STATE OF IDAHO
TRANSPORTATION DEPARTMENT
BOISE

CONTRACT NO. 9042

PROJECT	A023(889)
KEY	23889
WORK AUTH	T236190
LOCATION	STC-7316, 5TH E (HOLMES AVE) & 49TH SOUTH SIGNAL
HIGHWAY	OFF SYS
COUNTY	BONNEVILLE

CONTRACTOR

SUNCORE CONSTRUCTION AND MATERIALS
901 PIER VIEW DRIVE, SUITE 201
IDAHO FALLS, ID 83402

RESIDENT ENGINEER

T. MATT KOSTER (LHTAC)
208-530-7455
mkoster@lhtac.org

NOTICE OF LETTING

Idaho Federal Aid Project No. A023(889), in Bonneville County, Key No. 23889; for the work of installing a Traffic Control Signal, constructing dedicated turn lanes along with associated intersection improvements.

Sealed proposals will only be received by one of these three options:

- **at the office** of the IDAHO TRANSPORTATION DEPARTMENT, 11331 WEST CHINDEN BLVD. BLDG #8, BOISE, IDAHO 83714 bid box slot **#4** located in lobby ATTN: ADVERTISEMENT AND AWARD, with the Key No. and Contractor name on outside of envelope marked "Bid Enclosed".

- **USPS** - IDAHO TRANSPORTATION DEPARTMENT, PO Box 40, BOISE, IDAHO 83707-0040 ATTN: ADVERTISEMENT AND AWARD. on the Sealed envelope inside please include the Key No., Contractor name and "Bid Enclosed".

- **FedX/UPS** - IDAHO TRANSPORTATION DEPARTMENT, 3311 W. STATE STREET, BOISE, ID 83703 ATTN: ADVERTISEMENT AND AWARD, on the Sealed envelope inside please include the Key No., Contractor name and "Bid Enclosed".

Bids may also be submitted electronically through Bid Express (www.bidx.com). All bids must be received by two o'clock p.m., on June 2, 2026.

For any design related questions, please submit through QuestCDN. Instructions on how to use this process and general bidding information are located on the Notice to Contractors page.

Digital copies of the Plans, Proposals, and Specifications must be downloaded for a fee of $22.00. **Bidders must appear on the plan holders list for their proposal to be accepted by the Department.** Please contact QuestCDN.com at 952-233-1632 or info@questcdninfo.com for assistance in downloading and working with this digital project information.

In an effort to achieve ITD's DBE Annual Participation Goal (APG) of 10.11% utilization, ITD requires responder to utilize certified subcontractors and suppliers listed on its DBE Directory located at: https://itd.dbesystem.com/. For this project, it has been determined that there is a DBE availability of 0.0% or more. For more information regarding ITD's DBE Program please go to https://itd.idaho.gov/civilrights/

This contract requires full compliance with Title VI of the Civil Rights Act of 1964, which protects persons from being denied the benefits of or excluded from participation in programs or activities; or subjected to discrimination based on race, color, national origin, sex, age, disability, Limited English Proficiency or economic status. The Contractor is encouraged to utilize the goods and services of disadvantaged firms in accomplishing the tasks or providing the services of this agreement, and to provide equal opportunity to all sub-bidders and suppliers.

CONTRACT AGREEMENT

THIS AGREEMENT, made and entered into, in duplicate, this 11 day of June, 2026, by and between the State of Idaho, hereinafter called the State, by the Idaho Transportation Board of said State, party of the first part, and SUNCORE CONSTRUCTION AND MATERIALS, hereinafter called the Contractor, party of the second part.

ITD TO DATE UPON AWARD

WITNESSETH: That the contractor, in consideration of the sum to be paid to him by said State, in the matter and at the time hereinafter provided, and of other covenants and agreements herein contained, hereby agrees for themself, their heirs, administrators, successors and assigns to furnish the material and perform the work of: installing a Traffic Control Signal, constructing dedicated turn lanes along with associated intersection improvements; in Bonneville County, designated as Idaho Federal Aid Project No. A023(889).

To furnish all necessary machinery, tools, apparatus, materials and labor to complete the work in the most substantial and workmanlike manner according to the plans and specifications therefore on file in the office of the Idaho Transportation Department of said State, and such modifications of the same and other directions that may be made by the State Highway Administrator as provided herein: Provided, however, that the proposed work covered by this contract does not include that portion or portions of the work to be done in right of way to which title is being contested in any court having jurisdiction, until a specific award has been made by the court in each instance and in good and sufficient title to such portion of right of way in dispute has been assured.

CONTRACT DOCUMENTS:

It is further agreed that the said plans and specifications and the schedule of rates and prices set forth in the proposal and the general and special provisions appended to this contract agreement are hereby specifically referred to and made a part of this contract, and shall have the same force and effect as though all of same were fully inserted herein.

PAYMENTS:

For the faithful performance of the work herein embraced, as set forth in the contract agreement, general and special provisions, notice to contractors, instructions to bidders, proposals, general and detailed specifications and plans, which are a part hereof, in accordance with the directions of the State Highway Administrator and to his satisfaction, the State agrees to pay said Contractor the amount earned, computed from the actual quantities of the work performed as shown by the estimates of the Administrator and unit prices named in such proposal, and to make such payments in the manner and at the time provided in such proposal, and to make such payments in the manner and at the time provided in the general provisions thereto appended. Payments shall be made by the State Treasurer of said State, upon warrants of the State Auditor of said State, issued upon vouchers of said State Highway Administrator, which have been approved by the Idaho Transportation Board out of monies legally available for that purpose.

IN WITNESS WHEREOF, The said State of Idaho, by the Idaho Transportation Board, executes this contract and the said SUNCORE CONSTRUCTION AND MATERIALS, does sign and seal the same, the day and year in this contract first above written.

Attest (The State):

I hereby attest that all contract documentation has been checked and included in this final contract, as appropriate.

Karen Hanna

Contracts Manager

STATE OF IDAHO
Idaho Transportation Board

By: Chief Engineer/Div. Admin. Const & Ops

Chief Engineer/Div. Admin. Const & Ops
Party of the First Part

TRANSPORTATION BOARD STATE OF IDAHO

CONTRACTOR

Pursuant to Idaho Code Section 9-1406 "I certify (or declare) under penalty of perjury pursuant to the law of the State of Idaho that the foregoing is true and correct." The undersigned is duly authorized to sign this document on behalf of the above referenced company.

Dave Clifford
Dave Clifford (Jun 8, 2026 11:59:26 MDT)

Signature

Dave Clifford

Print Name

Area Manager

Title
Party of the Second Part

Jun 8, 2026

Date

Seal

Bond No. 108499391 Revised 09-09-2021

SURETY

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, That we SUNCORE CONSTRUCTION AND MATERIALS, as Principal, and Travelers Casualty and Surety Company of America

as Surety are held and firmly bound unto the State of Idaho in the penal sum of

ONE MILLION TWO HUNDRED THIRTY SEVEN THOUSAND TWO HUNDRED EIGHTY NINE DOLLARS ($1,237,289.00) lawful money of the United States, which sum is agreed to be the maximum liability hereunder, well and truly to be paid, and for the payment of which we and each one of us bind ourselves, our heir, executors, administrators and assigns, jointly and severally, firmly by these presents.

The condition of the instrument is such, that whereas the Principal has entered into a certain agreement, hereto attached, with the State of Idaho, dated June 11, 20 26, for the work of installing a Traffic Control Signal, constructing dedicated turn lanes along with associated intersection improvements; STC-7316, 5th E (HOLMES AVE) & 49th SOUTH SIGNAL; known as IDAHO FEDERAL AID Key No. 23889 Contract No. 9042, in Bonneville County.

ITD TO DATE UPON AWARD

NOW, THEREFORE, If the said Principal shall pay all claimants supplying labor or materials to him or his subcontractors in the prosecution of the work provided for in said contract, and any and all authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being hereby waived and shall pay all taxes when due, as required by Title 63, Chapter 15, Idaho Code, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, However, that this bond is executed pursuant to the provisions of the Public Contracts Bond Act, and all liabilities on this bond shall be determined in accordance with said provisions to the same extent as if set forth in full herein.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument to become effective on the date of the contract agreement as set forth above.

CONTRACTOR:

By:

Dave Clifford

Dave Clifford (Jun 8, 2026 11:59:26 MDT)

Signature

Dave Clifford

Print Name

Area Manager

Title

CORPORATE SURETY:

Travelers Casualty and Surety Company of America

Surety Company Name

By:

Lindsey Carcamo

Signature

Lindsey Carcamo

Print Name

Attorney-in-Fact

Title

801-685-6865

Phone Number

lcarcamo@beehiveinsurance.com

Email Address

Bond No. 108499391 Revised 09-09-2021

SURETY

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, That we SUNCORE CONSTRUCTION AND MATERIALS, as Principal, and Travelers Casualty and Surety Company of America

as Surety are held and firmly bound unto the State of Idaho in the penal sum of

ONE MILLION TWO HUNDRED THIRTY SEVEN THOUSAND TWO HUNDRED EIGHTY NINE DOLLARS ($1,237,289.00) lawful money of the United States, which sum is agreed to be the maximum liability hereunder, well and truly to be paid, and for the payment of which we and each one of us bind ourselves, our heir, executors, administrators and assigns, jointly and severally, firmly by these presents.

The condition of the instrument is such, that whereas the Principal has entered into a certain agreement, hereto attached, with the State of Idaho, dated June 11, 20 26, for the work of installing a Traffic Control Signal, constructing dedicated turn lanes along with associated intersection improvements; STC-7316, 5th E (HOLMES AVE) & 49th SOUTH SIGNAL; known as IDAHO FEDERAL AID Key No. 23889 Contract No. 9042, in Bonneville County.

ITD TO DATE UPON AWARD

NOW, THEREFORE, If the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract and any extensions thereof that may be granted by the State, with or without notice to the Surety and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then this obligation to be null and void, otherwise to remain in full force and effect.

PROVIDED, However, that this bond is executed pursuant to the provisions of the Public Contracts Bond Act, and all liabilities on this bond shall be determined in accordance with said provisions to the same extent as if set forth in full herein.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument to become effective on the date of the contract agreement as set forth above.

CONTRACTOR:

By:

Dave Clifford
Dave Clifford (Jun 8, 2026 11:59:26 MDT)

Signature

Dave Clifford

Print Name

Area Manager

Title

CORPORATE SURETY:

Travelers Casualty and Surety Company of America

Surety Company Name

By:

Lindsey Carcamo

Signature

Lindsey Carcamo

Print Name

Attorney-in-Fact

Title

801-685-6865

Phone Number

lcarcamo@beehiveinsurance.com

Email Address

ATTACH POWER OF ATTORNEY
CB-2-B

☑ ☑

STATE OF IDAHO

TRANSPORTATION DEPARTMENT

BOISE, IDAHO

DATE: May 20, 2026

ADDENDUM NO. 1

Idaho Federal Aid Project No. A023(889)
STC-7316, 5th E (HOLMES AVE) & 49th SOUTH SIGNAL
Bonneville County, Key No. 23889

NOTICE TO PLANHOLDERS:

Enclosed is the Revised Davis-Bacon Wage Reference Sheet, ID260093 for Bonneville County, dated 05/18/2026.

This **letter** must be included with your hard copy bid. If submitting bid electronically, bidder must acknowledge this addenda, by inclusion of the amendment, in the electronic bid

FAILURE TO ACKNOWLEDGE INCLUSION OF THIS ADDENDUM SHALL RENDER THE BID PROPOSAL IRREGULAR AND THE BID WILL BE REJECTED.

Sincerely,

Karen Hanna
Contracts Manager

STATE OF IDAHO

TRANSPORTATION DEPARTMENT

BOISE, IDAHO

DATE: May 21, 2026

ADDENDUM NO. 2

Idaho Federal Aid Project No. A023(889)
STC-7316, 5th E (HOLMES AVE) & 49th SOUTH SIGNAL
Bonneville County, Key No. 23889

NOTICE TO PLANHOLDERS:

Enclosed is the Revised Page 1 of 16 of the Special Provisions.

This **letter** must be included with your hard copy bid. If submitting bid electronically, bidder must acknowledge this addenda, by inclusion of the amendment, in the electronic bid

FAILURE TO ACKNOWLEDGE INCLUSION OF THIS ADDENDUM SHALL RENDER THE BID PROPOSAL IRREGULAR AND THE BID WILL BE REJECTED.

Sincerely,

Karen Hanna
Contracts Manager

Proposal

In compliance with your bid package to be received for this letting, the undersigned certifies to have examined the location of work and/or materials sites, and is satisfied as to the condition to be encountered, and that the plans, specifications, contract and method of payment for such work is understood. The undersigned hereby proposes to furnish the material and perform the work as described in the Notice of Letting in accordance with the Proposal/Plans purchased through QuestCDN for this project.

On the acceptance of this proposal for said work, the undersigned will execute Contract Forms CA in accordance with the bid as accepted, and furnish the Contract Performance and Payment Bonds on Forms CB with approved and sufficient surety within 15 days after the prescribed forms are presented for signature.

The bidder further agrees that, if awarded, the contract work will be completed as stated in the Special Provisions, after authority to proceed has been given in conformity with and subject to such extensions as may be authorized by the terms of Extension of Contract Time of the Standard Specifications.

Accompanying this proposal is a Certified Check or a Cashier's Check drawn on an Idaho bank in the amount of five percent of the total amount bid, made payable to the Idaho Transportation Department, or a Bidder's Bond in the amount of five percent of the total amount bid.

The undersigned being duly sworn upon oath deposes and says that it complies with the provisions of Section 72-1717 Idaho Code (Drug Free Workplace program).

The contractor warrants and takes the steps to verify that it does not knowingly hire or engage persons not authorized to work in the United States; and that any misrepresentation in this regard or any employment of person not authorized to work in the United States constitutes a material breach and shall be cause for the imposition of monetary penalties up to five percent (5%) of the contract price, per violation, and/or termination of its contract.

By signature on this proposal, the bidder declares under penalty of perjury under the laws of the United States, that the firm, association, or corporation has not by or through any of its officers, partners, owners, or any other person associated therewith, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this highway project, and is not financially interested in or otherwise affiliated in a business way with any other bidder on this project.

Legal Company Name: Suncore Construction And Materials, Inc.

Company Business Address: 901 Pier View Drive, Suite 201, Idaho Falls, ID 83402

Mailing (Shipping) Address, if different or N/A: N/A

Company organized under the state of: Utah

Legal Name of Highest Officer in Company: Mark Elder

Title of Highest Officer in Company: President

Contact Name: Steve Giles

Title of Contact: Sr. Estimator

Contact Phone No.: 208-821-1302 Email: stgiles@suncore.build

Idaho Public Works License No.: PWC-C-17452-U-1-4 Exp. Date: 11-30-2026

Unique Entity Identifier (UEI): Q8RNY8VA6JL5

Submittal, signature, acceptance, authorization and certifications are hereby made by signing this internet bid with a Digital ID. ***

State of Idaho
Idaho Transportation Department
Schedule of Items

LINE NUMBER	ITEM NUMBER	QUANTITY	UNIT	UNIT PRICE	EXTENSION PRICE
SECTION 001 Work by Contract A023(889)					
0005	107-019A SURVEY MONUMENT PRESERVATION	2000.000	CA	$1.00000	$2,000.00
0010	202-005A SELECTIVE REMOVAL OF TREES INCLUDING STUMPS	6.000	EACH	$800.00000	$4,800.00
0015	203-006A REMOVAL OF SIGN	9.000	EACH	$200.00000	$1,800.00
0020	203-015A REMOVAL OF BITUMINOUS SURFACE	2400.000	SY	$4.00000	$9,600.00
0025	203-055A REMOVAL OF CONCRETE PAVEMENT	11.000	SY	$90.00000	$990.00
0030	203-130A REMOVAL OF PAVEMENT MARKINGS	516.000	FT	$5.00000	$2,580.00
0035	205-005A EXCAVATION	5100.000	CY	$19.00000	$96,900.00
0040	205-060A WATER FOR DUST ABATEMENT	210.000	MG	$33.00000	$6,930.00
0045	205-071A EXCAVATION AND REPAIR OF SOFT SPOTS	100.000	CY	$60.00000	$6,000.00
0050	212-011A FIBER WATTLE	1490.000	FT	$2.50000	$3,725.00
0055	212-020A SILT FENCE	820.000	FT	$3.50000	$2,870.00
0060	212-060A STABILIZED CONSTRUCTION ENTRANCE	4.000	EACH	$3,200.00000	$12,800.00
0065	212-095A INLET PROTECTION	2.000	EACH	$200.00000	$400.00
0070	212-105A WATER AND POLLUTION	5000.000	CA	$1.00000	$5,000.00
0075	301-005A GRANULAR SUBBASE	6500.000	TON	$17.00000	$110,500.00
0080	303-022A 3/4" AGGREGATE TYPE B FOR BASE	2600.000	TON	$25.00000	$65,000.00
0085	307-010A OPEN-GRADED BASE CLASS I	190.000	TON	$115.00000	$21,850.00
0090	401-020A CSS-1 DILUTED EMULSIFIED ASPHALT FOR TACK COAT	1300.000	GAL	$4.00000	$5,200.00
0095	405-245A APPROACH	10.000	EACH	$2,150.00000	$21,500.00
0100	405-435A SUPERPAVE HMA PAVEMENT INCLUDING ASPHALT & ADDITIVES CLASS SP-3	1750.000	TON	$105.00000	$183,750.00
0105	431-005A	2930.000	SY	$5.00000	$14,650.00

		COLD MILLING			
0110	605-025A	72.000	FT	$95.00000	$6,840.00
		12" STORM SEWER PIPE			
0115	605-500A	2.000	EACH	$4,200.00000	$8,400.00
		CATCH BASIN TYPE 1			
0120	605-640A	1.000	EACH	$770.00000	$770.00
		ADJUST VALVE COVERS			
0125	614-015A	685.000	SY	$76.00000	$52,060.00
		SIDEWALK			
0130	614-020A	22.000	SY	$175.00000	$3,850.00
		DRIVEWAY			
0135	614-025A	89.000	SY	$205.00000	$18,245.00
		CURB RAMP (PERPENDICULAR)			
0140	615-491A	825.000	FT	$35.00000	$28,875.00
		CURB & GUTTER TYPE 1			
0145	616-010A	10.000	SF	$30.00000	$300.00
		SIGN TYPE B-1			
0150	616-040K	10.500	FT	$200.00000	$2,100.00
		STEEL SIGN POST TYPE E-2			
0155	616-080A	2.000	EACH	$125.00000	$250.00
		REINSTALL SIGN FACE			
0160	616-085A	2.000	EACH	$800.00000	$1,600.00
		REINSTALL SIGN POST			
0165	626-010A	694.000	SF	$10.00000	$6,940.00
		TEMPORARY TRAFFIC CONTROL SIGNS			
0170	626-040A	12.000	EACH	$600.00000	$7,200.00
		BARRICADE TYPE 3			
0175	626-100A	1000.000	CA	$1.00000	$1,000.00
		MISCELLANEOUS TEMPORARY TRAFFIC CONTROL ITEMS			
0180	626-105A	320.000	HR	$55.00000	$17,600.00
		TEMPORARY TRAFFIC CONTROL MAINTENANCE			
0185	630-005A	1174.000	SF	$4.00000	$4,696.00
		TRANSVERSE, WORD, SYMBOL, AND ARROW PAVEMENT MARKINGS - WATERBORNE			
0190	630-025A	16760.000	FT	$0.30000	$5,028.00
		LONGITUDINAL PAVEMENT MARKING - WATERBORNE			
0195	640-005A	400.000	SY	$3.30000	$1,320.00
		DRAINAGE GEOTEXTILE			
0200	640-015A	6600.000	SY	$2.50000	$16,500.00
		SUBGRADE SEPARATION GEOTEXTILE			
0205	651-010A	1500.000	SF	$1.90000	$2,850.00
		LAWN CONSTRUCTION (SODDED)			
0210	656-065A	1.000	EACH	$12,000.00000	$12,000.00
		COMBINED CABINET & SERVICE PEDESTAL FOUNDATION			
0215	675-005A	1.000	LS	$22,000.00000	$22,000.00
		SURVEY			
0220	675-010A	5000.000	CA	$1.00000	$5,000.00
		DIRECTED SURVEYING			
0225	S501-15A	190.000	SF	$40.00000	$7,600.00

		RETAINING WALL KEYSTONE BLOCK			
0230	S604-05A	1.000	LS	$7,000.00000	$7,000.00
		REM & RESET IRR			
0235	S610-05A	333.000	FT	$30.00000	$9,990.00
		REM & RESET FENCE			
0240	S900-50A	10000.000	CA	$1.00000	$10,000.00
		CONTINGENCY AMOUNT MISCELLANEOUS WORK			
0245	S901-05A	1.000	EACH	$600.00000	$600.00
		SP REMOVE AND RESET MAILBOX			
0250	S904-05A	1.000	LS	$25,000.00000	$25,000.00
		SP MANHOLE AND SEEPAGE BED			
0255	S904-05B	1.000	LS	$213,000.00000	$213,000.00
		SP INSTALL TRAFFIC SIGNAL			
0260	S911-05A	282.000	FT	$45.00000	$12,690.00
		SP REMOVE AND RESET FENCE (VINYL THREE RAIL)			
0265	S912-05A	238.000	SY	$30.00000	$7,140.00
		SP LANDSCAPE REPAIR			
0270	Z629-05A	1.000	LS	$140,000.00000	$140,000.00
		MOBILIZATION			
Section 001 Total					$1,237,289.00

Item Total	$1,237,289.00

Failure to complete this form as required shall render the bid unresponsive and void.

LICENSE REQUIREMENTS FOR PLUMBING, ELECTRICAL AND HVAC WORK

The Contractor must comply with Idaho Code Section 67-2310. The bidder shall provide the name, address, Division of Building Safety License Number,and Public Works Contractors License Number of the firm(s) who shall, in the event the Contractor secures the contract, complete the plumbing, electrical, or HVAC work under the contract.

For Federal Aid Projects, securing an Idaho Public Works Contractors License may not be required until award, as stated in Subsection 107.03 - Licensing of Contractors.

No bidder shall name any subcontractor or sub-subcontractor in the bid unless the bidder has received communication from the subcontractor or sub-subcontractor.

If plumbing, electrical or HVAC work is to be self-performed, provide bidder's information. If work is to be performed by Subcontractor(s) or Sub-Subcontractor(s), their information shall be provided or explain here why a Specialty Contractor is not required: (N/A or "Not Applicable" will not be considered a sufficient explanation)

A. Plumbing work by:
N/A
residing at

, whose Idaho Public Works Contractors License No. is

Plumbing Amount: $.
and whose Plumbing Contractors License No. is

B. Electrical work by:
Swift Water Construction
residing at
6647 E 113 N, Idaho Falls, ID 83401
, whose Idaho Public Works Contractors License No. is
067098-AA-4
Electrical Amount: $189,800.00
and whose Electrical Contractors License No. is
058592.

C. HVAC work by:
N/A
residing at

, whose Idaho Public Works Contractors License No. is

HVAC Amount: $.
and whose HVAC Contractors License No. is
.

*** Form Completed? Yes ***

Rev. 05/2025

IDAHO CODE CERTIFICATION FORM
For Federal - Aid Projects

Failure to complete and include this form with bid submittal will result in bid being deemed irregular. Failure to comply with the terms of the referenced Idaho Code may result in breach of contract.

Anti-Boycott Clauses

Per the provisions of Idaho Code §§ 67-2346, Anti-Boycott Against Israel Act, and Idaho Code §§ 67-2347A, Prohibition on Contracts with Companies Boycotting Certain Sectors the undersigned certifies that it is not currently engaged in, and will not for the duration of the contract engage in the following:

- Boycott of goods or services from Israel or territories under its control: or
- Boycott of any individual or company because the individual or company engages in or supports the exploration, production, utilization, transportation, sale, or manufacture of fossil fuel-based energy, timber, minerals, hydroelectric power, nuclear energy, or agriculture; or
- Boycott of any individual or company because the individual or company engages in or support the manufacture, distribution, sale, or use of firearms, as defined in Idaho Code §18-3302(2)(d),

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Prohibition on Contracts with Companies Owned or Operated by the Government of China

Idaho Code, §§ 67-2359 states "a public entity in this state may not enter into a contract with a company to acquire or dispose of services, supplies, information technology, or construction unless the contract includes a written certification that the company is not currently owned or operated by the government of China and will not for the duration of the contract be owned or operated by the government of China". Company certifies that it is not owned or operated by the government of China.

By signing below, I certify that this company understands and will comply with the aforementioned requirements

Signature of Company's authorized representative:

Signature Steve Giles

Company Name Suncore Construction And Materials, Inc.

DAVIS-BACON WAGE

GENERAL WAGE DECISION ID260093

PUBLICATION DATE *05/18/2026 ID93

The above referenced wage rates can be obtained

at

http://www.sam.gov

*Revised per Addendum No. 1 05/20/2026

DAVIS-BACON WAGE RATES

Idaho Federal Aid Project No. A023(889)
STC-7316, 5th E (HOLMES AVE) & 49th SOUTH SIGNAL
Bonneville County, Key No. 23889

The following Davis Bacon Wage Rates shall be posted by the Contractor using Poster WH-1321 and shall be placed prominently in a location where it will be noticeable and accessible to all workers at the site of the work on each Federal Aid Project.

Should these papers tear or become illegible, they shall be replaced as long as work continues. Posters and additional copies of this form are available from the Engineer.

"General Decision Number: ID20260093 05/18/2026

State: Idaho

Construction Types: Highway

Counties: Idaho Counties of
Bonneville

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

ENGI0302-034 01/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR: GROUP 8 BULLDOZER	$ 37.58	16.10

LABO0238-035 06/01/2019

	Rates	Fringes
LABORER: PIPELAYER ZONE DIFFERENTIAL (ADD TO ZONE 1 RATES): ZONE 2 - $2.00 BASE POINTS: PASCO ZONE 1: 0-45 RADIUS MILES FROM THE MAIN POST OFFICE. ZONE 2: 45 RADIUS MILES AND OVER FROM THE MAIN POST OFFICE	$ 28.48	13.00

SUID2013-021 06/17/2013

	Rates	Fringes
TRUCK DRIVER: WATER TRUCK	$ 21.35	13.05
TRUCK DRIVER: OIL DISTRIBUTOR TRUCK	$ 23.93	11.27
TRUCK DRIVER: LOWBOY TRUCK	$ 26.61	13.21
TRUCK DRIVER: DUMP TRUCK	$ 21.17	12.10
TRAFFIC CONTROL: LABORER-CONES/ BARRICADES/BARRELS - SETTER/MOVER/SWEEPER	$ 17.69	4.66
TRAFFIC CONTROL: FLAGGER	$ 22.68	10.48
OPERATOR: SCREED	$ 22.30	7.22
OPERATOR: ROTOMILL	$ 25.42	10.25
OPERATOR: ROLLER (SUBGRADE)	$ 19.99	7.99
OPERATOR: ROLLER	$ 24.59	8.95
OPERATOR: PAVER (ASPHALT, AGGREGATE, AND CONCRETE)	$ 24.61	8.23
OPERATOR: OILER	$ 22.25	6.52
OPERATOR: MECHANIC	$ 25.82	9.75
OPERATOR: LOADER	$ 24.94	8.95
OPERATOR: GRADER/BLADE	$ 25.85	9.60
OPERATOR: FORKLIFT	$ 23.13	9.17
OPERATOR: CRANE	$ 23.34	9.45
OPERATOR: BROOM/SWEEPER	$ 24.10	8.66
OPERATOR: BOBCAT/SKID STEER/SKID LOADER	$ 21.15	8.20
LABORER: MASON TENDER - CEMENT/CONCRETE	$ 22.34	10.90
LABORER: GRADE CHECKER	$ 20.64	7.37
LABORER: COMMON OR GENERAL	$ 22.84	10.83
LABORER: ASPHALT, INCLUDES RAKER, SHOVELER,		

SPREADER AND DISTRIBUTOR.....$ 19.38 7.86
HIGHWAY/PARKING LOT STRIPING: PAINTER.....$ 25.47 9.52
ELECTRICIAN.....$ 26.33 11.45
CEMENT MASON/CONCRETE FINISHER.....$ 22.90 11.99
CARPENTER, EXCLUDES FORM WORK.....$ 25.21 9.32
CARPENTER (FORM WORK ONLY).....$ 26.24 9.48

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA", or "SC" denotes that a union rate was prevailing for that classification in the survey. Example:

PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

"SU" wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took

effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION

"

SPECIAL PROVISIONS

FEDERAL AID PROJECT KEY NO. 23889

STC-7316, 5th E (Holmes Ave) & 49th South Signal Bonneville County

For the work of installing a Traffic Control Signal, constructing dedicated turn lanes along with associated intersection improvements.

The following special provisions and all addenda issued supplement or modify the 2023 Idaho Transportation Department Standard Specifications for Highway Construction: 2025 Supplemental Specifications for the Idaho Transportation Department 2023 Standard Specifications for Highway Construction, 2020 Quality Assurance (QA) Manual (10/19), 2026 QA Manual Supplementals to the 2020 QA Manual (4/02/2026), 2025 Buy America Insert (10/7/2025), 2023 Quality Assurance Special Provision for State Acceptance (12/07/2023), 2025 Special Provision for 405 Superpave Hot Mix Asphalt (11/17/2025), 2025 Standard Drawings, Title VI Special Provisions; FHWA-1273 Federal Aid Required Contract Provisions and General Wage Decision ID260093.

SOURCE IDENTIFICATION

Designated source(s). Designated source(s) are not identified for this contract/project.

Contractor provided sources. Provide an approved source(s) for all materials to be embanked or processed for placement. Department owned or controlled sources will not be allowed for this contract.

Cost. Assume all costs incurred in obtaining approvals for use of source(s).

CONTRACT TIME **

Work will not start earlier than July 6, 2026, or later than August 17, 2026, and must be completed within 45 working days.

Once started, work must continuously progress until completion. Return traffic through the work zone to normal operations during any planned or unplanned work stoppage lasting longer than 3 working days.

LIQUIDATED DAMAGES

The amount of liquidated damages for failure to complete the work on time will be $4000 per day.

Liquidated damages provision does not waive the Department's right to seek other remedies for a breach of contract by the awarded Contractor.

CONTRACTOR NOTES

DBE PROGRAM REQUIREMENTS 10/21

For bidding purposes, the Contractor must comply with the DBE program requirement of **0.0**%. Upon award, the approved percentage on the ITD-2396 DBE Commitments form becomes contractual and failure to

Whenever the Engineer determines, after investigating and obtaining evidence the Contractor has not complied with the DBE program requirement, the Engineer will take corrective action. Refer to the Department's Standard Specifications for Highway Construction, Section 110, Civil Rights.

The Contractor, sub recipient, or subcontractor will 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 USDOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate (e.g., withholding monthly progress payments, assessing sanctions, liquidated damages, disqualifying the Contractor from future bidding as non-responsible).

For additional DBE Program information see the Department's DBE program requirements located at: *https://itd.idaho.gov/civilrights/*

ADJACENT RESIDENT ACCESS

Maintain driveway access to all adjacent residences throughout the duration of construction. Provide temporary access if any construction activities require closure of existing driveways. Maintain emergency vehicle access to all residences. If driveway closures are unavoidable, approval by the Engineer must be obtained prior to implementation.

BIDDER Q&A 01/25

Prior to bid opening, submit any project-related questions through QuestCDN – Submit questions by 5:00pm MT on the Thursday prior to the bid opening. ITD is not obligated to respond to questions received after the stated cutoff date and time.

COMMUNICATION PROTOCOL DURING CONSTRUCTION BIDDING 01/25

During the advertisement period, prospective Contractors/Bidders will address all questions through QuestCDN. After Bid Opening and through Contract Award, all communications between the Department and the Contractor/Bidder, and any unsuccessful bidders, will be through the State Design Engineer at 208.334.8502. The Department will be unable to share any information related to bid submittals or pending Department decisions during this time. After Contract Award, all communications between the Department and the Contractor will be through the Design Construction (Resident) Engineer.

CONSTRUCTION TRAFFIC CONTROL

Submit a detailed Traffic Control Plan for approval prior to construction. The construction plans contain example Traffic Control Plans that may be accepted by the Contractor; however, the Contractor is encouraged to develop their own Traffic Control Plans that conform to their method of operation. Traffic Control Plans must be approved by the Engineer prior to implementation. Costs for preparing the Traffic Control Plans are incidental to item Z629-05A Mobilization. Allow seven calendar days for review of each plan submittal. The traffic control must meet the following requirements:

- Provide for adjacent resident access through construction.
- Holmes Ave: Detours are allowed, as necessary, for active ongoing construction activities.
- 49th South: Detours are allowed, as necessary, for active ongoing construction activities.

- All Construction Traffic Control must meet the requirements of the MUTCD.

CONSULTANT CONFLICT OF INTEREST

The Consultant and sub-consultants, as the designers of this project, agree that no one in their firms will perform any services for the contractor on the construction of this project.

The following Consultants worked on the design of this project:

Keller Associates, Inc.
Bionomics Environmental

ELECTRICAL WORK 01/18

This contract contains work for which the Department believes a licensed electrical firm will be required. Complete the sheet provided for compliance with 67-2310 Idaho Code or provide an explanation as to why an electrical license is not required. "N/A" is not an appropriate explanation.

EMPLOYMENT AGENCY 01/23

To find the nearest employment office, visit https://www.labor.idaho.gov/dnn/Local-Office-Directory.

ENVIRONMENTAL REQUIREMENT - MIGRATORY BIRD PROTECTION ACT COMPLIANCE

Work Window Restriction:

No clearing or removal of vegetation and trees is allowed between April 1st and August 15th unless work is approved by the Engineer. To request approval, submit a survey that verifies the absence of Migratory Birds.

The survey shall be:

a. Completed immediately prior to ground disturbing, bridge removal, or tree removal activities.
b. Covers an area or work activity including a 50' buffer.

Initial survey work is incidental to the contract.

ENVIRONMENTAL REQUIREMENT – POLLINATOR PROTECTION

Implement the following Best Management Practices to support pollinators and pollinator habitat along roadside corridors:

- Protect Existing Habitat: Protect existing stands of native vegetation. Ground disturbing activities will be limited only to those areas deemed necessary for the construction of the project. Disturbing existing areas of native vegetation purely for the convenience of the contractor is prohibited.
- Herbicide Use: Reduce the risk of herbicide exposure to pollinators by:

  (1) Eliminating or reducing herbicide exposure to pollinators by first utilizing non-chemical (manual) methods to eliminate noxious and undesirable weeds.
  (2) If herbicide use is necessary, spot treat specific weeds with selective herbicides that do not leave residuals in the soil.
  (3) Treat weeds before they flower, to avoid spraying when pollinators are present.

(4) Avoid spray applications if winds are above 10 mph.

ENVIRONMENTAL REQUIREMENT – (STORM WATER) POLLUTION PREVENTION PLAN LOW EROSIVITY WAIVER

With engineer approval, a Low Erosivity Waiver (LEW) may be obtained for the project, in lieu of construction general permit coverage, if the total project disturbances are less than 5.0 acres and the Environmental Protection Agency calculated rainfall erosivity R factor is less than 5.0. If approved, a pollution prevention plan (PPP) ITD-2788 form will be required. Include all LEW documentation in the PPP and retain on site.

If anticipated construction time is extended and the Rainfall Erosivity R factor will exceed 5.0 the project will no longer be eligible for a LEW. A SWPPP must be submitted for review and certification. When certified a Notice of Intent must be filed and construction general permit coverage obtained no less than 14 days prior to desired permit coverage.

For R value calculations see:

https://lew.epa.gov/

GENERAL WAGE DECISION 01/18

Upon written request 10 calendar days before the bid opening date, the Department will provide a missing job classification, wage rate, and fringe benefit rate as outlined on FHWA-1273 IV.1.b to all plan holders as addenda.

HMA PAVEMENT

The Contractor is informed that SuperPave HMA placement may not be possible through the required Completion Date of this contract due to inclement weather. The requirements outlined in ITD Specification Section 405 will not be waived or relaxed as a result of late season paving and impacts due to weather. If the Contractors operations take SuperPave placement into out of specification paving weather, a temporary pavement will be placed at a depth of no less than 0.15' until weather allows in the spring to place the SuperPave surface within specification required conditions at no additional cost to the project. Placement, removal, traffic control, and any rework required as a result of the use of Temporary Pavement will be the responsibility of the Contractor and will be considered incidental to the project 405 item.

HMA – SMALL QUANTITIES

The Department does not require acceptance test strips on small quantity pavement (e.g., less than 2250 tons), nonstructural pavement, or temporary pavement. Submit HMA mix designs regardless of project pavement quantity for approval. The Contractor is responsible for quality control testing.

HOMEOWNER COORDINATION

For work along the Mendenhall, Jensen, and Fehringer properties, coordinate with the homeowner to cut and reconfigure their sprinkler system out of the way of the roadway and sidewalk improvements in accordance with the right-of-way purchase agreement.

IDAHO IMPLEMENTATION OF AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE, 2ND EDITION (2016)

The following safety hardware must meet AASHTO 2016 MASH criteria, ITD's Standard Drawings, and if the hardware is a proprietary product, it must be approved on ITD's Qualified Product List (QPL) for new permanent installations and full replacements:

- W-beam
- Cast-in-place concrete barriers
- W-beam tangent terminals and buried-in-backslope terminals
- W-beam flared terminals and terminals installed on a flare
- Crash cushions
- Transitions
- Permanently installed portable barriers
- Bridge rails
- Cable barriers
- Cable barrier terminals

The following safety hardware may be MASH 2009/2016 or NCHRP 350 compliant for new permanent installations and full replacements:

- Double-sided or median terminals
- Sign supports
- All other breakaway hardware

For projects utilizing December 2018 Standard Drawings release or earlier, replace the 612 series sheets with the 612 series from the latest Standard Drawings release.

Temporary work zone devices (including portable barriers, truck- and trailer-mounted attenuators, portable changeable message signs (PCMS), temporary traffic signals, and camera trailers) manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

INCIDENTALS

Sawcutting is incidental and included in the contract unit price for the Superpave HMA contract pay item.

MEDIA NOTIFICATION

Prepare and submit press releases to the Engineer 5 days prior to start of work or any change in traffic flow during construction. The county will approve and notify all local papers, news media, police, fire department, school districts, and postal service.

OFFICIAL PROJECT EMAIL ADDRESS

Send ALL project email to mkoster@lhtac.org. The subject line of every email will include the date, project key number, project name, and subject, all separated by commas. (Example: MMDDYY, 23889, 5th E (Holmes Ave) & 49th South Signal "Email subject") Also designate an official project email address for LHTAC to send all project email**.**

PLANT CONTROL CHARTS

As noted in ITD Standard Specification Section 405.03, plant control charts will be a required submittal. These submittals must include mix design inputs, and actual aggregate and additive weights as recorded by automated, or staff recorded logs.

SOLE SOURCE SIGNAL AND ILLUMINATION EQUIPMENT

The traffic signal controller (which includes supporting software and communications equipment), the radar detection system, and the pre-empt detection system are the only Department approved sole source traffic signal items.

All other signal items such as traffic signal cabinets, poles, heads, brackets, wire, and cables are available from multiple sources.

Use materials and equipment per City of Idaho Falls standards as identified on the Signal Materials List.

All Contractor supplied items must comply with the Build America, Buy America (BABA) Act requirements.

UTILITY COORDINATOR PROVIDED BY THE CONTRACTOR 01/18

Provide an individual whose primary responsibility is to coordinate the work with each utility company and the railroad company that will or may affect the utility company's or railroad company's property, facilities, or operations. Ensure this individual is readily available by telephone whenever there is work being done by the Contractor, subcontractor, lower-tier subcontractor, utility company, or railroad company.

The Department will not make separate payment for coordinating the work that affects each utility company's or railroad company's property, facilities, or operations. This work coordination is incidental and included in the ground disturbing construction contract pay items.
Ensure this individual is responsible for the following activities and makes documents generated by these activities available to the Contractor, utility company, railroad company, and the Engineer:

1. Maintaining and posting a list of emergency telephone numbers for the Contractor and its subcontractors (including lower-tier subcontractors), each utility company, railroad company, and the Engineer.
2. Notifying the Contractor and its subcontractors (including lower-tier subcontractors), each utility company, railroad company, and the Engineer of a method, including telephone number, to contact the utility coordination individual. An alternate contact person with a telephone number will be provided for situations when the utility coordination individual is not available.
3. Maintaining and documenting in writing all instructions, general discussions, or meetings notes that involve work on each utility company's or railroad company's property or facilities or work which has or may affect the utility or railroad operations.
4. Maintaining and documenting in written or printed format the proposed and actual time schedules of work on utility or railroad property or facilities. Time schedules are to show the Contractor and its subcontractor (including lower-tier subcontractors), and each utility company or railroad company activities.
5. Maintaining and documenting in writing a diary of work each day that involves utility or railroad property and facilities, and any work that has or may affect the utility or railroad operations.

6. Coordinating with each utility company and the Engineer to resolve utility conflicts and for any needed change orders to address utility conflicts.

ON PAGE 19, SUBSECTION 101.04 - DEFINITIONS

Delete the following under Working Day.:

4. Days during December, January, and February.

ON PAGE 28, SUBSECTION 104.01.B. – CONSTRUCTION PARTNERING

Delete the entire section.

ON PAGE 36, SUBSECTION 105.04 04/24

Delete items 7 through 11 and add the following:

7. Buy America Insert
8. Quality Assurance (QA) Manual Supplementals
9. Standard Supplementals
10. Standard Specifications
11. Standard Drawings
12. QA Manual

ON PAGE 37, SUBSECTION 105.07 – UTILITY FACILITIES 07/24

Add the following to the end of the subsection:

The City of Idaho Falls traffic signal electrician (Bruce Scholes) can be reached at (208) 612-8183. Conduct special coordination with Idaho Falls Power, Rocky Mountain Power, and Idaho Falls Fiber to relocate all utilities from the existing power poles to the new power poles to be set by Idaho Falls Power.

