice will follow the oral notice according to Subsection 105-1.01, Authority of the Engineer.

Add the following after the second sentence:

In no case shall this time exceed 24 hours.

CR6431-110812

643-3.06 TRAFFIC PRICE ADJUSTMENT. Add the following in the 2nd paragraph after the 2nd sentence:

Temporary crash cushions required to protect motorists from incomplete guardrail installations, as described in Section 606-5.01 is also an unauthorized lane reduction.

CR6432-110410

Add the following after the 3rd paragraph:

Failure to maintain an acceptable infrastructure or traffic control plan will result in a price adjustment equal to 100 percent of the applicable rate shown in Table 643-1, Adjustment Rates, for the time the roadway or pedestrian facility is in an unacceptable condition.

Replace Table 643-1 with the following:

TABLE 643-1
ADJUSTMENT RATES

Published ADT	Dollars/Minute of Delay/Lane
0 – 5,000	$ 30
5,000 +	$ 40

643-3.08 CONSTRUCTION SEQUENCING. Replace the last sentence with:

Unless otherwise determined by the Engineer and on an approved Traffic Control Plan (TCP), do not restrict traffic during the times listed below. Areas south of Sargent Creek Road will not have daily restrictions.

1. Monday through Friday: 0700 hrs to 0900 hrs and 1400 hrs to 1830 hrs.
2. Around any Holiday:
   a. If a holiday falls on Sunday, Monday, or Tuesday, the above stipulations apply from 1200 hrs on the Friday before the holiday to 0300 hrs on the day after the holiday.
   b. If a holiday falls on Wednesday, the above stipulations apply from 1200 hrs on the Tuesday before the holiday to 0300 hrs on the Thursday after the holiday.
   c. If a holiday falls on Thursday, Friday, or Saturday, the above stipulations apply from 1200 hrs on the day before the holiday to 0300 hrs on the Monday after the holiday.
3. During the Crab Festival: From Friday 1600 hrs to Sunday 2300 hrs.
4. During the Kodiak State Fair: From Friday 1600 hrs to Sunday 2300 hrs.
5. During the school year, when the school zone flashing beacons are lit.

Lane restrictions, if allowed shall be conducted so that no more than a 5 minute accumulated stopped delay, 20 vehicles, or 1/8 mile (660 feet) of traffic is detained, whichever occurs first, before releasing the detained motorists. During paving operations, a 10 minute stopped delay, 40 vehicles, or 1/4 mile (1320 feet) of traffic detained, will be allowed for motorists, except school buses. If a queue of traffic develops at a stop, the entire queue must be emptied to include the last car that entered the queue at the time the queue was released.

Obtain the local school bus schedule and coordinate work efforts to ensure the school buses are not delayed through the construction zone. This plan shall be submitted, as a TCP, to the Engineer for approval before the implementation of the school bus coordination plan.

643-3.09 INTERIM PAVEMENT MARKING. In the second paragraph, delete the words:

"or cover them with black removable preformed marking tape."

Replace the first sentence in the last paragraph with the following:

Apply final pavement markings according to Subsection 670-3.01, Construction Requirements, of these Special Provisions.

CR6431-110812

Add the following Subsection 643-3.10:

643-3.10 LIGHTING OF NIGHT WORK. Illuminate the night work areas specified in Table 643-3, Night Work Illumination Level, and Area of Coverage, to the light levels specified.

Table 643-3 does not provide a comprehensive list of operations that require lighting. Provide lighting for other operations when necessary.

TABLE 643-3
NIGHT WORK ILLUMINATION LEVEL AND AREA OF COVERAGE

Type of Work/Equipment	Lighting Configuration
Paving, Milling, Striping, Pavement Marking Removal, Rumble Strip Installation	At least two machine mounted balloon lights with a cumulative wattage of at least 4000 watts. Provide additional lights or wattage if necessary to provide complete coverage.
Rolling, Pavement Sweeping	At least four sealed beam halogen lamps in the front and four in the back. Each should be at least 55 watts.
Flagging	Two balloon lights of at least 2000 watts each located within 30 feet of the normal flagger location. Locate one on the right side of the road beyond the flagger and the other on the left side of the road in front of the flagger.
Truck Crossings (meaning where haul vehicles cross or enter a road): 1) Roads with ADTs over 10,000 2) That are controlled by portable signals or flaggers	Two Balloon lights of at least 2000 watts each located on the main road, one on the far right side of the intersection, the other on the near left. Locate lights within 30 feet of the edges of the side street. If there is a flagger at the crossing, locate the lights to also meet the requirements for flagging.

Use balloon lighting as the main light sources. Do not use floodlights without prior approval by the Engineer. When approved, install floodlighting in a manner that minimizes glare for motorists, workers, and residents living along the roadway. Locate, aim louver, and/or shield light sources to achieve this goal.

The Engineer shall be the sole judge of when glare is unacceptable, either for traffic or for adjoining residences. When notified of unacceptable glare, modify the lighting system to eliminate it.

If the Contractor fails to provide the lighting equipment specified in Table 643-3 or provides lighting that creates unacceptable glare at any time, the Contractor shall cease the operations that require illumination until the condition is corrected.

Lighting equipment shall be in good operating condition and in compliance with applicable OSHA, NEC, and NEMA codes.

Provide suitable brackets and hardware to mount lighting fixtures and generators on machines and equipment. Design mountings so lights can be aimed and positioned as necessary to reduce glare. Locate mounting brackets and fixtures so they do not interfere with the equipment operator or overhead structures. Connect fixtures securely in a manner that minimizes vibrations.

Ensure ground, trailer, and equipment mounted light towers are sturdy and freestanding without the aid of guy wires. Towers shall be capable of being moved to keep pace with the construction operation. Position ground and trailer mounted towers and trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment.

Raise trailer or equipment mounted lights to maximum height, except do not exceed the clearance required for overhead objects such as trees, aerial utilities, or bridges. Aim and adjust lights to provide the required light levels. Provide uniform illumination on the hopper, auger, and screed areas of pavers. Illuminate the operator's controls on machines uniformly.

Furnish each side of nonstreet legal equipment with a minimum of 75 square inches high intensity retroreflective sheeting in each corner, so at least 150 square inches of sheeting is visible from each direction. Provide red sheeting on the rear of the equipment and yellow sheeting elsewhere.

Existing street and highway lighting and conventional vehicle headlights do not eliminate the need for the Contractor to provide lighting meeting the requirements of Table 643-3.

Provide sufficient fuel, spare lamps, spare generators, and qualified personnel to ensure that required lights operate continuously during nighttime operations. Ensure generators have fuel tanks of sufficient capacity to permit operation of the lighting system for a minimum of 12 hours. In the event of failure of the lighting system, discontinue the operation until the required level and quality of illumination is restored.