The following utility companies have facilities within the project limits:

Sparklight/Cable One – Idaho Falls
Nick Barron
(208) 520-1113
nicholas.barron@sparklight.biz
Telecommunications facilities are attached to power poles within Holmes Avenue that will be relocated by Rocky Mountain Power. Sparklight will relocate cable TV/internet lines to the relocated power poles behind the back of sidewalk to the west. Relocation will be at company expense and completed prior to construction.

Lumen/CenturyLink
Brandon McKissick
(208) 760-3240
Brandon.mckissick@lumen.com

Fiber optic facilities are within the proposed roadway on the east side of Holmes Avenue. Lumen will relocate these facilities to the east at company expense during construction. Coordinate and accommodate utility relocation as needed.

Idaho Falls Power
Richard Malloy
(208) 612-8428
rmalloy@ifpower.org
Idaho Falls Power to install a new power pole at the northwest corner of the intersection and relocate their power lines at utility's expense.

Intermountain Gas Co.
Cindy Barnes
(208) 542-6634
Cindy.barnes@intgas.com
Retain and protect.

Rocky Mountain Power
Justin Cherry
(208) 357-2601
Rmpplanninganddesignrequests@pacificorp.com
Rocky Mountain Power to relocate their power lines to Idaho Falls Power's new power pole at utility's expense.

Montana-Dakota Utilities Co.
Josh Yarno
(208) 377-6845
Joshua.yarno@mdu.com
Retain and protect.

City of Idaho Falls (Water and Fiber)
Chris Canfield, P.E., Assistant Public Works Director
Office (208) 612-8259 Cell (208) 201-5695
ccanfield@idahofallsidaho.gov
City will relocate the fire hydrant at city expense before the start of construction. City will relocate fiber from the existing power poles to the new Idaho Falls Power pole at city expense.

ON PAGE 60, SUBSECTION 106.01.B – USE TAX 04/23

Add the following sentence to the end of the subsection:

The estimated cost of city supplied materials is: $155,969.11

ON PAGE 82, SUBSECTION 107.19 – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.2, add the following after the first full sentence:

Research within the project limits in the MCPD for survey monuments within the work zone to determine the possible existence of survey monuments to preserve and protect or to be reestablished after construction. Document that this research has been completed.

ON PAGE 84, SUBSECTION 107.19 – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.9.g., add the following at the end of the subsection:

The provisions of Section 107.08 will apply.

ON PAGE 87, SUBSECTION 108.01 - SUBLETTING OF CONTRACT 04/23

Delete the second sentence and substitute the following:

If the Engineer consents to subletting a portion of the work, the Contractor will use its own organization to perform work amounting to at least 30 percent of the original contract amount.

ON PAGE 112, SUBSECTION 109.05 – PARTIAL PAYMENT MOD LHTAC

In the second sentence of the first paragraph delete “at least”.

Delete the 3rd sentence in the first paragraph.

ON PAGE 592, SUBSECTION 656.03 – CONSTRUCTION REQUIREMENTS

Delete:

Idaho Transportation Department
Signal Shop
8150 Chinden Boulevard
Boise, Idaho 83714

and substitute the following:

Idaho Falls Power
Signal Shop
140 S. Capital Ave.
Idaho Falls, Idaho 83402
(208) 612-8430

S501-15A RETAINING WALL - KEYSTONE BLOCK

Description. Install Keystone gravity concrete block retaining wall system.

Materials. Arrange to purchase or manufacture the necessary components for the selected pre-approved wall system from the following supplier list or approved equals. Use only the type and color of wall that matches the existing wall being extended.

Keystone Sales Representative:
Kirk Skinner, Regional Manager
480-252-4150
kskinner@keystonewalls.com
Sunroc
Craig Buehner

385-377-8313
cbuehner@sunroc.com

Contech
Chad Kitchen
801-851-0420
Ckitchen@conteches.com

Lowe's Idaho

Provide a Certificate of Compliance in accordance with Subsection 106.04 certifying that the materials comply with the applicable specifications. Provide manufacturers' certifications for all materials before starting wall construction. Obtain written approval from the Engineer for non-specified materials or material from sources not listed in the contract documents.

A. **Concrete Block Requirements**.

a. Testing and Inspection: The Engineer will determine acceptability of the precast concrete block units based on visual inspection. The Engineer will consider precast units acceptable that are not cracked, chipped, or otherwise damaged. No compression strength testing will be required.

b. Concrete Finish: Unless indicated otherwise, provide block units with concrete facing texture and color as provided by the wall manufacturer. Submit the proposed concrete facing texture and color to the Engineer for approval before casting the concrete blocks.

c. Tolerances: Manufacture concrete block units within the following tolerances:

i. Dimension within $^{3}/_{16}$ inch for block height.
ii. Dimension within ½ inch for block width, unless field cut for fitting purposed.

e. Rejection: In addition to the preceding paragraphs, the engineer may reject a block or lot with any of the following defects:

i. Defects that indicate imperfect molding.
ii. Defects that indicate honeycombed or open texture concrete.
iii. Cracked or chipped blocks.
iv. Front-block color variation due to excess form oil or other reasons.

f. Handling, Storage, and Shipping: Handle units with care to eliminate chipping and fractures.

B. **Leveling Pad.** Provide a gravel or non-reinforced concrete leveling pad consisting of Class 22 concrete as needed.

C. **Backfill Material**. Provide the material that is free of shale, organic matter, mica, gypsum, clay, or soft poor durability particles and meets the following property requirements:

a. Backfill using granular material free from organics and deleterious materials that conforms to granular borrow requirements. Alternatively, rock cap may be used in place of granular borrow. Remove debris and other foreign matter before placing backfill behind walls. Calculations for the Equivalent Fluid Densities are based on free-draining granular borrow fill/rock cap, for the approach embankments/structure, with an internal friction angle of 50 degrees and a moist unit weight of 130 pounds per cubic foot (pcf).

Construction Requirements.

A. **Wall Excavation**. Excavate the wall in accordance with Section 210 and as shown on the plans.

B. **Foundation Preparation**. Grade the foundation for the structure level for a width equal to or exceeding the width of the bottom blocks or as shown on the plans. Before wall construction, compact the foundation, if not in rock, as directed by the Engineer. Remove and replace foundation soils found to be unsuitable as directed by the Engineer.

C. **Wall Erection**. Place concrete block units in their final position as shown on the design drawings. Handle and place concrete block units by work force or lifting devices. Place concrete block units in successive horizontal lifts as backfill placement and compaction proceeds. Place backfill material behind the block units while maintaining the facing in the desired position with temporary wedges or bracing in accordance with the wall supplier's recommendations. Ensure vertical tolerances and horizontal alignment tolerances along the wall line for segmental concrete blocks are within ¾ inch when measured with a 10-foot straight edge. Ensure the maximum offset in any block unit joint is ¾ inch. Check the position and tolerances of each concrete block unit row before erection of the next row. Should any block units be out of tolerance, remove the fill, and reset block units to their proper position.

   Remove and reconstruct walls or wall portions constructed outside the tolerances in this Special Provision, wall with negative batter (batter in excess of vertical away from the wall), or if the batter becomes negative during construction. The Department will not make additional payment for this work.

D. **Backfill Placement**. Closely follow each erection course of concrete block units with backfill placement. Place backfill in 12-inch lifts or less. Place backfill so as to avoid damage or misalignment of the facing elements. Remove and replace wall materials that become damaged or disturbed during backfill placement or correct as directed by the Engineer at no additional cost to the Department. Correct misalignment or distortion of the wall facing elements due to work not associated with this Special Provision as directed by the Engineer at no additional cost to the Department.

   Ensure lift thickness after compaction is 12-inches or less. Decrease this lift thickness, if necessary, to obtain the specified density. Compact backfill with the compactor running parallel to the wall face.

   Compact the block wall backfill to Class A compaction requirements. Over compaction must be avoided since increased compactive efforts will result in higher lateral pressures. Heavy compaction equipment or other construction loads will not be allowed within 5 feet of the structure walls unless included in the structural design. Only light hand operated compaction equipment will be utilized within 5 feet of the backfilled walls. Do not place backfill materials when they are frozen. Do not place backfill materials on snow cover or frozen materials.

   Achieve compaction within 3 ft. behind the wall by at least five passes, or as directed, of a lightweight mechanical tamper, roller, or a vibratory system.

   At the end of each day's operation, slope the backfill away from the wall face to direct surface runoff away from the wall. In addition, do not allow surface runoff from adjacent areas to enter the wall construction site.

Method of Measurement. The Engineer will measure acceptably completed work by the square foot from the top of the leveling pad to the top of the top block units and length as shown on the plans. The Engineer will not make separate measurements for wall-leveling pad.

Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item	Pay Unit
S51-15A Retaining Wall - Keystone Block	SF

The Department considers structural excavation and compacting backfill and backfill material incidental.

S604-05A REM & RESET IRR 11/12

Description. Remove and reset irrigation system to finished grade, or as directed.

Materials. Use materials matching the existing system.

Construction Requirements. Remove and reset the system upon completion of the sidewalk and retaining wall. Replace at no additional cost to the Department damage to the existing sprinkler system from the contractor's operation. Replace the existing water lines with the same size of water line removed. Retain and place heads behind the sidewalk or retaining wall at approximately the same spacing/location from where they were removed.

Adjust sprinkler heads flush with the surface.

Method of Measurement. The Engineer will measure acceptably completed work by the lump sum.

Basis of Payment. The Department will pay for the accepted quantities at the contract unit price as follows:

Pay Item	Pay Unit
S604-05A Rem & Reset Irr	LS

S610-05A REM & RESET FENCE

Description. Remove, store (if necessary), and reset existing fences and gates as shown in plans.

Materials. If existing materials are not reusable, then provide materials equivalent to the existing fence or as specified in Section 610. Refer to Standard Drawing 610-2 for gates.

Construction Requirements. Remove and store the existing fence and gates during construction. Remove (if applicable) existing concrete around fence posts and provide new concrete when resetting fence posts. Reset the fence and gates to the locations shown on the plans. Be responsible for the condition of the fence removed or stored. Replace in kind fence damaged during removal, storage, or reconstruction at no additional cost to the Department. Fill and compact any voids left from the removal of the fence posts and/or fence foundations. Reconstruct in accordance with 610.03.

Method of Measurement. The Engineer will measure acceptably completed work by the foot of fence reset including gates.

Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item	Pay Unit
S610-05A Rem & Reset Fence	FT

The Department considers all materials, equipment, and labor necessary to remove, store, and reinstall the fence, removal of concrete foundations, and materials and work necessary to fill voids, as incidental and the cost included in the contract unit price for Rem & Reset Fence. No separate payment will be made for gates, but the length of gates will be included in the measurement of this item.

S900-50A CONTINGENCY AMOUNT - MISCELLANEOUS WORK

Description. Use for minor work or material not specified in the project documents that is necessary for the work as directed by the Engineer.

Materials. Provide material as directed by the Engineer and in accordance with the ITD Standard Specifications.

Construction Requirements. Complete construction as directed by the Engineer and in accordance with the ITD Standard Specifications.

Method of Measurement. The Engineer will measure acceptably completed work by the Contingency Amount (CA).

Basis of Payment. The Department will pay for the accepted quantities using established contract unit prices, negotiated prices, or by force account according to Subsection 109.03.C.5 Force Account.

Pay Item		Pay Unit
S900-50A	Contingency Amount - Miscellaneous Work	CA

S901-05A SP - REMOVE AND RESET MAILBOX

Description. Remove the existing mailbox and support, retain the materials, and reconstruct the mailbox at new location.

Materials. Reuse the existing materials. If a new foundation is required, provide materials as specified in Sections 502 and 503.

Construction Requirements. Remove, store, and re-install existing mailbox at the new location shown in plans. Construct foundation, if necessary, similar to the existing foundation.

Method of Measurement. The Engineer will measure acceptably completed work by each mailbox reset.

Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item		Pay Unit
S901-05A	Remove and Reset Mailbox	EACH

Replacement costs for damaged materials caused by removing, transporting, storing, and reconstructing the mailbox are the Contractor's responsibility and expense.

S904-05A SP – MANHOLE AND SEEPAGE BED

Description. Construct manhole junction with storm water separator device and seepage bed for subsurface stormwater disposal at the location and as detailed in the plans.

Materials. All materials are to comply with BABA requirements. Provide materials as follows:

Manhole Type D	Subsection 605.02 and Standard Drawing 605-12
Catch Basin Hood	Use 30R Snout by BMP, Inc. or equal.
Filter Sand	Subsection 703.02.B
Storm Sewer Pipe	Section 706
Perforated Drainpipe	Subsection 706.10
Drainage Geotextile	Subsection 718.05
4" Drain Rock	See below.

4" Drain Rock will be rounded uncrushed rock meeting the aggregate gradation below:

Sieve Size	Percent Passing
6 in	100
4 in	90 - 100
3 in	0 - 5
No. 200	0 - 1.0

Construction Requirements. Excavate the seepage bed to the elevation and width shown in the plans. Construct seepage bed level to avoid water migration to a low point. Place a minimum one foot of filter sand below the seepage bed to provide water quality treatment.

Place drainage geotextile along all sides of trench prior to filling with drain rock. Install a single 24" perforated drainpipe within the upper third of the drain rock height the entire length of the bed. Overlap drainage geotextile from sides and ends a minimum of four feet over the top of the seepage bed to hold in place when backfilled.

Connect catch basins to manhole junction using 12" storm sewer pipe. Use non-perforated HDPE drainpipe for at least the first six feet from the manhole to avoid soil saturation near the manhole. Connect the 24" perforated drainpipe at a point that is one foot inside the seepage bed and extend it to 36" from the end of the seepage bed as shown in the plans. Backfill with native material and compact to Class D requirements of Section 205.

The Idaho Department of Water Resources (IDWR) requires all shallow injection wells to be inventoried. Complete the inventory form and pay the processing fee to IDWR prior to seepage bed construction.

Method of Measurement. The Engineer will measure acceptably completed work by the lump sum, complete in place, at the location specified on the plans.

Basis of Payment. The Department will pay for the accepted quantities at the contract unit price as follows:

Pay Item		Pay Unit
S904-05A	Manhole and Seepage Bed	LS

The Department considers all materials, labor, and equipment required to complete the construction of seepage bed including permit application and fee to IDWR, excavation, drainage geotextile, drain rock, filter sand, pipes, manhole, connections, and backfilling to finished grade as incidental and the cost included in the contract unit price for this item.

S904-05B SP – INSTALL TRAFFIC SIGNAL

Description. Install traffic signal at the location shown in the plans.

Materials. The city of Idaho Falls will provide materials for this item. Other Section 656 pay items may be required and will be paid under respective item numbers, see Traffic Signal Materials List.

Incidental materials, such as concrete or metal reinforcement, (i.e. materials required but not provided by the city or covered by another pay item) will be provided by the contractor and must meet the requirements of Subsection 656.02 and applicable standard drawings.

Construction Requirements. Follow the requirements of Subsection 656.03 and applicable standard drawings.

Method of Measurement. The Engineer will measure acceptably completed work by the lump sum, complete in place and operational.

Basis of Payment. The Department will pay for the accepted quantities at the contract unit price as follows:

Pay Item		Pay Unit
S904-05B	Install Traffic Signal	LS

The Department considers all use taxes for furnished materials, contractor furnished materials, labor, and equipment required to complete the construction of the traffic signal including excavation, trenching, backfill, and backfill materials as incidental and the cost included in the contract unit price for this item.

S911-05A SP – REMOVE AND RESET FENCE (VINYL THREE RAIL)

Description. Remove, store (if necessary), and reset existing fences and gates as shown in plans.

Materials. If existing materials are not reusable, then provide materials equivalent to the existing fence or as specified in Section 610. Refer to Standard Drawing 610-2 for gates.

Construction Requirements. Remove and store the existing fence and gates during construction. Remove (if applicable) existing concrete around fence posts and provide new concrete when resetting fence posts. Reset the fence and gates to the locations shown on the plans. Be responsible for the condition of the fence removed or stored. Replace in kind fence damaged during removal, storage, or reconstruction at no additional cost to the Department. Fill and compact any voids left from the removal of the fence posts and/or fence foundations. Reconstruct in accordance with 610.03.

Method of Measurement. The Engineer will measure acceptably completed work by the foot of fence reset including gates.

Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item		Pay Unit
S911-05A	Remove and Reset Fence (Vinyl Three Rail)	FT

The Department considers all materials, equipment, and labor necessary to remove, store, and reinstall the fence, removal of concrete foundations, and materials and work necessary to fill voids, as incidental and the cost included in the contract unit price for this item. No separate payment will be made for gates, but the length of gates will be included in the measurement of this item.

S912-05A SP – LANDSCAPE REPAIR

Description. Place landscape rock behind the back of curb and over seepage bed to the front of sidewalk as shown in the plans or as directed by the Engineer.

Materials. Supply materials suitable for the intended purpose and approved by the Engineer.

Landscape Rock - Open Graded Base Class 1 (Rock Cap) per Subsection 703.08.

Riprap/erosion Control Geotextile will be woven meeting the requirements of Subsection 718.06.

Material must comply with BABA requirements.

Construction Requirements. Place groundcover in areas shown on the plans to stabilize soil.

Areas to be ground covered with material such as landscape rock will be preceded by a riprap erosion control geotextile per Section 640 to function as a weed barrier. Landscape rock will be at least three inches deep with no part of the rock extending above the top back of curb elevation.

Maintain all completed landscaped areas throughout the construction of this project and retain and protect existing undisturbed areas.

Method of Measurement. The Engineer will measure acceptably completed work by the square yard.

Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item		Pay Unit
S912-05A	Landscape Repair	SY

2025 SUPPLEMENTAL SPECIFICATIONS FOR THE 2023 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

Note: 2025 revisions are indicated by a single line to the left

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ON PAGE 12, 101.04 - DEFINITIONS

Delete the definition for "Contingency Item" in its entirety and replace with the following in alphabetical order:

> **Contingency Amount.** A dollar amount for items of work that are difficult to accurately estimate or quantify. The Department will pay for authorized work performed under a contingency item as required by the contract. Payment for accepted work will be made using the force account method (109.03.C.5) or as approved by the Engineer.

ON PAGE 17, 101.04 - DEFINITIONS

Delete the current definition for "Significant Change" and replace with:

> **Significant Change.** When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed plans or work, or when a contract pay item is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. An allowance for an increase in quantity will apply only to the portion in excess of 125 percent of the original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

ON PAGE 19, 101.04 – DEFINITIONS

Add the following to bullet point 1 under the definition for Working Day:

> and the day after Thanksgiving.

ON PAGE 21, 102.03 - EXAMINATION OF PLANS, SPECIFICATIONS, AND PROJECT SITE

Delete the last sentence of paragraph 4, starting with "Bidders must..."

ON PAGE 21, 102.04 - PREPARATION OF A PROPOSAL

Delete the last sentence of paragraph 3 and replace with:

> Addenda acknowledgement required by inclusion of the addenda cover letter for each addenda with hard copy bid submittal or by downloading the addenda EBSX file through BidX for electronic bids.

ON PAGE 23, 102.10 - PROPOSAL ACCEPTANCE AND IRREGULAR PROPOSALS

Delete "omissions of addenda" in item no. 5 and replace with:

> "lack of addenda acknowledgement"

ON PAGE 23, 102.10 - PROPOSAL ACCEPTANCE AND IRREGULAR PROPOSAL

Add the following to the numbered list:

8. Not having a UEI (Unique Entity Identifier) at the time of bid on a federal-aid contract.

ON PAGE 29, 104.02.A - GENERAL

Delete the fourth paragraph and replace with:

> If the Engineer issues a change order revising the contract, sign the change order by signing a hardcopy or by noting approval in AASHTOWare within 5 days of receipt. If returning an unsigned change order, notify the Engineer in writing within 5 days of receipt of the reason for not signing the change order. The Department may withhold payment for the change order work until the Contractor submits a signed change order or unsigned change order with a written explanation.

ON PAGE 40, 105.11 - INSPECTION OF WORK

Delete the last two paragraphs of the section.

ON PAGE 41, 105.14.C - MAINTENANCE OF PUBLIC HAUL ROADS

Delete the first full paragraph under this section starting with "The Contractor is responsible for..."

ON PAGE 61, 106.06 - STORAGE AND HANDLING OF MATERIALS

In the third sentence of the first paragraph, delete "re inspect" and replace with "re-inspect".

ON PAGE 66, 107.01.B - NON-FEDERAL AID CONTRACTS

Delete the section and replace with the following:

> Non-federal-aid contracts must comply with 44-1001 through 44-1005, Idaho Code. Certify compliance monthly during the life of the contract using form ITD-2434, Idaho 95% Resident Monthly Workforce Certification for State-Funded Contracts. If a Contractor is not in compliance, they are required to take corrective action to restore compliance. Failure to supply the form ITD-2434 certifying monthly compliance may be considered a breach of the construction contract.

ON PAGE 66, 107.02 - PERMITS AND LICENSES

Change the section name to "Permits, Licenses, and Taxes".

ON PAGE 69, 107.10 - RESPONSIBILITY FOR INJURY DAMAGE

Delete the fourth paragraph and replace with:

> Submit a certificate of insurance to the email address provided on the Award letter and do not start work before obtaining approval of the insurance coverage by the Department.

ON PAGE 75, 107.17.B - CONTRACTOR SUPPORT AREAS

Delete "found" from the fifth sentence of the first full paragraph and replace with "present".

ON PAGE 80, 107.17.K – CGP REQUIREMENTS

Delete the second paragraph under item 4 and replace with:

Do not begin construction activities until an authorization letter is received from IDEQ. If the review period exceeds 14 days it is considered an excusable/ non-compensable delay per 108.07.B.

ON PAGE 87, 108.01 - SUBLETTING OF CONTRACT

Delete the second sentence fourth paragraph and replace with the following:

For federal-aid contracts, the subcontractor must have a Unique Entity Identifier (UEI) prior to Engineer approval of subcontract agreement.

ON PAGE 91, 108.05 – LIMITATION OF OPERATIONS

Delete the second paragraph and replace with:

Do not work on a roadway open to the traveling public, except for normal maintenance operations, during a 3-day holiday weekend, on July 3, 4, and 5, or the day after Thanksgiving.

ON PAGE 100, 109.01.A.6.B - WEIGHT

Delete the first sentence of the second paragraph starting with "Material measurement…" and replace with the following:

At the time and location of material placement, provide printed scale weight tickets indicating the project name, project number, contract pay item number, load date, load time, load number, truck number, load gross weight, load tare weight, and load net weight. Hand-written or hand-corrected tickets are not acceptable without approval of the Engineer.

ON PAGE 101, 109.01.A.14 - ELECTRONIC TICKETING (e-Ticketing) FOR MATERIALS

Add the following section after 109.01.A.13.

14. ELECTRONIC TICKETING (e-Ticketing) FOR MATERIALS

The Contractor is encouraged to use e-Ticketing for materials delivery. The Contractor and the Engineer will decide at or before the Preconstruction Conference which bid items will be subject to e-Ticketing. Once this selection has been made, the Contractor may switch back to paper tickets by providing written notification to the Engineer. Contractor may switch to paper tickets 3 business days after providing this notice.

The cost associated with creating and maintaining electronic ticketing data and placing identifying vehicle numbers on the delivery vehicles is incidental to the associated pay item.

Provide electronic data for material weight tickets of bituminous, non- bituminous and aggregate materials delivered to the project. Place an identifying vehicle number on the delivery vehicle. The identifying vehicle number may be its license plate. This e-Ticketing requires that the Contractor have internet service available and connected to the plant loadout system/software. These provisions do not preclude or dismiss the contractor producing paper tickets required by the contractor's quality assurance plan or used by the contractor as a back-up.

Use the Department's E-Ticketing Vendor. The Departments e-Ticketing vendor has no-cost connectors available to install in existing plant load out system/software at no cost. If the Contractor has an e-Ticketing vendor already, this connector does not interfere with other existing e-Ticketing vendor..

Register here https://haulhub.com/itd/#signmeup to begin using the Department's Electronic Ticketing Portal system.

Training is found at https://learn.haulhub.com/

A. General Requirements

As electronic tickets (e-Tickets) are generated, submit them to the Department using the Electronic Ticketing Portal: https://www.e-dot.com. The Department will reject any load that does not have a corresponding e-Ticket unless the cause is beyond the Contractor's control wherein the data cannot be uploaded directly into the cloud within ten (10) minutes of load-out, e.g., no internet availability, equipment malfunction, etc. In such circumstances, paper tickets may be permitted at the discretion of the Engineer for the duration of the extenuating circumstance. Notify the Engineer immediately of such circumstances. The Department may reject any ticket(s) received later than 10 minutes from when the ticket was created.

Payment for material weight delivered to the project will be based upon the e-Tickets marked "Delivered," less waste and excess material weight as noted in 106.04 of the Standard Specifications, and any audit corrections.

Do not reissue or reprint tickets that have been marked "Delivered," "Pending," or "Rejected" without first notifying the Engineer. The Engineer may reject a reissued or reprinted ticket at their discretion. When a reissued or reprinted ticket is rejected, payment will be based upon the original ticket.

For materials subject to the Contractor's Quality Control Plan, incorporate e-Ticketing.

B. Data Integration

Request a list of the Department's naming nomenclature. Include in the request an identification of what system the supplier utilizes for its load read-out weighing system. If necessary, use the Departments Application Programming Interface (API) to integrate with the Department's Electronic Ticketing Portal. Utilize the API to provide electronic data from the load read-out weighing system at the material source in a manner that is acceptable by the Department's Electronic Ticketing Portal. Update the load readout weighing system and API as necessary to maintain connection to the Department's Electronic Ticketing Portal.

Provide the following data on each e-Ticket:

1. **General Ticket information (All Materials).**
   - **a.** Date.
   - **b.** ITD Project Number.
   - **c.** Name of Contractor
   - **d.** Name of material supplier.
   - **e.** Unique truck ID.
   - **f.** Plant/scale name (source).
   - **g.** Ticketed time.

2. **Portland Cement Concrete.**
   - **a.** Loaded time (water/cement time).
   - **b.** Wet and dry batch weights
     - **1)** %Moisture of aggregates
   - **c.** Load Number
   - **d.** Yards delivered
   - **e.** Water:
     - **1)** In aggregate.
     - **2)** Total water.
     - **3)** Water/cement ratio.
     - **4)** Max water/cement ratio.
     - **5)** Allowable water to add.
   - **f.** Admixtures (including brand names if available):
     - **1)** Retarder and weights.
     - **2)** Water reducer and weights.
     - **3)** Air entrainment and weights.
     - **4)** Special performance admixtures and weights.
     - **5)** Concrete fibers.
   - **g.** Cementitious material(s) and weights.
   - **h.** CPI Name and certificate number.

3. **Flexible Pavement Mixture.**
   - **a.** Type of material.
   - **b.** Gross weight (if not automatic weighed).
   - **c.** Tare weight (if not automatic weighed).
   - **d.** Net weight.
   - **e.** Mix design number.

4. **Optional Additional Truck Status (Will be accepted when available - All Materials)**
   - **a.** Left plant.
   - **b.** Arrive at project.
   - **c.** Begin unload.
   - **d.** Finish unload.
   - **e.** Leave project.

Loads which do not have the required e-Ticket data upon arrival at project site will be rejected. No payment will be made for rejected material.

C. Setup and Calibration

Conduct a test of each supplier's integration with the Department's Electronic Ticketing Portal prior to shipping material. Complete test at least seven days prior to shipping material unless otherwise approved by the Engineer. The test must involve at least four calibration e-Tickets from each supplier approved for use on the project. The calibration e-Tickets must accurately reflect categories 1-4 shown above; all other categories shall be marked "TEST." After the Engineer confirms that the calibration e-Tickets have been entered into the Department's Electronic Ticketing Portal, void the e-Tickets with the reason "Calibration Testing."

D. Small Quantity Exceptions

e-Ticketing will not be required for material suppliers who produce less than the specified quantity minimums:

- Embankment materials: 5000 Tons
- Aggregates: 3000 Tons
- Flexible pavements: 2250 Tons
- Concrete: 50 CY

ON PAGE 105, 109.03.B – PAYMENT FOR QUANTITY VARIATIONS

Delete the second paragraph and replace with:

If the total pay quantity of a work item varies from the bid quantity by more than 25 percent, the Department will appraise whether an adjustment is warranted based on a written request by the Engineer or the Contractor. The Department may make an adjustment to the unit price if justified. The Engineer and the Contractor must agree to the adjustment before the performance of the work. The Department's contract unit price adjustment will equal the difference between the contract unit price and the actual unit cost to perform the work, plus 6 percent profit.

ON PAGE 114, 109.08.3 - ACCEPTANCE AND FINAL PAYMENT

Delete the word "retainage" in Item 3 under 109.08 and replace with "withholding".

ON PAGE 116, 110.01 – GENERAL REQUIREMENTS

Delete the last sentence of the first paragraph and replace with:

To find the nearest employment office go to the Local Office Directory on the Idaho Department of Labor website.

In the fourth paragraph, delete the phone number listed and change to:

208-334-8884

ON PAGE 116, 110.02.A – EMPLOYMENT LISTS, LABOR SELECTIONS, NON-DISCRIMINATION

Delete the first two paragraphs and replace with:

To find the nearest employment office go to the Local Office Directory on the Idaho Department of Labor website.

The Contractor may use the services of the employment office for obtaining labor of the intermediate and skilled grade.

ON PAGE 137, 203.05 - BASIS OF PAYMENT

Add the following:

Saw cutting is incidental to the associated removal item.

ON PAGE 147, 205.03.H.3.a - QUALIFICATIONS

Delete the last sentence in the first paragraph starting with "Provide the following..." and replace with the following:

The Blaster in Charge must meet the following minimum experience and qualifications or be pre-approved as a Blasting Consultant on ITD's Consultant Term Agreement List.

ON PAGE 147, 205.03.H.3.a - QUALIFICATIONS

Delete item (7).

ON PAGE 183, 301.03.A - GENERAL

Delete the word "enough" from the last sentence of the last paragraph.

ON PAGE 187, 303.03.A - GENERAL

Delete the word "enough" from the last sentence of the last paragraph.

ON PAGE 188, 303.03.C - AGGREGATE BASE MATERIAL

Revise the section name to: "C. Aggregate Base Material - Load, Haul, and Place"

Delete "Load, Haul, and Place." from the first paragraph.

ON PAGE 192, 308 – CEMENT RECYCLED ASPHALT BASE STABILIZATION (CRABS)

Delete the entire section and replace with:

SECTION 308 – CEMENT RECYCLED ASPHALT BASE STABILIZATION (CRABS)

308.01 Description.

Recycle the existing roadway pavement and a portion of the base layer.

Follow the specified grade control class.

1. Class I CRABS: use field-established elevations.

2. Class II CRABS: use prescribed elevations.

308.02 Materials.

Use materials conforming to the following requirements:

Use cement as specified in the project plan sheets. If no cement is specified refer to 701. If an alternate type of cement is proposed for use, obtain approval from the Department. 1L cements are allowable for use.

Use water that is clear and without oil and other contaminants.

Perform quality control density testing using an uncorrected nuclear gauge in accordance with FOP for AASHTO T 310 Method A Modified. AASHTO T 310 Method A Modified specifies that the nuclear gauge be operated in backscatter mode to establish the breakover curve. Conduct at least 1 compaction test for every 7,200 square yards of CRABS work.

308.03 Construction Requirements.

Before mobilization, submit a plan of operations for CRABS processing, including traffic control.

A. General.

Construct the CRABS while the existing pavement temperature is above and is expected to remain above 40°F for 24 hours after final completion.

Do not spread portland cement over puddled water, during rain, when rain is imminent, or when wind will not allow uniform spread on the roadway or will cause displacement of cement before mixing.

Add cement and process no more of the roadway than can be repaved in 1 day of paving production. Do not allow traffic to drive on the CRABS surface unless approved by the engineer.

Unless the approved traffic control plan requires traffic to be detoured to an alternate roadway, open the roadway to traffic at the end of each working day. Traffic can travel on compacted pulverized material, if approved by the Engineer. Grade and water the pulverized surface at least once every 24 hours if traffic is allowed to drive on the pulverized surface.

On Class I work, establish the final CRABS surface elevation in the field. Survey the existing roadway surface to produce a surface file (DTM format) for submission to the Engineer for review. Allow at least 7 working days for review. Do not begin work until the submitted surface file has been approved. Adjustments to the surface profile, if approved by the Department, will be made. On tangent roadway sections, the cross slope must be a 2% crown with a centerline at the existing crown location. Match existing cross slopes on superelevated and transitions sections of roadway. Use the approved surface file to establish grade control and maintain the grades of the roadway as specified. Machine control can be used if approved by the Department. Finish the CRABS surface to within 0.03 foot of the approved elevations from the submitted surface file.

On Class II work, the Department will provide grade elevations for the top of the CRABS layer. Finish the CRABS surface to within 0.03 foot of the elevations provided.

Do not waste material before approval of the final elevation for either class.

B. Initial Pulverization.

Before pulverization, strip and waste any vegetation encountered around approaches and inside the typical CRABS section.

Pulverize the pavement to the depth specified in the plans. The surface of the pulverized pavement prior to the application of cement must be at an elevation so that, when processed and recompacted to the required density, the final elevation will match the approved elevation. Overlap pulverization passes at least 6 inches between longitudinal joints and 2 feet between transverse joints. The pulverized material must have 100% passing the 3-inch sieve. Gradation of the material will be accepted by visual inspection. If the pulverized pavement does not contain enough fine material to achieve compaction, additional material can be added on top of the subgrade or from below from deeper pulverizing, if approved by the Engineer.

Document the existing pavement thickness every 0.1 mile in each lane. Submit this documentation to the Department.

Notify the Engineer of any poor quality subbase materials (e.g., soft spots, clays, silts, organic materials) as they are encountered.

If traffic is allowed on the surface prior to the CRABS process and after initial pulverization, shape and compact the pulverized material before the CRABS mixing process.

C. CRABS Process.

Furnish portland cement in bulk. Add the cement to the pulverized material using a mechanical spreader at the rate specified in the plans +/- 5 percent. Synchronize the application rate with the machine speed to provide uniform application. Spread the cement in a dry state and do not allow blowing of the cement. Upon approval of the engineer, slurry cement application may be used.

After spreading the portland cement, mix the cement with the pulverized material to obtain the required depth and width. Start mixing cement within 30 minutes of placement. Distribute only as much portland cement as can be mixed and compacted within the same working day.

Use a road mixing machine (pugmill, auger, or cross-shaft mixer) capable of providing a uniform homogeneous mixture. Introduce the water through the mixing machine using a metering device. Add the correct quantity of water to produce a mixture within 3% of optimum moisture content for compaction. Do not allow water leakage from equipment. Do not add excessive water. Mix the existing pulverized pavement, base, and cement to the full depth as specified.

More than 1 pass of the mixer may be required. Introduce water with the final mixing pass.

Ensure and document the mixing thickness every 0.3 mile in each lane.

Provide continuous grade and cross-slope control including surveying (blue topping or confidence points to verify the DTM model).

It is expected that the pulverized material will swell 15 to 30 percent before compaction. Construct the cross slope as shown in the approved DTM surface . Adjustments may be required to the existing roadway profile to provide a consistent grade and to avoid adding new material or wasting existing material. If necessary, reestablish the roadway profile and cross slopes to provide a roadway section that is consistent with the typical section. Obtain approval for any modifications to the approved DTM surface. For CRABS Class II work, the grades in the Department-provided gradebook may be adjusted to avoid adding new material or wasting existing material upon approval.

Account for swell in the grading operation that may leave the processed surface above the adjacent surface. Incorporate all pulverized material into the CRABS layer. Shape and finish the CRABS surface without adding new material or wasting existing material.

Grade designated shoulder material to a location and elevation on the shoulder that is below the top of the CRABS layer. Do not use cement-treated material for shoulder material.

Place windrow material designated for removal adjacent to, but outside the limits of pulverization. Dispose of material following final shaping and before application of cement.

Use a motor grader, mechanical spreader, paver, or grade trimmer to shape the mixture.

For the compaction train, include at least 1 rubber-tired roller, 1 vibratory roller, and 1 vibratory pad-foot soil compactor. Use compaction equipment and/or rolling methods to produce the required compaction without damaging the work.

The vibratory soil compactor will have a minimum centrifugal force of 15 tons, minimum drum width of 60 inches, and minimum pad height of 3½ inches. Use the vibratory pad-foot soil compactor after the cement has been mixed.

Perform all other final process rolling and blading after completion of the vibratory pad foot operation.

Establish a roller pattern using in-place density from an uncorrected nuclear gauge in accordance with FOP for AASHTO T 310 Method A Modified. Use the roller pattern as a standard from which to measure compaction. Compaction is achieved when additional roller passes add no more than 0.5 pound per cubic feet to the previous in-place density. Ensure a “false break” or leveling-off point is not used for compaction density. Reestablish a new roller pattern when mixture properties change and at least every 7,200 square yards of finished surface.

Perform grading and rolling without wasting material.

Accomplish all shaping, final process rolling and associated blading within 2 hours of the initial blending of the cement and water. Do not use vibratory rollers on the CRABS surface beyond the 2 hours after the addition of water and cement.

Cure completed CRABS material by applying a prime coat or another approved sealing membrane or by keeping the processed and compacted material visibly moist until the first lift of plant mix is applied. The method of curing must be included in the submitted plan of operations for CRABS. If prime coat or another approved sealing membrane is used, apply as soon as possible once the CRABS material can support the weight of the application equipment without causing damage to the completed CRABS

surface. Keep the CRABS surface continuously moist until the application of the curing material. Do not apply prime coat to the completed CRABS surface if standing water is present.

If prime coat or another approved sealing membrane is used to cure the CRABS the Engineer will approve the proper application rate. The application rate of the prime coat or sealing membrane may be adjusted for proper application and sealing of the CRABS surface as approved by the Engineer. Allow the prime coat or sealing membrane to dry before construction equipment or traffic is allowed on the surface. If construction equipment needs to travel on the surface before the prime coat or sealing membrane is dry, clean dry blotter sand can be applied to the surface to prevent tracking or damage to the surface. Repair tracking or damage to the tack coat at no additional cost to the Department.

Pave over the CRABS as soon as possible following compaction and within 48 hours after the introduction of cement and water to the CRABS. If the CRABS surface is protected and being properly cured, the 48 hour timeline can be extended if approved by the Engineer.

Tight-blading and static rolling may be required before applying the initial lift of plant mix due to surface deformation, raveling, or other irregularities. Ensure there is no loose material on the CRABS surface at the time of plant mix paving. After paving, blade the roadway shoulders to provide a uniform appearance.

308.04 Method of Measurement.

Pulverized existing surface and CRABS will be measured by the square yard.

Portland cement will be measured by the ton using certified weights indicating the truck and trailer number, tare weight, gross weight, net weight, and date. When the measurement of Portland cement is based on certified weight certificates, the following will apply:

1. An occasional loaded transporting vehicle will be weighed on a local certified scale and a copy of the weight certificate will be submitted before the discharge of material. The Engineer will determine when loaded transporting vehicles will be weighed.

2. At the Engineer's request, randomly selected, empty transporting vehicles may be weighed on a local, certified scale able to produce a scale ticket for the Engineer's documentation and verification.

For discrepancies between the weight certificates and weights obtained at the project site, the Engineer will be the sole judge in determining the quantity of portland cement used.

308.05 Basis of Payment.

The Department will pay for acceptable quantities as follows:

Pay Item	Pay Unit
Pulverize Existing Surface	SY
Cement Recycled Asphalt Base Stabilization Class ___	SY
Portland Cement	Ton
Prime Coat	Gallon

The following work is incidental, and the cost included in the CRABS contract pay items including:

1. Stripping and disposing of unsuitable materials.
2. Grade control work.
3. Additional required pulverization and mixing passes.
4. Brooming.
5. Grading, rolling, and shaping.
6. Mixing water and water required to keep the CRABS surface moist for shoulder dressing.
7. Blade the shoulders to be smooth and at a uniform slope leaving no clumps or debris.

ON PAGE 242, TABLE 409.01.A - CLASSIFICATION

Delete Table 409.01-1 and replace with the following:

Table 409.01-1 – Basic Mix Design Parameters

Concrete Class in 100 psi (28 or 56 Day) (a) (b) (g)(h)	Minimum Cementitious Content lb/yd^3 (c) (d) (e) (f)	Water to Cement Ratio	Slump in	Air Content Percent
45	600	0.42 maximum	2 maximum	4 - 7

(a) The class of concrete is the specified compressive strength when using the applicable tests as specified in 409.02.
(b) A design value of 5,600 psi is specified to achieve the specified compressive strength.
(c) Cementitious is cement plus secondary cementitious material (SCM).
(d) It may not always be possible to produce concrete of the required strength using the minimum cementitious contents. No separate payment will be made by the Department for additional cementitious material required to meet specified strength.
(e) Use SCM as specified in 714.
(f) It may not always be possible to produce concrete using the minimum SCM content that will ensure mortar bar expansion does not exceed the standard limit when tested in accordance with CRD C 662 or ASTM C 1293. If additional SCM is needed to meet mortar bar expansion requirements, the Contractor may add it to the mix without a corresponding increase in cement provided the strength requirements are met. Obtain approval to add lithium or other mitigating measures to meet the mortar bar expansion requirement. A separate payment will not be made by the Department for additional cementitious material required to meet the specified compressive strength.
(g) Concrete class designated as Class F will contain SCM. Minimum SCM content varies by product, for fly ash and slag cement (slag) minimum content is 20% by weight of total cementitious material. Fly ash will not exceed 25% of total cementitious material. Slag will not exceed 35% of the total cementitious material. Ternary and quaternary blends will contain at least 20% SCM. Total SCM content will not exceed 50%.
(h) When using blended cements, the strength development may take longer than it would have with ordinary portland cements. If the schedule allows, designing the mix for 56-day strength will allow for a reduced cement content to reduce the potential for shrinkage cracking.

ON PAGE 242, 409.01.B – ACCEPTANCE

Add the following after the second sentence in the first paragraph:

> Strength is accepted based on the results of the 28-day, or 56-day compressive strength tests, if needed, as determined in accordance with AASHTO T 22.

Delete the second paragraph and replace with:

> When the 28-day or 56-day strength for a test falls below the specified strength, concrete represented by that test is subject to rejection or a price reduction.

ON PAGE 243, 409.01.B – ACCEPTANCE

Add the following to the end of the first sentence of the third paragraph:

> … , or 70 calendar days for the 56-day strength.

Delete the second sentence of the third paragraph and replace with:

> Cores obtained after 42 or 70 calendar days will only be acceptable to the Engineer when the Contractor submits a correlation curve developed by a Department approved independent testing laboratory to relate strength at the actual test age to 28-day or 56-day strength for a particular class and design mix represented by cores.

Delete the second sentence of the last paragraph and replace with:

> If results of 7-day strength tests are low or show a downward trend, predicting concrete may not meet the specified 28-day or 56-day strength, make corrective changes.

ON PAGE 243, 409.01.B – ACCEPTANCE

Delete the second sentence of the last paragraph and replace with:

> The Department will provide the 7-day break data to the Contractor. If results of 7-day strength tests are low or show a downward trend, predicting concrete may not meet the specified 28-day or 56-day strength, make corrective changes.

ON PAGE 244, TABLE 409.02-1 – CHARACTERIZING EFFECTIVENESS OF MITIGATION IN CONCRETE

Add the following after “CRD C662” in the Title:

> “or ASTM C1567”.

ON PAGE 245, 409.02 - MATERIALS

Delete the reference to standard test method AASHTO T 23 and replace with the following:

Standard Practice for Making and Curing Concrete Test Specimens in the Field
(Except use single use molds made of plastic) ……..... AASHTO R 100

ON PAGE 247, 409.03.A - PROPORTIONING

Delete "CRD-C 662CRD-C 662" from the first sentence of the last paragraph on the page.

ON PAGE 251, 409.03.D - MIXING AND DELIVERING

Under Item 10, delete "85°F" and replace with "90°F".

ON PAGE 252, 409.03.F.3 - TEMPERATURE LIMITATIONS

Delete the text in Item 3 and 4 and replace with the following:

3. Do not place concrete if the concrete temperature is greater than 90°F. Do not place concrete when the evaporation rate is greater than 0.15 pounds per square foot per hour when tested in accordance with Idaho IT 133. Submit for acceptance an evaporation and curing plan as described in 409.03.M. If the evaporation rate approaches 0.15 pounds per square foot, implement the accepted evaporation and curing plan. Admixtures can be used to extend delivery times and revolutions if noted in the mix design with the approval of the Engineer. Night or early morning placement may be necessary to avoid excess evaporation. Ice used as part of the mixing water must be completely melted by the time the mixing is completed.
4. Do not place concrete against any surface with a temperature less than 32°F or greater than 90°F.

ON PAGE 259, 409.03.M - COLD WEATHER CONCRETING WORK PLAN

Replace section name with:

M. Cold and Hot Weather Concreting Work Plans

ON PAGE 260, 409.03.M - COLD WEATHER CONCRETING WORK PLAN

Add the following hot weather information to the end of the section.

Submit for approval a hot weather concreting work plan, also known as an evaporation and curing plan, when ambient temperatures are likely to be above 85°F during placement or when the evaporation rate could potentially approach 0.15 pounds per square foot due to wind and other factors. At no time can the concrete temperature or evaporation rate exceed the limitations specified. The plan may include development of a concrete mixture and a detailed plan for mixing, transporting, placing, protecting, curing and testing of concrete. Precautions must be made to avoid thermal cracking or deleterious effects to the concrete due to high temperatures. Retempering is not allowed.

Use of established mathematical and empirical models will be required.

Evaporation retardant must be on hand and available for use as an emergency protection when the curing operation is delayed. Do not use evaporation retardant as a finishing aid. Evaporation retardant material and use must be addressed in the Contractor's evaporation and curing plan.

ON PAGE 262, 409.05 – BASIS OF PAYMENT

Add the following prior to the second paragraph beginning with "Drilling holes…"

The Department will pay for concrete in two payments. The Department will pay for 50% of the quantity of concrete placed at the contract price per square yard after placement. Upon acceptance of the material, the remainder will be paid, plus or minus adjustments for strength and thickness. No payment will be made for removal and replacement of rejected material.

ON PAGE 301, 502.01.A - CLASSIFICATION

Delete Table 502.01-1 and replace with:

Table 502.01-1 – Basic Mix Design Parameters

Concrete Class in (100 psi) (28 or 56 day) [a][i]	Minimum Cementitious Content lb/yd^3 [b] [c]	Maximum Cementitious Content lb/yd^3	Maximum Water Cement Ratio	Air Content Percent
65 and greater, Self-consolidated concrete [d][e][f][g]	660	NA	0.42	0-6.0
45 to less than 65 [d][e][f][g]	560	710	0.44	0-6.0
35 to less than 45 [d][e][f][g]	470	615	0.44	0-6.0
30	470	570	0.50	6.5±1.5
Seal Concrete	660	N/A	0.60	0 - 6.0
Mass Concrete[d][e][g][h]	560	N/A	0.44	0-6.0

a) Numerical part of class designation is the specified compressive strength when using the applicable tests as specified in 502.02.

b) Cementitious is cement and secondary cementitious materials (SCM).

c) It may not always be possible to produce concrete using the minimum SCM content that will ensure mortar bar expansion does not exceed the standard limit when tested in accordance with CRD C 662 or ASTM C 1293. If additional SCM is needed to meet mortar bar expansion requirements, the Contractor may add it to the mix without a corresponding increase in cement provided the strength requirements are met. Obtain approval to add lithium or other mitigating measures to meet the mortar bar expansion requirement. A separate payment will not be made by the Department for additional cementitious material required to meet the specified compressive strength.

d) Concrete designated as Class A will have an air content of 6.5 plus or minus 1.5 percent.

e) Concrete designated as Class C will have a maximum water cement ratio of 0.40, water reducer required, and air content of 6.5 plus or minus 1.5 percent.

f) Concrete designated as Class F will contain SCM. Minimum SCM content varies by product; for fly ash and slag cement (slag) minimum content is 20% by weight of total cementitious material. Fly ash will not exceed 25% of total cementitious material. Slag will not exceed 35% of the total cementitious material. For silica fume, minimum content is 7.5% by weight of total cementitious material. Silica fume will not exceed 10% of the total cementitious material. Ternary and quaternary blends will contain at least 20% SCM. Total SCM content will not exceed 50%.

g) Provide SCM meeting the requirements of 714.

h) Use only Type I, II, IL, IP or IS cements. Any combination of slag or Class F fly ash. Class C may be used with a maximum substitution of 20%. Maximum total substitution of SCM must not exceed 50%, including the amount of blended cement. Water reducing or retarding admixtures may be used to aid in air entrainment. Non-chlorine accelerators are allowed.

i) When using blended cements, the strength development may take longer than it would have with ordinary portland cements. If the schedule allows, designing the mix for 56-day strength will allow for a reduced cement content to reduce the potential for shrinkage cracking.

ON PAGE 302, 502.01.B – ACCEPTANCE

Add the following after the second sentence in the first paragraph:

> Strength is accepted based on the results of the 28-day, or 56-day compressive strength tests, if needed, as determined in accordance with AASHTO T 22.

Add the following sentence to the end of the first paragraph:

> When the 28-day or 56-day strength for a test falls below the specified strength, concrete represented by that test is subject to rejection or a price reduction. Make approved corrective changes if results of 7-day strength tests are low or show a downward trend predicting concrete may not meet the specified 28-day or 56-day strength.

ON PAGE 302, 502.01.A - CLASSIFICATION

In the first sentence of the last paragraph, delete “303” and replace with “380”.

ON PAGE 303, 502.01.B – ACCEPTANCE

Delete the following from the first sentence of the second paragraph:

> ...at no additional cost to the Department

Add the following to the end of the first sentence of the third paragraph:

> … , or 70 calendar days for the 56-day strength.

Delete the second sentence of the third paragraph and replace with:

> Cores obtained after 42 or 70 calendar days will only be acceptable to the Engineer when the Contractor submits a correlation curve developed by a Department approved independent testing laboratory to relate strength at the actual test age to 28-day or 56-day strength for a particular class and design mix represented by cores.

Add to the end of the fourth full paragraph starting with “The Engineer and the Contractor…”

> When results of the drilled core testing indicates passing results, the cost to perform the coring and testing will be borne by the Department or its representatives.

ON PAGE 304, 502.01.B – ACCEPTANCE

Delete the second sentence of the first paragraph and replace with:

> The Department will provide the 7-day break data to the Contractor. Make approved corrective changes if results of 7-day strength tests are low or show a downward trend predicting concrete may not meet the specified 28-day or 56-day strength.

ON PAGE 304, Table 502.02-1 – CHARACTERIZING EFFECTIVENESS OF MITIGATION IN CONCRETE

Add the following after "CRD C662" in the Title:

"or ASTM C1567".

ON PAGE 305, 502.02 - MATERIALS

Delete the reference to standard test method AASHTO T 23 and replace with the following:

Standard Practice for Making and Curing Concrete Test Specimens in the Field (Except use single use molds made of plastic) ..... AASHTO R 100

Delete test method "Determining the Percentage of Fracture of Coarse Aggregate".

ON PAGE 306, 502.02 - MATERIALS

Add the following to the list of test methods:

Standard Test Method for Determination of Length of Change of Concrete Due to Alkali-Silica Reaction ..... ASTM C 1293

ON PAGE 311, 502.03.D.10 - MIXING AND DELIVERY

Delete Item 10 and replace with the following:

10. Do not place concrete when the concrete temperature is below 50°F. Do not place concrete if the concrete temperature is greater than 80°F for bridge decks or when placing concrete where the least dimension is greater than 3.0 feet; otherwise, the concrete temperature must not exceed 85°F. The concrete temperature must not exceed 85°F at the time of placement for precast members. Refer to 502.03.F.4 for temperature limitations with massive placements. When placing flatwork, do not place concrete when the evaporation rate is greater than 0.15 pounds per square foot per hour when tested in accordance with Idaho IT 133. Submit for acceptance an evaporation and curing plan as described in 409.03.M if the concrete temperatures are anticipated to approach the temperature limitations specified or if the evaporation rate is anticipated to approach 0.15 pound per square foot for flatwork. Implement the accepted evaporation and curing plan when appropriate based on the actual concrete temperature and evaporation rates. Admixtures can be used to extend delivery times and revolutions if noted in the mix design with the approval of the Engineer. Night or early morning placement may be necessary to avoid excess evaporation. Ice used as part of the mixing water must be completely melted by the time the mixing is completed.
11. Do not place concrete against any surface with a temperature less than 32°F or greater than 90°F.

ON PAGE 308, TABLE 502.03-3 – STRENGTH VALUE

Delete Table 502.03-3 and replace with:

Table 502.03-3 – Strength Value

Concrete Class	Location	Design Mix Strength
Specified Strength 3,000 psi thru 5,000 psi	Concrete, except cast in-place girders	Specified Strength +1,200 psi
	Cast-in-place girders	Specified Strength + 1,600 psi
Specified Strength over 5,000 psi	Concrete	1.1 x Specified Strength + 700 psi

ON PAGE 312 AND 313, 502.03.E.3.a(6) - FALSEWORK AND FORMS

Delete item (6), including the "Note", and replace with the following:

(6) For applying the lateral pressure formulas, columns are defined as elements with no plan dimension exceeding 6.5 feet. Walls are defined as vertical elements with at least 1 plan dimension greater than 6.5 feet.

ON PAGE 317, 502.03.E.5 - REMOVAL OF FALSEWORK AND FORMS

Replace the first paragraph with the following:

Perform maturity testing in accordance with ASTM C1074 or field-cured cylinder testing to determine compressive strength for form removal and loading.

ON PAGE 317 AND 318, 502.03.E.5 - REMOVAL OF FALSEWORK AND FORMS

Correct formatting by replacing Table 502.03-5 with:

Table 502.03-5 – Form and Falsework Removal and Loading of Concrete

Part 1: **Removal of Forms and Falsework Structural Element**	**Minimum Days** [a] [b] [f]	**Percent of Design Strength** [e]
Side forms for: footings, abutment caps, pier caps, traffic and pedestrian barriers, end diaphragms, intermediate diaphragms, sleeper beams, moment slabs, and other side forms not supporting the concrete mass	1	—
Columns, abutment backwalls, and retaining walls	3	50
Cantilever bridge deck sidewalks	7	—
Bridge decks, top slabs of concrete box culverts or stifflegs [c]	10	80
Crossbeams, caps, box girders, T-beam Girders, and flat slab superstructures [c]	7	80
Signal, Luminaire, and Sign Support Foundations	7	80
Part 2: **Subsequent Loading [d] of Structural Element**	**Minimum Days** [a] [f]	**Percent of Design Strength** [e]
Footings and abutments	3	80
Approach slabs, sleeper beams, moment slabs, and bottom slabs of box girders with falsework in place	5	80
Columns and walls	5	100
Bridge decks, top slabs of concrete box culverts or stifflegs and other members	10	100
Signal, Luminaire, and Sign Support Foundations	7	100
Erecting girders on pier caps	7	100

(a) From the time of the last placement in the forms or falsework supports and excluding the days when the surrounding temperature is below 40°F for a total of 4 hours or more. Requirements in 502.03.G still apply. The Contractor will monitor the temperature during curing time by continuous recording thermometers.
(b) Do not remove forms until the concrete has sufficient strength to prevent damage to the surface or cause over stressing of the concrete.
(c) Where continuous spans are involved, the time for spans will be determined by the last concrete placed.
(d) Except loads from formwork and reinforcing steel of further concrete placements.
(e) Standard concrete mix designs may not achieve strength in the minimum days shown.
(f) 1 day is 24 hours.

ON PAGE 322, 502.03.G.1 - COLD WEATHER CONCRETING

Delete items b and c, and renumber the remaining items in alphabetical order.

ON PAGE 323, 502.03.H - HOT WEATHER CONCRETING

Delete the first sentence of the first paragraph and replace with:

> Submit for acceptance an evaporation and curing plan as described in 409.03.M.2 if the concrete temperatures are anticipated to approach the temperature limitations specified or if the evaporation rate is anticipated to approach 0.15 pounds per square foot per hour for flatwork.

ON PAGE 328, 502.05.1 – CONCRETE

Delete the first two full sentences of the first paragraph and replace with:

> The Department will pay for concrete of the class and schedule specified in two payments. The Department will pay for 50% of the quantity of concrete placed at the contract price per cubic yard or square yard after placement. Upon acceptance of the material, the remainder will be paid, minus adjustments for strength. No payment will be made for removal and replacement of rejected materials.

ON PAGE 329, 502.05.6 - SURFACE RESISTIVITY PRICE ADJUSTMENT

Delete the first full sentence and replace with the following:

> The Department will pay the price adjustment to the contract unit price for each lot of Schedule No. 2 concrete meeting the surface resistivity requirements in Table 502.05-2 when measured using AASHTO T 358 at 28 calendar days.

Change the number of the table to: “502.05-2”

ON PAGE 330, 503.03.B - PROTECTION OF MATERIAL

Remove the 4th sentence and replace with the following:

> Do not flame cut reinforcing steel.
>
> Prevent condensation from forming on the bars. Store and cover epoxy-coated metal reinforcement off the ground to protect them from sunlight, salt spray, and weather exposure. Do not drag or drop epoxy-coated reinforcing steel. Repair coating cracks, abrasions, chips, and bond loss before oxidation appears on the bar surface.

ON PAGE 331, 503.03.D - PLACING AND FASTENING

Add the following after the fifth sentence of the 1st paragraph:

> Locate supports at least 1.5 times the maximum aggregate size or 2 inches, whichever is greater, from formed corners to allow for concrete consolidation around the supports.

ON PAGE 333, 503.03.E - SPLICES

Replace the first sentence of the first full paragraph with the following:

> Make one tension test specimen splice to represent each lot of bars spliced at the project site and submit to a qualified lab for testing. Submit test results to the Engineer before installation.

Delete criteria 2 of the sixth paragraph and replace with:

2. Slippage for AASHTO M 31 Grade 60 bars within a splice sleeve is limited to a maximum of 0.01 inches for bar sizes up to No. 14, and 0.03 inches for No. 18 bars. Measure the slippage between gauge points clear of the splice sleeve. Take measurements in accordance with ASTM A1034.

ON PAGE 333, 503.05 - BASIS OF PAYMENT

Add the following to the end of the pay item list:

> Metal Reinforcement, Type W…….lb

ON PAGE 335, 504.01.F - SHOP PLANS

Add the following after the last sentence of the first paragraph:

> If the girder top flange or web is to be used to support the deck forms or screed machines, show the method and location of support in the girder shop drawings for approval prior to fabrication.

ON PAGE 338, 504.03.D - FIT AND BEARING

Replace all instances of “mill” with “finish”

Replace the first sentence of the last paragraph with the following:

> Finish bearing stiffeners so they will bear evenly against the flange in accordance with ANSI/AASHTO/AWS D1.5 Section 5.5.9.

ON PAGE 342, 504.03.L.1 - BOLTED CONNECTIONS

Delete the first paragraph and replace with:

> General. High-strength bolted connections are slip critical. Provide galvanized Type 1 bolts and galvanized Direct Tension Indicators (DTIs) for painted structures. Provide Type 3 bolts and Type 3 Direct Tension Indicators (DTIs) for weathering steel structures.

Delete the fifth paragraph.

ON PAGE 343, 504.02.L.1 - GENERAL

In the third paragraph, delete item “a.” and replace with the following:

a. The complete fastener assembly, including lubrication if required, to be used in the work satisfies the proof load requirements specified in ASTM F3125 Table 5.

ON PAGE 344, 504.02.L.1 - GENERAL

Delete the second paragraph starting with “When bolts…”, and delete Table 504.03-2 – Bolt Tension.

ON PAGE 344, 504.03.L.2 - TIGHTENING METHODS

Delete the first sentence and replace with:

> Tightening Methods. Tighten using the DTI method. Turn-of-nut method requires prior approval.

ON PAGE 344, 504.03.L.2.a.(2) - BOLT TENSION

Add the following to the end of section (a):

> Modify the verification test procedure as follows: the maximum number of spaces in which the 0.005 inch gage is refused is the number of spaces on the washer minus one.

Add the following section after section (b):

> (c) Tension all bolts and inspect all DTIs with a feeler gage, in the presence of the Engineer. Install DTIs with a minimum of a two-person crew, with one individual preventing the element at the DTI from turning and a second individual measuring the gap of the DTI to determine the proper tension of the bolt.

ON PAGE 346, 504.03.M.2 - PREHEATING

Delete ", Section 4" from the sentence.

ON PAGE 347, 504.03.M.3 – WELDING PROCEDURES

Delete ", Sections 5.7 and 5.12" from the last sentence of the first paragraph.

ON PAGE 347, 504.03.M.4 - FILLERS

Delete "Table 4.2" from the sentence.

ON PAGE 348, 504.03.M.6.b - RADIOGRAPHIC INSPECTION

Add the following to the end of the paragraph:

> Provide an inspection report in digital format that includes a full set of radiographic digital images per AWS D1.5 Ch 8.12.3. Phased array ultrasonic testing (PAUT) is not allowed as a replacement for radiographic inspection.

ON PAGE 352, 505.03.B - HELMET ASSEMBLY

Delete the 3rd sentence and replace with the following:

> Provide a pile hammer helmet assembly (strike plate, hammer cushion, drive cap base, and pile insert or pile adapter) that is approved by the pile hammer manufacturer and sized for the pile hammer. Field fabricated pile hammer components are not acceptable.

ON PAGE 357, 505.05 - BASIS OF PAYMENT

Delete the second paragraph of Section 505.05 and replace it with the following:

> Splice steel pile before driving: the Department will pay for up to 1 splice per pile if the estimated pile lengths are 60 feet or longer. Splice steel pile during driving: the Department will pay for up to 1 splice per pile for estimated pile lengths from 60 up to 100 feet and up to 2 splices per pile for estimated pile lengths that are greater than 100 feet.

ON PAGE 373 AND 374, TABLE 510.02-2 - LATEX-MODIFIED CONCRETE PROPERTIES

Modify the formatting of Table 510.02-2 as follows:

Table 510.02-2 – Latex-Modified Concrete Properties

Mix Design Item	Requirement
Cement content	660 lb/yd^3
Latex emulsion admixture	25 gal/yd^3
Approx. added water [(a)], including free moisture in the FA & CA	150 lb/yd^3
Air content, percent of plastic mix	0 - 6.5
Slump[(b)]	4 - 6 in
Percent fine aggregate as percent of total aggregate by weight (rounded CA)	55 ± 5
Percent fine aggregate as percent of total aggregate by weight (crushed CA)	60 ± 5
Weight ratio of cement-FA-CA- (rounded CA)[(c)]	1:2.5:2.0 dry basis
Weight ratio of cement-FA-CA- (crushed CA)[(c)]	1:2.7:1.8 dry basis
28-day compressive strength (Minimum)	4,000 psi

(a) This is in addition to the latex. Adjust the water added to control the slump and to produce net water-cement ratios of 0.35 to 0.40 by weight.
(b) Measure the slump 4 to 5 minutes after discharge from the mixer or immediately ahead of the finisher.
(c) The Contractor may adjust the dry-weight ratios within limits as approved. The Contractor may increase the FA ratio by as much as 0.2 if the CA is reduced by an equivalent amount.

ON PAGE 373, TABLE 510.02-2 - LATEX-MODIFIED CONCRETE PROPERTIES

Delete “Cement Content” and replace with “Cementitious Content (Cement + SCM)”.

ON PAGE 374, TABLE 510.02-3 - SILICA FUME CONCRETE PROPERTIES

Delete “Cement Content” and replace with “Cementitious Content (Cement + SCM)”.

Delete “Course” from “Course Aggregates” and replace with “Coarse”.

ON PAGE 377, 510.03.E - PLACING AND FINISHING

Add the following to the end of the first paragraph:

Remove any plastic sheeting prior to placement of bonding coat.

Delete “visqueen” from the first paragraph and replace with “plastic sheeting”.

ON PAGE 381, 511.01.B.3 - SUBMITTALS

Add the following after item “f”:

g. Submit a quality control plan for acceptance.

ON PAGE 384, 511.03.A - SURFACE PREPARATION

Delete the second paragraph and replace with:

For structure rehabilitation, remove foreign materials from the concrete surface before applying waterproofing system. Repairs and patches must be fully cured before applying waterproofing. Prepare the surface according to an accepted quality control plan.

ON PAGE 384, 511.03.B.1 - TYPE C APPLICATION OF PENETRATING WATER REPELLENT SYSTEM

Delete the word “sandblasted” from the third sentence of the first paragraph and replace with “prepared”.

ON PAGE 389, 511.04 - METHOD OF MEASUREMENT

Replace the first sentence with the following:

The Engineer will measure acceptably completed work by the square yard based on plan quantity.

ON PAGE 400, TABLE 522.02-1 - CDF MIXTURE PROPERTIES

Delete Table 522.02-1 and replace with the following:

Table 522.02-1 – CDF Mixture Properties[1]

	MIN. CEMENT CONTENT (LB/CY)	FLY ASH (CLASS F) OR SLAG CONTENT (LB/CY)	MAX WATER TO CEMENTITIOUS RATIO	FINE AGGREGATE (SSD) (LB/CY)	COARSE AGGREGATE (SSD) (LB/CY)	SLUMP[4] (INCH)	AIR[4] CONTENT (%)
Flowable Fill	50	0-260	2.0	1300-3000	0-2500[2]	6-8	0-15
Low Flowability Fill	100	- -	4.0	1300-2000	1300-1900[3]	0-2	0-5

Notes:

1. Refer to ACI 229R for guidance.
2. 3/8 inch to No. 4 according to ASTM C33, or pea gravel.
3. ¾ inch according to ASTM C33.
4. Provided for guidance.

ON PAGE 418, 553.02 – MATERIALS

Replace the 5th sentence in the 2nd paragraph with the following:

> If the aggregate type is not specified in the plans, provide calcined bauxite aggregate.

ON PAGE 426, 565.01 - DESCRIPTION

Delete last sentence of the first paragraph and delete the 2 products listed.

ON PAGE 426, 565.02 - MATERIALS

Delete entire section and replace with:

> Provide premeasured polymer asphalt expansion joint binder material, aggregate, backer rod (closed cell foam expansion joint filler), bridging plate, and location spikes in accordance with ASTM D6297.

ON PAGE 429, 566.03 - CONSTRUCTION REQUIREMENTS

Add new first paragraph:

> Ensure the compression seal manufacturer's representative is present during the first installation of each joint type.

ON PAGE 430, 567.03.B - INSTALLATION

Delete the first sentence of the first paragraph and replace with:

Install the expansion joint as specified, per the approved shop drawings and manufacturer's instructions.

ON PAGE 435, 569.01 - DESCRIPTION

Replace the first sentence with the following:

Remove and dispose of existing expansion joint system and deck to the limits specified.

ON PAGE 435, 569.03 - CONSTRUCTION REQUIREMENTS

Replace the second paragraph with the following:

Remove and dispose of existing expansion joint headers, steel armor angles, sliding plates, embedded hardware, joint seals, and concrete within the specified removal limits so the concrete is not damaged beyond the limits shown.

Replace the last sentence of the third paragraph:

Repair damage to existing reinforcement, concrete overbreak, or other damage outside the limits specified in accordance with 582.03 at no additional cost to the Department.

ON PAGE 437, 574 – ANTI-GRAFFITI COATING

Delete the entire section and replace with:

SECTION 574 - ANTI-GRAFFITI COATING

574.01 Description.

Provide anti-graffiti coating on concrete surfaces.

A. System Types. Use one of the following system types:

(1) Type 1 Chemical Removal. Coatings that are chemically resistant that allow for the removal of graffiti with solvent or chemical graffiti removers.

(2) Type 2 Water Cleanable. Coatings that allow for graffiti removal with a high-pressure water wash.

574.02 Materials.

Provide a clear or pigmented anti-graffiti coating system. Use an aliphatic urethane system with a clear finish for the anti-graffiti system topcoat. Use a permanent anti-graffiti coating for the protection of raw concrete substrates. Provide color pigment of base or sealer coat that meet the following requirements:

Table 574.02-1 Type 1 Chemical Removal		
Property	Requirement	Test Method
Graffiti Resistance	Cleanability Level: 8, 9, or 10	ASTM D6578
	Recleanability: Min. 10 cycles	

Table 574.02-2 Type 2 Water Cleanable		
Property	Requirement	Test Method
Graffiti Resistance	Cleanability Level: 1	ASTM D7089
	Recleanability: Min. 10 cycles	

Provide coatings and primers from the same manufacturer. Ensure removal products do not damage or cause pigment loss of the coating.

1. Submittals:

    a. Provide accredited laboratory test reports, performed within three years of submittal, demonstrating conformance with Tables 574.02-1 or 574.02-2.

    b. The manufacturer's safety data sheet (SDS) for each of the components.

    c. The manufacturer's current product data sheets and installation instructions for the product.

Allow five business days for review and approval of submittals and resubmittals.

574.03 Construction Requirements.

Prepare surfaces to be coated by sandblasting to ensure surface is clean and free from foreign substances per manufacturer's instructions.

Apply base or sealer coat to the concrete surfaces. Apply anti-graffiti coating in accordance with manufacturer's installation instructions. Submit the guarantees and warranties.

Coat exposed surfaces of designated concrete superstructures, substructures, retaining walls, MSE walls, and coping to a line one foot below finished grade. Cover exposed bridge and wall surfaces except the deck and the underside of the deck surfaces.

574.04 Method of Measurement.

The Engineer will measure acceptably completed work by the square foot.

574.05 Basis of Payment.

The Department will pay for acceptable quantities at the contract unit price as follows:

Pay Item	Pay Unit
Anti-Graffiti Coating, Ty ____	SF

Surface preparation is incidental.

ON PAGE 439, 576.02.A - SUBMITTALS

Delete the following sentence:

> Provide certifications bearing the notarized signature of a manufacturer's representative having quality control responsibility.

ON PAGE 446, 578.02 - MATERIALS

Revise the second sentence in the second paragraph:

> Provide reinforcing steel meeting AASHTO M31, Grade 60S or Grade 80S.

In the third sentence of the second paragraph, delete "ASTM A497" and replace with "AASHTO M 336".

ON PAGE 446, 578.03 - CONSTRUCTION REQUIREMENTS

Delete the last sentence of the second paragraph and replace with:

> Provide box culvert dimensional tolerances in accordance with ASTM C1577, Section 12. Provide three-sided frame dimensional tolerances in accordance with ASTM C1504, Section 11.

ON PAGE 454, 582.02.A - PREPARATION OF CONCRETE SURFACES

Delete item 6.

ON PAGE 455, 582.03 - CONSTRUCTION REQUIREMENTS

Replace A through D with the following:

A. Preparation of Concrete Surfaces.

Mark out and score removal areas to a depth of ½-inch with a dry concrete saw to form faces perpendicular to the surface. Angle the sawcut or adjust the sawcut depth as needed to avoid penetrating other bridge elements or damaging existing metal reinforcement.

Remove unsound concrete using jackhammers with a nominal rating of 15 pounds or less and held at an angle of 45° or less from the concrete surface. Do not remove concrete within ½-inch of girder bearing systems, including neoprene pads or lead plates, between the bearing seat and 4 inches above the bottom of abutment and pier caps. Notify the Engineer if unsound concrete is found within

½-inch of the girder bearing system. If any reinforcement is or becomes exposed during the removal and the bond between concrete and reinforcement is destroyed, remove deteriorated, loose, or unsound concrete to a minimum depth of ¾-inch behind the bar or to the depth of sound concrete, whichever is greater. Exercise care to prevent additional damage or debonding of metal reinforcement in adjacent concrete areas.

After concrete removal, sandblast the cavity and the surrounding concrete area to remove dirt, oil, grease, paint, corrosion deposits, dust, laitance, and bond inhibiting materials. Prepare the cavity using mechanical scarification or additional sandblasting to provide a minimum surface profile of ± ⅛-inch.

Protect property and traffic from damage and flying debris during concrete removal and sandblasting operations.

B. Existing Reinforcing Steel.

Repair or replace damaged (cracked, broken, gouged, or deteriorated) metal reinforcement where the effective bar area is less than 75 percent of the original bar diameter. Embed and splice replacement bars as directed. Embed supplemental bars as directed.

Clean exposed reinforcing steel to remove dirt, oil, grease, paint, corrosion deposits, dust, laitance, and bond-inhibiting materials immediately prior to patch material placement. Protect cleaned metal reinforcement from the elements and from contamination.

C. Inspection.

Prior to mortar placement, allow the Engineer to inspect concrete areas after final surface preparation has been completed for approval. After allowing the mortar to set in accordance with the manufacturer's recommendations, sound the repaired areas with a sounding bar or hammer. The Engineer must be present during the sounding inspection. Remove and replace any unsound patches at no additional cost to the Department.

D. Finish.

Place mortar for each repair area in a single continuous pour or as directed. Match the texture of the existing surface and ensure the finished surface is flush with the existing surface. Immediately after removing forms, remove any excess mortar that has accumulated over an intended joint.

ON PAGE 473, 601.02 - MATERIALS

Add the following after "Ribbed Polyvinyl Chloride (PVC) Pipe":

Corrugated PE Pipe.....706.16
Ribbed PE Pipe 706.17

Add the abbreviation "(PP)" after "Polypropylene Pipe".

ON PAGE 475, 601.03.D - PLASTIC PIPE

Delete the fourth paragraph and replace with the following;

Test PE lines for leakage in accordance with ASTM F2164. A maximum leakage rate of 0.15 gallon per inch of pipe diameter per 100 feet of pipe length per hour is allowed.

Test PP lines for leakage in accordance with ASTM F2487. A maximum leakage rate of 0.15 gallon per inch of pipe diameter per 100 feet of pipe length per hour is allowed.

ON PAGE 492, 612.04 - METHOD OF MEASUREMENT

Add the following to the end of the last sentence in item "1":

", and short radius w-beam guardrail system"

Add the following after "...guardrail transitions, " in item "2":

"short radius w-beam guardrail system, "

ON PAGE 493, 612.05 - BASIS OF PAYMENT

Delete the second to last paragraph and replace with:

Miscellaneous guardrail or barrier components, including precast concrete barrier anchor pinning, are incidental to the guardrail or barrier pay items.

ON PAGE 495, 614.02 – MATERIALS

Add the following to the list of materials:

Preformed Expansion Joint Filler 704.1

ON PAGE 496, 614.05 – BASIS OF PAYMENT

Delete the last two paragraphs, starting with "Detectable...", and replace with:

If there is not an associated Excavation or Removal item, Excavation and Backfill are incidental to the associated pay item.

Detectable warning surfaces and preformed expansion joint filler are incidental to the associated pay item.

ON PAGE 497, 615.02 – MATERIALS

Add the following to the list of materials:

Preformed Expansion Joint Filler 704.1

ON PAGE 498, 615.05 – BASIS OF PAYMENT

Delete the last sentence and replace with the following:

Excavation, backfill, reinforcing steel, diluted emulsified asphalt for tack coat, and preformed expansion joint filler are incidental to the associated curb, gutter, curb and gutter, or traffic separator pay items.

ON PAGE 509, 619.02 - MATERIALS

Delete the following section references and replace with those listed below:

LED Luminaires. 713.04
Rigid Steel Conduit. 713.11
Plastic Conduit. 713.11
Concrete Junction Boxes. 713.11
Composite Junction Boxes 713.11
Electrical Conductors. 713.11

ON PAGE 515, 620.03.C - BACKFILLING & FINISHING

Delete the last paragraph starting with “Submit a contingency spill and prevention plan with ...”

ON PAGE 526, SUBSECTION 623.02 – MATERIALS

Add the following after the first paragraph:

The contractor has the option to use shotcrete in place of 509 concrete. Provide shotcrete meeting ACI 506R-16 Grading No. 2.

ON PAGE 526, SUBSECTION 623.03 – CONSTRUCTION REQUIREMENTS

Replace the first sentence with the following:

Construct as specified in 509, or as specified in ACI 506R-16 if using shotcrete.

ON PAGE 529, 626.02.A - TEMPORARY TRAFFIC CONTROL SIGNS

Add the following to the end of the section:

Do not use double-sided signs.

ON PAGE 529, 626.02.B - CHANNELIZING DEVICES

Add ", or cones" after "barricades" and delete ", or other channelizing devices" in the first sentence of the first paragraph.

ON PAGE 532, 626.03.A - GENERAL

Delete the phrase "As specified in 105.14.D," from the third sentence of the first paragraph.

ON PAGE 534, 626.04 - METHOD OF MEASUREMENT

Under Item 2, add ", cones" after "drums".

ON PAGE 535, 626.05 - BASIS OF PAYMENT

Add the following pay item, in alphabetical order:

Cones.....Each

ON PAGE 540, 627.03.C.1 - SURFACE PREPARATION

Delete "3.2.9" from the first paragraph and replace with "5.2.9".

ON PAGE 542, 627.03.C.4 - FIELD PAINTING AND REPAIR

Delete the first sentence of the first full paragraph and replace with:

Clean the erected exposed bolted areas, including remaining faying surfaces and bolts, and paint areas with exposed primer with intermediate and topcoat application.

ON PAGE 549, 630.05 - BASIS OF PAYMENT

Add the following to the end of the section:

Preparation of pavement surface before pavement marking application is incidental.

ON PAGE 553, 632.05 - BASIS OF PAYMENT

Add the following to the end of the section:

Debris containment, water treatment, disposal, cleanup, submittals, and other related work are incidental.

ON PAGE 557, 636-639 - RESERVED

Add new Section 636 and change the section heading to "637-639 RESERVED".

636 - DRAIN ROCK

636.01 Description.

Provide and place drain rock as shown on the plans.

636.02 Materials.

Provide material as specified in:

Drain Rock……711.01

636.03 Construction Requirements.

Place Drain Rock as specified on the plans or as directed.

636.04 Method of Measurement.

The Engineer will measure acceptably completed work by the cubic yard.

636.05 Basis of Payment.

The Department will pay for the accepted quantities at the contract unit price as follows:

Pay Item	Unit
Drain Rock	CY

ON PAGE 591, 656.03.B - TRAFFIC CABINET EVALUATION & TESTING

Delete the first paragraph and replace with:

Submit the cabinet wiring schematic, Malfunction Management Unit (MMU) jumper list, and the application programming for the control equipment for approval before fabrication begins.

ON PAGE 592, 656.03.B - TRAFFIC CABINET EVALUATION & TESTING

Add "(Gate 3 on Coffey St.)" after "Signal Shop" in the address.

ON PAGE 601, 675.01 - DESCRIPTION

Delete the last sentence.

ON PAGE 618, 701.01 - GENERAL REQUIREMENTS

Delete "Type I, II, or III" from the Portland Cement materials reference and replace with:

"Type I, II, III, or V"

Add the following after "IT, or IS" for Blended Hydraulic Cement:

with the appropriate suffix for the application (none, MS, HS, or HE)

Add the following material reference below Blended Hydraulic Cement:

Hydraulic Cement.....ASTM C1157 Type GU, MS, HS, or HE

ON PAGE 618, 701.01.A - PORTLAND CEMENT

Delete "Portland" from the title.

Delete the first paragraph and replace with:

Portland Cement Type I (General Purpose), Type II (Moderate Sulfate Resistance), Type III (High Early Strength), or Type V or equivalent Blended Hydraulic Cement or Hydraulic Cement according to Table 701.01-1.

Table 701.01-1 - Portland Cement / Blended Cement / Hydraulic Cement Equivalencies

AASHTO M 85	AASHTO M240	ASTM C1157
Type I	IS, IP, IL, IT	GU
Type II	IS(MS), IP(MS), IL(MS), IT(MS)	MS
Type III	IS(HE), IP(HE), IL(HE), IT(HE)	HE
Type V	IS(HS), IP(HS), IL(HS), IT(HS)	HS

Delete the second, third, and fourth paragraph.

ON PAGE 618, 701.1.B - BLENDED HYDRAULIC CEMENT

Delete "(≤ 10)" from first sentence of first paragraph.

Delete "(≤ 10)" from first sentence of second paragraph.

ON PAGE 619, 702.03 - EMULSIFIED ASPHALTS

Delete Items 1 and 2 and replace with:

1. Standard Specification for Emulsified Asphalt.....AASHTO M 140

   For SS-1 and SS-1h, provide Rotational Paddle Viscosity measurements @ 25°C for information only. Report the test results on or with the Bill of Lading in addition to Saybolt Viscosity results.

2. Standard Specification for Cationic Emulsified Asphalt.....AASHTO M 208

   For CSS-1 and CSS-1h, provide Rotational Paddle Viscosity measurements @ 25°C for information only. Report the test results on or with the Bill of Lading in addition to Saybolt Viscosity results.

ON PAGE 628 AND 629, TABLE 703.02-9 – COMBINED AGGREGATE SIZE NO. AND GRADATION

Delete Table 703.02-2 and replace with:

Table 703.02-9 – Combined Aggregate Size No. and Gradation

	Individual Percent Retained				
Sieve size	**1C**	**2C**	**3C**	**4C**	**5C**
2½ in	—	—	—	—	0
2 in	—	—	—	0	0 - 10
1½ in	—	—	0	0 - 10	4 - 18
1 in	—	0	0 - 10	4 - 18	6 - 20
3/4 in	0	0 - 10	4 - 18	6 - 20	6 - 20
1/2 in	0 - 10	4 - 18	6 - 20	6 - 20	6 - 20
3/8 in	5 - 18	6 - 20	6 - 20	6 - 20	6 - 20
No. 4	4 - 20	6 - 20	6 - 20	6 - 20	6 - 20
No. 8	4 - 20	0 - 16	0 - 16	0 - 16	0 - 16
No. 16	4 - 20	0 - 16	0 - 16	0 - 16	0 - 16
No. 30	4 - 20	6 - 20	6 - 20	6 - 20	6 - 20
No. 50	4 - 20	6 - 20	6 - 20	6 - 20	6 - 20
No. 100	4 - 20	4 - 18	4 - 18	4 - 18	4 - 18
No. 200	0 - 6.0	0 - 6.0	0 - 6.0	0 - 6.0	0 - 6.0
pan	0 - 3.0	0 - 3.0	0- 3.0	0 - 3.0	0 - 3.0

ON PAGE 625, 703.02.A - GENERAL

Add superscript (b) to the title of Table 703.02-1 after “General Concrete Aggregate Criteria”.

In Table 703.02-1, under Ethylene Glycol, add superscript (c) after “90% minimum retained”.

Add the following after Note (a) at the bottom of Table 703.02-1.

b) Testing provided for source approval can be used to meet these requirements, unless the material has changed since this testing was done. At the discretion of the Engineer, additional testing may be required.
c) For basalt materials only. Note that alluviums with basalt must also be tested.

ON PAGE 629, 703.02.D - COMBINED AGGREGATE GRADATION FOR CONCRETE

Delete Items 1, 2 and 3 below the second paragraph and replace with the following:

1. Seventy (70) for all concrete, other than concrete wearing surfaces.
2. Seventy (70) for concrete wearing surfaces (e.g., bridge decks, pavements, approach slabs) with 2.0 percent or less than passing the No. 200 sieve.
3. Eighty (80) for all concrete wearing surfaces with between 2.0 percent and 3.0 percent passing the No. 200 Sieve.

ON PAGE 628, 703.02.D - COMBINED AGGREGATE GRADATION FOR CONCRETE

In the last sentence of the first paragraph, delete “Method B.:” and replace with “Method A or B.”