Maintain a supply of at least 20 emergency flares for use in the event of emergency or unanticipated situations. Comply with local noise ordinances.

Provide NCHRP 350-compliant breakaway bases for post mounted electroliers located within the clear zone.

ES14-031506

Standard Modification

Add the following Subsection 643-3.11:

643-3.11 HIGH VISIBILITY GARMENTS. Ensure all workers within project limits wear outer garments that are highly visible and comply with the following requirements:

1. Standards. Use high visibility garments conforming to the requirements of ANSI/ISEA 107-2004, Class 2 for tops or Class E for bottoms, and Level 2 retroreflective material.

2. Labeling. Use garments labeled in conformance with Section 11.2 of ANSI/ISEA 107-2004.

3. Tops. Wear high visibility vests, jackets, or coverall tops at all times.

4. Bottoms. Wear high visibility pants or coverall bottoms during nighttime work (sunset to sunrise). Worksite traffic supervisors, employees assigned to traffic control duties, and flaggers wear high visibility pants or coverall bottoms at all times.

5. Outer Raingear. Wear raingear tops and bottoms conforming to requirements in this Subsection, 643-3.11.

6. Exceptions. When workers are inside an enclosed compartment of a vehicle, they are not required to wear high visibility garments.

7. Condition. Furnish and maintain vests, jackets, coveralls, rain gear, hard hats, and other apparel in a neat, clean, and presentable condition. Maintain retroreflective material to Level 2 standards.

Payment for high visibility garments for workers is subsidiary to other traffic Pay Items.

E90-100410

643-4.01 METHOD OF MEASUREMENT.

2. Traffic Control Device Items. Replace the second sentence with the following:

Special Construction signs are measured by the total area of legend bearing sign panel, as determined under Subsection 615-4.01 and compensation for a 24 hour period shall be made under Construction Signs in the Traffic Control Rate Schedule, Table 643-4.

CR6431-110812

Add No. 17:

17. Hotline Road Report. No measurement required to provide a 24 hour toll free (1-800 ###-####) "Hotline Road Report" telephone with a prerecorded message, and weekly notices with daily updates. Work will be subsidiary to Pay Item 643(1) or 643(2), Traffic Maintenance.

643-5.01 BASIS OF PAYMENT.

Add the following:
All Temporary Pavement Markings installation and removal is subsidiary to Item 670. All Traffic Control required for the installation and removal of Temporary Pavement Markings is subsidiary to Item 670.

7. Flagging and Pilot Car. Add the following:

The Engineer will pay for Item 643(15) Flagging on a contingent sum basis at the rate of $51.00/hour. The Engineer does not require a change order/directive for the flagging Pay Item. Flagging associated with Change Order work will be paid at the prices according to Subsection 109-1.05 Compensation for Extra Work.

11. Traffic Control. Add the following:

The Engineer does not require a change order/directive for Pay Item 643(25), Traffic Control.

12. Portable Changeable Message Board Sign. Add the following:

Three Portable Changeable Message Board Signs used for Permanent Construction Signing will be paid for under Item 643(3) Permanent Construction Signs. Additional portable changeable message board signs will be paid for under 643(25), Traffic Control.

CR6431-110812

Add No. 17:

17. Work Zone Illumination. Payment for work zone illumination is subsidiary to other items.

ES14-031506

Add No. 18:

18. High Visibility Garments. Payment for high visibility garments for workers is subsidiary to other Pay Items.

Add No. 19:

19. Pavement Breaks. Temporary hot mix asphalt at pavement breaks, as noted in Subsection 643-3.02.2. Gravel Surface Not Specified is subsidiary to Pay Item 401(1A).

Add the following:

TABLE 643-4
TRAFFIC CONTROL RATE SCHEDULE

Traffic Control Device	Pay Unit	Unit Rate
Construction Signs	Each/Day	$6.50
Special Construction Signs	Square Foot	$28.00
Type II Barricade	Each/Day	$3.30
Type III Barricade	Each/Day	$11.00
Traffic Cone or Tubular Marker	Each/Day	$1.10
Drums	Each/Day	$3.30
Sequential Arrow Panel	Each/Day	$55.00
Portable Concrete or Steel F Shape Barrier	Each	$80.00
Temporary Crash Cushion / Sand or Water Filled Barrels or Barrier (all required per end)	Each	$1250.00
Temporary Crash Cushion / Redirective	Each	$2500.00
Pilot Car	Hour	$73.00
Pilot Car w/Sequential Arrows	Hour	$76.00
Watering	M-Gallon	$25.00
Street Sweeping: Regenerative Sweeper, Vacuum Sweeper, Mechanical or Power Broom with Vacuum	Hour	$175.00
40,000 GVW Truck with Crash Attenuator	Hour	$97.00
Plastic Safety Fence	Lineal Foot	$1.00
Portable Changeable Message Board Sign	Calendar Day	$130.00
Temporary Sidewalk Surfacing	Square Foot	$2.00
Flexible Markers (Flat Whip, Reflective)	Each	$60.00
Temporary Guardrail	Lineal Foot	$25.00

Replace Pay Item 643(15) with the following:

Pay Item No.	Pay Item	Pay Unit
643(15)	Flagging	Contingent Sum

CR6431-110812

SECTION 644

SERVICES TO BE FURNISHED BY THE CONTRACTOR

Special Provisions

644-2.01 FIELD OFFICE. Delete this subsection in its entirety and substitute the following:

Furnish and maintain a suitable office for the Engineer, available for occupancy from 2 weeks before beginning work, through 30 days after issuance of the notice of project completion as defined in Subsection 105-1.15. The following office requirements shall be met:

1. A minimum of 1000 square feet of floor area. The office area shall be divided so that it contains an office room separated by a closable door. The office room shall have a minimum of 160 square feet of floor area.
2. A thermostatically controlled interior heating system with necessary fuel.
3. Adequate electrical lighting and 120 volt, 60 hertz power, with a minimum of 6 electrical outlets.
4. A minimum of 100 square feet of window area and adequate ventilation.
5. Adequate parking for a minimum of 16 vehicles, with one handicap parking space meeting the requirements of Americans with Disabilities Act Accessibility Guidelines (ADAAG).
6. Attached indoor plumbing with sanitary lavatory facilities and potable drinking water provided.
7. Provide engineering communication services to the field office, Subsection 644-2.08.
8. If a part of the Contractor's building, it shall be completely partitioned off from the balance of the structure and provided with a separate outside door equipped with a lock.
9. Located within 3 miles of the project.
10. Weekly janitorial service consisting of emptying trash receptacles, vacuuming office area, and cleaning restrooms and counter areas.
11. Provide one mobilization and one demobilization of the Engineer's office equipment and furniture.

CR644FOCOM-080511

Standard Modifications

644-2.02 FIELD LABORATORY. Add the following to the end of the second sentence of the first paragraph:

through one week after Project Completion.