ON PAGE 632, 703.05 - AGGREGATE FOR SUPERPAVE HMA PAVEMENT

In Table 703.05-1, Superpave Mixture Requirements, delete the row with “R-Value”.

ON PAGE 636, 703.08 - AGGREGATE FOR OPEN GRADED BASE

Delete the first sentence of the first paragraph and replace with the following:

> Meet aggregate gradation requirements specified in Table 703.08-1 in accordance with AASHTO T 27 for Class I and II, T 27/ T 11 for Class III.

ON PAGE 637, 703.08 -AGGREGATE FOR OPEN GRADED BASE

Delete the following from the last line of Table 703.08-2 under Fracture Face:

> 90% retained on #4 with 2 fractured faces for Class II

ON PAGE 643, 704.05 - SILICONE SEALANT

In the 2nd full paragraph, delete the 3rd sentence starting with “Do not place...”

ON PAGES 644 AND 645, TABLE 704.06-1 - ELASTOMERIC REQUIREMENTS

Delete Table 704.06-1 and replace with the following:

Table 704.06-1 – Elastomeric Requirements

Physical Property	Test Method	Performance Requirements
Hardness, Durometer A	ASTM D2240	60 ± 10 points
Tensile strength	ASTM D412	2,000 psi, minimum
Elongation at break	ASTM D412	300%, minimum
Brittleness temperature	ASTM D746	- 40°F (- 40°C)
Tear resistance	ASTM D624 (Die C)	150 lb/in minimum
Flame resistance	ASTM C542	must not propagate flame
Resistance to heat aging change in original properties after 70 hr at 212°F (100°C) Hardness Elongation Tensile strength	 ASTM D573 ASTM D573 ASTM D573	 + 10 points, maximum - 40%, maximum - 15%, maximum
Resistance to oil aging change in volume after 70 hr immersion in ASTM oil No. 3 at 212°F (100°C)	ASTM D471	+ 80%, maximum
Resistance to ozone condition after exposure to 100 pphm ozone in air for 100 hr at 100°F (38°C) (sample under 20 percent strain)	ASTM D1149	No cracks
Resistance to permanent set compression set after 22 hours at 158°F (70°C)	ASTM D395 (Method B)	30%, maximum
Resistance to water change in weight after 7 days immersion at 158°F (70°C)	ASTM D471	+ 5%, maximum

ON PAGE 650, 706.18 - STEEL REINFORCED RIBBED PE PIPE

Replace the paragraph with the following:

Meet AASHTO M 335 for SRRPE Pipe nominal size of 12 to 60 inches in diameter. Meet AASHTO MP 40 for SRRPE Pipe nominal size of 66 to 120 inches in diameter. Limit size of SRRPE to 120 inches maximum diameter.

ON PAGE 656, 708.02 - REINFORCING STEEL

In the first sentence of the first paragraph, delete “M 55” and replace with “M 336”.

Delete the 2nd sentence of the first paragraph and replace with:

> Provide other reinforcing steel meeting AASHTO M31 Grade 40S or 60S, unless otherwise specified. For bar marked “W/S”, the Department will test the bar for the “Type S” requirements, unless the “Type W” is specified and the “Type W” pay item is used.

Delete the third sentence of the first paragraph and replace with the following:

> The Contractor may substitute plain or deformed steel-welded wire reinforcement that meets AASHTO M 336 for AASHTO M 31 reinforcing steel with approval.

ON PAGE 657, 708.06.1 - 9.2.2

Delete “3.2.3” from the first paragraph and replace with “5.2.3”.

ON PAGE 658, 708.06.2.a - BOLTS - GENERAL

Delete the fifth paragraph, starting with “Ensure the maximum…”

ON PAGE 671, 709.04 - SET RETARDING ADMIXTURE

Delete Section 709.04 and replace with the following:

> **709.04 Chemical Admixtures – Types A-G, and Type S**
>
> **A. Types A through G.**
>
> Meet ASTM C494.
>
> **B. Type S**
>
> Type S admixtures must be approved by the Engineer prior to use. Provide data sheets and describe intended use and dosage. Provide a letter from manufacturer stating that it will not adversely impact the concrete and describe any limitations. Type S admixtures must not have adverse effects on the properties of concrete when tested in accordance with ASTM C494. Manufacturers must also provide data that the product will meet the performance claimed.

Delete Section 709.05 and renumber 709.06 to 709.05.

ON PAGE 676, 711 - ROADSIDE IMPROVEMENT MATERIAL

Add 711.01 Drain Rock to the beginning of the section and renumber the following sections from "711.01 to 711.03. Reserved." to "711.02 and 711.03. Reserved."

711.01 Drain Rock

Meet the requirements of Tables 711.01-1 and 711.01-2. Provide material from an approved source according to 106.09.

Table 711.01-1 – Gradation Requirements (AASHTO T27)

Sieve Size	Percent Passing
4-inch	100
3-inch	95-100
2-inch	60-90
1-inch	25-60
¾-inch	20-70
No. 4	0-10
No. 200	0-3

Table 711.01-2 – Drain Rock Quality Testing Criteria

Property	Test Method	Requirement
Void Space	AASHTO T 19M	30% Minimum
Los Angeles Abrasion	AASHTO T 96	45% Maximum
Ethylene Glycol	Idaho IT 116	75% Minimum Retained
Apparent Specific Gravity	AASHTO T 85	2.5 Minimum

ON PAGE 677, TABLE 711.04-2 - GRADATION REQUIREMENT FOR RIPRAP

Delete Table 711.04-2 and replace with:

Table 711.04-2 – Gradation Requirement for Riprap (a)

Class	Nominal Riprap Size, D_{50} [b] (inches)	Percent of Rock Equal or Smaller, D_x	Range of Intermediate Dimensions [c] (inches)
I	6	100	12 [d]
		85	7-10
		50	6-7
		15	3-5
II	9	100	18[d]
		85	11-14
		50	8-11
		15	5-8
III	12	100	24 [d]
		85	15 - 19
		50	11 - 14
		15	7 - 11
V	18	100	36 [d]
		85	23 - 28
		50	17 - 21
		15	11 - 16
VII	24	100	48 [d]
		85	31 - 37
		50	23 - 28
		15	14 - 21
VIII	30	100	60 [d]
		85	39 - 46
		50	28 - 35
		15	18 - 26

Class	Nominal Riprap Size, D_{50} [b] (inches)	Percent of Rock Equal or Smaller, D_x	Range of Intermediate Dimensions [c] (inches)
IX	36	100	72 [d]
		85	47 - 56
		50	34 - 42
		15	22 - 32
X [e]	42	100	84 [d]
		85	54 - 65
		50	40 - 49
		15	25 - 37

(a) Riprap class, size, and gradation consistent with FHWA – Hydraulic Engineering Circular No. 23.
(b) The size for which 50% by weight of the particles are smaller.
(c) Furnish rock with intermediate dimension (width and thickness) of at least one-third its length (longest axis).
(d) Maximum intermediate dimension.
(e) For any riprap larger than Class X, a qualified Engineer will determine the riprap size through an appropriate evaluation and provide a suitable gradation.

ON PAGE 685, 711.22 - HYDRAULIC EROSION CONTROL PRODUCTS (HECP)

Add “biodegradable” to the first sentence of the first paragraph after “...applied blends of...”.

ON PAGE 688, 713.01.A.3 - PEDESTRIAN SIGNAL POLE REQUIREMENTS

Delete item “a” and replace with the following:

a. A 4-inch schedule 40 or 80 aluminum pole.

ON PAGE 689, 713.04.A - ILLUMINATION POLES

Delete “Error! References source not found” in the first full paragraph and replace with the “708.19”.

ON PAGE 701, 715.01 - MESH

In the first sentence of the first paragraph following Table 715.01-1, delete “ ASTM A185” and replace with “AASHTO M 336”.

In the second sentence of the second paragraph following Table 715.01-1, delete “ ASTM A185” and replace with “AASHTO M 336”.

ON PAGE 712, 720.07.3.b – CATEGORY 2

Delete the second sentence of the first paragraph and replace with:

In addition to those tests specified in Category 1, test the aggregate recovered from the RAP extraction process as follows:

Delete item (1) and replace with:

(1) AASHTO T 96 and Idaho IT 15 at a frequency of 1 test per stockpile.

Delete the first sentence of item (3) and replace with:

AASHTO T 304 and IT 146 (performed on non-extracted RAP) at a minimum testing frequency of 1 test per 5,000 tons on a blended composite sample of material obtained at 1,000 ton increments.

ON PAGE 712 AND 713, 720.07.3 - RECYCLED ASPHALT PAVEMENT (RAP)

Delete the last two sentences of the last paragraph on the page, starting with “The standard deviation of the correlation results...”

ON PAGE 715, 720.10 - DETECTABLE WARNING SURFACES.

Delete the first paragraph and replace with:

Provide cast iron detectible warning surface (DWS) products or provide non-cast iron DWS products that have been evaluated and meet testing specifications through AASHTO Product Evaluation & Audit Solutions. Meet the requirements in Table 720.10-1.

Your Safety • Your Mobility
Your Economic Opportunity

Pollution Prevention Plan
Idaho Transportation Department (ITD)

ITD 2788 (Rev. 04-18)
itd.idaho.gov

Instructions

The Pollution Prevention Plan (PPP) is a requirement for ITD projects which do not have coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP).

Prior to ground disturbing activities, the Contractor designated support areas shall be identified and the disturbed area shall be recalculated to determine if the project is still exempt from NPDES permitting requirements.

To help you develop the PPP use the following template. This template is designed to guide you through the PPP development process and help ensure that your PPP addresses all the necessary elements. EPA's 2007 guidance document titled *Developing Your Stormwater Pollution Prevention Plan* can also be used to help you develop your PPP. This guide can be found at: https://www.epa.gov/npdes/developing-stormwater-pollution-prevention-plan-swppp. On the ITD's stormwater management website: http://itd.idaho.gov/env/ other useful information including the Best Management Practices Manual, Standard Drawings, and other stormwater forms and templates is available.

Using the PPP Template: This template was developed so that you can easily add text or tables. Some sections may require only a brief description while others may require more extensive explanation. Modify this template so that it meets the specific needs of your project.

Multiple operators may share the same PPP, but make sure that responsibilities are clearly described, and that all signatory requirements are met.

The Best Management Practices (BMPs) from ITD's BMP Manual are listed in tables throughout the template. Refer to the manual for further guidance on each BMP. The link is provided above.

Applicable Federal, Tribal, State, or Local Programs

The PPP shall meet the requirements of Sections 107.17 and 212 of the Standard Specifications for Highway Construction and be consistent with all applicable federal, state, tribal, and/or local requirements or ordinances, including MS4 requirements, for erosion control and stormwater management and compliance.

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Pollution Prevention Plan Narrative Site Information

Key Number	Project Name			
23889	STC-7316, 5th E (Holmes Ave) & 49th S Signal			
Location/Address		City	County	Zip Code
Intersection of 5thE and 49th S		Idaho Falls	Bonneville	83404
Beginning Milepost (if applicable)	Ending Milepost (if applicable)			
0.930 (5th E)	1.065 (5th E)			

Operator(s)

Local Highway Technical Assistance Council Choose an item.

LHTAC Contact Name		Title	
Sam Larrondo		Federal-aid Engineer	
Office Address	City	County	Zip Code
3330 Grace Street	Boise	Ada	83703
Telephone Number	E-mail Address	Fax Number	
208-344-0565	SLarrondo@lhtac.org		

Local Sponsor Choose an item.

Organization Name		Contact Name		
Bonneville County		Lance Bates		
Organization Address	City	State	Zip Code	
2700 Manwill Road	Idaho Falls	ID	83402	
Telephone Number	E-mail Address	Fax Number		
208-529-1295	lbates@bonnevillecountyidaho.gov	208-529-1295		

Contractor's PPP and 24 Hour Emergency Contact Information

Company/Organization Name		Site Manager's Printed Name		
Company/Organization Address	City	State	Zip Code	
Telephone Number for 24/7/365 Availability	E-mail Address	Fax Number		

Estimated Project Start Date

Estimated Project End Date

Section 1 - Project/Site Information

Location Information

Project/Site Name	Project Street/Location/Milepost/Route	
STP-7316, 5th E (Holmes Ave) & 49th S Signal	Intersection of 5th E (Holmes Ave) & 49th S	
City	County	ZIP Code
Idaho Falls	Bonneville	83404

Contact Information/Responsible Parties

Prime Contractor

Company/Organization Name			
Company/Organization Address	City	State	Zip Code
Telephone Number	E-mail Address	Fax Number	
Area of Control (if there is more than one operator at the site)			

Project Manager(s) or Site Supervisor(s)

Company/Organization Name	Manager/Supervisor's Name(s)		
Company/Organization Address	City	State	Zip Code
Cell Phone Number	E-mail Address	Fax Number	
Area of Control (if there is more than one operator at the site, insert area of control for each)			

PPP Preparer Information (Contractor)

Company/Organization Name	Preparer's Name		
Company/Organization Address	City	State	Zip Code
Cell Phone Number	E-mail Address		

LHTAC Resident Engineer Information

Engineer's Name
Jayme Coonce, Matt Koster, Megan Kautz

Address	City	Zip Code
3330 Grace Street	Boise	83703

Cell Phone Number	E-mail Address	Fax Number
208-344-0565	mkautz@lhtac.org Mkoster@lhtac.org jcoonce@lhtac.org	208 344 0789

General Scope of Work or Project Description

Improve the operation of the 5th East and 49th South intersection by replacing the existing all-way stop with a traffic signal and constructing dedicated turn lanes. All legs will feature dedicated left turn lanes with the south leg also adding a dedicated right turn lane. Curb, gutter, sidewalk, and ADA compliant pedestrian ramps will be constructed at all corners with signalized crossings. The south leg will also feature a sidewalk on the east side and a multi-use pathway on the west side. Curb and gutter at the intersection will be placed in anticipation of a future buildout of 5 lanes for 5th East and 3 lanes with bike lanes for 49th South.

Activity Description by Responsible Party

To add more rows, hit Tab in the last cell of the table.

Name and Contact Information for Subcontractor	Area of Subcontractor Controls/Work Performed

Soils, Slopes, Vegetation, Existing Drainage Patterns, Climate

Soil Type(s) Bannock and similar soils
Slopes - Describe existing slopes and any changes due to construction activities Flat terrain. Minor slope modifications for roadside ditches.
Drainage Patterns - Describe existing drainage patterns and note any changes due to construction Roadway runoff conveyed to roadside ditches. South leg includes curb and gutter installation that will be conveyed to a new seepage bed.
Existing Vegetation Irrigated grass on adjacent properties and some trees
Climate/Rainfall Patterns – Select amount that applies Semi-Arid (10"-20" annual rainfall)

Construction Site Estimates

The following are estimates of the project disturbance. Show acreage to the nearest 0.25 acre

Project site area to be disturbed – 1.77 acres

Off-site waste sites to be disturbed - _____ acres

Off-site borrow/source sites to be disturbed - _____ acres

Staging Area to be disturbed - _____ acres

Total project disturbed area - acres

Receiving Waters

Describe receiving surface waters (if applicable) German Canal (Snake River)
Describe receiving storm sewer systems (if applicable) and note MS4 areas
List immediate downstream water bodies (water bodies that are connected or would receive a direct discharge from the Project) that have been listed as impaired for sediment or waters subject to TMDLs by the Idaho Department of Environmental Quality (IDEQ) under Section 303(d) of the CWA

Site Features and Sensitive Areas that Require Protection

Provide a description of any unique features (such as wetlands) that require protection (if applicable)
If applicable, describe measures to protect these unique features

PPP Plans and Site Maps

The PPP will show the following locations:

- Temporary and permanent BMPS
- On-site staging areas, off-site material, waste, borrow or equipment storage or staging areas
- Locations of all ITD defined hazardous materials
- Any industrial stormwater discharges other than from project construction
- Waters of the United States including wetlands
- Storm sewer inlets

Insert a copy of all applicable Plan Sheets and/or Site Maps in **Appendix A**

Potential Sources of Pollution

Use the table below to identify all potential pollutants and sources, other than sediment, to stormwater runoff

Trade Name Material	Stormwater Pollutants	Location or N/A
Fuels and/or Lubricants	Petroleum Distillates	
Hydraulic Oils	Mineral Oil	
Asphalts	Petroleum Distillates	
Concrete/Curing Compounds	pH	
Anti-freeze	Glycol, Heavy Metals	
Paints	Organic Chemicals, VOCs	
Fertilizers	Nutrients-Nitrogen, Phosphorous	

Sanitary Toilets	Bacteria, Viruses, Parasites	

Add additional rows as needed by hitting Tab in the last cell of the table

Each of the pollutants listed in the table above must be addressed with a specific BMP.

Section 2 - Erosion and Sediment Control BMPs

In the tables provided below, check the boxes of the BMPs that will be used on your project. Delete the BMPs that will not be used, or leave unchecked. Add any BMPS that might be required to meet your project needs.

BMPs should be implemented as needed at all designated staging and storage areas, source and borrow sites, and disposal/excess material/waste sites prior to initiating any ground disturbance activities in these areas.

➡ **Note: In the following tables, ITD SD SPECS and Drawings, and BMP Numbers from ITD BMP Manual are referenced beside each BMP**

Minimize Disturbed Area and Protect Natural Features and Soil

BMPs	Specification(s)	Check if Used	Implementation Schedule
Preservation of Existing / Natural Vegetation	- SD SPECS (201 and 202) - EC-2	☐	Date Location (Stations or MP)

Preservation of natural existing vegetation shall be utilized throughout the project, where practical, to minimize erosion potential, minimize total ground disturbance, and minimize stormwater movement off site. Existing vegetated buffers (including preserving mature vegetation and trees) shall be utilized to minimize stormwater erosion potential and down slope movement to any watershed, water feature (including irrigation amenities or domestic water sources), or area susceptible to stormwater or surface water movement. The vegetated buffers shall consist of areas of undisturbed vegetation including grasses, shrubs, woody plants, and trees that are located between the traversed roadway section and the existing swales, ditches, canals, wetlands, and intermittent/perennial streams or rivers that are located within ITD right-of-way. The vegetated buffers shall be left undisturbed throughout the project life and act as permanent erosion and sediment control BMPs to ensure short and long-term slope stability.

Phase Construction Activity

BMP	Specification(s)	Check if Used	Implementation Schedule
Scheduling and Sequencing of Construction Activities	- SD SPECS (108, 205, and 212) - EC-1	☐	Date Location (Stations or MP)

The specific scheduling and sequencing of construction activities are required to be outlined by the Contractor and become a permanent part of the PPP. Records must be maintained as part of the PPP and shall include dates and durations when major activities occur (i.e. soil disturbing activities); dates when construction activities temporarily or permanently cease on a portion of the site; and dates when stabilization measures have been initiated and are obtained. Scheduling and sequencing of construction activities including the CMP Schedule shall be documented in this PPP by the Contractor. Describe major phases of construction in the spaces provided here:

Phase I

-
-

Phase II

-
-

Repeat as needed for additional Phases

Control Stormwater Flowing Onto and Through the Project

BMP	Specification(s)	Check if Used	Implementation Schedule
Coffer and Tarp Dams / Water Filled Bladders/ Aprons	- SD SPECS (210 and 501) - EC-3	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Interceptor Ditches / Diversion Channels/Ditches	- SD SPECS (208, 209, and 212) - SD Drawings (P-1-D, P-1-E, and P-2-E) - EC-4	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Slope Drains	- SD SPECS (212 and 706) - SD Drawings (P-1-A) - EC-5	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Dikes / Berms	- SD SPECS (205, 209, and 212) - SD Drawings P-1-F and P-1-E - SC-1	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Channel Protection:	- Check Dams / Flexible Liners / Rigid Liners - SD SPECS (209, 212, 512, 623, 624, 711, 715, and 718) - SD Drawings (P-1-D, P-2-A, P-2-B, P-2-C, and P-2-D) - SC-2, PC-3, PC-4	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Retention/Detention Sediment Basin(s)/Trap(s)	- SD SPECS (205 and 212) - SD Drawings (P-1-A, P-1-C, P-1-D, P-1-E, P- 4-A, and P-4-B) - SC-10	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Clear Water Diversion	- SD SPECS (N/A) - NS-5	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
		☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Stabilize Soils and Protect Slopes

BMP	Specification(s)	Check if Used	Implementation Schedule
Hydraulically Applied Erosion Control Products	- SD SPECS (212, 621, and 711) - EC-6	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Hydroseeding	- SD SPECS (621 and 711) - EC-7	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Soil Binders	- SD SPECS (212) - EC-8	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Straw Mulch	- SD SPECS (212, 621, and 711) - EC-9	☐	Date to be Implemented Location (Stations or MP)

BMP	Specification(s)	Check if Used	Implementation Schedule
			Quantity of BMP
Wood Mulch	- SD SPECS (212, 621, and 711) - EC-10	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Geotextiles, Plastic Covers, and Erosion Control Blanket	- SD SPECS (212, 621, and 711) - EC-11	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Vegetation-Seeding	- SD SPECS (212 and 621) - EC-12	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Dust Control	- SD SPECS (104, 106, 107, 205, 212, 621, and 711) - EC-13	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Wind Erosion Control	- SD SPECS (205 and 212) - EC-14	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
		☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Protect Storm Drain Inlets

BMP	Specification(s)	Check if Used	Implementation Schedule
Inlet/Outlet Protection	- SD SPECS (212, 640, 711, and 718) - SC-6	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
		☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Establish Perimeter Controls and Sediment Barriers

BMP	Specification(s)	Check if Used	Implementation Schedule
Gravel Bag Barrier	- SD SPECS (212) - SC-3	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Sandbag Barrier	- SD SPECS (212) - SC-5	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Silt Fence	- SD SPECS (212 and 718) - SC-7	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

BMP	Specification(s)	Check if Used	Implementation Schedule
Sediment Retention Fiber Rolls	- SD SPECS (N/A) - SC-8	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
		☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Retain Sediment On-Site

BMP	Specification(s)	Check if Used	Implementation Schedule
Sediment-Desilting Basin	- SD SPECS (212) - SD Drawings (P-1-C, P-1-D, P-4-A) - SC-9	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Retention / Detention Sediment Basin(s) / Trap(s)	- SD SPECS (205 and 212) - SD Drawings (P-1-A, P-1-C, P-1-D, P-1-E, P-4-A, and P-4-B) - SC-10	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
		☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Establish Stabilized Construction Exits and Temporary Haul Roads

BMP	Specification(s)	Check if Used	Implementation Schedule
Street Sweeping and Vacuuming	- SD SPECS (N/A) - SC-4	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Temporary Construction Entrances	- SD SPECS (104, 205, and 212) - SD Drawings (P-1-F) - SC-11	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Temporary Roads	- SD SPECS (104, 107, 205, and 212) - SC-12	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Entrance Outlet Tire Wash	- SD SPECS (621) - SD Drawings (P-3-E) -SC-13	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Temporary Stream Crossing	- SD SPECS (602) - NS-4	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
		☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Insert any required additional text or tables here

Section 3 - Good Housekeeping BMPs

All staging areas, material storage/stockpile sites, source sites, disposal/excess material/waste sites, haul roads, temporary roads, construction entrances and exits, and any other disturbed soil areas not defined within the contract documents must be approved by the Resident Engineer and have BMPs implemented prior to approved use. All sites require appropriate erosion, sediment, and pollution prevention control BMPs installed prior to initiation of construction and throughout the length of construction activities. The Contractor is responsible for attaching a record of Environmental Clearance/Approvals and for obtaining any permitting for any Contractor designated sites, including cultural resources, ESA, etc.

The following are material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff. For the purposes of this plan and for any ITD projects, ***Hazardous Material*** is defined as "any material that poses harmful risks to human health and/or the environment. Includes any hazardous or toxic substance, waste, pollutant, or chemical regulated under the CAA, CWA, TSCA, and/or RCRA; a pollutant or contaminant as any substance likely to cause death, disease, abnormalities, etc. (CERCLA Sec. 101(33)); or those listed in 40 CFR 302. For ITD purposes, petroleum, lead paint, asbestos, and other substances will be considered hazardous materials, as identified in the scope of work".

- An effort will be made to store only enough product required to complete the job
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible under a roof or other enclosure that minimizes contact with stormwater
- Products will be kept in their original containers with the original manufacturer's label
- Substances will not be mixed with one another unless recommended by the manufacturer
- Whenever possible, all of the product will be used up before disposing of the container
- Manufacturer's recommendations for proper use and disposal will be followed
- The site superintendent will inspect daily to ensure proper use and disposal of materials
- Tanks containing fuel will have secondary containment installed to contain any spilled material

Material Handling and Waste Management in Staging Areas

BMP	Specification(s)	Check if Used	Implementation Schedule
Staging and Materials Site Management	- SD SPECS (107) - SD Drawings (P-1-D, P-3-E, and P-5-A) - WM-1	☐	Date to be Implemented Location (Stations or MP)
Solid Waste Management	- SD SPECS (N/A) - WM-6	☐	Date to be Implemented Location (Stations or MP)
Concrete Curing	- SD SPECS (N/A) - NS-12	☐	Date to be Implemented Location (Stations or MP)
Material and Equipment Use Over Water	- SD SPECS (N/A) - NS-13	☐	Date to be Implemented Location (Stations or MP)
Concrete Finishing	- SD SPECS (N/A) - NS-14	☐	Date to be Implemented Location (Stations or MP)
Structure Demolition-Removal Over or Adjacent to Water	- SD SPECS (N/A) - NS-15	☐	Date to be Implemented Location (Stations or MP)
Material Delivery and Storage	- SD SPECS (N/A) - WM-2	☐	Date to be Implemented Location (Stations or MP)
Material Use	- SD SPECS (N/A) - WM-3	☐	Date to be Implemented Location (Stations or MP)

BMP	Specification(s)	Check if Used	Implementation Schedule
Stockpile Management	- SD SPECS (N/A) - WM-4	☐	Date to be Implemented Location (Stations or MP)
		☐	Date to be Implemented Location (Stations or MP)

Solid and source site materials, excess materials, hazardous materials, vehicle equipment and maintenance, sanitary waste management, and waste in general shall be managed at designated staging and waste areas. Staging and waste areas should be located a minimum of 150-ft away from any water feature (including irrigation amenities or domestic water sources) or areas susceptible to stormwater or surface water movement.

Solid and source site materials, include but are not limited to, dedicated asphalt or concrete plants (where the manufacturing of asphalt or concrete will occur on-site), gravel pits, stockpiles, source sites, general construction materials, and excess materials. The Contractor shall use an approved licensed solid waste management company. The Contractor shall reuse and recycle trash, source materials, construction materials, and construction debris unless it is not usable. If it is not usable or cannot be recycled it will be considered solid waste. All solid waste materials, with the exception of source materials, will be collected and disposed of in a securely lidded dumpster and shall be covered and secured at night and during all precipitation events. Any leaky solid waste dumpster must be exchanged or replaced within 24-hours of confirmation. Collection and proper disposal of all leaking materials shall be the responsibility of the Contractor.

The Contractor shall arrange an adequate solid waste disposal schedule to ensure that there is adequate solid waste disposal capacity on-site at all times and that dumpsters do not overflow and are emptied on a regular basis. All solid waste materials shall be removed from the project site throughout the duration and after the project is completed. Solid waste materials shall not be buried, burned, or discharged from the site.

Designate Washout Areas

BMP	Specification(s)	Check if Used	Implementation Schedule
Liquid Waste Management	- SD SPECS (N/A) - WM-11	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Concrete Waste Management	- SD SPECS (N/A) - SD Drawings (P-5-B) - WM-9	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Entrance/Outlet Tire Wash	- SD SPECS (621) - SD Drawings (P-3-E) - SC-13	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
		☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Concrete waste procedures and practices are designed to minimize or eliminate the discharge of concrete waste materials to the storm drain systems or to watercourses. A wash station may also be required to prevent transporting noxious weeds and contaminated soils from a contaminated site to an uncontaminated site or road surface.

Covering or containing hazardous materials or washing contaminated equipment may be required. All vehicle and equipment cleaning and maintenance shall occur in a designated staging site/area and include a water pollution control

equipment wash down area that shall have secondary containment and protection through the use of berms or other erosion and sediment controls or BMPs to reduce or eliminate discharges of pollutants.

The Contractor shall avoid mixing excess amounts of fresh concrete or cement mortar on-site. Storage of dry and wet materials associated with concrete should be located a minimum of 150-ft upslope of any water feature (including irrigation amenities or domestic water sources) or area susceptible to stormwater or surface water movement. The Contractor shall **Never** dispose of concrete, grout, or cement mortar washout into a watershed, water feature, or area susceptible to stormwater or surface water movement. Wash out concrete transit mixers only in designated washout areas. The Contractor shall design a temporary concrete washout station (s) as per ITD Standard Drawing P-5-B. All hardened concrete, grout, or cement mortar waste, including waste generated during equipment cleaning and QA/QC testing, shall be collected and transported to an approved licensed solid waste disposal/processing or recycling site by the Contractor.

Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

BMP	Specification(s)	Check if Used	Implementation Schedule
Vehicle and Equipment Fueling	- SD SPECS (N/A) - SD Drawings (P-5-E) - NS-9	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Vehicle and Equipment Maintenance	- SD SPECS (N/A) - NS-10	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Pile Driving Operations	- SD SPECS (N/A) - NS-11	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
		☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Drip pans and drip cloths shall be used to drain and replace fluids. Spill prevention kits shall be located on site at all times and readily available in case of a leak, spill, or discharge and used when needed to contain and minimize unwanted and unnecessary leak, spill, or discharge impacts.

Fueling activities should be located at least 150’ away from surface water features. If site features do not allow this minimum setback, additional controls may be necessary. Additionally, if more stringent standards are required by permitting agencies or local entities, those standards shall be met.

Vehicles and construction equipment shall be monitored for leaks and receive regular preventative maintenance, and fueled on site using a portable service truck with a portable fuel tank or temporary storage tanks. Fueling shall occur within a hazardous materials containment staging area as approved by the Resident Engineer.

Fueling and/or Maintenance Activity	**Practices to be Implemented to Control Spills and/or Exposure to Stormwater**

Add additional rows as needed by hitting Tab in the last cell of the table

Sanitary Waste BMPs

BMP	Specification(s)	Check if Used	Implementation Schedule
Sanitary-Septic Waste Management	- SD SPECS (N/A) - WM-10	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Sanitary and Septic Waste procedures and practices are used to minimize or eliminate the discharge of construction site sanitary/septic waste materials to the storm drain system or to watercourses. Sanitary/septic waste management practices are implemented on all construction sites that use temporary or portable sanitary/septic waste systems. Temporary portable toilets from an approved licensed sanitary waste company shall be used during the duration of the project and maintained and cleaned as needed. Portable toilets shall be located at designated staging areas and have secondary containment in case of a leak, spill, or discharge. All sanitary waste will be collected from the portable units a minimum once per week. Placement and removal of all portable toilets shall be the responsibility of the Contractor.

Contaminated Soil BMPs

BMP	Specification(s)	Check if Used	Implementation Schedule
Contaminated Soil Management	- SD SPECS (N/A) - WM-8	☐	Date to be Implemented Location (Stations or MP)

Prior to construction or soil disturbance, ITD shall inspect the site for physical contamination. During the construction phase, if the Contractor detects evidence of contamination, or encounters leaks, spills, or discharges are detected, contaminated soils and water should be contained and held for testing whenever contamination is suspected. Any specific contaminant known to exist or that is discovered on site and which has contaminated soil or has the potential to contaminant soil and/or drainages or water features (including irrigation amenities or domestic water sources) shall be reported to the Resident Engineer immediately. The Resident Engineer will coordinate clean-up of contaminated soils with the Idaho Communications Center (Statecom) at 1-800-632-8000.

Allowable Non-Stormwater Discharge Management and Equipment/Vehicle Washing

Non-stormwater (dust control water, water used in road grading, irrigation drainage, springs or ground water dewatering, etc) may combine with stormwater and be present in the discharge at this site. All water shall be treated in the same manner as stormwater runoff. The same BMPs used in this PPP for stormwater runoff shall be implemented to reduce non-stormwater impacts and limit non-stormwater discharges. The use of soap, solvents, and degreasers is specifically prohibited for cleaning use. Uncontaminated water discharge from dust control, dust abatement activities, and water used in road grading or excavation activities and compaction shall not reach waters of the United States.

The following incidental non-stormwater from the sources marked below may combine with stormwater and be present in the discharge at this site.

- ☐ Hydrant or Water Line Flushing
- ☐ Vehicle Wash-Down Water
- ☐ Dust Control Water
- ☐ Irrigation Drainage (including landscape)
- ☐ Spring or Groundwater

- ☐ Air Conditioner Condensate
- ☐ Uncontaminated Foundation or Footing Drains
- ☐ Pavement or Building Wash Water
- ☐ Uncontaminated Excavation Dewatering (without detergents)
- ☐ Potable Water
- ☐ No Known Non-Stormwater Sources Apparent

List allowable non-stormwater discharges marked above and the measures used to eliminate or reduce them and to prevent them from becoming contaminated:

Allowable Non-Stormwater Discharges	Measures to be Implemented to Eliminate or Reduce Contamination

Add additional rows as needed by hitting Tab in the last cell of the table

Non-Stormwater BMPs

BMP	Specification(s)	Check if Used	Implementation Schedule
Water Conservation Practices	- SD SPECS (106 and 205) - NS-1	☐	Date to be Implemented Location (Stations or MP)
Dewatering Operations	- SD SPECS (N/A) - NS-2	☐	Date to be Implemented Location (Stations or MP)
Paving and Grinding Operations	- SD SPECS (203) - NS-3	☐	Date to be Implemented Location (Stations or MP)
Potable Water-Irrigation Management	- SD SPECS (N/A) - NS-7	☐	Date to be Implemented Location (Stations or MP)
Vehicle and Equipment Cleaning	- SD SPECS (N/A) - SD Drawings () - NS-8	☐	Date to be Implemented Location (Stations or MP)
Freeze Reduction	- SD SPECS (N/A) - NS-16	☐	Date to be Implemented Location (Stations or MP)
Snow Management	- SD SPECS (N/A) - EC-15	☐	Date to be Implemented Location (Stations or MP)
Snow Accumulation Management	- SD SPECS (N/A) - EC-16	☐	Date to be Implemented Location (Stations or MP)
		☐	Date to be Implemented Location (Stations or MP)

Spill Prevention and Control BMPs

All ITD projects shall follow the Idaho Hazardous Materials/WMD Incident Command and Response Support Plan and ITD Incident Management Plan. In addition, a project Spill Plan shall be provided by the Contractor, and should be

included in **Appendix B.** The ITD BMPs listed below also contain guidance on waste management, spill prevention and control, and cleanup.

BMP	Specification(s)	Check if Used	Implementation Schedule
Spill Prevention and Control	- SD SPECS (N/A) - WM-5	☐	Date to be Implemented Location (Stations or MP)
Hazardous Waste Management	- SD SPECS (N/A) - WM-7	☐	Date to be Implemented Location (Stations or MP)
Illicit Connection-Illegal Discharge Detection and Reporting	- SD SPECS (N/A) - NS-6	☐	Date to be Implemented Location (Stations or MP)
		☐	Date to be Implemented Location (Stations or MP)

Per 40 CFR 112, if petroleum products stored at the construction site aggregate 1,320 gallons or more, a Spill Prevention, Control, and Countermeasure Plan (SPCC) plan will be required.

Section 4 - Permanent Erosion or Sediment Control BMPs

Permanent erosion and sediment control BMPs shall be designated and referenced on the project bid plans in association to their placement locations and amounts, lengths, and types used and as specified by the Engineer. The following permanent erosion and sediment control BMPS or combination of control BMPs will be installed and used to collect, retain, and treat stormwater runoff and pollutant discharges and to provide permanent stabilization of disturbed soils per ITD PPP requirements. In the table provided below, check the boxes of the BMPs that will be used on your project and insert implementation/installation times. Delete the BMPs that will not be used, or leave unchecked.

BMP	Specification(s)	Check if Used	Implementation Schedule
Channel Protection - Check Dams	- SD SPECS (212) - SD Drawings (P-2-B) - PC-1	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Sheet Flow to Buffers	- SD SPECS (N/A) - PC-2	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Channel Protection-Flexible Liners	- SD SPECS (212 and 624) - SD Drawings (P-2-A and P-2-C) - PC-3	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Channel Protection-Rigid Channel Liners	- SD SPECS (209 and 623) - SD Drawings (P-2-D) - PC-4	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Dikes and Berms	- SD SPECS (205, 209, and 212) - SD Drawings (P-1-E and P-1-F) - PC-5	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Dry Swale	- SD SPECS (N/A) - PC-6	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

BMP	Specification(s)	Check if Used	Implementation Schedule
Wet Swale	- SD SPECS (N/A) - PC-7	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Geosynthetics	- SD SPECS (640 and 718) - PC-8	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Surface Sand Filter	- SD SPECS (N/A) - PC-9	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Subsurface Sand Filter	- SD SPECS (N/A) - PC-10	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Perimeter Sand Filter	- SD SPECS (N/A) - PC-11	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Organic Filter	- SD SPECS (N/A) - PC-12	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Pocket Sand Filter	- SD SPECS (N/A) - PC-13	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Bioretention	- SD SPECS (N/A) - PC-14	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Inlet-Outlet Protection	- SD SPECS (212, 608, 609, 640, 711, 718) - SD Drawings (D-1-A, D-1-B, P-1-A, P-1-H, and P-2-F) - PC-15	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Interceptor Ditches	- SD SPECS (208 and 209) - PC-16	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Retaining Walls	- SD SPECS (210 and 512) - PC-17	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Stormwater Basins	- SD SPECS (205 and 212) - SD Drawings (P-1-C and P-4-A) - PC-18	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Extended Detention Basin with Micropool	- SD SPECS (N/A) - PC-19	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Wet Basin	- SD SPECS (N/A) - PC-20	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

BMP	Specification(s)	Check if Used	Implementation Schedule
Wet Extended Detention Basin	- SD SPECS (N/A) - PC-21	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Shallow Wetland	- SD SPECS (N/A) - PC-22	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Extended Detention Shallow Wetland	- SD SPECS (N/A) - PC-23	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Pond Wetland System	- SD SPECS (N/A) - PC-24	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Pocket Wetland	- SD SPECS (N/A) - PC-25	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Sediment Control Box	- SD SPECS (605 and 609) - SD Drawings (E-6-A-F, P-1-H, P-3-A, P-3-B, and P-3-D) - PC-26	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Infiltration Trench	- SD SPECS (N/A) - PC-27	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Infiltration Basin	- SD SPECS (N/A) - PC-28	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Slope Drains - Chutes - Flumes	- SD SPECS (208, 212, 409, 606, 607, and 609) - SD Drawings (D-1-A, D-1-B, and P-2-D) - PC-29	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Rock Armor / Mulch – Turf Reinforced Mat	- SD SPECS (N/A) - PC-30	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Serrations / Roughening	- SD SPECS (205) - ITD Design Manual Sec. 5.6 - PC-31	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Terraces / Benching	- SD SPECS (205) - ITD Design Manual Sec. 5.6 - PC-32	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Topsoil Management	- SD SPECS (213 and 711.09) - PC-33	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Vegetation-Seeding	- SD SPECS (621, 711.05, 711.12, 711.06) - PC-34	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

BMP	Specification(s)	Check if Used	Implementation Schedule
Vegetation-Planting	- SD SPECS (620 and 711.06) - PC-35	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Water Quality Inlet / Oil Grit Separator	- SD SPECS (N/A) - PC-36	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Street Sweeping	- SD SPECS (N/A) - PC-37	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Deep Sump Catch Basin	- SD SPECS (N/A) - PC-38	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
On-line Storage in Storm Drain Network (Vaults)	- SD SPECS (N/A) - PC-39	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Porous Pavements	- SD SPECS (N/A) - PC-40	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
Proprietary Manufactured Systems	- SD SPECS (N/A) - PC-41	☐	Date to be Implemented Location (Stations or MP) Quantity of BMP
		☐	Date to be Implemented Location (Stations or MP) Quantity of BMP

Section 5 - Inspection and Maintenance Requirements

Inspections

- Contractor shall inspect and maintain all structural and non-structural control measures for functionality as required by the contract
- Conduct inspections using the inspection and corrective action log form in the Appendix
- Completed, certified, and executed Inspection Forms serve as a Corrective Action Log for ITD projects. These forms should be retained along with this PPP in **Appendix C**

All BMP deficiencies identified during the inspection, or any inadequacies related to the PPP, must be corrected as soon as possible but never later than 7 days after the inspection.

Maintaining an Updated PPP Plan

Changes to the PPP must be documented and may include any one of the following:

Construction methods

Operation methods

Design of the project (including civil plan sheets)

In the field change orders

Maintenance or inspection procedures

Staging sites

Material source sites/stockpile sites

Disposal/excess material/waste sites

Haul roads, temporary roads, and locations where vehicles travel and enter or exit staging areas and construction sites

Implementation and maintenance of BMPs

Stormwater discharge locations

Sequencing/scheduling changes

Impacts to wetlands or sensitive areas

Changes in personnel

All of these can result in the need for additional BMPs, and therefore a PPP update.

The sole objective of all modifications is to keep the PPP concurrent to existing on-the-ground conditions and to eliminate erosion and sediment impacts, as well as other pollutant impacts that could potentially result from the project. All modifications to the PPP shall be documented in **Appendix C** through the completion of inspections reports that shall serve as the corrective action log on this project.

Section 6 - Recordkeeping

Low Erosivity Waiver

If this PPP is being prepared in lieu of a Stormwater Pollution Prevention Plan based on the applicability of obtaining a Low Erosivity Waiver for the project, a copy of ITD, the Contractor, and any applicable local entity filing for a Low Erosivity Waiver (LEW) should be included in **Appendix D**. Guidance on the applicability of the LEW on your project can be found at the following website: http://water.epa.gov/polwaste/npdes/stormwater/Welcome-to-the-Rainfall-Erosivity-Factor-Calculator.cfm

Attention should be given to the expirations date on the LEW.

Inspections

Completed, certified, and executed Inspection Forms serve as a Corrective Action Log for ITD projects. These forms should be retained along with this PPP in **Appendix C**.

Section 7 - Certification and Notification

LHTAC Representative's Printed Name	Title	Signature	Approval Date
Karissa Hardy	LHTAC Environmental Engineer		

Contractor Certification Statement

As an operator, I certify that this Pollution Prevention Plan (PPP) narrative and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. As an operator, I certify that I understand requirements of the Clean Water Act as it relates to my activities and will, to the maximum extent practicable, implement BMPs to minimize release of pollutants into the environment.

Contractor's Printed Name	Title	Signature	Date

Place all signed copies of the Subcontractor Certification/Agreement form in **Appendix E**.

Appendices

Appendix A – PPP Plan Sheets and Site Maps

Appendix B – Basic Spill Prevention and Control Plan Language

In addition to all the erosion and sediment control BMPs, non-stormwater BMPs, and good housekeeping BMPs discussed in the this PPP plan, the minimum following information will be provided by the Contractor for Spill Prevention and Cleanup:

1) Contact information for Contractor's designated Spill Coordinator for the project. This person must have authority to mobilize equipment, personnel, and materials in the event of a spill or discharge.
2) Documentation of training and/or education on spill response and cleanup.
3) Description of the location and content of spill kits on the project site.

Appendix C – Executed Inspection Reports/Corrective Action Log

Appendix D – Low Erosivity Waivers (if applicable)

Appendix E – Subcontractor Certifications/Agreements

Subcontractor Certification for Pollution Prevention Plan

Project Number	Project Name	Operator(s)

As a subcontractor, you are required to comply with the Pollution Prevention Plan (PPP) for any work that you perform on-site. Any person or group who violates any condition of the PPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the PPP. A copy of the PPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the PPP for the above designated project and agree to follow the BMPs and practices described in the PPP.

This certification is hereby signed in reference to the above named project.

Company Name	Address	City	State	Zip Code
Telephone Number	Construction Service to be Provided			
Printed Name	Title	Signature	Date	

2025 BUY AMERICA/ BUILD AMERICA BUY AMERICA INSERT

(For projects obligated on or after October 1, 2025)

This document is intended as a Build America Buy America (BABA, 2 CFR 184) and Buy America (BA, 23 CFR 635.410) contract insert that includes changes to the 2023 Standard Specifications for Highway Construction (SSHC), and the 2020 Quality Assurance Manual (Dated 10/19). For the purposes of this contract, the term "Buy America" refers to both Build America Buy America (BABA), and Buy America (BA).

REVISIONS TO THE 2023 SSHC

ON PAGE 11, SUBSECTION 101.04 – DEFINITIONS **09/25**

Replace the definition of "Construction Material" with the following:

Construction Material (BABA, 2 CFR 184). A Construction Material is an article, material, or supply that consists of only one of the items listed, except for minor additions: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cable); glass (including optic glass); lumber (including treated wood, and untreated wood); Fiber optic cable; Optical fiber; Engineered wood or drywall. To the extent one of the items listed above contains as inputs other items listed above, it is nonetheless a Construction Material. For example, fiber optic cable contains as inputs other items listed, such as glass and/or plastics, but fiber optic cable is nonetheless a Construction Material. Items specifically excluded from Construction Materials are products that are primarily iron or steel (defined under Iron and Steel Products); cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. Coatings do not change the categorization of a Construction Material. Minor additions of articles, materials, supplies, or binding agents to a Construction Material do not change the categorization of Construction Material. For example, wax added to engineered wood should not disqualify the engineered wood from categorization as a Construction Material. However, if before the engineered wood is brought to the work site, it is combined with glass or other items or materials to produce a new product, which is not listed above, the new product would be classified as a Manufactured Product, not a Construction Material.

ON PAGE 14, SUBSECTION 101.04 – DEFINITIONS **09/25**

Add the following in alphabetical order:

Manufactured Product (BA, 23 CFR 635.410). A Manufactured Product is defined as articles, materials, or supplies that have been processed into a specific form and shape, or combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies. Any product that is classified as an iron or steel product, an excluded material, or a Construction Material is not a Manufactured Product. Excluded materials, defined in 2 CFR 184.3, include cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives. However, an article, material, or supply classified as a manufactured product may include components that are iron or steel products, excluded materials, or other product categories as specified by law or in 2 CFR part 184. Mixtures of excluded materials delivered to a work site without final form for incorporation into a project are not a manufactured product. The FHWA waiver on

Manufactured Products has been eliminated and 100% of the final assembly or manufacture of the Manufactured Product must occur domestically.

Manufacturer. In the case of Manufactured Products, manufacturer means the entity that performs the final manufacturing process that produces a Manufactured Product.

ON PAGE 59, 106.01.A.1 – IRON AND STEEL PRODUCTS **02/2024**

Add the following after the first paragraph.

Iron or steel products means articles, materials, or supplies that consist wholly or predominantly of iron or steel or a combination of both. "Predominantly of iron or steel" means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components.

ON PAGE 60, 106.01.A.1 – IRON AND STEEL PRODUCTS **02/2024**

Delete the second sentence of the fifth paragraph and replace with the following:

Cost determination is based on supplier invoice costs.

ON PAGE 60, 106.01.A.2 – CONSTRUCTION MATERIALS **02/2024**

Delete the first paragraph and replace with:

All Construction Materials must be produced in the United States. Produced in the United States is defined below for each Construction Material.

(1) Non-ferrous metals. All manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly, occurred in the United States.
(2) Plastic and polymer-based products. All manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form, occurred in the United States.
(3) Glass. All manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.
(4) Fiber optic cable (including drop cable). All manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding and jacketing, occurred in the United States. All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic and polymer-based products, or any others.
(5) Optical fiber. All manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.
(6) Lumber. All manufacturing processes, from initial debarking through treatment and planing, occurred in the United States.
(7) Drywall. All manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels, occurred in the United States.

(8) Engineered wood. All manufacturing processes from the initial combination of constituent materials until the wood product is in its final form, occurred in the United States.

ON PAGE 60, 106.01.A.2 – CONSTRUCTION MATERIALS **09/2025**

Add the following after 106.01.A.2:

3. Manufactured Products (BA, 23 CFR 635.410).

All Manufactured Products must be produced in the United States. For Manufactured Products, produced in the United States means that 100% of the final assembly or manufacture of the Manufactured Product must occur domestically.

4. Small Quantities for Construction Materials and Manufactured Products

The Engineer may allow small quantities of foreign or non-compliant Construction Materials and Manufactured Products, so long as the total value of the foreign or non-compliant Construction Materials and Manufactured Products does not exceed the lesser of $1,000,000 or 5 percent of the Total Applicable Project Costs for the project or where the Total Amount of Federal Financial Assistance is below $500,000. "Total Applicable Project Costs" are defined as the cost of iron/ steel, Construction Materials and Manufactured Products used in the project that are subject to a domestic preference requirement, including materials that are within the scope of an existing waiver. "Total Amount of Federal Financial Assistance" includes federal funding provided for preliminary engineering, right of way, and all construction contracts. For projects under a NEPA decision, include all federal funding provided for all projects under that NEPA decision.

The Contractor must maintain and provide in .csv format for each estimate to the Engineer a running total, listed by bid item and manufacturer, of the cost of Construction Materials and Manufactured Products not meeting the Buy America criteria and a running total of the Total Applicable Project Costs (as defined in the paragraph above). Invoices must be available for audit at any time and must be retained for a period of five years from the date of substantial completion for the project. If the Contractor does not provide these costs for each estimate, the estimate payment will not be made until the costs are supplied, or the Contractor provides a written statement(*) that they are not going to supply these costs. The written statement will include a statement from the Contractor acknowledging that they will not be able to incorporate any non-compliant Construction Materials or Manufactured Products into the project. The Engineer needs to make sure the running total of the Total Applicable Project Costs and the running total of foreign or non-compliant Construction Materials or Manufactured Products are received prior to issuing each pay estimate and that the Contractor does not exceed the Buy America threshold for non-compliant Construction Materials or Manufactured Products or have received the written statement from the Contractor indicating they will not be providing the running total.

* The written statement must include the following sentence:

"As the authorized representative of the Contractor, by providing this written statement that I will not be providing the running total for each estimate of the Total Applicable Project

Costs, the Contractor is acknowledging that non-compliant Construction Materials or Manufactured Products cannot be incorporated into the project."

REVISIONS TO THE 2020 QUALITY ASSURANCE MANUAL (DATED 10/19)

Section 100.00.01 – Quality Control (QC) Producer

Delete the second sentence of the first paragraph and replace with:

Quality control of materials used in construction is the Contractor's responsibility and is performed during the production of the material and/or at the point of delivery.

Section 200 "Outline"

Revise Section 230.01 as follows:

230.01	General Provisions and Buy America.
230.01.01	General Provisions.
230.01.02	Buy America, and Build America Buy America.
230.01.02.01	Iron and Steel Products
230.01.02.02	Construction Materials
230.01.02.03	Manufactured Products

Section 230.01 General Provisions

Delete Section 230.01 and replace with the following:

230.01 General Provisions and Buy America

230.01.01 General Provisions

Standard Department certification forms will be used. The standard forms are:

- ITD-849 Geotextile and Geogrid
- ITD-851 Miscellaneous Items
- ITD-875 Non-Structural Concrete
- ITD-914 Steel and Iron, and Buy America
- ITD-915 Construction Materials and Manufactured Products for Buy America
- ITD-966 PG Asphalt Binder
- ITD-968 Cement / Fly Ash

The standard forms must be completed in their entirety and signed by the manufacturer's representative who has quality control responsibility for the manufacture or fabrication of the material.

When required by the contract, QC test results must be attached to the specified standard form. Certification does not preclude inspection, sampling, testing, or verification of certified test results of the material received on the project. Project inspectors will review all certification results for specification compliance before accepting the material. If the certified material is found to be outside acceptable specification limits, the material is subject to rejection.

Each shipment of certified material must be visually inspected for obvious defects and shipping/handling damage. Repair, reject, or replace damaged or defective material to the satisfaction of the Engineer. Where feasible, simple measurements of specified properties should be spot-checked at least once per project and recorded to verify certification. Examples would be length, mass per unit length, or thickness of steel items.

Withdraw acceptance of material by certification when sample test or inspection results show the material consistently fails to meet specifications requirements. Reestablishment of the certification acceptance may be achieved through Department pre-testing, pre-inspection, and review of historical certification records and test results of the material before its incorporation into a project. Additionally, the manufacturer's QA program may require revision and reevaluation by the Department.

230.01.02 Buy America (BA), and Build America Buy America (BABA)

Buy America and Build America Buy America apply to any contract eligible for Federal Aid Highway funding within the scope of an applicable NEPA finding, determination, or decision regardless of the funding source of such contracts if at least one contract or phase of the project is funded with Federal-Aid highway funds. All incorporated steel and iron products, Construction Materials, and Manufactured Products permanently installed on the project as established in Standard Specification 106.01.A must be certified that they were produced in the United States of America per 23 CFR 635.410 for iron/steel, 23 CFR 635.410 for Manufactured Products, and 2 CFR 184 for Construction Materials. Certification must be provided before incorporation of the materials into the project. Materials that are only used or rented during the project construction, but not incorporated into the work (temporarily installed), do not require certification. 230.01.02.01 Iron and Steel Products per 23 CFR 635.410.

The ITD-914 form will serve as Buy America Certification and be signed by a person having quality control responsibility for the company that manufactures or fabricates the material. The ITD-914 will be sent with mill tests reports attached, except as noted in the MTRs.

Small quantities of steel and iron may be accepted without Buy American Certification, so long as its total cost for the project does not exceed 0.1% of the contract amount or $2,500, whichever is greater. The total cost of steel and iron includes the cost of the material plus the cost of transportation to the project site, as evidenced by delivery receipt, but does not include labor cost involved in final assembly performed on the project site.

If Department project staff or consultant inspectors discover that foreign iron and/or steel products are incorporated into a federal-aid project that exceed the Buy America minimal use amount for iron or steel (the greater of $2,500 or 0.1% of the contract value), the FHWA Idaho Division must be contacted to

resolve this after-the-fact discovery. All information on foreign iron and steel permanently incorporated into a project that exceeds the minimal use amount must be presented to FHWA to determine the appropriate resolution. The Department will not complete a project's Material's Certification without FHWA's resolution when the project is not compliant with Buy America. The Department has no authority to complete such a resolution and cannot resolve Buy America compliance issues by use of non-Federal funds.

230.01.02.02.02 Construction Materials per 2 CFR Part 184.

A Construction Material is an article, material, or supply that consists of only one of the items listed, except for minor additions: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cable); glass (including optic glass); lumber (including treated wood, and untreated wood); Fiber optic cable; Optical fiber; Engineered wood or drywall.

To the extent one of the items listed above contains as inputs other items listed above, it is nonetheless a Construction Material. For example, fiber optic cable contains as inputs other items listed, such as glass and/or plastics, but fiber optic cable is nonetheless a Construction Material.

Items specifically excluded from Construction Materials are products that are primarily iron or steel (defined under Iron and Steel Products); cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

Coatings do not change the categorization of a Construction Material. Minor additions of articles, materials, supplies, or binding agents to a Construction Material do not change the categorization of Construction Material. For example, wax added to engineered wood should not disqualify the engineered wood from categorization as a Construction Material. However, if before the engineered wood is brought to the work site, it is combined with glass or other items or materials to produce a new product, which is not listed above, the new product would be classified as a Manufactured Product, not a Construction Material.

230.01.02.03 Manufactured Products per 23 CFR 635.410

Manufactured Products are defined as articles, materials, or supplies that have been processed into a specific form and shape, or combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.

With respect to precast concrete products that are classified as Manufactured Products, components of precast concrete products that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements for steel and iron products. The cost of such components shall be included in the applicable calculation for purposes of determining whether the precast concrete product is produced in the United States.

With respect to intelligent transportation systems and other electronic hardware systems that are installed in the highway right of way or other real property and classified as manufactured products, the cabinets or other enclosures of such systems that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements for steel and iron products. The cost of cabinets or other enclosures shall be included in the applicable calculation for purposes of determining whether systems referred to in the preceding sentence are produced in the United States.

230.01.02.04 Small Quantities for Construction Materials and Manufactured Products

For awards obligated on or after August 16, 2023, the Engineer may allow small quantities of foreign Manufactured Products and Construction Materials, so long as the total value of the non-compliant products does not exceed the lesser of $1,000,000 or 5 percent of the total applicable costs for the project or where the total amount of federal financial assistance is below $500,000. "Total applicable project costs" are defined as the cost of Construction Materials and Manufactured Products used in the project that are subject to a domestic preference requirement, including materials that are within the scope of an existing waiver. "Total Amount of Federal Financial Assistance" includes federal funding provided for preliminary engineering, right of way, and all construction contracts. For projects under a NEPA decision, include all federal funding provided for all projects under that NEPA decision.

The Contractor must maintain and provide in .csv format for each estimate to the Engineer a running total, listed by bid item and manufacturer, of the cost of Construction Materials and Manufactured Products not meeting the Buy America criteria and a running total of the Total Applicable Project Costs (as defined in the paragraph above). Invoices must be available for audit at any time and must be retained for a period of five years from the date of substantial completion for the project. If the Contractor does not provide these costs for each estimate, the estimate payment will not be made until the costs are supplied, or the Contractor provides a written statement (*) that they are not going to supply these costs. The written statement will include a statement from the Contractor acknowledging that they will not be able to incorporate any non-compliant Construction Materials or Manufactured Products into the project. The Engineer needs to make sure the running total of the Total Applicable Project Costs and the running total of foreign or non-compliant Construction Materials and Manufactured Products are received prior to issuing each pay estimate and that the Contractor does not exceed the Buy America threshold for non-compliant Construction Materials and Manufactured Products or have received the written statement from the Contractor indicating they will not be providing the running total. Cost is defined in 2 CFR 200.306 (actual acquisition cost).

* The written statement must include the following sentence:

"As the authorized representative of the Contractor, by providing this written statement that I will not be providing the running total for each estimate of the Total Applicable Project Costs, the Contractor is acknowledging that non-compliant Construction Materials and Manufactured Products cannot be incorporated into the project."

230.01.02.04 Certification of Construction Materials and Manufactured Products

The ITD-915 form serves as Buy America Certification for Construction Materials and Manufactured Products and must be signed by a person having quality control responsibility for the company that manufactures the product.

If Department project staff or consultant inspectors discover that foreign Construction Materials or Manufactured Products are incorporated into a federal-aid project, the FHWA Idaho Division must be contacted to resolve this after-the-fact discovery. All information on foreign Construction Materials and Manufactured Products permanently incorporated into a project must be presented to FHWA to determine the appropriate resolution. The Department will not complete a Project's Materials Certification without FHWA's resolution when the project is not compliant with Buy America requirements. The Department has no authority to complete such a resolution and cannot resolve Buy America compliance issues by use of non-Federal funds.

Section 230.03 Steel.

Delete the last sentence of the first paragraph and replace with:

Steel will comply with 230.01.02 Buy America per 23 CFR 635.410.

Section 230.07 Corrugated Metal Pipe and Corrugated Plate Pipe.

Add the following to the end of the second paragraph of the section:

Additionally, a form ITD-915 will be submitted attesting that the aluminum pipe meets applicable Buy America requirements for Construction Material (non-ferrous metals).

Section 230.08 Plastic Pipe.

Add the following to the end of the first paragraph of the section:

Additionally, a form ITD-915 will be submitted attesting that the plastic pipe meets applicable Buy America requirements for Construction Material (plastic and polymer-based products).

Section 230.09 Geosynthetics.

Add the following to the end of the first paragraph of the section:

Additionally, a form ITD-915 will be submitted attesting that the aluminum pipe meets applicable Buy America requirements for Construction Material (plastic and polymer-based products).

Section 270.00 Minimum Testing Requirements (Table)

Use the Buy America Summary Table below for BA requirements and BA certifications of materials. Iron or steel products are listed as "Fe". Construction Materials are listed as "CM". Manufactured Products are listed as "MP

Buy America Summary Table (Section 270)				
Section	**Item Desc.**	**Code[1,4,6,7]**	**Form(s)[2,3,5,9]**	**Comments**
212	Slope Drain	Fe, CM	ITD-914, ITD-915	
212 (General)	Erosion and Sediment Control Products	MP	ITD-915	All erosion and sediment control products that are allowed to remain in place must be certified appropriately.
405	Pavement Reinforcement Fabric	CM	ITD-915	
420	Concrete Pavement Rehab (Precast Elements)	MP	ITD-914, ITD-915	Both required for steel reinforced products.
502	Precast Concrete Products	MP	ITD-914, ITD-915	Both required for steel reinforced products.
503	GFRP	MP	ITD-915	
504	Bolts, Nuts, Hardened Washers, DTI	Fe, CM, MP	ITD-914, ITD-915	
504	Two Tube Curb-Mount Railing	Fe, CM, MP	ITD-914, ITD-915	
504	Pedestrian Bicycle Railing	Fe, CM, MP	ITD-914, ITD-915	
504	Combination Pedestrian Bicycle, and Traffic Railing	Fe, CM, MP	ITD-914, ITD-915	
505	Timber Piles	CM	ITD-915	
506	Prestressing Concrete	Fe, CM, MP	ITD-915	
507	Bearing Pads and Plates	Fe, CM, MP	ITD-914, ITD-915	
508	Corrugated Plate Pipe - Entire Section	Fe, CM, MP	ITD-914, ITD-915	
511	Concrete Waterproofing Systems - Types A, B	CM, MP	ITD-915	
511	Concrete Waterproofing Systems - Types C	MP		Note, Type C Silanes and siloxane chemicals are not polymers and are not Construction Materials.
511	Concrete Waterproofing Systems - Types D	CM, MP	ITD-915	
511	Concrete Waterproofing Systems - Types E	CM, MP	ITD-915	
512	Gabion Structures	Fe, CM, MP	ITD-914, ITD-915	

565	Asphaltic Plug Expansion Joint System	Fe, CM, MP	ITD-914, ITD-915	
566	Compression Seal Expansion Joint	CM, MP	ITD-915	
567	Strip Seal Expansion Joint	Fe, CM, MP	ITD-914, ITD-915	
576	GFRP	MP	ITD-915	
577	Pile Sleeves	Fe, CM, MP	ITD-914, ITD-915	
578	Precast Concrete Culvert	Fe, CM, MP	ITD-914, ITD-915	
581	Concrete Crack Repair	CM, MP	ITD-915	
582	Patch and Repair Concrete	Fe (for replaced reinforcing steel)	ITD-914	
586	Utility Conduit General	Fe, CM, MP	ITD-914, ITD-915	
587	Painting Structural Steel	CM, MP	ITD-915	
602-608	Culverts, Pipe Siphons, Irrigation Pipelines, Sewers, Storm Sewers, Manhole, Valve Covers, and Dry Wells, Pipe Underdrains, Urban and Rural Edgedrains, Embankment Protectors, Pipe Aprons	Fe, CM, MP	ITD-914[2], ITD-915	
609	Minor Structures General	Fe, CM, MP	ITD-914, ITD-915	
610	Fence General	Fe, CM, MP	ITD-914, ITD-915	
611	Cattle Guards	Fe, CM, MP	ITD-914, ITD-915	
612	–Guardrail and Concrete Barrier - General	Fe, CM, MP	ITD-914, ITD-915	
613	Crash Cushions	Fe, CM, MP	ITD-914, ITD-915	
614	Detectable Warning Surfaces	CM, MP	ITD-915	
616	Signs and Sign Supports - General	Fe, CM, MP	ITD-914, ITD-915	
617	Delineators and Mileposts General	Fe, CM, MP	ITD-914, ITD-915	
618	Marker Posts, Witness Posts, and Street Monuments - General	Fe, CM, MP	ITD-914, ITD-915	
619	Illumination General	Fe, CM, MP	ITD-914, ITD-915	
622	Precast Concrete Headgates	Fe, MP	ITD-914, ITD-915	

623	Pre-formed expansion Joint Filler Concrete Slope Paving	CM, MP	ITD-915	
625	Joints - General	CM, MP	ITD-915	
627	Painting	CM, MP	ITD-915	
628	Snow Poles	Fe, CM, MP	ITD-914, ITD-915	
630	Pavement Markings - General	CM, MP	ITD-915	
634	Mailbox - General	Fe, CM, MP	ITD-914, ITD-915	
640	Geosynthetics - General	CM, MP	ITD-915	
641	Biaxial Geogrid	CM, MP	ITD-915	
652	Underground Sprinkler System - All Items	CM, MP	ITD-915	
656	Traffic Signal Installation - General	Fe, CM, MP	ITD-914, ITD-915	
Misc. Items	Epoxies	CM, MP	ITD-915	

Notes:

1. Code Key: Fe = iron & steel, CM = Construction Material, MP = Manufactured Product, BA N/A = Item determined not to apply to BA.
2. The ITD-914 applies to Iron and steel products only. There is no change to the Buy America certification process for Iron and Steel.
3. This table makes additional requirements to the existing 270 table only; the existing ITD-914 requirements for Iron and Steel are not restated.
4. Buy America requirements apply to all iron and steel items no matter what form of manufacturing or material combinations are used.
5. The ITD-915 applies to Construction Materials and Manufactured Products.
6. Besides Fe and CM, no other products/items are considered by the Department to be applicable to these Buy America requirements.
7. Field assembly does not constitute a manufactured process and does not necessarily preclude applicability to Buy America requirements.
8. Wood products, even when treated, are considered Construction Materials.
9. Any justification denying applicability to the Buy America requirements is to be submitted on/with the ITD-915 form.

Section 470.01 Exceptions.

In the sixth full paragraph, replace the sentence with:

> Exceptions to the Buy America specification must be presented to FHWA for determination of a resolution, see Section 230.01.02 Buy America.

2023 Quality Assurance Special Provision for State Acceptance (2023 QASP SA) 12/7/2023

ON PAGE13, 15 AND 16, SUBSECTION 101.04 – DEFINITIONS

HMA Paving Quality Control Plan. A quality control plan specific to hot mix asphalt paving.

Quality Assurance. All planned and systematic operations to ensure that the operation, material, and/or end product meets specifications. Quality assurance includes:

1. Approval and oversight of the Contractor's quality control plan.
2. Review of inspector, sampler, tester, and laboratory qualifications.
3. Inspection for conformity with contract requirements.
4. Contractor quality control.
5. Acceptance.
6. Independent assurance.
7. Challenge resolution.

Quality Control Plan. The documentation, approved by the Department, of the program used by the Contractor which specifies the actions, inspection, sampling, and testing necessary to keep production and placement operations within specifications, including provisions to quickly determine when an operation becomes out of control and those actions that the Contractor will take to restore compliance.

ON PAGE 36, SUBSECTION 105.03 – CONFORMITY WITH PLANS AND SPECIFICATIONS

Add after the first sentence:

> For the quality characteristics of the items included in QASP SA Table 106.03-1, and subject to quality level analysis, acceptance will be based on the requirements of the 2023 Quality Assurance Special Provision for State Acceptance (2023 QASP SA).

ON PAGE 61, SUBSECTION 106.03 – SAMPLES, TESTS, AND CITED SPECIFICATIONS

Delete this subsection and replace with the following:

106.03 Samples, Tests, and Cited Specifications.

The Engineer will accept material, based on inspection and test results, before the Contractor incorporates material into the work. The Contractor may, with approval, incorporate material the Engineer cannot routinely sample before delivery, at the Contractor's risk. The Department will pay the Contractor for material incorporated into the work if the material meets the sampling, testing, and certification requirements.

Ensure the sampling and testing required by the contract, including references to WAQTC, ASTM, AASHTO, and Idaho standard test methods are from the current edition at time of bid opening, except as modified by the contract.

For testing performed on the Contractor's behalf for plant mix designs, alkali-silica reactivity expansion, and claim or dispute resolution, a professional engineer, licensed in the state where the testing will be performed, will supervise testing reporting.

Ensure a safe means of sampling and testing. If safe means of sampling and testing is not provided, work will be halted, at no additional cost to the Department. No material will be accepted after unsafe conditions have been identified and the Contractor has been notified of the unsafe conditions, until corrective action has been taken and the resumption of work is approved by the Engineer.

Ensure the individuals sampling and testing material and the testing facilities are qualified for the tests performed.

Provide crushing, screening, and mixing plants with approved sampling equipment capable of operating from the ground or a platform. Ensure the sampling equipment is capable of the following:

1. Moving at a constant rate across the width of the material falling from the discharge belt or chute.
2. Taking a representative sample of the material.
3. Conveying (e.g., slide, chute) the sample to the ground level where the sample can be safely and conveniently collected.

The Contractor is responsible for the quality of construction and materials incorporated into the work. The Contractor will perform all necessary quality control inspection, sampling, and testing and the Department is responsible for acceptance testing and independent assurance (IA) testing. Sampling and testing costs are included in the respective contract pay items. The Contractor is allowed to take the acceptance or IA samples as long as the sample collection is witnessed by the Department. The Contractor may employ an independent laboratory. The laboratory must follow the Contractor's approved quality control plan. Make all project records, including test results and all original source documentation for specified contract quality requirements available for review and allow Department representatives immediate access to the testing facilities during delivery and production hours.

The Contractor may observe the Department's sampling and testing activities. If the Contractor observes a deviation from the specified sampling or testing procedures, then the Contractor must describe the deviation to the Department immediately and document the deviation in writing within 24 hours to preserve their ability to challenge the sample.

A. Material Subject to Statistical-Based Acceptance.

When specified in the contract, the Department will use the quality level analysis as specified in 106.03.B to determine quality-based pay adjustments.

The Contractor and the Department will work cooperatively within their respective quality assurance (QA) responsibilities to produce and document a high quality project, meeting or exceeding the quality requirements of the contract.

1. The Department's Quality Assurance Responsibilities.

   The Department is responsible for determining the acceptability of the work, approving and monitoring of the Contractor's quality control plan (QCP). The Department will perform acceptance sampling, testing, and inspection for any element of the work to ensure Contractor compliance with the QCP and contract requirements. The Department may also perform IA and verification sampling and testing at any time.

   Acceptance sampling and testing is the Department's responsibility, unless alternate procedures are specified. The Department is responsible for performing acceptance testing and for evaluating the quality characteristics as specified in the QASP SA Table 106.03-1.

   The Department will obtain all samples by utilizing stratified random sampling in accordance with Idaho IR 148.

   Rounding will not be permitted at any level of calculating acceptance test results. The final reported value will be rounded to the nearest significant figure as specified in the QASP SA Table 106.03-1. ASTM E 29 does not apply.

   The Department will provide official acceptance test results within 24 hours of receipt of the final sample for the lot. The Department will not provide official acceptance test results before the completion of the lot. Acceptance results and all original source documents/datasheets used during material acceptance testing will be made available for review upon request.

   Unofficial results before final review can be shared with the Contractor, if available. These results must not be used for process quality control.

   The Department will complete acceptance sampling, splitting, and testing as specified in the QASP SA Table 106.03-1 using independent, stratified random samples. Approximately ½ of the sample will be used for acceptance testing and the other ½ retained for challenge testing. The challenge samples must be secured with Department provided serialized security tape. All chain of custody information must be documented on Department provided forms and samples must be stored in a location only accessible by Department representatives.

   a. Lot Description.

      A lot is a specific quantity of material from a single source which is produced or placed by the same controlled process. Acceptance tests will be grouped into lots by the Engineer. Lot size will be determined by the Engineer using the following criteria:

      i. The minimum lot size is 3 tests for each quality characteristic. The minimum testing frequency is specified in the QASP SA Table 106.03-1.

      ii. A lot is based on a work shift's production when the minimum lot size is achieved.

         1. If the work shift is represented by less than 3 tests for any quality

characteristic, the work shift will be combined with the following work shift to form a lot.

2. If the final work shift is represented by less than 3 tests for any quality characteristic, the final work shift will be combined with the previous work shift to form a lot. A Superpave HMA acceptance test strip is considered a lot.

2. The Contractor's Quality Control Responsibilities.

The Contractor is responsible for quality control for all work. The Contractor will not rely on the Department's acceptance testing results for their process quality control.

a. Quality Control Plan (QCP). The Contractor will develop, submit, and implement a QCP that meets the requirements of Idaho IR 158, as approved by the Department, for each of the materials included in QASP SA Table 106.03-1. A QCP for each of the materials, will be submitted to the Department at or before the preconstruction conference. The Department will provide the Contractor with approval or rejection of each QCP within 5 business days after receiving the QCP. Rejection of the QCP will require an additional 5 business days for re-evaluation. The QCP must be approved before that material is incorporated into the work/project. The QCP, as approved by the Department in accordance with Idaho IR 159, is binding upon the Contractor as a contract requirement.

i. QCP Amendments. Amend the QCP as necessary to conform to the current operations and submit the amended QCP for the Engineer's approval in accordance with IR 158. The Engineer will review and provide approval or rejection of the QCP amendment in accordance with Idaho IR 159 before the amendment is implemented.

At a minimum, the QCP will consist of plans, procedures, responsibilities, authority, and an organizational structure that demonstrates that an effective level of quality control will exist resulting in the end product complying with the contract requirements. The Contractor will provide all necessary quality control inspection, sampling, and testing to implement the QCP. The QCP will include an organizational structure and reporting requirements that demonstrate that QC personnel have sufficient independence to allow them to be primarily concerned with quality, as opposed to schedule and budget.

The Department will not sample or test for process control or assist in controlling the Contractor's production operations. The Contractor will provide QC personnel and testing equipment capable of providing a quality product that meets or exceeds the contract requirements. Continued production of non-conforming work for a reduced price as determined by the Department, instead of making adjustments to bring the work into conformance, is not allowed. The QCP will specifically include:

i. Construction items covered by the QCP as specified in the contract.

ii. Sampling location and techniques.

iii. Sampling plan.

iv. Tests and test methods.

v. Testing frequencies.

vi. Testing forms.

vii. Inspection frequencies.

viii. Detailed description of production and placement equipment and methods.

ix. Detailed calibration processes and procedures for hot plants or mixing plants.

x. Documentation procedures, including:

(1) Inspection and test records.

(2) Temperature measurements.

(3) Accuracy, calibration, or recalibration checks performed on production or testing equipment.

The QCP will identify the Contractor's QC personnel, including the company official ultimately responsible for the quality of the work. The Department's QCP approval process may include inspection of testing equipment and a sampling and testing demonstration by the Contractor's QC personnel to assure an acceptable level of performance.

The Contractor will comply with the approved QCP and will take all other steps necessary to assure a high quality project.

Failure by the Contractor to comply with the approved QCP will result in mandatory work suspension until compliance.

The Contractor will maintain and make available, quality control charts (at a minimum, a run chart as the material is being produced) for each quality characteristic to be used in the statistical analysis. Where applicable, the run chart will be plotted with the material's specification upper and lower limits for statistical analysis.

B. Quality Level Analysis.

Quality level analysis will not be performed if the total quantity of material, except the test strip(s), based on planned quantity, is less than the quantity computed for 3 tests at the frequencies specified in QASP SA Table 106.03-1.

1. Statistical Analysis. Unless otherwise specified, quality levels and pay factors will be computed as specified below:

a. Determine the unrounded arithmetic mean $(\bar{X})$.

$$\bar{X} = \frac{\sum x_i}{n}$$

Where:

Σ = Summation.

x_i = Individual test value.

n = Total number test values.

b. Compute the unrounded sample standard deviation (S).

$$S = \sqrt{\frac{\sum (x_i - \bar{X})^2}{n - 1}}$$

c. Compute the unrounded upper quality index (Q_u).

$$Q_u = \frac{USL - \overline{X}}{S}$$

Where:

USL = Upper specification limit.

S = Standard deviation.

d. Compute the unrounded lower quality index (Q_L).

$$Q_L = \frac{\overline{X} - LSL}{S}$$

Where:

LSL = Lower specification limit.

S = Standard deviation.

e. Determine P_U (percent within the upper specification limit, which corresponds to a given Q_U).

$$P_U = 100 - (100 \times \int_0^A \text{beta}(X; \frac{n}{2} - 1)\, dX)$$

Where:

P_U = Unrounded percent within upper limits.

$A = \text{Maximum}\left[0, 0.5 - Q_U \times \frac{n^{0.5}}{2(n-1)}\right]$ $X = \text{Maximum}\left[0, 0.5 - Q_U \times \frac{n^{0.5}}{2(n-1)}\right]$

$\text{beta}(X; \frac{n}{2} - 1)$ = Beta distribution density with $\alpha = \beta = \frac{n}{2} - 1$ where α and β are parameters of the beta distribution.

If a USL is not specified, P_U will be 100.

f. Determine P_L (percent within lower specification limit, which corresponds to a given Q_L).

$$P_L = 100 - (100 \times \int_0^A \text{beta}(X; \frac{n}{2} - 1)\, dX)$$

Where:

P_L = Unrounded percent within lower limits.

$A = \text{Maximum}\left[0, 0.5 - Q_L \times \frac{n^{0.5}}{2(n-1)}\right]$

$X = \text{Maximum}\left[0, 0.5 - Q_L \times \frac{n^{0.5}}{2(n-1)}\right]$

$\text{beta}(X; \frac{n}{2} - 1)$ = Beta distribution density with $\alpha = \beta = \frac{n}{2} - 1$ where α and β are parameters of the beta distribution.

If a LSL is not specified or the specification is zero, P_L will be 100.

g. Determine the unrounded percent within limits (PWL) (i.e., the total percent within the specification limits).

$$PWL = (P_U + P_L) - 100$$

h. Repeat steps 106.03.B.1.c through 106.03.B.1.g to calculate the PWL for each quality characteristic.

2. Acceptance Criteria. The Engineer will accept a lot containing material that does not meet specifications if the PWL is at least 40 for each of the quality characteristics. The Engineer must reject a lot containing non-specification material, which does not obtain at least a PWL of 40 for each quality characteristic. Remove rejected material, including those portions of the work in which that material was incorporated, at no additional cost to the Department. The Contractor may reuse the removed material if adjustments are made so the material meets the specifications.

   If the PWL of a lot falls below 60 for any quality characteristic, stop production and/or delivery. A corrective action plan must be submitted to the Engineer and approved. Production and/or delivery may resume after the Contractor takes effective and acceptable actions to improve the production quality as outlined in the approved corrective action plan. If resuming production involves a significant change to the production process, as determined by the Engineer, stop the current lot and begin a new lot.

   The Contractor may elect to remove defective material and replace it with new material on an entire lot basis, at no additional cost to the Department. The Department and the Contractor must re-sample, retest, and re-evaluate the new lot for acceptance.

   The Engineer may isolate and reject obviously defective material without regard to testing procedures. The Contractor may isolate and reject obviously defective material during delivery and production before acceptance testing.

3. Materials.

   a. 301, 303, and 635 Materials. The upper and lower specification limits (USL and LSL) for gradations will be set based on the applicable requirements of 703 except as specified below:

      (1) Test results will not be included in the quality level analysis for fracture, sand equivalent, cleanness value, 100 percent passing, or for any sieves where the upper specification limit is 100 percent passing and the lower specification limit is 95 percent passing or greater.

      The Engineer will use the lowest PWL computed for any 1 sieve as the basis of acceptance for that lot. The average PWL will be used for payment.

   b. 404 Material. When the lower specification limit is 0 percent and the upper specification limit is less than 3 percent, the upper specification limit will be 3 percent for statistical analysis. A 2 percent tolerance will be given for the percentage retained on the maximum sized sieve provided that 100 percent of the material passes the next larger sieve size. Only #4 and #8 sieves will be used for quality level analysis.

   c. 405 Superpave Material. The upper and lower specification limits for Superpave quality characteristics will be set by the limits established in 405.

(1) For SP 2 aggregates, the lowest PWL for any 1 sieve will be used for acceptance and pay factor calculations.

ON PAGE 62, SUBSECTION 106.07 – TEST RESULT CHALLENGE RESOLUTION

Delete this subsection and replace with the following:

106.07 Test Result Challenge Resolution.

The Contractor and the Department may enter into a challenge resolution when the quality of a lot is believed to be misrepresented.

The test result challenge process as specified in 106.07 will be exhausted in its entirety before other dispute or claims processes are initiated as specified in 105.16, 105.17, 105.18, and 105.19. The intent of challenge resolution is to resolve testing issues early, efficiently, and as close to the project level as possible. The Contractor will waive their right to challenge test results if they fail to comply with the requirements set forth in this subsection.

A. Initiation of a Challenge.

To request a challenge of acceptance test results, provide written notice, including all quality characteristics and copies of original quality control source documentation, within 3 business days after receipt of the acceptance test results. Failure to comply with these requirements in this subsection will bar either party from any further administrative, equitable, or legal remedy.

1. The Contractor will waive their right to challenge if either of the following conditions occur:
    i. The Engineer does not receive a written notice as specified within the time requirements (i.e., 3 business days).
    ii. The Contractor does not obtain the required number of the Contractor's quality control tests reported on forms established in the QCP at the frequency specified in QASP SA Table 106.3-1.
2. The Department will review the written notice and quality control documentation.

B. Challenge Resolution Process.

1. The Department and the Contractor will identify differences in procedures and equipment.
2. The Department and the Contractor will agree to a work plan for initiating resolution by a challenge laboratory as specified in 106.07.C. or 106.07.D.
3. The Contractor can witness challenge testing.

C. Challenge of Material <u>Not</u> Subject to Statistical-Based Acceptance.

The challenge lab is the Department Central Materials Laboratory or a Department District Materials Laboratory not associated with the District in which the acceptance testing is being performed. Splits of the Department's acceptance samples for the entire lot will be used for challenge testing. The challenge samples will be tested for all quality characteristics used in the quality level analysis by the challenge laboratory. The challenge laboratory results are final and the Engineer will use the challenge laboratory's test results for all quality characteristics for acceptance.

1. If the Department's acceptance test results indicate reject level material, and:

i. The challenge laboratory test results indicate acceptable material, then the Department will bear the cost of challenge laboratory testing.

ii. The challenge laboratory test results indicate reject level material, then the costs of challenge laboratory testing will be deducted from any monies due or that may come due the Contractor under the contract at the rate of $500.00 per sample.

For challenging of density properties, the Department's acceptance cores will be retained for retesting. The Contractor may request to observe challenge testing.

D. Challenge Laboratory Resolution of Material Subject to Statistical-Based Acceptance.

The challenge laboratory is the Department Central Materials Laboratory. The Central Materials Laboratory may elect to choose another challenge laboratory as needed to accommodate testing timelines. Upon challenge notification, the Department will arrange for testing of all challenged acceptance samples of the lot in question. Splits of the Department's acceptance samples will be used for challenge testing. The challenge samples for the entire lot will be tested for all quality characteristics used in the quality level analysis by the challenge laboratory. The challenge laboratory test results are final and the Engineer will use the challenge laboratory test results of all quality characteristics for acceptance for the entire lot.

The Contractor may use challenge resolution for density when the density pay factor is less than 1.00. The entire lot will be retested for density and used in the quality level analysis. A challenge resolution test will be performed by obtaining cores in new, stratified random sample locations equal to the same number of original acceptance tests. Sample locations will be identified by the Department using Idaho IR 148. Sampling of cores will be performed by the Contractor and must be witnessed by the Engineer. Traffic control and sampling will be performed by the Contractor. Challenge resolution may be performed regardless of the sampling location being exposed to traffic. The challenge test results are final and the Engineer will use the challenge test results for acceptance of the entire lot.

1. If the new composite pay factor results in a lower or equal composite pay factor for the lot in question, then the costs of challenge testing, in addition to the cost of any work related to traffic control performed for retesting at unit bid prices for the costs incurred, will be deducted from any monies due or that may come due the Contractor under the Contract at the rate shown in Table 106.07-1 per sample in the challenged lot.
2. If the new composite pay factor results in a higher composite pay factor for the lot in question, then the Department will bear the costs associated with the challenge testing, and the cost of any work related to traffic control performed for retesting at unit bid prices for the costs incurred.