E44-012707REV

Replace 2.g. with the following:

g. 500 gallon capacity tank with a pressure pump or a commercial pressurized system.

Replace 6.a. with the following:

a. Supply 240 volt, 60 hertz power, a 100 pound propane bottle, and a 500 gallon capacity water tank with a pressure pump or a commercial pressurized system for a State provided portable asphalt lab at a location designated by the Engineer.

Add the following:

7. Provide one mobilization and one demobilization of the Engineer's laboratory equipment from Anchorage.

CR644LAB-071009

644-2.05 VEHICLES. Delete the second and third paragraphs and substitute the following:

Pickup(LT)/Sport Utility Vehicle (SUV): Furnish full-size, four-wheel drive vehicles, either pickup/light truck(s) with crew cabs or sport utility vehicle(s). Provide vehicles less than three model years old, in good condition, and with less than 36,000 miles on the odometer. Furnish all fuels, maintenance and parts, and insurance during the Department's operation and use.

Equip each vehicle with lightbars wired into the vehicle's electrical system with a dash mounted switch easily accessible to the vehicle operator. Provide Code 3; Model 2100 LEDX lightbars, or approved equal. Approved equal equipment shall have the following characteristics:

- (4) Four Corner Amber LED Wide Optix Modules
- 1200 flashed per minute
- 55 inches in length

If you are working after October 1, provide four studded snow tires mounted on each vehicle.

You are responsible for normal wear and tear, and any other incidental damage including broken windshields, occurring during the Department's operation and use. The Department is responsible for damage to any vehicle caused by its own negligent operation.

54149-020413

644-2.06 NUCLEAR TESTING EQUIPMENT STORAGE SHED. Design, furnish and maintain a weatherproof, heated, and ventilated nuclear densometer/testing equipment storage shed for the Engineer to use exclusively throughout the Contract. Install the building at least 15 feet from an occupied area at a location approved by the Engineer. Install the shed before beginning of construction activities and maintain it until one week after project completion. Provide sufficient floor area for the nuclear testing equipment and a portable electric heater to maintain a minimum room temperature of 50 °F in freezing weather. Design the building with enough floor area to provide sufficient clearance between the equipment, heater, and combustibles. Provide a commercial grade metal clad exterior entrance door of 3'-0" minimum width by 6'-8" height with dead-bolt lockset. Hang the door so that hinge pins are not accessible from the exterior. Provide the Engineer with 2 keys to control access. Provide a 5/16" x 10 foot long welded steel security chain securely attached inside the structure with tamperproof hardware for the Engineer to secure the testing equipment. Provide 120 volt, 60 cycle power, an interior light, and a wall receptacle for the heater. Secure the structure to the ground with tamperproof anchors to resist wind loads and prevent unauthorized movement of the building. The nuclear testing equipment storage shed remains the property of the Contractor. Remove the shed from the site following project completion.

Add the following new subsection:

644-2.07 STORAGE CONTAINER. Furnish, transport, and maintain a weather tight, lockable, steel enclosed 20 foot long X 8 foot wide X 8 foot high wooden floored container for the storage of the Department's materials, supplies and testing equipment (but not nuclear equipment). Provide twenty equally spaced fastening points on the interior walls that are capable of securing the Department's contents. Door opening dimensions of the storage container shall be greater than 60 square feet. Supply necessary equipment to lift and move container with minimal disturbance to the Department's contents. The container shall not be moved by skidding or hook lift. The Contractor shall be listed as the shipper on documents listing and acknowledging receipt of the Department's goods for shipment.

Deliver an empty and clean container to the Regional Materials Laboratory, or location acceptable to the Engineer, three weeks before transporting to the project site. Allow 7 days for the Department to load the container. Transport the loaded container to the project site. Set up container at a location approved by the Engineer prior to commencing construction work.

1. Provide electrical service and other facilities as follows:
   a. Electrical current, 120V (ac), 60 cycle on a 24 hour a day basis.
   b. Wiring system to support a 20 amp user load demand.
   c. 2 GFI protected outlets conveniently spaced on the interior walls.
   d. Four 100 watt incandescent or eight 40 watt fluorescent lights located for maximum illumination.
   e. Provide a stairway with railing, built to meet the International Building Code, if there is more than 12-inch difference in floor entry and existing ground elevation.

Return the container to the Regional Materials Laboratory or location acceptable to the Engineer, upon project completion. Allow 7 days for the Department to unload the container. The storage container remains your property after completing the work.

E44-012707REV

Add the following subsection:

644-2.08 ENGINEERING COMMUNICATION. Engineering Communications, minimum service includes:
   a. Three phone/facsimile lines (different phone numbers for each line)
   b. High speed internet service with modem (DSL or Cable)

CR644FOCOM-080511

Add the following subsection:

644-3.01 METHOD OF MEASUREMENT. Delete the third paragraph and substitute the following:

Vehicle (LT/SUV). For each vehicle provided. If a replacement vehicle is necessary, no additional measurement will be made.

CR644LTSUV-033111

Standard Modification

Add the following Pay Items:

Nuclear Testing Equipment Storage Shed. By the number of storage sheds specified, to including components, installation and accepted as completed units and ready for equipment storage.

Storage Container. By the number of storage containers specified, to including components, installed and accepted as completed units and ready for materials and equipment storage.

E44-012707REV

644-4.01 BASIS OF PAYMENT. Add the following:

Electricity, propane, and water supplied for the State provided portable asphalt lab will not be paid for separately, but will be subsidiary to Pay Item 644(2) Field Laboratory.

CR644LAB-071009

Add the following:

Pay Item 644(8) Vehicle (LT/SUV):

1. A percentage of the Contract unit price, to be determined by the Engineer, will be paid as full compensation for furnishing the vehicle at the site.

2. The balance of the Contract unit price will be prorated over the anticipated active construction period with a portion included as part of each interim payment, for maintenance, repairs, and fuel and, at the end of the project, for removing it from the site. If anticipated construction period changes, the final increment will be held until final payment.

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
644(8)	Vehicle (LT/SUV)	Each

CR644LTSUV-033111

Add the following:

Pay Item 644(10) Engineering Communications. Usage services including long distance calls made by State personnel and the Internet service provider will be reimbursed by the State. Payment for communication usage services shall be based on paid receipts to the service provider plus 15%.

Connection fees (initial connection) local calls, providing equipment and disconnection are subsidiary to Pay Item 644(1) Field Office and as such are paid by the Contractor.

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
644(10)	Engineering Communications	Contingent Sum

CR644FOCOM-080511

Standard Modifications

Add the following Pay Items:

Lump Sum Items. Payment for lump sum items will be made as follows:

1. A percentage of the lump sum amount, to be determined by the Engineer, will be paid as full compensation for furnishing the facility at the site.