Table 106.07-1 – Challenge Laboratory Testing Rates

Material	Rate Per Sample
301 Granular Subbase	$200
303 Aggregate Base	$250
404 Cover Coat Material	$300
635 Anti-Skid Material in Stockpile	$300
405 SP 2 Mix Quality Characteristics	$600
405 SP 2 Roadway Quality Characteristics	$400
405 SP 3 Mix Quality Characteristics	$600

Material	Rate Per Sample
405 SP 3 Roadway Quality Characteristics	$400
405 SP 5 Mix Quality Characteristics	$600
405 SP 5 Roadway Quality Characteristics	$400

ON PAGE 91, SUBSECTION 108.04 – PRECONSTRUCTION AND PREOPERATIONAL CONFERENCES

Delete #4 and replace with the following: :

4. A quality control plan as specified in 106.03.A.2.

ON PAGE 115, NEW SUBSECTION 109.09 – PAY FACTOR EQUATIONS

Insert with the following new subsection:

109.09 Pay Factor Equations.

The Engineer will determine a pay factor for each quality characteristic in an individual lot not rejected and replaced, except as otherwise specified, for use in the basis of payment calculations.

With the exception of 405 pay items or reject quality level material, if any quality characteristic used in calculating the pay factor for the lot falls below 60 PWL, all quality characteristics will be paid corresponding to the lowest, unrounded PWL.

For 405 pay items, with the exception of reject quality level material, if any two quality characteristic used in calculating the pay factor for the lot fall below 60 PWL, all quality characteristics will be paid corresponding to the average two lowest, unrounded PWL.

A. 405 Mainline Density.

For mainline density, calculate the pay factor for each lot using the following formula:

$$\mathrm{PF}_{MLD} = \frac{55 + 0.5\times \left(PWL_{92} - \frac{(\mathrm{PWL}_{92} - 90) + |PWL_{92} - 90|}{2}\right)}{100} + \frac{((PWL_{92} - 90)) + |(PWL_{92} - 90)|}{1000} + \frac{(PWL_{93} - 90) + |PWL_{93} - 90|}{1000} + \frac{(PWL_{94} - 90) + |PWL_{94} - 90|}{2000}$$

Where:

PWL_{92} is the percent of material between 92.0 to 100.0% compaction.

PWL_{93} is the percent of material between 93.0 to 100.0% compaction.

PWL_{94} is the percent of material between 94.0 to 100.0% compaction.

B. All Other Quality Characteristics.

For all other quality characteristics calculate the unrounded pay factors for each lot using the following equation:

$$PF = \frac{55+0.5\times(PWL)}{100}$$

ON PAGE 184, SUBSECTION 301.05 – BASIS OF PAYMENT

Add the following:

A. Granular Subbase Pay Factor. All acceptable material will be paid at contract unit price.

When RAP material is included in acceptable subbase, the natural material will be tested as specified in 301 and the blended material will be paid at contract unit price.

ON PAGE 188, SUBSECTION 303.05 – BASIS OF PAYMENT

Delete this subsection and replace with the following:

Calculation of Incentive/Disincentive. The incentive/disincentive dollar amount to be paid or deducted for all ____aggregate type _____for base accepted by the Department will be computed using the following formula:

$$PA_{303} = (PF_{303} - 1) \times Q_i \times P$$

Where:

PA_{303} = Pay adjustment for all _____aggregate type _____for base in dollars.

PF_{303} = Per 106.B.3 and 109.09.

Q_i = Quantity represented by individual lot (n).

P = Contract unit price.

The incentive/disincentive dollar amount to be paid or deducted for all _____aggregate type _____for base in stockpile accepted by the Department will be computed using the following formula:

$$PA_{STKPL\,303} = (PF_{STKPL\,303} - 1) \times Q_i \times P$$

Where:

$PA_{STKPL303}$ = Pay adjustment for all _____aggregate type _____for base in stockpile in dollars.

$PF_{STKPL303}$ = Per 106.B.3 and 109.09.

Q_i = Quantity represented by individual lot (n).

P = Contract unit price.

Note: The incentive may be a negative amount (i.e., a deduction from the total amount bid for the item).

ON PAGE 208, SUBSECTION 404.05 – BASIS OF PAYMENT

Add the following:

If the aggregate pay factor is less than 0.75, the material may be allowed to be left in place with a price adjustment if the finished product is found to be capable of performing its intended purpose. The price adjustment will be 50 percent of the contract unit bid price multiplied by the total quantity of material with a pay factor less than 0.75.

For surface treatment aggregate, the Engineer will use the lowest pay factor computed for any 1 sieve as the pay factor for that lot.

Calculation of Incentive/Disincentive. The incentive/disincentive dollar amount to be paid or deducted for

all cover coat material class _____accepted by the Department, excluding material in stockpile and material with a pay factor less than 0.75 allowed to remain in place with a price adjustment, will be computed using the following formula:

$PA_{404} = (PF_{404} - 1) \times Q_i \times P$

Where:

PA_{404} = Pay adjustment for all cover coat material class _____in dollars.

PF_{404} = Per 106.B.3 and 109.09.

Q_i = Quantity represented by individual lot (n).

P = Contract unit price.

The incentive/disincentive dollar amount to be paid or deducted for all cover coat material class ____in stockpile accepted by the Department will be computed using the following formula:

$PA_{STKPL404} = (PF_{STKPL404} - 1) \times Q_i \times P$

Where:

$PA_{STKPL404}$ = Pay adjustment for all cover coat material class ____in stockpile in dollars.

$PF_{STKPL404}$ = Per 106.B.3 and 109.09.

Q_i = Quantity represented by individual lot (n).

P = Contract unit price.

Note: The incentive may be a negative amount (i.e., a deduction from the total amount bid for the item).

ON PAGE 556, SUBSECTION 635.05 – BASIS OF PAYMENT

Add the following:

For anti-skid material, the Engineer will use the lowest pay factor computed for any 1 sieve as the pay factor for that lot.

Calculation of Incentive/Disincentive. The incentive/disincentive dollar amount to be paid or deducted for all anti-skid material accepted by the Department, excluding anti-skid defined as small quantity, will be computed for each lot using the following formula:

$$PA_{635} = (PF_{635} - 1) \times Q_i \times P$$

Where:

PA_{635} = Pay adjustment in dollars.

PF_{635} = Per 106.B.3 and 109.09.

Q_i = Quantity represented by individual lot (n).

P = Contract unit price.

Note: The incentive may be a negative amount (i.e., a deduction from the total amount bid for the item).

QASP SA Table 106.03-1 – Material Subject to Statistical Based Acceptance

Material	Quality Characteristic	Test Method	Quality Characteristic Reported to	Quality Control Plan by the Contractor	Acceptance by the Department	
				Minimum Testing Frequency [a]	Minimum Testing Frequency [a]	Point of Sampling
301 Granular Subbase [f]	Gradation – 703.11	FOP for AASHTO T 27	0.01%	1 test per 5,000 Tons 1 test per 5,000 Tons	1 test per 5,000 Tons	From windrow or roadway
	Sand Equivalent	FOP for AASHTO T 176 (Alt. Method #2), Mechanical	See Note 2.	1 test per 5,000 Tons 1 test per 5,000 Tons	1 test per 5,000 Tons (pass/fail, no statistical analysis)	From windrow or roadway
303 Aggregate Base [f]	Gradation – 703.04	FOP for AASHTO T 27 with FOP for AASHTO T 11 (use wash method for all gradation measurements)	0.01%	1 test per 1,000 Tons 1 test per 1,000 Tons	1 test per 1,000 Tons	From windrow or roadway
	Sand Equivalent	FOP for AASHTO T 176 (Alt. Method #2), Mechanical	See Note 2.	1 test per 1,000 Tons	1 test per 1,000 Tons (pass/fail, no statistical analysis)	From windrow or roadway
	Fracture Count	FOP for AASHTO T 335, Method 1	See Note 2.	1 test per 1,000 Tons	1 test per 1,000 Tons (pass/fail, no statistical analysis)	From windrow or roadway
404 Cover Coat Material [f]	Gradation – 703.06	FOP for AASHTO T 27 with FOP for AASHTO T 11 (use wash method for all gradation measurements)	0.01%	1 test per 400 Tons 1 test per 400 Tons	1 test per 400 Tons	At point of loading to the roadway
	Cleanness Value	Idaho IT 72	See Note 2.	1 test per 400 Tons 1 test per 400 Tons	1 test per 400 Tons (pass/fail, no statistical analysis)	At point of loading to the roadway
	Fracture Count	FOP for AASHTO T 335, Method 1	See Note 2.	1 test per 400 Tons 1 test per 400 Tons	1 test per 400 Tons (pass/fail, no statistical analysis)	At point of loading to the roadway

Continued –QASP SA Table 106.03-1 – Material Subject to Statistical Based Acceptance						
Material	Quality Characteristic	Test Method	Quality Characteristic Reported to	Quality Control Plan by the Contractor	Acceptance by the Department	
				Minimum Testing Frequency [a]	Minimum Testing Frequency [a]	Point of Sampling
405 Superpave Class SP2 [f] [g]	Asphalt Content, P_b [e]	FOP for AASHTO T 168[c] and FOP for AASHTO R 47 and FOP for AASHTO T 308 and FOP for AASHTO T 329	0.01%	1 test minimum per 750 Tons	1 test per 750 Tons	FOP for AASHTO R 97 [c]
	Gradation[e	FOP for AASHTO T 168[c] and FOP for AASHTO R 47 and FOP for AASHTO T 30 (use wash method for all gradation measurements)	0.01%	1 test minimum per 750 Tons	1 test per 750 Tons	FOP for AASHTO R 97 [c]
	Fracture Count	FOP for AASHTO T 335, Method 1	See Note 2.	By the Contractor as needed to control the operation. 1 test minimum per 1,500 Ton	N/A	N/A
	Sand Equivalent	FOP for AASHTO T 176 (Alt. Method #2), Mechanical	See Note 2.	By the Contractor as needed to control the operation. 1 test minimum per 1,500 Tons	N/A	N/A
	Mainline Density, MLD [d]	FOP for AASHTO T 355 [b] or FOP for AASHTO T 343	0.01%	1 test minimum per 375 Tons	1 test per 375 Tons [b]	FOP for AASHTO R 97 [c]
	Recycled Asphalt Pavement	FOP for AASHTO T 308 and FOP for AASHTO T 30	See Note 2.	1 test minimum per 1,500 Tons	N/A	N/A

Continued –QASP SA Table 106.03-1 – Material Subject to Statistical Based Acceptance						
Material	Quality Characteristic	Test Method	Quality Characteristic Reported to	Quality Control Plan by the Contractor	Acceptance by the Department	
				Minimum Testing Frequency [a]	Minimum Testing Frequency [a]	Point of Sampling
405 Superpave HMA Class SP 3, and SP 5 [f] [g]	Asphalt Content, P_b [e]	FOP for AASHTO T 168[c] and FOP for AASHTO R 47 and FOP for AASHTO T 308 and FOP for AASHTO T 329	0.01%	1 test minimum per 750 Tons	1 test minimum per 750 Tons	FOP for AASHTO R 97 [c]
	Gradation [e]	FOP for AASHTO T 30 (use wash method for all gradation measurements)	0.01%	1 test minimum per 750 Tons	1 test minimum per 750 Ton	FOP for AASHTO R 97 [c]
	Maximum Specific Gravity, G_{mm} [e]	FOP for AASHTO T 168[c] and FOP for AASHTO R 47 and FOP for AASHTO T 209 (Bowl Method)	0.001	1 test minimum per 750 Tons	1 test minimum per 750 Ton	FOP for AASHTO R 97 [c]
	Bulk Specific Gravity of Compacted Mix, G_{mb} [e]	FOP for AASHTO T 168[c] and FOP for AASHTO R 47 and FOP for AASHTO T 312 and FOP for AASHTO T 166 (Method A)	0.001	1 test minimum per 750 Tons	1 test minimum per 750 Tons	FOP for AASHTO R 97 [c]
	Effective Specific Gravity of Combined Aggregate, G_{se} [e]	WAQTC TM 13	0.001	1 test minimum per 750 Tons	1 test minimum per 750 Tons	FOP for AASHTO R 97 [c]
	Air Voids @ N_{design}, P_a [e]	WAQTC TM 13	0.01%	1 test minimum per 750 Tons	1 test minimum per 750 Tons	FOP for AASHTO R 97 [c]
	VMA @ N_{design} [e]	WAQTC TM 13	0.01%	1 test minimum per 750 Tons	1 test minimum per 750 Tons	FOP for AASHTO R 97 [c]
	Dust Proportion, DP [e]	WAQTC TM 13	0.001	1 test minimum per 750 Tons	1 test minimum per 750 Tons	FOP for AASHTO R 97 [c]
	Mainline Density [d] [e]	FOP for AASHTO T 355 [b] or FOP for AASHTO T 343 For cores: FOP for AASHTO R 67; FOP for AASHTO T 166 Method A or FOP for AASHTO T 331	0.01%	1 test minimum per 375 Tons	1 test per 375 Tons [b]	Roadway [c]
	Recycled Asphalt Pavement	FOP for AASHTO T 308 and FOP for AASHTO T 30	See Note 2.	1 test minimum per 1,500 Tons	N/A	N/A
635 Anti-Skid Material in Stockpile [f]	Gradation – 703.10	FOP for AASHTO T 27 with FOP for AASHTO T 11 (use wash method for all gradation measurements)	0.01%	1 test per 1,000 Tons By the Contractor as needed to control the operation	1 test per 1,000 Tons	From crusher or if previously crushed, final stockpile location.

Note: 1. Refer to the QA Manual minimum test requirements for minimum testing not included in QASP SA Table 106.03-1.

[a] If the total quantity of material is less than the minimum testing frequency for 1 test from QASP SA Table 106.03-1, acceptance will be as specified in the QA Manual Section 270.04.

[b] When a test strip is not required, density acceptance is based on cores as specified in 405.L.

[c] Sampling from the plant is not permitted unless the planned quantity is less than 750 tons or during the acceptance test strip.

[d] The Department will use nuclear gauges. The Contractor may use nuclear or non-nuclear (i.e., electronic) gauges.

[e] Calculated value based on unrounded results.

[f] This material requires an approved quality control plan.

[g] If the total quantity of material is between 750 and 2,250 tons, the entire quantity of material will be considered a single lot and will be accepted as specified in 405.03.I.

2. This quality characteristic is not subject to statistical based acceptance. Refer to the QA Manual Table 275.01.1 for calculating and reporting requirements.

Special Provision for 405 Superpave Hot Mix Asphalt 11/17/2025 (For use with 2023 Spec Book)

ON PAGES 209-234, Section 405 – SUPERPAVE HOT MIX ASPHALT

Delete this section, in its entirety, and replace with the following.

405.01 Description. Construct 1 or more courses of Superpave hot mix asphalt (HMA) plant mix, including leveling courses if applicable, on a prepared surface. References in this section also apply to warm mix asphalt (WMA).

405.02 Materials. Provide materials as specified in:

Aggregate 703

Asphalt 702

Anti-Stripping Additive 702

Hydrated Lime 720.06

Recycled Asphalt Pavement (RAP) 720.07

Test materials in accordance with the following applicable standard methods:

Particle Size Distribution of Aggregate ..... FOP for AASHTO T 27

With Materials Finer than 75um (No. 200) Sieve in Mineral Aggregate by Washing ..... FOP for AASHTO T 11 Method A or B

Mechanical Analysis of Extracted Aggregate ..... FOP for AASHTO T 30

Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor ..... FOP for AASHTO T 312

Superpave Volumetric Design for Hot Mix Asphalt (HMA) ..... AASHTO R 35

Determining the Percentage of Fracture in Coarse Aggregate ..... FOP for AASHTO T 335 Method 1

Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures ..... AASHTO T 269

Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures ..... FOP for AASHTO T 209 Bowl Method

Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface Dry Specimens ..... FOP for AASHTO T 166 Method A

Pavement Straightedge Procedures ..... Idaho IR 87

In-Place Density of Asphalt Mixtures by Nuclear Methods ..... FOP for AASHTO T 355 Backscatter mode

Sampling Asphalt Mixtures after Compaction (Obtaining Cores) ..... FOP for AASHTO R 67

Determining Volume of Liquids in Horizontal or Vertical Storage Tanks.....Idaho IT 120

Acceptance Test Strip for Hot Mix Asphalt (HMA) Pavement ..... Idaho IR 125

Sampling of Aggregate…… …… ……FOP for AASHTO R 90

Standard Practice for Operating Inertial Profilers and
Evaluating Pavement Profiles .....AASHTO R 57

Determining the Asphalt Binder Content
of Hot Mix Asphalt (HMA) by the Ignition Method ..... FOP for AASHTO T 308

Sampling Asphalt Mixtures.....AASHTO R 97
(See QA Manual Section 270 for sampling method)

Reducing Samples of Hot Mix Asphalt to Testing Size ..... FOP for AASHTO R 47

Moisture Content of Hot Mix Asphalt (HMA) by Oven Method..... FOP for AASHTO T 329

Plastic Fines in Graded Aggregate and Soils By Use of the
Sand Equivalent Test ..... FOP for AASHTO T 176
Alternate Method #2, Mechanical, Pre-wet

Standard Method of Test for Compressive Strength of Hot Mix Asphalt.....AASHTO T 167

Standard Test Method for Effect of Water on Compressive Strength
of Compacted Bituminous Mixtures (Immersion-Compression) ..... ASTM D1075
(Replace ASTM D1074 and ASTM D2726 with AASHTO T 167 and AASHTO T 166)

Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage .....AASHTO T 283

Uncompacted Void Content of Fine Aggregate, Method A .....AASHTO T 304

Mixture Conditioning of Hot-Mix Asphalt (HMA) .....AASHTO R 30

Sampling Asphalt Materials..... FOP for AASHTO R 66

Determining Rutting Susceptibility of Asphalt Pavement
Mixture Using the Asphalt Pavement Analyzer (APA).....AASHTO T 340

Superpave Volumetric Mix Design ..... AASHTO M 323

Evaluation of the Superpave Gyratory Compactor (SGC)

Internal angle of Gyration Using Simulated Loading .....AASHTO T 344

Standard Test Method for Flat Particles, Elongated Particles,
or Flat and Elongated Particles in Coarse Aggregate .....Idaho FOP for ASTM D4791
(ratio of length to thickness equal to or greater than 5:1)

Bulk Specific Gravity and Density of Compacted Asphalt Mixtures
Using Automatic Vacuum Sealing Method.....AASHTO T 331

Standard Practice for Rapid Drying of Compacted
Asphalt Specimens Using Vacuum Drying Apparatus .....AASHTO R 79

Standard Test Method for Maximum Specific Gravity and Density of
Bituminous Paving Mixtures Using Automatic Vacuum Sealing Method ..... ASTM D6857

Specific Gravity and Absorption of Aggregate
Using Automatic Vacuum Sealing Method.....Idaho IT 144

Quantitative Extraction of Bitumen from Bituminous Paving Mixtures .....AASHTO T 164

Quantitative Extraction and Recovery of Asphalt Binder from Asphalt Mixtures .....AASHTO T 319

Lime for Asphalt Mixtures.....AASHTO T 303

Determination of Recycled Asphalt Pavement (RAP) Aggregate Dry Bulk Specific Gravity (G_{sb}) .....Idaho IT 146

Standard Test Method for Automated Extraction of Asphalt Binder From Asphalt Mixtures (Asphalt Analyzer™) ..... ASTM D8159

Standard Method of Test for Determination of Cracking Tolerance Index of Asphalt Mixture Using the Indirect Tensile Cracking Test at Intermediate Temperature ..... ASTM D8225

Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA) .....AASHTO T 324

Stratified Random Sampling..... Idaho IR 148

Superpave Mix Design ..... Idaho IR 150

Superpave Mix Design Evaluation..... Idaho IR 151

HMA Quality Control Plan Development and Implementation ..... Idaho IR 152

Split Sample Comparison..... Idaho IR 153

Nuclear Density Gauge Correlation..... Idaho IR 154

Procedures for Checking Asphalt Drum Mix Plant Calibrations ..... Idaho IR 155

Method for Determining Rolling G_{mm}.....Idaho IR 156

NCAT Correction Factor..... Idaho IR 157

Evaluation and Approval of HMA Plants..... Idaho IR 160

Verification of Ignition Oven Correction Factor Specimen Materials by Gsa Verification .....Idaho IR 161

Verification of Ignition Oven Correction Factor Specimens “Blank” Gradation.....Idaho IR 162

Provide Superpave HMA composed of a combination of aggregate, approved additives, mineral filler (if required), RAP (if used), WMA additives or process (if used), and performance graded (PG) asphalt binder material. Provide a job mix formula (JMF) reported on ITD-0774 and a Superpave HMA pavement as specified and meeting the requirements in this section, 703, and 720.

Table 405.02-1 – Superpave Mixture Requirements

Mixture Type	SP 2 (50 gyrations)	SP 3 (75 gyrations)	SP 5 (100 gyrations)
Design ESALs [a] (millions)	< 1	1 < 10	≥ 10
Gyratory Compaction Gyrations for N_{ini} Gyrations for N_{des} Gyrations for N_{max}	 6 50 75	 7 75 115	 8 100 160
Relative Density, % G_{mm} @ N_{ini}	≤ 90.5	≤ 89.0	≤ 89.0
Relative Density, % G_{mm} @ N_{des}	96.0	96.0	96.0
Relative Density, % G_{mm} @ N_{max}	≤ 98.0	≤ 98.0	≤ 98.0
Air Voids, % P_a	4.0	4.0	4.0
Dust Proportion Range [b]	0.6 – 1.4	0.6 – 1.4	0.6 – 1.4
Voids Filled with Asphalt (VFA) Range, % 1½" 1" ¾" ½" ⅜" #4	 64 – 80 65 – 78 65 – 78 65 – 78 65 – 78 67 – 79	 64 – 75 65 – 75 65 – 75 65 – 75 73 – 76 67 – 77	 64 – 75 65 – 75 65 – 75 65 – 75 73 – 76 67 – 77
Rut Depth, mm [c]	≤ 10.0 mm	≤ 10.0 mm	≤ 10.0 mm
Stripping, passes [d]	12,500	15,000	15,000
Cracking Test, IDEAL-CT_{Index} [e]	80 (index value)	80 (index value)	80 (index value)

[a] The anticipated project traffic level expected on the design lane over a 20 year period. Regardless of the actual design life of the roadway, determine the design ESALs for 20 years.

[b] For No. 4 nominal maximum size mixtures, the dust proportion is 1.0 to 2.0 for SP 2 mixes and 1.5 to 2.0 for SP 3 and SP 5 mixes. For coarse graded ⅜, ½, and ¾ inch nominal maximum size mixtures, the dust proportion is 0.6 – 1.5. (Fine and coarse graded mixtures are defined in 703.05).

[c] Maximum depth after specified number of stripping passes. The Hamburg must have passing test results in the mix design.

[d] Minimum number of passes with no stripping inflection point. The Hamburg must have passing test results in the mix design.

[e] The Ideal-CT value and the associated data generated will be included in the mix design submittal; the data will only be used for information.

Approved SP 3 mixes may be substituted for SP 2 mixes. Use the binder content corresponding to 3.5 percent air voids. Adjust the SP 3 mix binder content by selecting the binder content that achieves 3.5 percent air voids at 75 gyrations from the binder content versus air voids graph of the approved mix design and target this binder content in the C-JMF. The SP 3 mix will be tested during production and accepted as an SP 2 mix (i.e., measuring binder content and gradation) when a substitution is made and the SP 2 VFA value will be used.

Use a QPL anti-stripping additive, if needed. Determine the amount of liquid anti-stripping additive or lime required by performing AASHTO T 324 during the mix design development.

1) Warm Mix Asphalt (WMA). WMA is defined as HMA that is produced at a target discharge temperature of 275 °F or less using QPL WMA additives or processes. WMA is allowed for use. QPL WMA additives or processes may be used to facilitate mixing and compaction of HMA produced at target discharge temperatures above 275 °F; however, such mixtures will not be defined as WMA.

   Use additives or processes from the QPL. Follow the supplier's or the manufacturer's written instructions for additives and processes when producing WMA mixtures.

   Use equipment and WMA technologies capable of producing an asphalt mixture that meet specifications and is workable at the minimum placement and compaction temperature desired, regardless of storage or haul distance considerations.

   Produce Superpave WMA by 1 or a combination of several QPL-approved technologies including chemical, foaming, and organic processes.

   The Department and the Contractor will prepare Superpave WMA field samples, as recommended by the manufacturer's representative, for WMA mixture testing.

2) Recycled Asphalt Pavement (RAP). The Department will allow RAP in the Superpave HMA. Provide RAP as specified in 720.07. Produce the mixture as specified in 405. Select the mass of RAP, the type of RAP, and the extent of RAP processing necessary to meet specifications. The Department will not change specifications or the contract unit price if RAP is used in the mixture.

   If RAP material is to be used from the project, obtain a representative sample of material for the mix design.

   The mass of RAP used in Superpave HMA is the mass of asphalt binder, in percent that the RAP contributes to the total mass of binder in the mixture.

   Use the following equation to determine the percent of RAP

   by weight of mix: X% = c (a/b)

   Where:

   a = optimum asphalt content, percent in mixture to produce 4.0% air voids.

   b = percent asphalt content in the RAP (from chemical extraction and/or FOP for AASHTO T 308 burn with asphalt binder correction factor).

   c = percent of RAP binder by weight of the total binder

   desired in the mix. X = desired RAP percent by total weight

   of mix.

   The following is an example of the calculation:

   Total RAP binder desired equals 17% of total binder in the mixture. If RAP will contribute 5.1% asphalt content and the optimum asphalt content is 5.8%, then

X% = 17% * (5.8/5.1) = 19.3% RAP percent by total weight of mix.

3. Recycled Asphalt Shingles (RAS). RAS is not allowed in any Superpave HMA.
4. Re-refined Engine Oil Bottoms (REOB). REOB is not allowed in any Superpave HMA.
5. Crumb Rubber Modifier (CRM). CRM is not allowed in any Superpave HMA.
6. All other additives and ingredients must be clearly identified in the mix design and JMF.

405.03 Construction Requirements.

A. Specific Gravity of Aggregates and RAP. The Department will determine the bulk dry specific gravity of aggregate, G_{sb}, apparent specific gravity of aggregate, G_{sa}, and water absorption (by percent weight of dry aggregate) of the coarse and fine aggregate for each stockpile used in the mixture using AASHTO T 85 and Idaho IT 144. The Department will evaluate the RAP G_{sb}, if used, by determining the RAP G_{se} in accordance with Idaho IT-146. The Department will determine the specific gravity of aggregates and RAP at a minimum of once a calendar year for each stockpile.

1. Sampling Requirements. The date, time, and location of sampling will be agreed to by the Engineer and the Contractor. The Contractor will sample the aggregate stockpiles and RAP stockpiles to be used in the mix design in accordance with FOP for AASHTO R 90 and reduce in accordance with FOP for AASHTO 76. Obtain samples from at least 6 distinct locations within each stockpile. When project millings are used, obtain samples of the project millings to be used in the mix design from the sampling location specified in the approved HMA quality control plan. Sample, combine, and reduce the material for each stockpile to the Department's required material submittal size in the Engineer's presence. Immediately give possession of the samples to the Engineer.
2. Submittal Requirements. Provide blend sheets for the mixture proportions and submit the following:
    a. Aggregate Stockpile. For each aggregate stockpile, submit:
        i. 100 pound minimum sample in clean 5-gallon plastic buckets with airtight lids.
            (1) Each bucket must weigh no more than 50 pounds.
        ii. A summary of all QC test data used to develop average stockpile gradation.
        iii. A summary of all QC test data of G_{sb}, G_{sa}, and water absorption (by percent weight of dry aggregate) of the coarse and fine aggregate produced during stockpile production.
        iv. Source number.
    b. RAP Stockpile. For each RAP stockpile, submit:
        i. 100 pound minimum sample in clean 5-gallon plastic buckets with airtight lids.
            (1) Each bucket must weigh no more than 50 pounds.
        ii. All QC test data used to develop average stockpile gradation.

iii. Report the asphalt binder/aggregate correction factor for asphalt binder and gradation for each RAP stockpile as specified in 720.

3. Testing Timeframe. The Department will not begin testing until the complete submittal has been received. The Engineer will provide the Contractor with an aggregate test report (i.e., ITD-802 form) within 7 business days after receiving the complete submittal package. G_{sb} testing will be performed by either the Headquarters Lab or a District Lab. A Contractor's representative may be present during the G_{sb} testing, if requested. Retesting, at the Contractor's request, will require an additional 15 business days for re-evaluation. Additional materials and additional information may be required from the Contractor. The Contractor may request a retest only if the QC data submitted supports retesting.

The Contractor will use the established G_{sb} in the mix design calculation, the mix design report, and for production paving testing.

The Engineer will use the established G_{sb} and G_{sa} during the mix design submittal evaluation, acceptance test strip testing, production acceptance testing, and challenge testing.

If the G_{sb} changes during production more than 0.030, as determined by the Engineer, the Engineer will notify the Contractor. The Engineer will establish a new G_{sb} and re-evaluate the mix design as specified in 405.03.B. All subsequent mix produced after the Contractor has been notified of the new G_{sb} will use the newly established G_{sb}. If at any time testing indicates that G_{sa} is greater than or equal to G_{se} and/or G_{se} is greater than or equal to G_{sb} (i.e., $G_{sa} \geq G_{se}$ and/or $G_{se} \geq G_{sb}$) is not true, production will be halted and a new G_{sb} will be established in accordance with this section.

Following bid award, and before HMA mix design submittal, small areas within the project site may be milled to collect RAP for pre-mix design testing. Perform this work according to a 405.03.C. HMA quality control plan, approved by the Engineer, including the plan and methods to sample and process RAP. At a minimum, for pre-milling the HMA quality control plan will include:

1. An approved traffic control plan that will minimize disturbance to traveling public.
2. Identification of no more than 6 RAP sampling locations within the project site. Each location must be less than 100 feet long with a maximum of 1 lane wide, unless otherwise approved.
3. The milling depth of each location must not be deeper than that shown in the plans for each location.
4. Patching plan.
5. Patch maintenance plan.
6. Detailed narrative of processing of milling and sampling locations to ensure representative samples are obtained.

After processing, sample for G_{sb} and asphalt content testing in accordance with the FOP for AASHTO R 90 and 405.03.A.

B. Mix Design. Develop a Superpave mix design in accordance with Idaho IR 150 to determine the appropriate combination of aggregate, approved additives, mineral filler (if required), RAP (if used), WMA additives or process (if used), and performance graded (PG) asphalt binder material meeting the requirements in 405, 703, and 720. The grade of asphalt is specified on the plans. Mix designs will be designed with a minimum of three virgin stockpiles. The Contractor may also "bump" this PG

binder with the following restrictions: the selected PG binder may be one grade lower than the low PG grade temperature. A binder may be selected one grade higher than the upper PG grade temperature if it meets the intermediate testing (G*(sin δ)) of the specified binder grade. Binder adjustments/"bumps" must meet the contract requirements at no additional cost to the Department. (Examples: A specified PG 58-28 may be bumped to PG 58-34. A specified PG 58-28 binder may be bumped to PG 64-28 if it meets the G*(sin δ) requirements of the specified binder. A specified PG 58-28 binder may be bumped to PG 64-34 if it meets the requirements of the specified binder.)

1. Approved Mix Design. A mix design must be approved before use using the following process:
    a. Mix Design Submittal. Submit the mix design and all supporting documentation in accordance with Idaho IR 150 a minimum of 5 business days before paving is scheduled to begin. Email to mixdesigns@ITD.idaho.gov and submit to the Engineer. Only 1 mix design per email notification will be accepted.
    b. Mix Design Submittal Evaluation. The Engineer in conjunction with the District Materials Engineer, the Construction and Materials section, and the Central Materials Laboratory will evaluate the mix design in accordance with Idaho IR 151. The Engineer will provide the Contractor with written approval or rejection of the mix design within 5 business days after receiving the full submittal package.
        i. Mix Design Submittal Approval. Once the mix design submittal is approved by the Department, and the FOP AASHTO T 308 correction factor samples have been submitted as per 405.03.B.3 the Contractor may proceed with acceptance test strip using the JMF from the approved mix design submittal. The mix design will be approved for use for up to 2 calendar years from the date of test strip acceptance.
        ii. Mix Design Submittal Rejection. Rejection of the mix design will require:
            (1) The mix designer will amend the mix design to address the items noted in the notification of rejection. The Contractor will resubmit the mix design as specified in 405.B.2. The Department will re-evaluate the mix design for approval or rejection as specified in 405.B.3.
            (2) Develop and submit a new mix design as specified in 405.B.
2. Approved Mix Design Expiration. An approved mix design, associated JMF, and any associated C-JMF will be considered expired when one of the following situations occur (but not limited to):
    a. More than 2 calendar year has elapsed from the time of test strip acceptance for the mix design.
    b. Changes in stockpile gradation.
    c. Changes in aggregate specific gravity or absorption.
    d. Changes in RAP specific gravity.
    e. Changes in aggregate, RAP, or binder sources.
    f. Aggregate does not meet physical requirements specified in 703.
    g. Changes in additives, including a change in the dosage rates.

h. Repeated non-conformance as defined in 405.03.M.1.

3. The Contractor will use FOP AASHTO T-308 to prepare hand mixed JMF Ignition Oven Correction Factor specimens (IOCFS), also referred to correction factor samples, and "blank" (IOCFS without asphalt added) for a Plant Mix design that will be used for one year. The contractor must allow the Engineer to witness samples being prepared and mixed. Each sample will be a virgin aggregate and virgin oil sample constructed to the same NCAT blank proportion. A prebatch meeting will be held 48 hours before starting to mix the samples. In addition to FOP AASHTO T-308 the Engineer will require the following:

   a. Virgin aggregate will be graded per each individual sieve through the minus #200 or 95% retained or greater whichever comes first.

   b. Batch two virgin aggregate specimens; determine their washed gradations (FOP AASHTO T 11 & T 27), and calculate mass adjustments needed to meet JMF gradation targets within the tolerances given in Table 405.03-1 - Batching Tolerances. Repeat the process until the results are consistently within the JMF gradation with tolerances. These preliminary trial specimens are for the Contractor's calibration purposes only, are not part of the 23 specimens in section 3. e., and do not require Engineer witnessing or verification.

   c. RAP will not be added to the sample.

   d. T-308 samples will target JMF blended gradation values and oil values.

   e. Establish a correction Factor for each JMF. This procedure must be performed for every ignition furnace on a project and for each JMF before any acceptance or verification testing is started.

      A new correction factor is required if the source or grade of the asphalt cement changes, if a different ignition furnace is used, or for a new JMF. A new correction factor shall be determined for each JMF and each oven prior to its first use every calendar year.

      Prepare 23 correction factor samples at the JMF without asphalt cement and with the appropriate proportions of mineral filler, fibers or other additive included in the JMF. (For JMFs with RAP, batch the virgin aggregate to the JMF targets. The Recycled Asphalt Materials will not be used for batching correction Factor samples.)

      - Batch each sample separately and according to the JMF target values with the following tolerances

Table 405.03-1 - Batching Tolerances

Sieve Size	Allowable Difference
Larger than No. 8	± 3.0 %
No 8 Sieve	± 2.0 %
Smaller than No 8 and Larger than No 200	± 1.5 %
Smaller than No 200 Sieve	± 1.0 %
Asphalt Cement	± 0.10 %

- The “blank” sample will have the same gradation, but no asphalt cement will be added. These “blank” samples will be used to establish correction factors for the aggregate gradations. The “blank” samples are not burned. The engineer will randomly select and take possession of the “Blank” samples after all samples have been built to the same gradation and before any asphalt has been added. Provide sample sizes meeting the requirements of AASHTO T 308.
- Mix and discard one of the remaining 19 samples. The purpose of this sample is to “butter” the mixing bowl.
- For the remaining 18 (or more) samples, tare the mixing bowl and weigh the mixing bowl again after the mixture is removed from the bowl. The empty bowl must be within ±1 gram of the previous tare weight. The weights of the bowl before and after will be done within 10°F of each other. The Engineer will randomly select and take possession of four samples for test strip lab, four samples for production testing lab, four samples for dispute testing, and two samples for HQ lab for info only testing.
- Individually identify each calibration sample and supply documentation showing the actual weights of aggregate, asphalt cement, mineral filler, fibers or any other additive for each sample and resultant actual calculated asphalt cement content for each sample. Also provide documentation for each sample verifying that the empty bowl weight after mixing is within ±1 gram of the empty bowl weight prior to mixing.

The gradation correction factor for each sieve size is the difference between the result from the “blank” sample and the average of the two incinerated correction samples to the nearest 0.1%.

If the correction factor for any single sieve size exceeds the allowable difference for that sieve established in the following table, contact the Engineer. The Engineer will apply the gradation correction factors for all sieves.

Gradation Difference Tolerances

Sieve	**Allowable Difference**
Sizes larger than (No. 8)	±5.0%
Size (No. 8)	±4.0%
Sizes larger than (No. 200) and smaller than (No. 8)	±2.0%
Size (No. 200) and smaller	±1.0%

IOCFS Verification: The IOCFS and IOCFS “Blanks” must be verified in accordance with procedures IR-161 and IR-162 respectively. The Department will take possession of the Gsa and “blank” samples immediately following sample preparation. If either the IOCFS source material or the IOCFS "Blanks" fail verification, the IOCFS and IOCF “blanks” must be rejected and discarded. New IOCFS material must be resampled from the stockpiles. The Gsa differences and blank specimen gradations will be documented on Aggregate Source Verification Form ITD 4666.

Conduct all NCAT AASHTO T 308 ignition furnace correction factor determination and AASHTO T 308 asphalt content ignition furnace testing at 426 ± 5°C (800 ± 9°F). Manually record the furnace temperature (set point) before the initiation of the test if the furnace does not record automatically.

The JMF correction factor samples will be collected by the Engineer a minimum of 5 business days before test strip.

C. HMA Quality Control Plan. Develop and submit for approval a HMA quality control plan that complies with the requirements of Idaho IR 152, Idaho IR 155, Idaho IR 160, and 106.03.A.2. The Contractor HMA quality control plan must be approved by the Engineer in accordance with 106.03.A.2, Idaho IR 152, Idaho IR 159, Idaho IR 160, and Idaho IR 155 before the material is incorporated into the work/project.

D. Weather Limitations for Permanent Paving. Do not place Superpave HMA on a wet or frozen surface or when weather or surface conditions will otherwise prevent the proper handling or finishing of the Superpave HMA material. Place Superpave HMA as specified in the temperature limitations in Table 405.03-2.

Table 405.03-2 – Air and Surface Temperature Limitations

Compacted Thickness of Individual Courses	Top Course	Leveling and Courses Below the Top Course
Less than 0.10 foot	60 °F	50 °F
0.10 to 0.18 foot	50 °F	40 °F
Greater than 0.18 foot	40 °F	40 °F

Provide a paved surface for travel if the work extends into the winter. Do not start construction on the pavement surface, unless the progress schedule realistically shows the pavement can be replaced or completed within the temperature limitations listed above.

E. Mixing Plants. Use an approved mixing plant that complies with Idaho IR 160 and in accordance with the approved HMA Quality Control Plan. Meet the requirements of Idaho IR 155, with the exception that the Contractor may calibrate the asphalt plant according to current National Asphalt Pavement Association (NAPA) manuals and documented best practices or in accordance to the manufacturer's recommendations. The Contractor will provide the calibration documentation (e.g., manufacturer's recommendation) to the Engineer.

F. Hauling Equipment. Provide hauling equipment in accordance with the approved HMA Quality Control Plan.

G. Paver. Provide a paver that complies with the approved HMA Quality Control Plan.

H. Pre-Paving Meeting. Immediately before paving, the Contractor, the asphalt supplier, the Engineer, and the Department personnel involved in the paving operation will hold a pre-operational paving meeting to discuss how to achieve the highest quality surface. The Engineer will prepare minutes of the pre-operational paving meeting and distribute them to the attendees. Any requests to revise the minutes must be made to the Engineer within 7 business days of receipt. These minutes will constitute the final record of the pre-operational paving meeting.

I. Acceptance Test Strip (Lot 1). Note: If a C-JMF has been accepted, this section does not apply because a test strip has already been accepted. Construct an acceptance test strip of 200 to 750 tons in accordance with Idaho IR 125 using the approved JMF (including offsite test strips). The Department

does not require acceptance test strips on small quantity pavement less than 750 tons, nonstructural pavement, or temporary pavement.

The Engineer will base acceptance on the requirements in Table 405.03-4. Do not continue production paving until properties of the acceptance test strip are accepted and a C-JMF has been established as specified in 405.03.K.

1. Test Strip Location. The first day of production paving will be considered the acceptance test strip. The Contractor may elect to perform an offsite mix verification of the JMF. Do not use Department-owned or controlled sources for offsite testing.
2. Testing Timeframe. The Department will require 5 full business days from the time of receipt of Superpave HMA mix samples, core samples, and cold feed samples to perform acceptance testing. Time will begin when all the required samples and associated paperwork needed to perform the specified testing are in the Engineer's possession.
3. Acceptance Testing Lab. Acceptance testing for the acceptance test strip will be performed by either the Headquarters Lab or a District Lab. The Contractor will give two business days notice to the Engineer prior to test strip.
4. Test Strip Tolerance. The Engineer will apply the tolerances to the acceptance test strip test properties as specified in Table 405.03-4 to establish the upper specification limit (USL) and lower specification limit (LSL) for quality level analysis.

Table 405.03-4 – Acceptance Test Strip Tolerance

Quality Characteristic	Test Strip Mix Tolerance
VMA, %	703.05 minimum value-0.20
Laboratory Air Voids, %	4.0 ± 1.5
Asphalt Binder Content, %	JMF ± 0.40
Dust Proportion (DP)	Table 405.02-1 range ± 0.10
VFA, %	Table 405.02-1 range ± 5
No. 4 and larger sieves, %	JMF value ± 6.0 (a)
No. 8 to No. 30 sieves, %	JMF value ± 5.0 (a)
No. 50 to No. 100 sieves, %	JMF value ± 4.0 (a)
No. 200 and smaller sieves, %	JMF value ± 2.0 (a)
G_{mm}	JMF value at P_b ± 0.012 (d)
G_{se}	JMF value ± 0.012 (d)
Mainline Density, % Compaction	92.0 – 100.0
Rut Depth, mm (b)	10.0 mm maximum (d)
Stripping, passes (c)	12,500/15,000 (d)

Cracking Test, IDEAL-CT_{Index}	80 (index value) [(d)]

[(a)] The upper and lower specification limits are never allowed to be outside the control points specified in 703.05.

[(b)] Maximum depth after 12,500/15,000 passes. For information only.

[(c)] Minimum number of passes with no stripping inflection point.

[(d)] For information only.

If the acceptance test strip is considered acceptable, the Contractor may proceed to production paving once a C-JMF is established as specified in 405.03.K.

The Engineer will reject an unacceptable test section for SP 3 and SP 5 mixtures and require removal. The Department will not pay for the removal or the applicable contract pay item quantities. An unacceptable test section for an SP 2 mixture will be subject to rejection. If the Engineer determines the failed SP 2 test section may remain in place, the Contractor may leave the test section in place with a 50 percent reduction in price or remove the failed material and replace it with acceptable material and receive full payment. Remove the failed SP 2 test section if rejected. The Department will not pay for removal or for the applicable contract pay item quantities.

If the Contractor is unable to meet the requirements after 3 test strips, the Engineer will require a new mix design to meet specifications. Place a new acceptance test strip at no additional cost to the Department.

If the Contractor's testing determines the test strip fails and the Contractor chooses to proceed with another test strip before receiving the Engineer's results, the Engineer will not complete testing of the test strip in question and the failed test strip will count as a failed test strip.

Statistical Acceptance and payment for the Test Strip. Use the statistical method outlined in 106.03.B. for evaluating acceptance and payment for the test strip. For material with a percent with limits (PWL) 40 and greater, use a 1.0 pay factor. If any quality characteristic, except Gmm or Gse, has a PWL less than 40, the asphalt mix will be rejected.

J. Production Laboratory Comparison Process. Conduct a split sample comparison with the acceptance testing laboratory on or before the first day of production paving. A sample from a different mix design is acceptable. Perform all comparisons in accordance with Idaho IR 153. The Contractor or the Engineer may request additional split sample comparisons at any time during construction.

K. C-JMF. Once a JMF is confirmed at acceptance test strip, the Contractor will establish an initial C-JMF.

1. Adjusting the C-JMF. C-JMF adjustments are allowed that will result in improved mix quality characteristics. If a lot is currently in progress, the adjustment will go into effect at the beginning of the next lot.
    a. Adjustments within Table 405.03-5. Adjustments listed in Table 405.03-5 can be made to the JMF. Provide a detailed description of how these adjustments will be made and what quality characteristics will be affected. The Engineer will be notified within 24 hours of adjustments and descriptions.

Table 405.03-5 – C-JMF Adjustment Limit Table

Parameter	Adjustment
No. 4 (4.75 mm) and greater	± 3% from JMF
No. 8 (2.36 mm)	± 2% from JMF
No. 100 to No. 30 (0.600 mm)	± 2% from JMF
No. 200 (0.075 mm)	± 0.3% from JMF
Asphalt Content	± 0.2% from JMF
G_{mm}	± 0.010 from C-JMF [c]
G_{se}	± 0.010 from C-JMF [c]
Individual Cold Feed Percentage for Aggregate	± 10.0% from JMF [a] [d]
Cold Feed Percentage for RAP	- 10.0% from JMF [b] [d]

[a] The cold feed percentage of any aggregate may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF will be eliminated.

[b] The cold feed percentage for RAP may be reduced up to 10 percentage points from the amount listed on the JMF and must not exceed the percentage of RAP approved in the JMF or for the specific application under any circumstances.

[c] Based on the initial C-JMF.

[d] Individual cold feed percentages for aggregate and RAP greater than 5.0% for a single stock pile of the same product must have a new correction factor established in accordance with IR 157.

b. Adjustments outside of Table 405.03-5. Adjustments outside the limits listed in Table 405.03-5 can be requested, but these adjustments are considered significant adjustments and will require the Contractor to document any differences in the asphalt plant settings necessary to achieve the designed asphalt plant output as documented by acceptance test results. Thus, additional supporting documentation and justification must be submitted and how these adjustments will affect on the quality characteristics of the asphalt mix. Adjustments and descriptions must be submitted for the Engineer's prior approval and the Engineer will have 1 business day after the date the request was submitted.

Use the C-JMF to establish target values and control limits when producing control charts during production paving.

L. Tack Coat. Apply an asphalt tack coat as specified in 402 to the following surfaces:

1. Existing plant mix surfaces and to the surface of each course constructed, except the final course.
2. Surfaces of curbing, gutters, manholes, portland cement pavement, and other structures. Paint or spray a thin, uniform tack coat of asphalt before placing pavement against the surfaces.
3. Contact surfaces of transverse joints and cold longitudinal joints just before additional mixture is placed against previously laid material.

M. Production Paving. Before production milling, obtain approval for Superpave HMA mix design(s). Milling, coring, or sampling for preliminary sample collection will be allowed for mix design development in accordance with the QCP.

The Contractor may request to continue production paving in accordance with the C-JMF after the acceptance test strip (Lot 1) is approved. Superpave HMA paving acceptance during production is based on the requirements in Table 405.03-6. The production paving lot (Lot 2) following the accepted test strip will be based on Table 405.03-4 except the gradation requirements. The Contractor will produce and place mix in accordance with the approved QCP.

If aggregate or asphalt binder sources change from the approved mix design, develop a new mix design as specified in 405.03.B. at no additional cost to the Department. If the G_{sb} changes during production more than 0.030, the Engineer may establish a new G_{sb} and re-evaluate the mix design.

1. Conformance to the C-JMF. The Contractor will produce mix that meets the requirements of Table 405.03-6. The Contractor may elect to remove defective material and replace it with new material on a lot basis, at no additional cost to the Department to ensure conformance to the C-JMF.

    a. Isolated Non-Conformance. If the Contractor is unable to meet the requirements on a single lot, the Engineer will require the Contractor to stop production and/or delivery until a corrective action plan can be developed and implemented to remedy the non-conformance. Submit the corrective action plan to the Engineer before resuming work.

    b. Repeated Non-Conformance. If the Contractor is unable to meet the requirements on 2 consecutive lots, the C-JMF, mix design, and associated JMF will be considered expired as defined in 405.03.B.2. The Engineer will require a new mix design to meet the specifications in 405.03.B. at no additional cost to the Department.

    If aggregate or asphalt binder sources change from the approved mix design, develop a new mix design to meet the specifications in 405.03.B. at no additional cost to the Department.

2. Production Limits**.** The properties listed in Table 405.03-6 will be used for purpose of quality analysis calculations, acceptance, and payment. The Engineer will apply the tolerances to the properties as specified in Table 405.03-6 to establish the upper specification limit (USL) and lower specification limit (LSL) for quality level analysis.

3. Production Acceptance Criteria. The Engineer will perform quality level analysis and determine acceptance as specified in 106.03.B using the quality characteristics specified in Table 405.03-6. ITD will submit test results to contractors as soon as possible.

Table 405.03-6 – Production Paving Quality Limits

Mix Quality Characteristic	Limits
SP 2 Mixture	
No. 4 sieve and larger sieves, %	C-JMF value ± 5.0 [(a)]
No. 8 to No. 30 sieves, %	C-JMF value ± 4.0 [(a)]
No. 50 to No. 100 sieves, %	C-JMF value ± 3.0 [(a)]
No. 200 sieve and smaller sieves, %	C-JMF value ± 1.5 [(a)]

Asphalt Binder Content, %	C-JMF value ± 0.3
SP 3 and SP 5 Mixtures	
Laboratory Air Voids, % N_{design}	SP 3: 2.5 – 5.0% SP 5: 2.8 – 5.0%
VMA, % N_{design}	703.05 minimum value
Dust Proportion	Table 405.02-1Range
G_{se} (f)	C-JMF value ± 0.012 (g)
G_{mm} (e, f)	C-JMFvalue@ P_b± 0.012 (g)
Rut Depth, mm	10.0 maximum (b, c)
Stripping, passes	12,500/15,000 (b, d)
Cracking Test, IDEAL-CT_{Index}	80 (index value)(b)
Roadway Quality Characteristic	**Limits**
Mainline Density, % Compaction	92.0 –100.0

(a) The upper and lower specification limits are never allowed to be outside the control points specified in 703.05.

(b) Hamburg and Ideal-CT are for information only at this time.

(c) Maximum depth after 15,000 passes.

(d) Minimum number of passes with no stripping inflection point.

(e) G_{mm} tests must be performed only after a 2-hour oven cure time in accordance to the mix design requirements to limit test result variability.

(f) G_{mm} and G_{se} values are indicators of consistency of the asphalt mix and are tracked using PWL. G_{mm} and G_{se} will be monitored for information only and, if the PWL is less than 40, the Engineer and the Contractor will review the data and take appropriate action (e.g., review plant settings, review test results). There will be no deduction for a low PWL based on G_{mm} or G_{se}.

(g) Based on the initial C-JMF.

N. Spreading and Finishing. Place the mixture on an approved surface. Use pavers to distribute the mixture over the entire width or over a partial width as practical. Do not extend partial width paving beyond one day's production. Minimum lift thickness will be no less than 3.5 times nominal maximum aggregate size (NMAS) of the mix design.

Use pavement marking tape to temporarily mark roadway centerline on pavements being used by traffic as specified in 626.03.

Unless otherwise specified, equip the paver with a shoe on the outside to provide slopes as follows:

> The Engineer will allow an 18-inch-wide shoe for depths 0.2 foot or less on initial pavement placement. The shoe must be 24 inches wide for depths greater than 0.2 foot. The shoe must be 24 inches wide on pavement overlays.

Meet-lines must be within 1 foot of lane lines or within 1 foot of center of lanes. Meet-lines are not allowed within a wheel path. Ensure transverse and longitudinal joints are smooth and match the adjacent surfaces.

O. Compaction. Compact the pavement to a density between 92.0 percent and 100.0 percent of maximum theoretical density for SP 2, SP 3, and SP 5 asphalt mixes. Determine G_{mm} using Idaho IR156.

Following acceptance test strip approval or C-JMF approval, pavement density testing for acceptance will be performed by the Department using a nuclear density gauge with the readings corrected by cores in accordance with AASHTO T 355. The G_{mm} for determining the percent compaction will be determined using a rolling, consecutive 2-lot average (i.e., the most recent 2 completed lots) of the Department's acceptance test results. For the first lot of production paving, the test strip's G_{mm} corresponding to the C-JMF is used for determining the percent compaction. The Contractor is responsible for quality control testing.

Density Gauge Correlation. When nuclear density gauges are used for acceptance, the Engineer will correlate the gauges in accordance with Idaho IR 154. A new gauge correlation will be established for each mix design, each paving lift, each paving lift thickness, and each underlying material (e.g., ¾" base, CRABs, 0.25' underlying lift of HMA).

Repair holes left in the pavement by the coring operation with non-shrink grout at no additional cost to the Department. Do not begin coring until repair methods and materials have been approved.

P. Joints. Do not roll over the unprotected end of freshly laid mixture. Form transverse joints by cutting back on the previous run to expose a vertical edge the full depth of the course.

Slope the cold transverse construction joints open to public traffic at 20H:1V. Remove the sloped surface (ramp) without damage to the base just before paving is resumed. Test the new joint for smoothness as specified in 405.03.S.

Construct end transitions between overlays and the adjoining pavement by milling a wedge out of the adjoining pavement, starting at the surface and continuing into the adjoining pavement on a 200H:1V slope or flatter until a vertical edge equal to 0.15 foot or the depth of overlay is reached. Transitions to ramps and crossroads are transverse joints. The milled wedge is a transverse joint when the adjoining pavement is concrete. Mill the wedge from the pavement to be overlaid, with the vertical edge against the concrete, when the adjoining pavement is concrete. Taper transitions between overlays and approaches to form a smooth transition while maintaining drainage.

Provide a positive bond, density, and a finish surface to the new mixture at longitudinal joints that is equal to the mixture against which it is placed. The Engineer may take density tests at longitudinal joints to ensure the integrity of material in the joint area.

Locate the longitudinal joint in the top course at the centerline of the traveled way if the roadway is two lanes wide or at the lane lines if the roadway is more than 2 lanes wide. On the lower courses, stagger the longitudinal joint and offset it 6 inches to 1 foot from the centerline of the traveled way if the roadway is 2 lanes wide or from the lane lines if the roadway is more than 2 lanes wide. Match the pavement surface across a longitudinal joint with the transverse slope shown on typical sections.

Test joints, except crowns, for smoothness in accordance with Idaho IR 87. Use an approved 10-foot straightedge. Complete the test and necessary corrections before the material temperature drops below 175 °F.

Place longitudinal joints straight and true. Use approved methods to bring back to straight and true unacceptable deviations. Make adjustments as needed to achieve the specified results.

Obtain approval for Superpave HMA mix design(s) before the start of milling operations.

Q. Miscellaneous Pavement. Place miscellaneous Superpave HMA pavement in irregular areas (e.g., raised or depressed medians, gores, tapers, radii (excluding approach radii), tapered paving for

guardrail terminal widening). Include areas that taper from 0 to 8 feet maximum width and gore areas from roadway shoulders to termini in this work. Do not include pavement widening for installation of guardrail in this work.

R. Small Quantities. Small quantities will be accepted in accordance with the QA Manual 270.04 When an acceptance test strip is not required as per 405.03.I, the Department will base acceptance for pavement density on the density of cores taken from the finished pavement. Obtain 5 randomly located core samples in accordance with the FOP for AASHTO R 67 from the compacted Superpave HMA in the Engineer's presence. The Engineer will determine the random core locations. Immediately submit the cores for testing. The Department will determine the density of the cores the FOP for AASHTO T 166 Method A or AASHTO T 331. In addition, obtain 3 randomly located mix samples during HMA placement, in the Engineer's presence, and immediately submit samples for testing. Obtain the samples in accordance with the AASHTO R 97 (see the QASP Table 106.03-1 Note 1.c.). The Engineer will randomly locate the mix samples and the Department will test the mix samples to determine the G_{mm} value in accordance with the FOP for AASHTO T 209 or ASTM D6857. The Department will use the average of the 3 G_{mm} values to compute in-place density of the cores taken for density acceptance. If paving will be performed in different construction seasons (e.g., bridge approaches), obtain 5 additional cores from the compacted Superpave HMA and 3 additional mix samples for density acceptance when paving resumes. The Contractor is responsible for quality control testing.

S. Leveling Course. Construct the leveling course of Superpave HMA, with a compacted thickness greater than 0.2 foot, in multiple courses.

Place the leveling course on the existing surface in quantities as approved. Use pavers and/or motor graders and a sufficient number of pneumatic tire rollers to adequately place and compact the leveling course to the required cross-section and grade. Use a steel-wheel roller for final rolling if the leveling course is to be used as a wearing course or if a seal coat is to be applied.

When blade laid leveling course is specified, place Superpave HMA in wheel ruts and other surface irregularities. Blade Superpave HMA into the low areas using a motor grader. Normally, 2 passes are required to fill depressions. Follow each pass of the motor grader with a pneumatic tired roller to provide compaction. Position the blade of the motor grader so light contact with the existing pavement surface is maintained. The Contractor may dispose of excess coarse aggregate resulting from placing the blade laid leveling course along the edge of the roadway.

When machine laid leveling course is specified, place Superpave HMA on the roadway with a paver to restore crown, super elevation, or rideability. Operate the screed close to the existing pavement surface. The Engineer will accept minor surface tears from this operation. Use pneumatic and vibratory rolling for compaction.

T. Surface Smoothness. Place pavement complying with Schedule II unless otherwise specified.

For Schedule III only, perform pre-paving, quality control, and acceptance surface smoothness testing, analyze the results of this testing, and submit the results. Submit pre-paving results. Before paving, submit a plan showing how Schedule III smoothness will be achieved.

Perform acceptance testing on the final lift and submit the results before corrective action. Complete acceptance testing within 1 week of paving completion.

Perform quality control testing in international roughness index (IRI). Request to use quality control testing for acceptance before the start of paving.

Submit quality control results by the next business day following placement.

If the quality control testing results show surface smoothness is not within the acceptable specification limits, suspend paving operations until it can be shown the steps taken to modify operations will result in acceptable smoothness.

Acceptance surface smoothness testing must be verified by the Engineer. The profile run must be witnessed by the Engineer and a preliminary copy of the report submitted immediately after the end of the run. The Engineer will not accept the testing, unless witnessed. Submit the profile data in a format suitable for evaluation using ProVAL or other industry standard software. In addition, each week or as requested by the Engineer, submit to the Engineer an electronic, editable Microsoft Excel spread sheet containing the data produced from the acceptance smoothness testing. Do not perform corrective action until approved.

The Engineer may elect to perform additional testing for verification. If the results vary from the Contractor's IRI results by more than 10 percent, the Engineer will use the Department's IRI results for acceptance.

Measure the finished pavement as follows:

1. Test the surface with a 10-foot straightedge at locations determined by the Engineer. Identify the locations that vary more than ¼ inch from the lower edge when the straightedge is laid on finished pavement in a direction parallel with centerline or perpendicular to centerline. Remove the high points that cause the surface to exceed the ¼ inch tolerance by grinding with equipment specified in Corrective Action below.
2. Profile the surface 3 feet from and parallel to each edge of each traffic lane. The Engineer will use the average of the results for each 0.1 mile section to calculate incentive payments and determine sections requiring corrective action.

   Use Class 1 or Class 2 profilers as defined in ASTM E950. Operate profilers in accordance with the manufacturer's instructions and AASHTO R 57. Set the profiler as follows:

   1. High pass or pre-filter: off or at least 200 feet.
   2. Bump detection: on
   3. Dip detection: on
   4. Resolution: 0.01 inch
   5. Low pass filter: off
   6. Other filters: off

   Operate the profiler according to the manufacturer's recommended speed. Calibrate the profiler at the beginning of the work and as needed thereafter.

   The Department requires the pavement to comply with the following surface smoothness schedule requirements:

a. Where longitudinal grade is 6.5 percent or less, pavement on tangent alignment and pavement on horizontal curves having centerline radius of curve 1,000 feet or more must meet the surface smoothness requirements for the smoothness schedule specified. The Engineer will add consecutive 0.1 mile sections of roadway tested together to obtain the mile section. There will be no overlapping of the 0.1 mile or 1 mile sections to change cumulative test results.

(1) Smoothness Schedule using IRI:

(a) Schedule I Projects: Target IRI values range from 60.0 to 70.0 inches per mile per0.1 mile. Corrective action required above 95.0 inches per mile per 0.1 mile.

(b) Schedule II Projects: Target IRI values range from 71.0 to 80.0 inches per mile per

0.1 mile. Corrective action required above 95.0 inches per mile per 0.1 mile.

(c) Schedule III Projects: Target IRI value range defined as one of the following:

i. For sections with a pre-paving IRI less than 160.0 inches per mile per 0.1mile the final index must not exceed 80.0 inches per mile per 0.1 mile.

ii. For sections with a pre-paving IRI of 160.0 inches per mile per 0.1 mile or greater, use the smoother of either:

1. A 50 percent improvement of the pre-paving index.

2. A maximum final index of 100.0 inches per mile per 0.1 mile. Corrective action is required above the target IRI.

b. The Engineer will exclude acceptance test strips, pavement on horizontal curves having a centerline radius of curve of less than 1,000 feet and pavement within the super elevation transition of such curves, or pavement with a longitudinal grade greater than 6.5 percent from incentive/disincentive payments. Meet the corrective action requirements for the smoothness schedule specified.

c. Profile the pavement to provide continuous, uninterrupted profile data. The Department will not apply profile smoothness tolerances and incentive/disincentive payments to the following:

(1) Pavement within 50 feet of a transverse joint that separates the pavement from a structure deck, an approach slab, or an existing pavement not constructed under the contract.

(2) Pavement for approaches and structure decks.

(3) Roadways with a speed limit less than 40 mph.

(4) Interstate ramps.

Smoothness acceptance for these areas will be as specified with straightedge requirements.

Surface Smoothness Corrective Action:

Use power-driven grinding equipment that is specifically designed to smooth portland cement concrete pavement with diamond blades. Use a machine with an effective wheelbase at least 12 feet and a cutting width of at least 3 feet. Restrict the machine forward speed to 5 feet per minute while milling. Provide grinding equipment of a shape and dimension that does not encroach on traffic movement.

Grind parallel to centerline. Extend adjacent grinder passes, within ground area, to produce a neat rectangular area having a uniform surface appearance. Make smoothly feathered transitions at transverse boundaries between ground and unground areas. Apply a fog coat to the ground pavement surface as specified in 408 after grinding has been completed.

Grind individual high points in excess of 0.3 inch within 25 feet or less, as determined by the California Profilograph simulation, until such high points do not exceed 0.3 inch.

After individual high point grinding has been completed, perform additional grinding in sections requiring corrective action to reduce the IRI to a maximum of 80.0 inches per mile per 0.1 mile section along lines parallel with the pavement edge.

Individual low points are areas in excess of 0.3 inch within 25 feet or less, as determined by the California Profilograph simulation. Low points will be subject to rejection and replacement at no cost to the Department. Under these circumstances, the Engineer's decision whether to accept the completed pavement or to require corrections is final.

Check the pavement for smoothness after grinding as specified in this subsection and make additional corrections necessary to achieve smoothness. Submit a report and graph showing compliance of the final surface to the smoothness requirements. The Department will not pay for the cost of grinding, milling or related work (e.g., fog coat), disposal of milled material, traffic control, flagging, profiling, surface repair of ground or milled areas, or temporary striping.

Surface Smoothness Deductions, Incentives, and Disincentives:

1. Straight-Edge Evaluation.

   If correction of the roadway as specified will not produce satisfactory smoothness results or it reduces pavement thicknesses and serviceability, the Engineer may accept the completed pavement and will deduct from monies due or may become due to the Contractor the sum of $500.00 for each individual high point exceeding ¼ inch tolerance or $3,000.00 for each 0.1 mile section. $500.00 per individual low point exceeding
   ¼ inch tolerance will be deducted from monies due or may become due to the Contractor. Low points exceeding ½ inch will be subject to rejection and replacement at no cost to the Department. Under these circumstances, the Engineer's decision whether to accept the completed pavement or to require corrections is final.

2. Profilograph Evaluation.

   For each evaluation section, the Contractor is entitled to a payment adjustment excluding acceptance test strips and Schedule III surface smoothness work. An evaluation section is defined as a 0.1 mile per traffic lane or fraction as applicable. The Department will not pay an incentive for pavement on the roadway shoulders, center turn lanes, turn bays, crossovers, tapers, or other miscellaneous pavement. The Department will pay incentive as specified in Table 405.03-7.

The Department will base incentive payments on initial profiles before corrective work on the top course of paving.

Table 405.05-1 – IRI
Initial Index inches per mile per 0.1 mile section

Payment $ per 0.1 mi	Schedule I	Schedule II
$500.00	40.4 or less	45.4 or less
$300.00	40.5 to 50.4	45.5 to 60.4
$100.00	50.5 to 60.4	60.5 to 70.4
$0.00	60.5 to 70.4	70.5 to 80.4
-$100.00	70.5 to 75.4	80.5 to 85.4
-$300.00	75.5 to 85.4	85.5 to 95.4
-$500.00	85.5 to 95.4	—
-$500.00 and corrective action	95.5 or greater	95.5 or greater
-$500.00 and corrective action	Individual high points [a]	Individual high points [a]
-$500.00 and corrective action	Individual low points [a]	Individual low points [a]

[a] In addition to the incentive/disincentive payment applied to the 0.1 mile section, the Engineer will deduct from monies due or may become due to the Contractor the sum of $500.00 for each individual high point or low point up to a maximum of $3,000.00 for each 0.1 mile section.

The Department will make only 1 incentive payment per evaluation section. An evaluation section runs consecutively from the point paving begins to the point paving is interrupted (e.g., at bridges, the end of lane paving areas specifically excluded by the specifications). The Department will prorate partial sections based on their percentage of a full section.

The Department will base incentive payments on initial profiles before corrective work on the top course of paving.

405.04 Method of Measurement. The Engineer will measure acceptably completed work as follows:

1. Pavements, leveling courses, and asphalts by the ton. The Engineer will not permit batch weights as a method of measurement. The Superpave HMA quantity will be the weight used in the accepted pavement and will include the weight of the aggregate, asphalt, and additives in the mixture.
2. Anti-stripping additive by the percentage of additive per ton of asphalt.
3. Miscellaneous pavement by the square yard. Final measurement will be based on plan quantities, unless changed by the Engineer. Miscellaneous pavement measurement is in addition to the measurement of asphalt and Superpave HMA material.
4. Approaches per each regardless of width or length. Separate mailbox turnouts will be measured as an approach. Mailbox turnouts adjacent to an approach will be considered as part of the approach and no separate measurement will be made. Approach

measurements are in addition to the measurement of asphalt and Superpave HMA material.

5. Wedge milling for the transition section by the square yard.
6. Tack coat will be paid for as specified in 401.

405.05 Basis of Payment.

1. Superpave SP3 and SP5.

Composite mix pay factor will be computed for each lot using the following equation:

$$CPF_{405Mix} = (0.4 \times PF_{AIRVOIDS}) + (0.4 \times PF_{VMA}) + (0.2 \times PF_{DP})$$

Where:

CPF_{405Mix} = Composite pay factor for mix quality characteristics.

$PF_{AIRVOIDS}$ = Pay factor for air voids.

PF_{VMA} = Pay factor for VMA.

PF_{DP} = Pay factor for dust proportion.

Calculation of Composite Incentive/Disincentive. The composite incentive/disincentive dollar amount to be paid or deducted for Superpave plant mix pavement accepted by the Department, excluding plant mix pavement for test strips, small quantity, approaches, and miscellaneous paving not placed with mainline paving, will be computed for each lot using the formula:

$$PA_{405} = (CPF_{405Mix} + PF_{MLD} - 2) \times Q_i \times P$$

Where:

PA_{405} = Pay adjustment for material and main line density in dollars for the lot.

CPF_{405Mix} = Composite pay factor for material characteristics for the lot.

PF_{MLD} = Pay factor for main line density for the lot.

Q_i = Quantity represented by individual lot.

P = Contract unit price.

Note: The incentive may be a negative amount (i.e., a deduction from the total amount bid for the item).

A pay factor of 1.00 will be used for all acceptable Superpave plant mix pavement incorporated into the onsite acceptance test strip for volumetrics.

Density pay factor for the Superpave plant mix leveling course will be 1.00.

2. Pay factors for approaches and miscellaneous paving not placed with mainline paving will be 1.00.Superpave SP2.

Composite pay factors will be computed for each lot using the following equations:

$$CPF_{405} = (0.3 \times PF_{AC}) + (0.3 \times PF_{AGG}) + (0.4 \times PF_{MLD})$$

Where:

CPF_{405} = Composite pay factor for mix quality characteristics. PF_{AC} = Pay factor for asphalt content.

PF_{AGG} = Pay factor for plant mix aggregate. PF_{MLD} = Pay factor for main line density.

Calculation of Composite Incentive/Disincentive. The composite incentive/disincentive dollar amount to be paid or deducted for Superpave plant mix pavement accepted by the Department, excluding plant mix pavement for test strips, small quantity, approaches, and miscellaneous paving not placed with mainline paving, will be computed for each lot using the formula:

$$PA_{405} = (CPF_{405} - 1) \times Q_i \times P$$

Where:

PA_{405} = Pay adjustment for material and main line density in dollars for the lot. CPF_{405} = Composite pay factor for material characteristics for the lot.

Q_i = Quantity represented by individual lot. P = Contract unit price.

Note: The incentive may be a negative amount (i.e., a deduction from the total amount bid for the item).

Density pay factor for the Superpave plant mix leveling course will be 1.00.

Pay factors for approaches and miscellaneous paving not placed with mainline paving will be 1.00.

A pay factor of 1.00 will be used for calculating a pay factor for all acceptable Superpave plant mix pavement incorporated into an onsite acceptance test strip for volumetrics.

The Department will pay for accepted quantities as follows:

Pay Item	**Pay Unit**
Superpave HMA Pavement Class SP	Ton
Superpave HMA Pavement, including asphalt and additives Class SP	Ton
Leveling Course Class SP	Ton
Leveling Course, including asphalt and additives, Class SP	Ton

__Asphalt Binder for Superpave HMA Pavement..... Ton

__Percent Anti-stripping Additive for Superpave HMA Pavement..... TOA

Miscellaneous Pavement..... SY

Approaches ..... Each

Wedge Milling .....SY

The cost to produce the required aggregate in each stockpile to accommodate blends is incidental and included in the contract unit price for the Superpave HMA contract pay item.

When Superpave HMA includes RAP, in any proportion, the Department will not include the asphalt binder contributed by the RAP in the quantity for asphalt and additives when asphalt and additives are paid for separately.

3. Pre-milling, Coring, or Sampling for RAP.

All work and maintenance associated with the pre-mix design RAP sampling is incidental.

ON PAGES 631-634, SECTION 703.05 – AGGREGATE FOR SUPERPAVE HMA PAVEMENT
Delete this section, in its entirety, and replace with the following:

703.05 Aggregate for Superpave HMA Pavement. Provide aggregate for mixes, except SP 2, in at least 3 separate stockpiles. Use aggregate consisting of crushed stone or crushed gravel. Combine with other required aggregate fractions and fillers in the proper proportion so the resulting mixture meets the gradation required.

Screen the aggregate used for Superpave HMA so 10 percent or less of the naturally occurring minus ½ inch material remains in the material used to produce the stockpile(s). Crush the plus ½ inch material to produce the required gradation. This requirement does not apply to SP 2 mixes or mixtures designated as nonstructural or temporary mixtures.

Size, grade, and combine the fractions for the mixture in proportions so the resulting blend conforms to the grading requirements as defined in Table 703.05-2a and Table 703.05-2b.

Use aggregate that meets the requirements in Table 703.05-1.

Table 703.05-1 – Superpave Mixture Requirements

Mix Type	SP 2	SP 3	SP 5
Design ESALs [a] (millions)	< 1	1 < 10	≥ 10
Idaho Degradation, maximum loss, %	5.0	5.0	5.0
Ethylene Glycol, minimum retained, %	90	90	90
R-Value	80 or more minimum	80 or more minimum	80 or more minimum
LA Wear, Maximum % loss	35	30	30
Sodium Sulfate Soundness [b] Maximum loss after 5 cycles, %	12	12	12
Fractured Face, Coarse Aggregate [c] % Minimum	65/-	75/60	98/98
Uncompacted Void Content of Fine Aggregate, % Minimum	40	40	45
Sand Equivalent, Minimum	35	40	45
Flat and Elongated [d], % Maximum	10	10	10

[a] The anticipated project traffic level expected on the design lane over a 20 year period. Regardless of the actual design life of the roadway, determine the design ESALs for 20 years.
[b] Perform sodium sulfate soundness testing when directed.[c] 75/60 denotes that 75 percent of the coarse aggregate has 1 fractured face and 60 percent has 2 or more fractured faces.
[d] This criterion does not apply to No. 4 nominal maximum size mixtures.

Table 703.05-2a – Nominal Maximum Aggregate Size-Control Points (Percent Passing) and VMA Requirements
PCS Control Points for Mixture Nominal Maximum Aggregate Size (b)

1 1/2 in			1 in		¾ in	
Sieve Size	Restricted Zone	Control Points	Restricted Zone	Control Points	Restricted Zone	Control Points
2 in	—	—	—	—	—	—
1 1/2 in	—	90 to 100	—	100	—	—
1 in	—	90 max	—	90 to 100[a]	—	100
¾ in	—	—	—	90 max	—	90 to 100[a]
½ in	—	40 to 70[a]	—	—	—	90 max
⅜ in	—	—	—	42 to 70[a]	—	52 to 80[a]
No. 4	34.7	—	39.5	—	—	—
No. 8	23.3	15 to 41[a]	26.8	19 to 45[a]	34.6	23 to 49[a]
No. 16	15.5	—	18.1	—	23.1	—
No. 30	11.7	—	13.6	—	16.7	—
No. 50	10	—	11.4	—	13.7	—
No. 100	—	—	—	—	—	—

No. 200	—	0.0 to 6.0[a]	—	1.0 to 7.0[a]	—	2.0 to 8.0[a]
VMA	11.5		12.5		13.5	
Primary Control Sieve	3/8 in		No. 4		No. 4	
PCS Control Point (% passing)	47		40		47	

Table 703.05-2b – Nominal Maximum Aggregate Size-Control Points (Percent Passing) and VMA Requirements PCS Control Points for Mixture Nominal Maximum Aggregate Size [b]

1/2 in			**3/8 in**		**#4**	
Sieve Size	Restricted Zone	Control Points	Restricted Zone	Control Points	Restricted Zone	Control Points
2 in	—	—	—	—	—	—
1 1/2 in	—	—	—	—	—	—
1 in	—	—	—	—	—	—
3/4 in	—	100	—	—	—	—
1/2 in	—	90 to 100[a]	—	100	—	100
3/8 in	—	90 max	—	90 to 100[a]	—	95 to 100[a]
No. 4	—	—	—	90 max	—	90 to 100
No. 8	39.1	28 to 58[a]	47.2	32 to 67[a]	—	—
No. 16	25.6	—	31.6	—	—	30 to 55[a]
No. 30	19.1	—	23.5	—	—	—
No. 50	15.5	—	18.7	—	—	—
No. 100	—	—	—	—	—	—
No. 200	—	2.0 to 10.0[a]	—	2.0 to 10.0[a]	—	6.0 to 13.0[a]
VMA	14.5		15.5		16.5	
Primary Control Sieve	No. 8		No. 8		No. 16	
PCS Control Point (% passing)	39		47		42	

(a) Denotes the sieves that will be used for mix design control points and quality analysis sieves for a Class SP 2 mix.

(b) The combined aggregate gradation will be classified as coarse-graded when it passes below the primary control sieve (PCS) control point as defined in Table 703.05-2a and Table 703.05-2b. Other gradations will be classified as fine graded. This classification is based on the Contractor's job mix formula and not individual gradation tests. Coarse graded mixtures will not pass through the restricted zone.

ON PAGES 711-713, SECTION 720.07 – RECYCLED ASPHALT PAVEMENT (RAP)

Delete this section, in its entirety, and replace with the following:

720.07 Recycled Asphalt Pavement (RAP). Prepare and maintain a RAP processing and stockpiling quality control plan and make these records available to the Department.

1. RAP Categories. Provide RAP that complies with one of the following categories:
   A. Category 1. The Department defines this material as being from a Department project or is traceable to another public agency sponsored project. The Engineer will accept Category 1 RAP for use provided the Contractor submits a letter stating the RAP is

from a specific pavement, including the route and mile post. Do not add material from other sources during stockpiling and submit certification of this from the producer on a stockpile-by-stockpile basis.

Category 1 RAP may consist of asphalt material removed from interstates, United States Highways, or State Highways.

B. Category 2. The Department defines this material as not being from Department projects or is not traceable to a Department project. Produce uniform RAP stockpiles when Category 2 material originates from different sources. The Engineer will accept Category 2 RAP for use as Category 1 RAP if the Contractor performs tests as specified in 720.07.3 and submits test results and materials that show the RAP meets the specifications and is verifiable by the Department.

Do not use Category 2 RAP that does not meet these requirements as Category 1 RAP.

Category 2 RAP is:

1) Production Returns. Asphalt material generated from plant waste (e.g., start-up/shut down material).

2) Random RAP. Crushed and screened asphalt material removed from private paving projects, plant overruns, rejected loads, or combination.

2. RAP Processing. The Contractor may use processed RAP as follows:

a) Processed RAP. RAP that is processed by crushing and screening to produce a uniform gradation from coarse to a fine and a uniform binder content in the RAP before use in a recycled mix. Provide processed RAP with 100 percent passing the ⅝ inch sieve on entry into the mixing plant.

The Contractor may recycle processed RAP in Superpave HMA at the percentages shown below:

1) Category 1 RAP is limited to 17 percent by binder replacement.

2) Category 2 RAP is allowed up to 10 percent by binder replacement when used in the top lift and is limited to 17 percent maximum by binder replacement when used in a lower lift.

Processed RAP stockpiles may contain RAP from sources as indicated by the category and may be replenished with RAP from sources of that same category.

3. RAP Testing and Test Frequency. Perform the following tests at the specified testing frequencies for each category and provide the data to the Department as soon as test results are available:

a. Category 1. Establish an extraction correlation. Determine the asphalt binder content and aggregate gradation in accordance with the FOP for AASHTO T 308 and AASHTO T 30 at the minimum frequency of 1 test per 500 tons for the first 2,000 tons and 1 test per 1,000 tons thereafter. Then perform at least 6 tests for stockpiles less than 4,000 tons.

Perform chemical binder extractions in accordance with AASHTO T 319 to reclaim the binder from the RAP when blending charts are used. Determine the PG binder grading of the recycled binder as specified in 702 at the frequency of 1 test per 5,000 tons with at least 1 test per stockpile.

b. Category 2. Asphalt binder content, aggregate gradation, and binder grade testing requirements are the same as Category 1. In addition, test the aggregate recovered from the RAP by the extraction process AASHTO T 308 or AASHTO T 164 or AASHTO T 319 to determine the aggregate quality. Test RAP aggregate quality as follows:

1) AASHTO T 96 and Idaho IT 15 tested on extracted aggregate as specified at a frequency of 1 test per stockpile.

2) AASHTO T 335, AASHTO T 304, and ASTM D4791 at the minimum frequency of 1 test per 500 tons for the first 2,000 tons and 1 test per 1,000 tons thereafter. Perform at least 6 tests for stockpiles less than 4,000 tons.

Meet the applicable aggregate quality requirements in Table 703.05-1 and 703 for the combination of virgin and RAP aggregate.

Use the RAP as Category 2 RAP, unprocessed, if it was not tested.

Asphalt Binder/Aggregate Correction Factor. Perform at least 6 AASHTO T 164 or AASHTO T 319 chemical extraction tests and AASHTO T 30 gradation tests and 6 AASHTO T 308 burn tests and AASHTO T 30 gradation tests to establish a correction factor for asphalt binder and aggregate gradation. Prepare 6 identical pairs of samples and test 1 sample of each pair in accordance with AASHTO T 164 or AASHTO T 319 and test the other sample in accordance with AASHTO T 308.

Bulk Specific Gravity of the RAP Aggregate. Test RAP material for G_{sb} according to Idaho IT 146 at the rate of 1 test per 500 tons for the first 2,000 tons and 1 test per 1,000 tons thereafter. Perform a minimum of 10 tests per stockpile. Provide the test results on a spreadsheet with the specific gravity of aggregates and RAP submittal as specified in 405.03.A.

For testing after stockpiling, submit a sample plan and test the RAP pile, either in-situ or by re-stockpiling, for approval. Meet the minimum frequency required and detail the procedure used to obtain representative samples throughout the stockpile for testing.

4. RAP Stockpiles and Record Keeping. Place RAP stockpiles on a base with adequate drainage and construct in layers to minimize RAP segregation and ensure a workable face. Construct separate stockpiles for each source of RAP based on the category of RAP, the quality of aggregate, type and quantity of asphalt binder, and size of processed material. Identify RAP stockpiles on a map of the stockpile areas and place signs in or near each stockpile.

Maintain a record system at the plant site for RAP stockpiles that includes, at a minimum, the following:

a. Stockpile identification and a sketch of stockpile areas at the plant site.

b. RAP category (project, state route, plant waste, rejected loads).

c. Origin or dates milled and approximate number of tons in the stockpile.

d. Chemical extraction and AASHTO T 308 burn test results.

Make the RAP stockpile records available at the plant site. The Engineer will reject, by visual inspection, stockpiles that are not kept clean and free of foreign materials. The Engineer will reject RAP containing contaminants (e.g., earth, brick, sand, concrete, pavement fabric, joint sealants). The Contractor may reprocess the rejected RAP stockpile to meet requirements or remove the stockpile from use.

CHANGES TO THE 2020 QA MANUAL (DATED 10/19)

To the end of sub-section 270.04 of the QA Manual (2019 and later versions) insert the following:

270.04.01 Acceptance of Small Quantities – Asphalt Mix
General. Contractor will sample loose mix and cores in the presence of the State. The State will complete acceptance testing.

1. **Plan Quantity Less than 750 tons**
   For bridge approaches see 270.05.01 *Non-standard Acceptance of Materials - Asphalt Mix*. For other applications use this subsection. Contractor may use a commercial (non-Superpave) mix design. Aggregate shall come from an ITD-approved source. The mix design will be submitted for information only.

   Establish paving location compared to travel path:
   i. Within travel path - cores and Gmm are required. Numbers of samples will be established in ITD 862 Sample Schedule. Compaction must be 92.0% or greater. Failing work will be removed and replaced.
   ii. Outside travel path accept by RE Letter of Inspection. The inspector will use ITD form 891 for density observation and will include equipment used and compaction temperatures. Gauge readings are not required.

2. **Plan Quantities between 750 - 2,250 tons and a *continuous operation*, use attached MTR Table 270 (405-7)**

3. **Plan Quantities between 750-2,250 tons per year and specific applications use 270.05.01 Non-standard Acceptance of Materials - Miscellaneous Asphalt Mix**

To the end of sub-section 270.05 of the QA Manual (2019 and later versions) insert the following:

270.05.01 Non-standard Acceptance of Materials – Asphalt Mix.
These acceptance criteria are established for plan quantities between 750 – 2,250 tons per year or locations such as bridge approaches, cross-overs, patching within travel lanes, gore areas and shoulders. These criteria may apply to projects with intermittent paving schedules spanning multiple months or seasons.