2. The balance of the lump sum amount will be prorated over the anticipated active construction period with a portion included as part of each interim payment, for maintenance, repairs, providing all utilities, and for removing it from the site. If anticipated construction period changes, the final increment will be held until final payment.

Nuclear Testing Equipment Storage Shed. At the Contract unit price to include labor, materials, tools, equipment, and supplies required to furnish and install the shed before beginning construction, to maintain it for the duration of the project and to remove the shed and electrical service after project completion. Electrical service and utility costs are subsidiary to this item.

Storage Container. At the Contract unit price to including labor, materials, tools, equipment and supplies required to deliver the storage container to the regional office for loading, to deliver it to the project office, to install it before beginning construction, to maintain it for the duration of the project, to remove the container and electrical service after project completion, to deliver it to the regional office for unloading, and to remove the storage container. Electrical service and utility costs are subsidiary to this item.

Add to Pay Items:

Pay Item No.	Pay Item	Pay Unit
644(15)	Nuclear Testing Equipment Storage Shed	Each
644(16)	Storage Container	Each

E44-012707REV

Special Provision

Add the following Section:

SECTION 645

TRAINING PROGRAM

645-1.01 DESCRIPTION. This Training Special Provision implements 23 CFR 230, Subpart A, Appendix B.

As part of the Equal Employment Opportunity Affirmative Action Program, the Contractor shall provide on-the-job training aimed at developing full journey status in the type of trade or job classification involved. The number of individuals to be trained and the number of hours of training to be provided under this contract will be as shown on the bid schedule.

645-2.01 OBJECTIVE. Training and upgrading of minorities and women toward journey status is the primary objective of this program. The Contractor shall enroll minorities and/or women, where possible, and document good faith efforts prior to the hire of non-minority males in order to demonstrate compliance with this Training Special Provision. Specific good faith efforts required under this Section for the recruitment and employment of minorities and women are found in the Federal EEO Bid Conditions, Form 25A-301, items 6.b, 6.c, 6.d, 6.e, 6.i, 6.j and 6.l, located in the "green pages" of this document.

645-3.01 GENERAL. The Contractor shall determine the distribution of the required number of apprentices/trainees and the required number of hours of training among the various work classifications based upon the type of work to be performed, the size of the workforce in each trade or job classification, and the shortage of minority and female journey workers within a reasonable area of recruitment.

Training will be provided in the skilled construction crafts unless the Contractor can establish prior to contract award that training in the skilled classifications is not possible on a project; if so, the Department may then approve training either in lower level management positions such as office engineers, estimators, and timekeepers, where the training is oriented toward construction applications, or in the unskilled classifications, provided that significant and meaningful training can be provided. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Credit for offsite training hours indicated above may only be made to the Contractor where the apprentices/trainees are concurrently employed on the project and the Contractor does one or more of the following: contributes to the cost of the training, provides the instruction to the apprentice/trainee, or pays the apprentice's/trainee's wages during the offsite training period.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

Prior to award of the contract, the Contractor shall submit Form 25A-311, Training Utilization Report, indicating the training program to be used, the number of apprentices/trainees to be trained in each selected classification, the number of hours of training to be provided, and the anticipated starting time for training in each of the classifications.

Training must begin within 2 weeks of the anticipated start date(s); unless otherwise authorized by a Directive. Such authorization will be made only after submission of documentation by the Contractor, and approval by the Engineer, of efforts made in good faith which substantiate the necessity for a change.

Contractors may use a training program approved by the U.S. Department of Labor, Bureau of Apprenticeship & Training (USDOL/OA), or one developed by the Contractor and approved prior to contract award by the Alaska Department of Transportation and Public Facilities (ADOT&PF) Training Program Representative, using Form 25A-310.

The minimum length and type of training for each classification will be established in the training program selected by the Contractor. Training program approval by the Department for use under this section is on a project by project basis.

It is expected that each apprentice/trainee will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist or until training has been completed. It is not required that apprentices/trainees be continuously employed for the duration of the contract.

If, in the judgment of the Contractor, an apprentice/trainee becomes proficient enough to qualify as a journey worker before the end of the prescribed training period and the Contractor employs that individual as a journey worker in that classification for as long as work in that area remains, the individual's training program will be considered completed and the balance of training hours required for that apprentice/trainee shall be waived.

The Contractor shall furnish each ADOT&PF training program trainee a copy of the program (Form 25A-310) to be followed during training on the project, and with written certification showing the type and length of training completed on the project. Existing USDOL/BAT apprentices should already have a copy of their program. No employee shall be employed for credit as an apprentice/trainee in a classification in which that employee has previously worked at journey status or has previously completed a training course leading to journey status.

The Contractor shall periodically review the training and promotion potential of minority and women employees and shall encourage eligible employees to apply for such training and promotion.

The Contractor shall provide for the maintenance of records and the furnishing of periodic reports documenting the progress of each apprentice/trainee. The Contractor must submit Form 25A-313 by the 15th of each month and provide each ADOT&PF trainee written evaluation reports for each unit of training provided as established on Form 25A-310.

645-3.02 WAGES. Trainees in ADOT&PF approved training programs will be paid prevailing Davis-Bacon fringe benefits plus at least 60 (but less than 100) percent of the appropriate minimum journey rate specified in the contract for the first half of the training period, at least 75 (but less than 100) percent for the third quarter of the training period, and at least 90 (but less than 100) percent for the last quarter of the training period. Trainee wages shall be identified on Form 25A-310. Apprentices in USDOL/BAT training programs shall be paid in accordance with their approved program. Beginning wages of each trainee/apprentice enrolled in a Section 645 Training Program on the project shall be identified on Form 25A-312.

645-3.03 SUBCONTRACTS. In the event the Contractor subcontracts a portion of the work, he shall determine how many, if any, of the apprentices/trainees are to be trained by the subcontractor. Any such subcontracts shall include this Section 645, Form 25A-311 and Form 25A-310, where appropriate. However, the responsibility for meeting these training requirements remains with the Contractor; compliance or non-compliance with these provisions rests with the Contractor and sanctions and/or damages, if any, shall be applied to the Contractor in accordance with subsection 645-5.01, Basis of Payment.

645-4.01 METHOD OF MEASUREMENT. The Contractor will be credited for each approved apprentice/trainee employed on the project and reimbursed on the basis of hours worked, as listed in the certified payrolls. There shall be no credit for training provided under this section prior to the Contractor's submittal and approval by the Engineer of Form 25A-312 for each apprentice/trainee trained under this Section. Upon completion of each individual training program, no further measurement for payment shall be made.

645-5.01 BASIS OF PAYMENT. Payment will be made at the contract unit price for each hour of training credited. Where a trainee or apprentice, at the discretion of the Contractor, graduates early and is employed as a journey worker in accordance with the provisions of subsection 645-3.01, the Contractor will receive payment only for those hours of training actually provided.

This payment will be made regardless of any other training program funds the Contractor may receive, unless such other funding sources specifically prohibit the Contractor from receiving other reimbursement.

Payment for training in excess of the number of hours specified on the approved Form 25A-311, may be made only when approved by the Engineer through Change Order.

Non-compliance with these specifications shall result in the withholding of progress payments until good faith efforts documentation has been submitted and acceptable remedial action has been taken.

Payment will be at the end of the project following the completion of all training programs approved for the project. No payment or partial payment will be made to the Contractor if he fails to do any of the following and where such failure indicates a lack of good faith in meeting these requirements:

1. provide the required hours of training (as shown on the approved Form 25A-311)

2. train the required number of trainees/apprentices in each training program (as shown on the approved Form 25A-311), or

3. hire the apprentice/trainee as a journey worker in that classification upon completion of the training program for as long as work in that area remains.

Failure to provide the required training damages the effectiveness and integrity of this affirmative action program and thwarts the Department's federal mandate to bring women and minorities into the construction industry. Although precise damages to the program are impractical to calculate, they are at a minimum, equivalent to the loss to the individuals who were the intended beneficiaries of the program. Therefore, where the Contractor has failed, by the end of the project, to provide the required number of hours of training and has failed to submit acceptable good faith efforts documentation which establishes why he was unable to do so, the Contractor will be assessed an amount equal to the following damages to be deducted from the final progress payment:

Number of hours of training not provided, times the journey worker hourly scale plus benefits. The journey worker scale is that for the classification identified in the approved programs.

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
645(1)	Training Program, One Trainee/Apprentice	Labor Hour

S99-092112

SECTION 646

CPM SCHEDULING

Special Provisions

646-2.01 SUBMITTAL OF SCHEDULE. Replace this Subsection with the following:

Submit a detailed initial CPM Schedule at the preconstruction conference for the Engineer's acceptance as set forth below.

The construction schedule for the entire Project shall not exceed the specified contract time. Allow the Engineer 14 days to review the initial CPM Schedule. Revise promptly. The finalized CPM Schedule must be completed and accepted before beginning work on the Project.

646-3.01 REQUIREMENTS AND USE OF SCHEDULE. Delete No. 2.

2. 60-Day Preliminary Schedule.

Delete the first sentence of No. 3. Schedule Updates. and substitute the following:

Hold job site progress meetings with the Engineer for the purpose of updating the CPM Schedule. Meet with the Engineer monthly or as deemed necessary by the Engineer.

CR261-121302

Special Provisions

Add the following Section:

SECTION 647

EQUIPMENT RENTAL

647-1.01 DESCRIPTION. This item consists of furnishing construction equipment, operated, fueled and maintained, on a rental basis for use in construction of extra or unanticipated work at the direction of the Engineer. Construction equipment is defined as that equipment actually used for performing the items of work specified and shall not include support equipment such as, but not limited to, hand tools, power tools, electric power generators, welders, small air compressors and other shop equipment needed for maintenance of the construction equipment.

The work is to be accomplished under the direction of the Engineer, and the Contractor's operations shall at all times be in accordance with the Engineer's instructions. These instructions by the Engineer shall be to the Contractor's supervisory personnel only, not to the operators or laborers. In no case shall these instructions by the Engineer be construed as making the Department liable for the Contractor's responsibility to prosecute the work in the safest and most expeditious manner.

647-2.01 EQUIPMENT FURNISHED. In the performance of this work, the Contractor shall furnish, operate, maintain, service, and repair equipment of the numbers, kinds, sizes, and capacities set forth on the Bid Schedule or as directed by the Engineer. The operation of equipment shall be by skilled, experienced operators familiar with the equipment.

The kinds, sizes, capacities, and other requirements set forth shall be understood to be minimum requirements. The number of pieces of equipment to be furnished and used shall be, as the Engineer considers necessary for economical and expeditious performance of the work. The equipment shall be used only at such times and places as the Engineer may direct.

Equipment shall be in first class working condition and capable of full output and production. The minimum ratings of various types of equipment shall be as manufactured and based on manufacturer's specifications. Alterations will not be considered acceptable in achieving the minimum rating. Equipment shall be replaced at any time when, in the opinion of the Engineer, their condition is below that normal for efficient output and production.

Equipment shall be fully operated, which shall be understood to include the operators, oilers, tenders, fuel, oil, air hose, lubrication, repairs, maintenance, insurance, and incidental items and expenses.

647-2.02 EQUIPMENT OPERATORS AND SUPERVISION PERSONNEL. Equipment operators shall be competent and experienced and shall be capable of operating the equipment to its capacity. Personnel furnished by the Contractor shall be, and shall remain during the work hereunder, employees solely of the Contractor.

The Contractor shall furnish, without direct compensation, a job superintendent or Contractor's representative together with such other personnel as are needed for Union, State, or Federal requirements and in servicing, maintaining, repairing and caring for the equipment, tools, supplies, and materials provided by the Contractor and involved in the performance of the work. Also, the Contractor shall furnish, without direct compensation, such transportation as may be appropriate for the personnel.

647-3.01 CONSTRUCTION REQUIREMENTS. The performance of the work shall be according to the instructions of the Engineer, and with recognized standards and efficient methods.

The Contractor shall furnish equipment, tools, labor, and materials in the kinds, number, and at times directed by the Engineer and shall begin, continue, and stop any of the several operations involved in the work only as directed by the Engineer.

Normally, the work is to be done when weather conditions are reasonably favorable, 6 days per week, Mondays through Saturdays, except holidays.

The Engineer will begin recording time for payment each shift when the equipment begins work on the project. The serial number and brief description of each item of equipment listing in the bid schedule and the number of hours, or fractions thereof to the nearest one quarter hour, during which equipment is actively engaged in construction of the project shall be recorded by the Engineer. Each day's activity will be recorded on a separate sheet or sheets, which shall be verified and signed by the Contractor's representative at the end of each shift, and a copy will be provided to the Contractor's representative.

647-4.01 METHOD OF MEASUREMENT. The number of hours of equipment operation to be paid for shall be the actual number of hours each fully operated specified unit of equipment, or each fully operated specified combination of units of equipment, is actually engaged in the performance of the specified work on the designated areas in accordance with the instruction of the Engineer. The pay time will not include idle periods, and no payment will be made for time used in oiling, servicing, or repairing of equipment, or in making changeovers of parts to the equipment. Travel time to or from the project, will not be authorized for payment. Hours paid shall be supported by certified payroll.

647-5.01 BASIS OF PAYMENT.

Payment for Item 647(5) Backhoe, 4WD, 1 cy Bucket, 75 hp Min, 15 ft Depth will be paid on a contingent sum basis on a per hour basis of $125.00/hour.

This shall be full compensation for furnishing, operating, maintaining, servicing, and repairing the equipment, and for incidental costs related to the equipment. Furnishing and operating of equipment of heavier type, larger capacity, or higher wattage than specified will not entitle the Contractor to any extra compensation.

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
647(5)	Backhoe, 4WD, 1 CY Bucket, 75 HP Min, 15 ft Depth	Contingent Sum

CR15-082405

(c) Gore Markings:
Diagonal gore markings will not be inlaid unless shown in the Plans.

g. Disposal of Waste. Waste material(s) are the Contractor's property. This includes grindings and removed marking material. Do not dispose of or store waste material(s) on State property. Dispose of waste material(s) according to applicable Federal, State, and local regulations.

h. Sampling. On the form provided by the Engineer, record the following readings and locations where they were taken using project stationing, and submit them to the Engineer with 24 hours for evaluation. Thickness of material and depth of slot are measured from the surface of the pavement.

SURFACE APPLIED

(1) For surface applied longitudinal applications, measure the thickness of the lines (above the pavement surface) at the time of application, every 500 feet.

(2) For surface applied other markings measure the thickness in three locations for each marking.

INLAID

(1) For inlay longitudinal applications, record the depth of the slot every 500 feet during the grinding operation.

(2) For inlay other markings measure the thickness in three locations for each marking.

Inspect the markings initially, and again two weeks after placement, to ensure the material has cured properly. Remove soft spots or abnormally darkened areas and replace with material meeting specifications.

The Engineer may elect to use the Contractor's readings or perform additional sampling.

Add the following:

Refer to the Survey Field Books identifying the no passing zones (see Subsection 642-3.01)

670-3.04 PAVEMENT MARKING REMOVAL. Add the following:

Coordinate removal work with construction activity. Remove pavement markings the same day permanent markings are applied, unless otherwise directed. Use vacuum shrouded equipment or other equally effective containment procedures.

Replace Subsection 3.06 with the following:

670-3.06 TOLERANCE FOR LANE STRIPING.

1. Length of Stripe. ± 2 inches.
2. Width of Stripe. ± 1/8 inch.
3. Lane Width. ± 4 inches from the width shown on the Plans.
4. Stripes on Tangent. Do not vary more than 1 inch laterally within a distance of 100 feet when using the edge of the stripe as a reference.
5. Stripes on Curves. Uniform in alignment with no apparent deviations from the true curvature.
6. All Stripes. Keep the center of the stripe within planned alignment.
7. Double Stripes. ± 1/4 inch.
8. Thickness of Surface Applied. Minimum specified to a maximum of + 30 mils.

9. Depth of Inlay Slot. Minimum specified to a maximum of + 40 mils.
10. Thickness of Inlaid Marking Material. Fill inlay area completely from the bottom of the inlay to the surface of the pavement.

If it is determined that the material is being placed too thin, the beads are not properly placed, the anti-skid aggregate is not visible, or otherwise not to specification, make immediate adjustments to correct the problem.

Pavement markings applied by any method will be unacceptable if:

1. Marking is not straight or wide enough.
2. Thickness of line is not uniform.
3. Thickness of line is less than specified.
4. Material is uncured.
5. Material blackens or is inconsistent in color.
6. Inlay slot is not the specified depth.
7. Inlay slot is not filled to the specified depth.
8. Edge of the markings is not clear cut and free of overspray.
9. Reflective elements are not properly embedded.
10. Retroreflectivity of the markings is less than specified.
11. Anti-skid aggregate is not visible in the marking material during application and the dried surface.
12. Markings exhibit poor adhesion.
13. Color is not as specified.

Perform repairs using equipment similar to the equipment initially used to place the materials. Do not perform repairs in a "patch work" manner. If more than one repair is required in a single 500 foot section, grind and repair the entire section.

670-4.01 METHOD OF MEASUREMENT. Add the following:

Thickness will be measured from the top of the marking to the top of the pavement surface. Marking material placed in a depression left by pavement line removal will not be included in measuring the thickness of the line.

Delete No. 2.

Delete No. 3 and replace with the following:

3. Each. Pavement markings using letters, numbers, and arrows will be measured on a unit basis with each separate word or symbol constituting a unit. Railroad Markings will be measured by the complete unit shown for each lane of travel.

Add the following No. 4:

4. Foot Basis. Longitudinal pavement markings, transverse, and gore markings, surface applied or inlaid will be measured by the linear foot of 4 inch wide line. Wider striping will be measured in multiples of 4 inches.

670-5.01 BASIS OF PAYMENT. Add the following:

For all phases of construction: There will be no separate payment for:

- Over-runs of material caused by the variation of the gradation of the asphalt

- Additional material required to achieve the thickness specified on open graded pavement

All work and materials associated with pavement markings are subsidiary to 670 items, including but not limited to:

- Milling for installation of the inlaid pavement markings including the removal of millings
- Temporary pavement markings and removal of conflicting markings, including repair of the roadway surface, milled surface or otherwise
- Traffic Control required for the installation of permanent and temporary pavement markings, removal of conflicting markings, and repairs

Replace Item 670(10) with the following:

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
670(10)	MMA Pavement Markings	Lump Sum

Delete Items 670(11) and 670(12).

CR246-110812

SECTION 702

ASPHALT MATERIALS
SECTION 702

Special Provision

702-2.01 ASPHALT CEMENTS. Meet AASHTO M 320 and the following:

ADDITIONAL REQUIREMENTS FOR PERFORMANCE GRADED ASPHALTS

Replace the column heading, **PG 64-28**, with, **PG 58-34.**

CR7021-102411

SECTION 703

AGGREGATES

Special Provisions

703-2.03 AGGREGATE FOR BASE.

Delete Table 703-2 and substitute the following:

TABLE 703-2
AGGREGATE FOR UNTREATED BASE
(Percent Passing By Weight)

Sieve Designation	Grading C-1	Grading D-1	Grading E-1
1 ½ inch	100	-	-
1 inch	70-100	100	100
3/4 inch	60-90	70-100	70-100
3/8 inch	45-75	50-79	50-85
No. 4	30-60	35-58	35-65
No. 8	22-52	20-47	23-50
No. 30	10-33	10-26	13-31
No. 50	6-23	6-19	10-26
No. 200	0-6	0-6	8-15

Replace Subsection 703-2.04 with the following:

703-2.04 AGGREGATE FOR HOT MIX ASPHALT PAVEMENT. Process and crush aggregate that is free from clay balls, organic matter, other deleterious material, and not coated with dirt or other finely divided mineral matter. Aggregate used must consist of sound, tough, durable rock of uniform quality.

Remove all natural fines passing a No. 4 sieve before crushing aggregates for Type IV, V and R mixtures.

Coarse Aggregate. Aggregate retained on the No. 4 Sieve.

Meet the following requirements:

Description	Specification	Type IIA	Type I, IIB, III	Type IV	Type V, R
LA Wear, % max	AASHTO T 96	45	45	45	45
Degradation Value, Min	ATM 313	30	30	30	30
Sodium sulfate Loss % max (5 cycles)	AASHTO T 104	9	9	9	9
Fracture, min %	WAQTC FOP for AASHTO TP 61	90, 2 face	80, 1 face	90, 2 face	98, 2 face
Flat-Elongated Pieces, max %	ATM 306				
1:5		8	8	8	8
1:3		20	-	-	20
Absorption, max. %	AASHTO T 85	2.0	2.0	2.0	2.0

Fine Aggregate. Aggregate passing the No. 4 sieve.

Aggregate shall meet the quality requirements of AASHTO M 29, including S1.1, Sulfate Soundness.

Aggregate for Type II, Class A mix shall not contain more than 10% natural fines (blend sand and mineral filler) added to the crushed aggregate.

Aggregate for Type IV, V, and R mixes:
- do not blend back natural sand
- shall be non-plastic as determined by WAQTC FOP for AASHTO T 90
- shall have a minimum uncompacted void content (Fine Aggregate Angularity) determined by AASHTO T 304, Method A, of 45%

TABLE 703-3
BROAD BAND GRADATIONS FOR HOT MIX ASPHALT PAVEMENT AGGREGATE
(Percent Passing by Weight)

Sieve	Gradation					
	Type I	Type II	Type III	Type IV	Type V	Type R
1 inch	100	-	-	-	-	-
3/4 inch	80-90	100	-	-	100	100
1/2 inch	60-84	75-90	100	100	65-90	70-100
3/8 inch	48-78	60-84	80-90	80-95	55-80	50-70
No. 4	28-63	33-70	44-81	55-70	40-60	30-42
No. 8	14-55	19-56	26-70	35-50	≤ 45	20-32
No. 16	9-44	10-44	16-59	20-40	≤ 35	15-25
No. 30	6-34	7-34	9-49	15-30	≤ 25	10-20
No. 50	5-24	5-24	6-36	10-24	≤ 20	7-15
No. 100	4-16	4-16	4-22	5-15	≤ 12	5-12
No. 200	3-8	3-8	3-8	4-8	3-8	4-10

Note:
1. No tolerance is allowed beyond the Broad Band Limits of the No. 200 Sieve.
2. For Type R, the mix design gradation JMD shall provide a minimum of 8% difference of percent passing the No. 4 and the No. 8 sieve.

CR7031-053112

Standard Modification

Add new subsection 703-2.15.

703-2.15 CRUSHED GLASS. Up to 10% by weight crushed glass (cullet) smaller than 3/8-inch may be uniformly blended with natural soil-aggregate material prior to project delivery and placement. Glass cullet must be free of soil, paper, plastic, metals, organic material and other deleterious and hazardous substances. No more than 2.0% debris should be present as determined by Section X3 of AASHTO M318.

Eligible glass products from which glass cullet might be produced include: food and beverage container glass; plain ceramic or china dinnerware; or building window glass.

Prohibited glass products include: automobile windshields or other glass from automobiles; light bulbs of any type; porcelain products; laboratory glass; television, computer or other cathode ray monitor tubes.

Provide documentation certifying that the glass cullet:

1. Showing the origin of the glass products,
2. Does not contain prohibited materials,
3. Meets debris content requirement.

Uniformly blend glass cullet and natural soil-aggregate and meet the following gradation requirements for the type specified:

TABLE 703-13

Type (Section)	Section/Table
Selected material (203-3.03)	Section 703-2.07
Base Course (301)	Table 703-2
Subbase (304)	Table 703-8

For the natural soil-aggregate used in the blend, meet quality requirements as shown in Table 703-1, Section 703-2.07, or Section 703-2.09 for the type specified.

E95-080112

SECTION 707

METAL PIPE

Standard Modification

Delete Subsection 707-2.07 and replace with the following:

707-2.07 GALVANIZED STEEL WATER CONDUIT. Meet the following:

Galvanized Pipe	ASTM A 53 or ASTM A 120, galvanized according to AASHTO 111
Galvanized Fittings	ASTM A 234 galvanized according to AASHTO M 232

E17-063004

SECTION 710

FENCE AND GUARDRAIL

Special Provisions

710-2.03 CHAIN LINK FABRIC.

In the 1st sentence between the parenthesis, replace "Class D" with the following:

(Class C or D coating)

CR7101-110410

Standard Modification

Delete Subsection 710-2.04 METAL BEAM RAIL and replace with the following:

710-2.04 METAL BEAM RAIL. Meet AASHTO M 180-00, Class A, Type II. Galvanize the rail per ASTM A653 after factory roll formed and punched.

E83-100410

Delete Subsection 710-2.06 GUARDRAIL POSTS AND BLOCKS and replace with the following:

710-2.06 GUARDRAIL POSTS AND BLOCKS. Furnish posts and blocks, as specified, meeting the following requirements.

1. Wood Posts and Blocks. Use timber with a stress grade of 1200 psi or more. Testing must meet the standards of the West Coast Lumber Inspection Bureau. Use timber for posts and blocks that is either rough sawn (unplaned) or S4S with nominal dimensions indicated. Allowable size tolerance of rough sawn blocks in the direction of the bolt holes is ± 1/4 inch. Only one combination of post and block finish may be used for any one continuous length of guardrail. Treat all timber to meet Section 714.

2. Steel Posts and Blocks. Meet the section and length specified or shown on the Plans. Use copper bearing steel when so specified. Use steel meeting the requirements of ASTM A 36 and galvanized per ASTM A 123.

3. Synthetic Blocks. Product made from alternate materials may be used if accepted by the FHWA for use on the National Highway System.

E84-100410

Delete Subsection 710-2.11 GUARDRAIL TERMINALS and replace with the following:

710-2.11 GUARDRAIL TERMINALS. Meet coating requirements of AASHTO M 180, Class A, Type II. Galvanize after fabrication. Fabrication includes forming, cutting, shearing, punching, drilling, bending, welding, and riveting. Provide one of the following terminal types, as shown on the plans, for single-rail W-beam guardrail. Provide terminals that pass NCHRP 350 or MASH Test Level 3 and meet the following requirements:

1. Controlled Release Terminal. Meet the requirements of Standard Drawing G-25.

2. Parallel Terminal.

   a. Requirements:
      (1) Crashworthiness: Provide terminals that pass NCHRP 350 or Mash Test Level 3.
      (2) Length: 50 feet.
      (3) End Offset: 0 to 2 feet (25:1 or flatter straight taper) offset end as shown on the plans.
      (4) Posts: Use posts that are:
         (a) Steel post with hinge or
         (b) Yielding or breakaway steel post in steel tube

   b. Acceptable models include the following or approved equivalent:
      (1) Sequential Kinking Terminal (SKT) manufactured by Road Systems, Inc., 3616 Old Howard County Airport, Big Spring, Texas 79720, Telephone (432) 263-2435.
      (2) Extruder Terminal (ET-Plus) manufactured by Trinity Highway Products, L.L.C., 950 West 400 South, Centerville, Utah 84014, Telephone (801) 292-4461.

   c. Install AASHTO M 268, Type III, IV, or V retro-reflective sheeting (2.0 square feet, minimum) on the end section of parallel terminals consisting of yellow and black bars sloping 45 degrees downward toward the traffic side of the terminal.

3. Buried in Backslope Terminal. Meet the requirements of Standard Drawing G-15.

E85-100410

SECTION 712

MISCELLANEOUS

Standard Modifications

712-2.06 FRAMES, GRATES, COVERS, AND LADDER RUNGS. In Gray iron castings, delete text and replace with:

AASHTO M 306 and AASHTO M 105, Class 35B.

E46-012707

Special Provisions

712-2.17 METHYL METHACRYLATE PAVEMENT MARKINGS. Replace No. 1. Quality Requirements: with the following:

1. Quality Requirements: Use a marking material formulated for the application type specified. Use a marking material manufactured from new materials and free from dirt and other foreign material. Use a methyl methacrylate based resin system for part "A". Use benzoyl peroxide system for part "B".

   Extruded or stenciled application: Material formulated for extruded or direct stenciled application with factory intermix beads, and anti skid aggregate and the application of additional surface applied beads.

   Submit a manufacturer certification for both the methyl methacrylate material, glass beads and anti-skid aggregate to ensure that the materials furnished conform to these Specifications.

2. Performance Properties: Add the following:

   I. Color: Yellow, PR-1 Chart, 33538 Federal Yellow. White, minimum daylight reflectance of 84.

712-2.18 GLASS BEADS FOR METHYL METHACRYLATE PAVEMENT MARKINGS. Replace the bead table with the following:

Use the type and quantity of beads specified in writing by the marking material manufacturer required to satisfy the specified performance requirements. The written certification will note the bead coating is compatible with the marking material binder.

1. Bead Manufacturer and Type.

   a. Swarco, Megalux-Beads or
   b. Approved equal beads

   Approved Equal Beads. Equal beads will demonstrate:

   (1) Bead coatings compatible with marking materials. Marking Material Manufacturer will certify compatibility.
   (2) Lasting retro reflectivity.

CR246-010109

SECTION 724

SEED

Special Provision

724-2.02 MATERIALS.

Delete Table 724-1 and replace with the following:

TABLE 724-1
SEED REQUIREMENTS

Species	Sproutable Seed, %, Min.
Arctared Red Fescue	78
Egan American Sloughgrass	67
Norcoast Bering Hairgrass	71
Nortran Tufted Hairgrass	71
Wainwright Slender Wheatgrass	88
Alyeska Polargrass	71
Bluejoint	71
Tilesy Sagebrush	71
Tundra Glaucous Bluegrass	76
Gruening Alpine Bluegrass	72
Nugget Kentucky Bluegrass	76
Beach Wildrye	70
Annual Ryegrass	76
Perennial Ryegrass	76

*Sproutable Seed is the mathematical product of Germination and Purity.

CR7241-101711

SECTION 726

TOPSOIL

Special Provision

Delete Subsection 726-2.01, except for Table 726-1 and replace with the following:

726-2.01 TOPSOIL. Furnish topsoil that is representative of the existing, natural organic blanket of the project area. Perform a quality test, as defined by ATM 203, on the soil to determine the organic content of the soil. Supply the results to the Engineer.

Soil with an organic content of 5 percent or more may be reused and spread on the finished slopes where topsoil is noted on the plans. Remove roots, stumps, unnatural material, and rocks greater than 3 inch in diameter from the organic material before it is graded onto the finished slope.

Soil with an organic content of less than 5 percent cannot be used as topsoil for the project. In this case furnish topsoil consisting of a natural friable surface soil without admixtures of undesirable subsoil, refuse or foreign materials having an organic content of 5 percent or more, as determined by ATM 203. The material shall be reasonably free from roots, clods, hard clay, rocks greater than 3 inches in diameter, noxious weeds, tall grass, brush, sticks, stubble or other litter, and shall be free draining and nontoxic. Notify the Engineer of the topsoil source location at least 30 calendar days before delivery of topsoil to the project from the identified location. The Engineer will inspect the topsoil and its sources before approval will be granted for its use.

CR208-112707

SECTION 730

SIGN MATERIALS

Standard Modification

Delete Subsection 730-2.01 SHEET ALUMINUM and replace with the following:

730-2.01 SHEET ALUMINUM. Use alloy 6061-T6, 5052-H36, 5052-H38, or recycled aluminum meeting alloy 3105, as specified in ASTM B 209. Meet the thickness of aluminum sheet designated on the Plans. Verify alloy and temper designation by mill certification.

Before January 1, 2011, treat the aluminum base metal sheets with chromate conversion coating for aluminum to meet ASTM B449, Class 2.

After January 1, 2011, treat the aluminum base metal sheets with a rinsed non-hexavalent chromium conversion coating for aluminum and aluminum alloys that meets ASTM B 921, class one. Handle the cleaned and coated base metal only by a mechanical device or by operators wearing clean cotton or rubber gloves. After cleaning and coating operations, protect the panels at all times from contact or exposure to greases, oils, dust, or other contaminants.

Make each sign panel a continuous sheet for all lengths 72 inches or less in the horizontal direction. Use no more than one vertical splice for signs up to 144 inches in length and 48 inches or less in height.

Meet the panel dimensions specified with a tolerance of 1/16 inch. Furnish metal panels that are cut to size and shape and free of buckles, warp, dents, cockles, burrs, and any other defects resulting from fabrication. Complete all possible fabrication, including shearing, cutting, and punching of holes prior to the base metal preparation.

E86-041210

Special Provision

730-2.04 SIGN POSTS.

Add No. 7:

7. Structural Tubing and W-Shape Beams.

   a. Structural tubing shall conform to ASTM A500, Grade B, or ASTM A501. The tubing shall be square and of the dimensions called for in the Plans with 0.2 inch thick walls. 0.4 inch diameter holes shall be drilled as required to permit mounting of the sign.

   b. W-shape beams shall conform to ASTM A36.

   c. Structural tubing and W-shape beams shall be hot dip galvanized according to 1.b. of this subsection. Damaged and abraded tubes and beams shall be repaired according to 1.c. of this subsection.

CR81-062204

INDEX

Standard Modification

INDEX Remove the text. *"Approved Products List" and replace with: Qualified Products List*

E36-012707