Acceptance Criteria:

- A Department-approved Superpave mix design is required before paving begins. A test strip will not be required.
- Tack Coat must be applied. Target guidelines for a 1:1 dilution are listed below, with the understanding this work may not be conducive to quantifying application rates:
  - 0.18 gallon per square yard on milled surfaces
  - 0.12 gallon per square yard on existing plant mix surfaces and
  - 0.08 gallon per square yard on newly paved surfaces.
- Acceptance requires 1 random core and 1 loose mix sample (Gmm only) per:

- Bridge lane-approach (minimum of 1 per bridge quadrant per lift). Contractor has the option for state to use composite cores for acceptance (minimum of 1 per bridge quadrant). A composite core is a single core with multiple lifts included in the core. Gmm is determined using the weighted average (based on thickness) of the Gmm for each lift represented by the core. Composite cores will not be split into component lifts for evaluation.
- Patch with any dimension exceeding 12.0 ft.
- Day of paving (not applicable for bridge approaches)
- One (1) random sample per 750 tons placed when the daily total exceeds 750 tons.

Compaction must be 92.0% or greater. Failing work will be removed and replaced.

ON PAGE 213 OF 844, INDEX 520, BITUMINOUS MATERIALS

Delete “IR-125-19” and replace with “IR-125-25”.

Delete “IR-150-19” and replace with “IR-150-21”.

Delete “IR-151-19” and replace with “IR-151-21”.

Delete “IR-152-19” and replace with “IR-152-21”.

Delete “IR-153-19” and replace with “IR-153-21”.

Delete “IR-154-19” and replace with “IR-154-21”.

Delete “IR-155-19” and replace with “IR-155-21”.

Delete “IR-156-19” and replace with “IR-156-21”.

Add “IR-161-25”.

Add “IR-162-25”.

ON PAGE 214 OF 844, INDEX 520, BITUMINOUS MATERIALS

Delete “IR-158-19” and replace with “IR-158-21”.

Delete “IR-159-19” and replace with “IR-159-21”.

Delete “IR-160-19” and replace with “IR-160-21”.

ON PAGES 281 TO 294, IR-125

Remove existing IR-125 and insert updated IR-125.

ON PAGES 307 TO 310, IR-150

Remove existing IR-150 and insert updated IR-150.

ON PAGES 311 TO 313, IR-151

Remove existing IR-151 and insert updated IR-151.

ON PAGES 314 TO 319, IR-152

Remove existing IR-152 and insert updated IR-152.

ON PAGES 320 TO 326, IR-153

Remove existing IR-153 and insert updated IR-153.

ON PAGES 327 TO 332, IR-154

Remove existing IR-154 and insert updated IR-154.

ON PAGES 333 TO 336, IR-155

Remove existing IR-155 and insert updated IR-155.

ON PAGES 337 TO 338, IR-156

Remove existing IR-156 and insert updated IR-156.

AFTER PAGE 338, IR-161 AND IR-162

Insert new IR-161 and insert updated IR-162.

ON PAGES 411 TO 416, IR-158

Remove existing IR-158 and insert updated IR-158.

ON PAGES 417 TO 418, IR-159

Remove existing IR-159 and insert updated IR-159.

ON PAGES 419 TO 430, IR-160

Remove existing IR-160 and insert updated IR-160.

Idaho Standard Practice for

Acceptance Test Strip for Asphalt Mixtures

IDAHO Designation: IR-125-25

1. SCOPE

1.1. This Standard Practice is used to evaluate hot mix asphalt (HMA) and warm mix asphalt (WMA) produced through a hot plant for conformance to the mix design and JMF and for acceptance. This IR includes responsibilities of the Engineer, the Central Materials Laboratory, and the Contractor.

1.2. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the user's responsibility of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations before use.*

2. REFERENCE DOCUMENTS

2.1 *AASHTO Standards*

- FOP for T 27, Particle Size Distribution of Aggregate
- FOP for T 11 Method A or B, Materials Finer than 75um (No. 200) Sieve in Mineral Aggregate by Washing
- FOP for T 30, Mechanical Analysis of Extracted Aggregate
- FOP for T 312, Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
- R 35, Superpave Volumetric Design for Hot Mix Asphalt (HMA)
- FOP for T 335, Method 1, Determining the Percentage of Fracture in Coarse Aggregate
- T 269, Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
- FOP for AASHTO T 209, Bowl Method, Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
- FOP for AASHTO R 67, Sampling Asphalt Mixtures after Compaction (Obtaining Cores)
- R 57, Standard Practice for Operating Inertial Profilers and Evaluating Pavement Profiles
- FOP for T 308, Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method
- R 97, Sampling Asphalt Mixtures
- FOP for R 47, Reducing Samples of Hot Mix Asphalt to Testing Size
- FOP for T 329, Moisture Content of Hot Mix Asphalt (HMA) by Oven Method
- FOP for T 176, Alternate Method #2 Mechanical Pre-Wet, Plastic Fines in Graded Aggregate and Soils By Use of the Sand Equivalent Test
- T 304, Method A, Uncompacted Void Content of Fine Aggregate

- FOP for R 66, Sampling Asphalt Materials
- M 323, Superpave Volumetric Mix Design
- T 344, Evaluation of the Superpave Gyratory Compactor (SGC) Internal angle of Gyration Using Simulated Loading
- T 331, Bulk Specific Gravity and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method
- R 79, Standard Practice for Rapid Drying of Compacted Asphalt Specimens Using Vacuum Drying Apparatus
- T 164, Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
- T 319, Quantitative Extraction and Recovery of Asphalt Binder from Asphalt Mixtures
- FOP for T 166, Method A, Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface Dry Specimens
- FOP for T 355, In-Place Density of Asphalt Mixtures by Nuclear Methods
- T 324, Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)

2.2 *ASTM Standards*

- D 1075, Standard Test Method for Effect of Water on Compressive Strength of Compacted Bituminous Mixtures (Immersion-Compression)
- D 4791, Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
- D 6857, Standard Test Method for Maximum Specific Gravity and Density of Bituminous Paving Mixtures Using Automatic Vacuum Sealing Method
- 8159, Standard Test Method for Automated Extraction of Asphalt Binder From Asphalt Mixtures (Asphalt Analyzer™)
- 8225, Standard Method of Test for Determination of Cracking Tolerance Index of Asphalt Mixture Using the Indirect Tensile Cracking Test at Intermediate Temperature

2.3 *Idaho Standards*

- Idaho IR 87, Pavement Straightedge Procedures
- IT 120, Determining Volume of Liquids in Horizontal or Vertical Storage Tanks
- IR 125, Acceptance Test Strip for Hot Mix Asphalt (HMA) Pavement
- IT 144, Specific Gravity and Absorption of Aggregate Using Automatic Vacuum Sealing Method
- IT 146, Determination of Recycled Asphalt Pavement (RAP) Aggregate Dry Bulk Specific Gravity (G_{sb})
- IR 148, Stratified Random Sampling
- IR 150, Superpave Mix Design
- IR 151, Superpave Mix Design Evaluation
- IR 152, HMA Quality Control Plan Development and Implementation
- IR 153, Split Sample Comparison
- IR 154, Nuclear Density Gauge Correlation
- IR 155, Procedures for Checking Asphalt Drum Mix Plant Calibrations

- IR 156, Method for Determining Rolling G_{mm}
- IR 157, Determining Ignition Furnace Correction Factor
- IR 158, Quality Control Plan (QCP) Development and Implementation
- IR 159, Quality Control Plan (QCP) Review Process
- IR 160, Development, Evaluation, and Approval of HMA Plant Quality Control Plans

2.4 Standard Specifications, Subsection 106.03

2.5 Standard Specifications, Section 405

2.6 Quality Assurance Manual, Section 220

3. GENERAL TEST STRIP REQUIREMENTS

3.1. The Contractor will notify the Engineer of the date, time, and location of the acceptance test strip before or during the pre-pave meeting. The Engineer will immediately notify the Central Materials Laboratory.

3.2. The Engineer must witness all sampling of material to be used for acceptance. Any acceptance sample obtained that is not witnessed by the Engineer will be rejected.

3.3. The Contractor is responsible for material sampling. The Contractor will have a qualified technician available for the duration of the test strip. The Contractor will immediately give the samples to the Engineer.

4. IDENTIFYING THE TYPE OF ACCEPTANCE TEST STRIP

4.1. There are 2 types of test strips, an on-site test strip and an off-site test strip (i.e., off-site mix verification). The onsite test strip is performed at the start of production paving operations and encompasses the first lot of production paving. The off-site test strip is performed before beginning production paving.

Note: For the density correlation, reference IR-154. Density correlation is not a test strip.

4.2. Determine if the Contractor will perform an onsite test strip or off-site test strip to verify the JMF.

4.3. For an onsite test strip, the test strip will be the first day of production with the following exception:

4.3.1. If the total estimated quantity of material for the bid item is between 750 and 2,250 tons, the entire quantity of material will be considered the test strip, use the modified sampling schedule found in Annex 1 – On-Site Test Strip Procedure for Smaller Production Runs.

4.4. For an off-site test strip (i.e., offsite mix verification), the test strip sampling will be performed while the Contractor is targeting the JMF.

5. DETERMINING THE TEST STRIP SAMPLING SCHEDULE

5.1. Before the test strip, determine, in conjunction with the Contractor, the anticipated quantity of material that will be produced for the test strip.

Note: *It is recommended to do this via email or other written communication to ensure adequate documentation for the project records.*

5.2. Calculate the testing frequency by dividing the anticipated quantity of material that will be produced for the test strip by the required number of samples needed.

5.3. Using the value calculated in 5.2, perform Idaho IR 148 to determine the sampling schedule to obtain the required number of stratified, random samples.

5.4. Repeat step 5.2 and step 5.3 for each material to be sampled. See Example of Determining the Test Strip Sampling Schedule.

6. MATERIAL SAMPLING REQUIREMENTS

6.1. Before obtaining the first sample, confirm at the hot plant that the approved JMF is being targeted in the hot plant control system and that the most current hot plant calibrations have been verified in accordance with Idaho IR 155.

6.2. The Contractor will sample the required materials as shown in Table 6.1 at the intervals given in the test strip sampling schedule.

6.2.1. Each sample must be clearly labeled and secured in the Engineer's possession immediately after the sample is taken. If a sample consists of multiple containers, label each container in such a way that the samples and the increments are readily distinguishable (i.e., if there are 2 boxes of material for Sample 1: label one box "Box 1 of 2", and the other box "Box 2 of 2").

6.2.2. Each sample must be accompanied by the appropriate sample tracking form with all sampling information included and signed by the WAQTC sampling technician.

6.3. Continue to monitor that the proper mix is being produced throughout the test strip.

6.4. Immediately after completion of the test strip, obtain the hot plant printouts showing production totals for each mix constituent and the most current calibration records (e.g., take a snap shot or provide a written note on the plant printout of where the test strip begins/ends and the next lot begins).

6.5. The testing timeframe begins once the Engineer has received all test strip samples, sample tracking forms, and hot plant printouts and calibration records. The Engineer will submit samples, and original sample tracking forms to the acceptance lab for testing.

Table 6.1-Sampling Requirements

Material	Sampling Procedure	Number of Samples	Minimum Sample Size	Sample Container
Mix	AASHTO R 97	5	100 lbs	Cardboard box [(a)]
Aggregate	AASHTO R 90	2	50 lbs	5-gallon bucket [(b)]
RAP	AASHTO R 97	2	50 lbs	5-gallon bucket [(b)]
Binder	FOP for AASHTO R 66	1	Three 1-quart containers	Screw top can [(a]
Field Compacted Mix	FOP for AASHTO R 67	10 [(d)]	One 6-inch diameter core	Suitable protective container [(c)]

[(a)] See Quality Assurance Manual Table 220.01.1.
[(b)] Clean 5-gallon bucket with a snap-on lid.
[(c)] See FOP for AASHTO R 67 for guidance on packaging and transporting samples.

[(d)] No cores required for off-site test strips.

7. SAMPLING AND TESTING FIELD COMPACTED MIX

7.1. For on-site test strips, field compacted mix acceptance will be based on the results of cores sampled in accordance with AASHTO R 67. Sample locations cannot be closer than 1.0 foot from a cold joint.

7.1.1. When nuclear density gauge results are to be used for acceptance for lots after the completion of the acceptance test strip, correlate the nuclear density gauge(s) in accordance with Idaho IR 154.

7.2. For off-site test strips, there is no field compacted mix acceptance performed during the test strip.

Note: *No nuclear density gauge results are needed for off-site test strips.*

8. TEST STRIP DOCUMENTATION

8.1. Maintain in ProjectWise the following records, *at a minimum,* for the test strip sampling:

8.1.1. Sampling schedule.

8.1.2. The carbon copy of the appropriate sample tracking form for each sample obtained in the project or lab file.

8.1.3. A daily work report (DWR) or daily diary documenting the day's events.

8.1.4. A copy of the hot plant calibration records and a hot plant printout showing recorded data every 15 minutes.

8.2. Ensure the documentation listed under 8.1 is available in ProjectWise within 2 business days after the completion of the test strip.

9. ACCEPTANCE LAB RECEIVING PROCEDURE

9.1. Upon receiving the samples and associated sample tracking forms, ensure that all required documentation is included.

9.2. Document condition of samples, and date and time received.

9.3. Notify the Engineer of receipt and provide a time of estimated completion and review of all testing.

9.4. *With the mix samples:*

9.4.1. Select 3 samples for volumetric testing shown in Table 10.1.

9.4.2. Select 2 samples for performance testing shown in Table 10.2.

9.4.3. Test the mix samples in accordance with Section 10.

9.5. *With the aggregate samples:*

9.5.1. Test the aggregate samples in accordance with Section 11.

9.6. *With the RAP samples:*

9.6.1. Test the RAP samples in accordance with Section 12.

9.7. *With the binder sample:*

9.7.1. Test the binder sample in accordance with Section 13.

9.8. *With the field compacted mix samples:*

9.8.1. Test the field compacted mix samples in accordance with Section 14.

10. ACCEPTANCE LAB MIX TESTING REQUIREMENTS

10.1. With each of the 3 samples selected in Section 9.4.1. retain 1 box of each sample for challenge (dispute) resolution testing. With the remaining box from each sample, reduce in accordance with FOP for AASHTO R 47 and perform the volumetric testing shown in Table 10.1.

10.1.1. Report results on the most current ITD-773 form and include copies of all original source documents.

Table 10.1 – Test Strip Mix Volumetric Testing Requirements.

Test Method	Increments Per Sample
FOP for AASHTO T 308	1
FOP for AASHTO T 30	1
FOP for AASHTO T 312	2
FOP for AASHTO T 166 Method A	2
FOP for AASHTO T 209	2
FOP for AASHTO T 329	1

10.2. With the 2 samples selected in Section 9.4.2. retain 1 box of each.

10.2.1. With the remaining sample, blend and reduce in accordance with FOP for AASHTO R 47 to within (plus or minus) 15.0 grams of the desired sample size. Fine tune by hand to the desired sample size and perform the performance testing shown in Table 10.2.

10.2.2. Report results on the most current ITD-773 form and include copies of all original source documents.

Table 10.2 – Test Strip Mix Performance Testing Requirements.

Test Method	Increments [(a)] Per Sample
AASHTO T 324	4
ASTM D 8225	3

[(a)] An increment is considered a single SGC puck.

11. ACCEPTANCE LAB AGGREGATE TESTING REQUIREMENTS

11.1. With one of the 2 samples from Section 9.5.1, reduce in accordance with FOP for AASHTO R 76 and perform the testing shown in Table 11.1.

11.1.1. Retain remaining 1 sample for challenge (dispute) resolution testing.

11.1.2. Report results on the most current Department forms and include copies of all original source documents.

Table 11.1 – Test Strip Aggregate Testing Requirements.

Test Method	Increments Per Sample
FOP for AASHTO T 335	1
FOP for AASHTO T 255	1
AASHTO T 304 Method A	1
FOP for ASTM D 4791	2
FOP for AASHTO T 176 (Alternate Method 2, Mechanical)	2
AASHTO T 85[(a)]	3
Idaho IT 144[(a)]	3

[(a)] Department may elect to perform to confirm G_{sb}.

12. ACCEPTANCE LAB RAP TESTING REQUIREMENTS

12.1. With 1 of the two samples from Section 9.6.1, reduce in accordance with FOP for AASHTO R 76 and perform the testing shown in Table 12.1.

12.1.1. Report results on the most current Department forms and include copies of all original source documents.

Table 12.1 – Test Strip RAP Testing Requirements.

Test Method	Increments Per Sample
FOP for AASHTO T 255 (Controlled Heat Source)	1
Idaho IT 146 [(a)]	1
ASTM D8159 [(a)]	1
AASHTO T 30 [(a)]	1
AASHTO T 308 [(a)]	1

[(a)] The Department may confirm the RAP G_{sb}.

13. ACCEPTANCE LAB BINDER TESTING REQUIREMENTS

13.1. With the sample from Section 9.7.1, select 2 quarts for Department acceptance testing and 1 quart for challenge resolution. Perform the testing shown in Table 13.1.

13.1.1. Report results on the most current Department forms and include copies of all original source documents.

Table 13.1 – Test Strip Binder Testing Requirements.

Test Method	Increments Per Sample
Idaho IT 99	1
AASHTO M 320[(a)]	1
ASTM D 8159[(a)]	1

[(a)] See QA Manual Sections 230.10. Meet the requirements of Standard Specifications Sections 702.01 and 702.06.

14. ACCEPTANCE LAB FIELD COMPACTED MIX TESTING REQUIREMENTS

14.1. With each of the 10 samples from Section 9.8.1, separate two or more pavement courses, lifts, or layers per FOP for AASHTO R 67. Perform the testing shown in Table 14.1.

14.1.1. Report results on the most current Department forms and include copies of all original source documents.

Table 14.1 – Field Compacted Mix Testing Requirements.

Test Method	Increments Per Sample
FOP for AASHTO T 166 Method A or AASHTO T 331[(a)]	1

[(a)] Use the average G_{mm} from testing performed in Section 10 to compute the in-place density of the cores.

15. ACCEPTANCE LAB TEST STRIP RESULTS REPORTING PROCEDURE

15.1. Report the results of each test performed on the most current Department forms and include copies of all original source documents and sample tracking forms in the report.

15.1.1. Each original source document will be signed by the testing technician.

15.2. The lab manager or the lab manager's qualified designated agent will fully review the report and all supporting documents for completeness.

15.3. Submit a complete electronic copy of the report to the Engineer for distribution with ample time to allow the Engineer time to review and determination of test strip acceptance.

16. EVALUATING ACCEPTANCE TEST STRIP RESULTS

16.1. The Engineer, upon receipt of the results from 15.3, will determine acceptance of the test strip as follows:

16.1.1. Use the Department approved method (e.g., Department provided spreadsheet or web portal) to perform the quality level analysis and determine acceptance as specified in 106.03.B and 405.03.I.

16.2. *Review of hot plant calibration records:*

16.2.1. Verify that the calibration records meet Idaho IR 155. If they do not match the most recent plant calibration record that was witnessed, perform a calibration verification in accordance with Idaho IR 155.

16.3. *Review of hot plant printout:*

16.3.1. Provide documentation to verify that the hot plant printout indicates the individual cold feed percentage for aggregate, cold feed percentage for RAP, asphalt content for the RAP, and virgin binder meet the requirements of 405.03.I.

17. ACCEPTANCE OF THE TEST STRIP

17.1. The test strip is considered acceptable when it meets Section 16.

18. EXAMPLE OF DETERMINING THE TEST STRIP SAMPLING SCHEDULE

Example: During the pre-paving meeting, the Contractor informs the Engineer that they will be performing an onsite test strip on April 19th. They anticipate paving 2,130 tons.

The Engineer will use this information to develop a test strip sampling schedule as follows:

For plant mix:

- The plant mix sampling frequency is calculated by dividing 2,130 by 5.
- Sampling frequency for plant mix is 1 sample per 355 tons.
- Use a 426 ton sample frequency and 5 samples, perform Idaho IR 148 to determine the sampling schedule to obtain 5 stratified random, samples of plant mix.
- Obtain plant mix samples in accordance with AASHTO R 97 per the sampling schedule.

For cold feed aggregate:

- Before sampling asphalt mix, obtain 1 cold feed aggregate sample by Conveyor Belt Method A or Method B of FOP for AASHTO R 90. Conveyor Belt Method B is the preferred method if automatic sampling devices are available.
- After sampling asphalt mix, obtain 1 cold feed aggregate sample by Conveyor Belt Method A or Method B of FOP for AASHTO R 90. Conveyor Belt Method B is the preferred method if automatic sampling devices are available.

For RAP (if used):

- Before sampling asphalt mix, obtain 1 RAP sample by FOP for AASHTO R 90. Conveyor Belt Method B is the preferred method if automatic sampling devices are available.
- After sampling asphalt mix, obtain 1 RAP sample by FOP for AASHTO R 90. Conveyor Belt Method B is the preferred method if automatic sampling devices are available.

For binder:

- Use a 2,130 ton sample frequency and 1 sample, perform Idaho IR 148 to determine the sampling schedule to 1 stratified, random samples of binder.
- Obtain 1 binder sample (consisting of 3, 1-quart cans) in accordance with FOP for AASHTO R 66 per the sampling schedule.

For field compacted mix:

- The field compacted mix sampling frequency is calculated by dividing 2,130 by 10.
- Sampling frequency for plant mix is 1 sample per 213 tons.
- Use a 213 ton sample frequency and 10 samples, perform Idaho IR 148 to determine the sampling schedule to obtain 10 stratified random, samples of field compacted mix.
- Obtain field compacted mix samples in accordance with AASHTO R 67 per the sampling

Idaho Standard Practice for

Superpave Volumetric Mix Design

IDAHO Designation: IR-150-21

1. SCOPE

1.1. This practice describes the requirements for developing a Superpave mix design.

1.2. *This standard practice may involve hazardous materials, operations, and equipment. This standard practice does not purport to address all of the safety concerns, if any, associated with its use. It is the user's responsibility of this procedure to establish appropriate safety and health practices and determine the applicability of regulatory limitations before use.*

2. BACKGROUND

2.1. Developing a mix design is a function of quality control (QC). A mix design is developed to find a combination of aggregates, recycled materials, asphalt, and additives to produce a roadway that meets the Department's specifications.

2.2. The end result of a successful mix design is a recommended mixture of aggregate and asphalt binder. This recommended mixture, which also includes aggregate gradation and asphalt binder type, is the job mix formula (JMF).

2.3. A JMF is a recipe for the plant to make. The mix design is the development of that recipe. A mistake in the design process can disrupt a project's schedule dramatically and have a big impact to the overall quality of the finished roadway. The development of the JMF is a QC process. It is the Contractor's responsibility to ensure that their mix design and resulting JMF will result in a mix that meets the contract requirements as determined by the Department's testing.

> **Note:** A JMF is only as good as the information that was used to develop it. A good mix design can help limit issues in production.

2.4. The mix design evaluation is for the Department to use to validate that the recipe was properly developed and the resulting JMF appears that the mix produced will meet the contract requirements.

3. REFERENCE DOCUMENTS

3.1. AASHTO Standards

- M 323, Superpave Volumetric Mix Design
- R 30, Mixture Conditioning of Hot-Mix Asphalt (HMA)
- R 35, Superpave Volumetric Design for Asphalt Mixtures
- R 76, Reducing Samples of Aggregate to Testing Size
- R 90, Sampling Aggregate Products
- T 11, Materials Finer Than 75-pm (No. 200) Sieve in Mineral Aggregates by Washing
- T 27, Sieve Analysis of Fine and Coarse Aggregates

- T 84, Specific Gravity and Absorption of Fine Aggregate
- T 85, Specific Gravity and Absorption of Coarse Aggregate
- T 166, Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens
- T 209, Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)
- T 312, Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor
- T 324, Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)
- T 331, Bulk Specific Gravity (G_{mb}) and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method

3.2. Idaho Standards:

- IT 144, Specific Gravity and Absorption of Fine Aggregate Using Automatic Vacuum Sealing Method
- IT-146, Determination of Recycled Asphalt Pavement (RAP) Aggregate Dry Specific Gravity G_{sb}
- Standard Specifications for Highway Construction

3.3. WAQTC/Idaho FOPs

- R 76, Reducing Samples of Aggregate to Testing Size
- R 90, Sampling Aggregate Products
- T 11, Materials Finer Than 75-pm (No. 200) Sieve in Mineral Aggregates by Washing
- T 27, Sieve Analysis of Fine and Coarse Aggregates
- T 166, Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens
- T 209, Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)
- T 312, Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor
- WAQTC TM 13, Volumetric Properties of Hot Mix Asphalt
- WAQTC TM 14, Laboratory Prepared Asphalt Mixture Specimens

3.4. ASTM Standards

- D8159, Automated Extraction of Asphalt Binder From Asphalt Mixtures (Asphalt Analyzer)
- D8255, Determination of cracking Tolerance Index of Asphalt Mixture Using the Indirect Tensile cracking Test at Intermediate Temperature

3.5. *Other Standards*

- Asphalt Institute MS-2, Asphalt Mix Design Methods, 7th Edition

4. SPECIFIC GRAVITY OF AGGREGATE AND RAP

4.1. Use the bulk dry specific gravity of aggregate (G_{sb}) established by the Department for each stockpile when developing the mix design and performing calculations.

5. MIX DESIGN REQUIREMENTS

5.1. Develop a Superpave mix design in accordance with AASHTO R 35 that will result in a plant-produced mixture that meets the contract requirements.

5.2. The mix design must be developed by an individual that is qualified by the Department as a Superpave mix design technician (SPMDT).

5.2.1. The specific tests required during the mix design process must be performed by an individual qualified by the Department for the specific test method.

5.3. The mix design must be reviewed, approved, signed, and sealed by an Idaho-licensed professional engineer responsible for the mix design.

5.4. Use a Department-qualified Superpave mix design laboratory for developing the design.

6. MIX DESIGN REPORT REQUIREMENTS

6.1. Provide a single job mix formula (JMF) reported on an ITD-774 form.

6.2. Attach all supporting documentation and data used in developing the JMF.

6.2.1. Include signature(s) and WAQTC/PE license number(s) for testers and reviewers on each sheet.

Note: The design will be reviewed by the Department in accordance with Idaho IR 151. Ensure that the report has all information required to complete the review. Incomplete or missing information will result in rejection of the mix design.

7. MIX DESIGN SUBMITTAL

7.1. Submit the mix design and all supporting documentation via email to mixdesigns@itd.idaho.gov and the Engineer.

7.2. Each mix design submitted for approval must be accompanied by a Microsoft® Excel® electronic version of the ITD-774 form specific to the mix design.

7.3. Only 1 mix design per email notification will be accepted. Submit the mix design for evaluation a minimum of 5 business days before paving is scheduled to begin.

7.4. Upon submittal, the Department will give the mix design a unique identifier number. This will be the mix design number. Keep this number for your records.

8. AMENDING THE MIX DESIGN

8.1. If the mix design is required to be amended per 405.03.B.1.b.i.1, amend the mix design the following process:

8.1.1. Each page of the mix design that is revised or added is required to include the project key lead number, bid item number, date of revision, and means of identifying the revision. The amendment is required to be signed and dated by the Contractor's representative who is responsible for developing the mix design and subsequently signed and dated when approved by the Engineer.

8.2. Amending the mix design or JMF is not allowed once the mix design has been approved by the Department.

9. APPROVED MIX DESIGNS

9.1. The Department will maintain a list of approved mix designs listed by Department generated mix design number. Mix designs are not approved for use unless they are listed.

Idaho Standard Practice for

Superpave Mix Design Evaluation

IDAHO Designation: IR-151-21

1. SCOPE

1.1. This practice describes the procedures for evaluating a Superpave mix design, mix design requirements, and the time required to perform the evaluation.

1.2. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the user's responsibility of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations before use.*

2. BACKGROUND

2.1. When reviewing a mix design, it is important to keep in mind the following:

2.2. A mix design is solely a function of quality control (QC). A mix design is developed to find a combination of aggregates, recycled materials, asphalt, and additives to use to produce a roadway that meets the Department's specifications.

2.3. The end result of a successful mix design is a recommended mixture of aggregate and asphalt binder. This recommended mixture, which also includes aggregate gradation and asphalt binder type is the job mix formula (JMF).

2.4. A JMF is a recipe for the plant to make. The mix design is the development of that recipe. A mistake in the design process can disrupt a project's schedule dramatically and have a big impact to the overall quality of the finished roadway. However, developing the JMF is a QC process. It is the Contractor's responsibility to ensure that their mix design and resulting JMF will result in mix that meets the contract requirements.

Note: A JMF is only as good as the information that was used to develop it. A good mix design can help limit issues in production.

2.5. The mix design evaluation is for the Department to use to validate that the recipe was properly developed and the resulting JMF appears that the mix produced will meet the contract requirements.

3. REFERENCE DOCUMENTS

3.1. *Idaho Procedures:*

- IT-150, Superpave Volumetric Mix Design
- Standard Specifications for Highway Construction

4. SUBMITTAL OF MIX DESIGN

4.1. The Contractor must submit the asphalt mix design in accordance with Idaho IR 150.

5. RECEIPT OF MIX DESIGN SUBMITTAL

5.1. Upon receipt of the mix design submittal, the mix design will be given a unique identifier number.

6. REVIEW OF MIX DESIGN SUBMITTAL

6.1. The Department will review all Superpave mix designs proposed for use before use. The Department recognizes the risk associated with each paving application varies. Therefore, the extent of each mix design review will be in accordance with these potential risks.

6.2. The mix design will be reviewed by the Engineer, the Central Materials Laboratory, and the State Construction and Materials Engineer.

6.3. The reviewers may contact the mix designer or the professional engineer responsible for the mix design during the review process for further information or clarifications.

6.4. All mix designs will be reviewed for the following:

6.4.1. Accuracy.

6.4.2. Completeness.

6.4.3. Reasonableness. Examples of items that will be check for reasonableness include, but are not limited to, ensuring that calculations were done correctly and that the volumetric data follows the expected trends (i.e., binder absorption not being dependent on asphalt content).

6.4.4. Compliance with specifications.

6.4.5. Compliance with Idaho IR 150.

6.5. When amendments are made to the mix design submittal, the current review will be ended and the amended mix design will be considered a new submittal.

6.5.1. Amendments must meet the requirements of Idaho IR 150.

7. REVIEW OF PREVIOUSLY USED MIX DESIGNS

7.1. A mix design reviewed and accepted for a previous or current project may be submitted in writing for use on a new project. Acceptance of the mix design will be based on meeting the following requirements in addition to the requirements of Section 3:

7.1.1. The proposed mix design is of the type required for the new project.

7.1.2. The mix produced on previous projects utilizing the proposed mix design was of good quality (e.g., the combined average PWL on all the previous project(s) was ≥ 90 PWL for all mix quality characteristics).

7.1.3. The mix design is not classified as expired in accordance with 405.03.B.2 of the Standard Specifications.

8. MIX DESIGN REVIEW TIMEFRAME

8.1. The Department will review the mix design within 5 business days after receiving the full submittal package.

9. APPROVAL OF MIX DESIGN

9.1. The Department will maintain a list of approved mix designs. Upon approval, the mix design will be placed on this list.

10. REJECTION OF MIX DESIGN

10.1. The Department will notify the Contractor upon rejection of a mix design via email.

10.1.1. The Department will provide details as to why the mix design was rejected.

10.2. Notification of the rejection will be sent to the email address given on the ITD-774 form.

Idaho Standard Practice for

ASPHALT MIXTURES QUALITY CONTROL PLAN (QCP) DEVELOPMENT AND IMPLEMENTATION

IDAHO Designation: IR-152-21

1. PURPOSE

1.1. The purpose is to establish minimum requirements for the Contractor's quality control system and quality control plan (QCP) for asphalt mixtures. It is intended that these requirements be used as a procedural guide in detailing the inspection, sampling, and testing deemed necessary to maintain compliance with the Department's specifications. The Department and the Contractor must hold a pre-pave meeting and document the decisions and agreements made. An example of a pre-pave meeting agenda is provided in the Appendix. Conducting a thorough pre-pave meeting increases partnership as well as it can only increase the likelihood of success of each party.

2. SCOPE

2.1. This procedure is applicable to the production and construction of asphalt mixtures.

3. REFERENCE DOCUMENTS

3.1. Idaho Standards

- IR 158, Quality Control Plan Development.
- IR 160, Evaluation and Approval of HMA Plants and Equipment.
- IR 155, Procedures for Checking Asphalt Drum Mix Plants

4. GENERAL REQUREMENTS

4.1. As stated in the Standard Specifications for Highway Construction, a QCP must be developed by the Contractor/producer and submitted in writing to the Engineer at the preconstruction conference. Acceptance of the QCP by the Engineer will be contingent upon its concurrence with the Standard Specifications and this standard method. For this reason, the QCP will clearly describe the methods by which the quality control program will be conducted. For example, the items to be controlled, tests to be performed, testing frequencies, sampling locations, and techniques will be included with each item listed separately. Also include a table stating what actions will occur when test results indicate specification limits are approached or exceeded. See Table 1 at end of this guide for an example. Also, a detailed plan of action regarding disposition of non-specification material will be included. Such a plan will provide for immediate notification of all parties involved in the Quality Assurance process in the event nonconforming situations are detected. Example 1. HMA Quality Control Plan may be used as an example.

4.2. Inspection and testing records must be maintained, kept current, and made available for review by Department personnel throughout the life of the contract. All other documentation (e.g., date of inspections, tests performed, temperature measurements, and accuracy, calibration or re-calibration checks performed on production of testing equipment) will be recorded.

4.3. The Contractor will maintain standard equipment and qualified personnel in accordance with the contract and specification requirements for the item(s) being produced.

5. QUALITY CONTROL PLAN

5.1. Operation quality control plans will be submitted for each contract/project to the Engineer for review and approval. Include a Plant Quality Control Plan that meets the requirements of Idaho IR 160. Distribution of the approved quality control plans will be made by the Engineer.

5.2. Example 1. HMA Quality Control Plan is provided only as an acceptable template that contains the required information is attached.

6. ADDENDA TO THE QUALITY CONTROL PLAN

6.1. Addenda are defined as an addition or deletion to the QCP. Each page of the QCP that is revised is required to include the project key lead number, date of revision, and means of identifying the revision. The addenda are required to be signed and dated by the Contractor's representative who is responsible for insuring that all items of work will comply with Department Specifications and subsequently signed and dated when approved by the Engineer.

Table 1: Example of QC Actions to Implement When Approaching or Exceeding Specification Limits

Test Description	Test Method	QC Action Limits		Situation		Action
		Single Test	4-Point Moving Avg. or Daily Avg.	Single Test	4-Point Moving Avg. or Daily Avg.	
Binder Content, P_b	FOP for AASHTO T 168 and FOP for AASHTO R 47 and FOP for AASHTO T 308 and FOP for AASHTO T 329	± 0.6	± 0.3	Approaching Limit	Approaching Limit	Discuss with hot mix plant, operator, and may suspend construction process
Aggregate Gradation	FOP for AASHTO T 30 (wash method used for all gradation measurements)	NA	C-JMF	4 percent on +#4 2 percent on -#4	Approaching Limit	Increase frequency of tests and prepare for process modification
Air Voids @ N_{design}, P_a	WAQTC TM 13	± 1.0%	NA	2 tests over ± 1%	NA	Initiate C-JMF Modifications
VMA @ N_{design}	WAQTC TM 13	≤ 1% min	≥ min	3 tests over ± 1%	Approaching Limit	Discuss with the Engineer & Process Modification
Dust Proportion, DP	WAQTC TM 13	NA	≥ min ≤ max	Approaching Limit	Approaching Limit	Modify C-JMF
G_{mm}	FOP for AASHTO T 168 and FOP for AASHTO R 47 and FOP for AASHTO T 209 (Bowl Method)	C-JMF	C-JMF	Approaching Limit	Approaching Limit	Modify C-JMF or Redesign
G_{se}	WAQTC TM 13	C-JMF	C-JMF	Approaching Limit	Approaching Limit	Modify C-JMF or Redesign
Rut Depth, mm	AASHTO T 324	≥ min	NA	Approaching Limit	NA	Discuss with the Engineer & initiate investigation, modification, or redesign
Stripping, passes	AASHTO T 324	≥ min	NA	Approaching Limit	NA	Discuss with the Engineer & initiate investigation, modification, or redesign
Cracking, FI	AASHTO TP 124	≥ min	NA	Approaching Limit	NA	Discuss with the Engineer & initiate investigation, modification, or redesign
Mainline Density	Idaho IR 156, and FOP for AASHTO T 355 or FOP for AASHTO T 343	NA	≥ min	Approaching < 92%	≤ 100% Pay	Notify the Engineer

Note: When 2 consecutive test results fail or if any of the 4-point moving average values fail, production will be suspended and the situation discussed with the Engineer. The process will be corrected before production resumes.

EXAMPLE 1

HMA Quality Control Plan – General Overview (Details provided in PrePave Meeting/Project Specific)

NOTE: This is provided only as an acceptable template; other options/formats are acceptable

Date:
To: (RESIDENT ENGINEER)
From: (CONTRACTOR(s) NAME)
Subject: HMA Quality Control Plan

1. Project Information

1.1. We are submitting our HMA Quality Control Plan, developed in accordance with Idaho IR 152, Idaho IR, 158, and Idaho IR 160 for:

Project Number:_____
Lead Key Number:_____
Date Submitted:_____

1.2. (NAME) is responsible for ensuring that all items of work will comply with the contract and Department specifications.

2. Hot Plant

2.1. General Information:

Make:_____

Type:_____

Address of Plant:_____

2.2. The hot plant operation is under the direction of (NAME) who can be contacted at (ADDRESS, EMAIL, AND TELEPHONE).

2.3. Current calibration and verification status of plant and history of plant inspection program attached in Exhibit A.

2.4. The Hot Plant Quality Control Plan, developed in accordance with Idaho IR 160 and approved on (DATE) by (NAME OF PERSON(s)) is attached in Exhibit B.

3. Mix Designs

3.1. Mix designs will be the responsibility of (NAME OF PERSON(s)), WAQTC number (NUMBER(s)).

3.2. The HMA design(s) to be used are attached in Exhibit C.

3.3. Before production, (NAME), (WAQTC NUMBER), will submit our HMA mix design for each type of mix in accordance with the contract and specifications by (DATE). Only allowable and approved materials will be incorporated in the mix.

4. Delivery and Placement

4.1. The field operation is under the direction of (NAME) who can be contacted at (ADDRESS, EMAIL, AND TELEPHONE).

4.2. (LIST OF EQUIPMENT TYPE, MAKE).

4.3. (DETAILED DESCRIPTION OF THE PRODUCTION AND PLACEMENT PROCESS).

5. Quality Control Sampling and Testing,

5.1. The laboratory performing quality control testing is (LAB QUALIFICATION NUMBER), located at (LOCATION).

5.2. The quality control program is under the direction of (NAME OF PERSON), who can be contacted at (ADDRESS, EMAIL, AND TELEPHONE).

5.3. During the placement operations of the HMA pavement we will perform at a minimum quality control tests per attached schedule. Sampling and testing is the responsibility of (NAME(s), WAQTC number (NUMBER(s)).

5.4. Sampling and testing is the responsibility of (NAME OF PERSON(s)), WAQTC number (NUMBER(s)).

5.5. During the production operations of the HMA (NAMES) will perform, at a minimum, quality control tests in accordance with the attached schedule. Also attached are the proposed method to select locations and/or times for sampling. See Exhibit D.

5.6. All testing will be completed by (NAME(s)), (WAQTC NUMBER(s)), within (HOURS) hours of sampling and all original documentation of results will be completed on the attached original documentation forms. See Exhibit E.

5.7. Testing reports and original source documents will be reviewed and checked by (NAME(s)), (WAQTC NUMBER(s)), within (HOURS) hours of testing being completed. All reporting will be completed on the attached forms. See Exhibit F.

EXAMPLE 1 (CONTINUED)
HMA Quality Control Plan

6. Records.

6.1. Testing reports and all backup documentation will be located at (LOCATION) for review by the Department between the hours of (TIME) and (TIME) during the life of the contract/project.

6.2. Testing reports and all backup documentation will be located at (LOCATION) for review by the Department between the hours of (TIME) and (TIME) for (YEARS) after the completion of the project.

7. Notifications.

7.1. Any material found to be noncomplying will be addressed by (NAME) who will notify the Engineer immediately.

7.2. (NAME) will notify appropriate Department personnel at least 48 hours before any work is to begin.

8. Nonconforming Material.

8.1. (STATE THE PROCESS FOR DISPOSITION OF NONCONFORMING MATERIAL)

8.2. See the Exhibit G for what actions will occur when test results indicate specification limits are approached or exceeded.

Attachments:

Exhibit A – Current calibration and verification status of plant and history of plant inspection program

Exhibit B – Hot Plant Quality Control Plan

Exhibit C – HMA Mix Design

Exhibit D – Minimum QC Testing Schedule, Sampling and Testing Methods, and Location(s)

Exhibit E – Original Test Documentation Form Template(s)

Exhibit F – Test Reporting Form Template(s)

Exhibit G – Table of QC actions when approaching or exceeding specification limits

Idaho Standard Practice for

Split Sample Comparison

IDAHO Designation: IR-153-21

1. SCOPE

1.1. This Standard Practice is used to compare 2 or more sets of test results in order to measure the testing variability of different parties (e.g., Department vs. Contractor).

2. BACKGROUND

2.1. There are 4 primary components or sources of inherent variability in individual test results for material samples. These components of inherent variability are:

- Sampling Variability
- Testing Variability
- Material Variability
- Construction Variability

2.1.1. **Sampling variability** is caused by variation that is inherent in the sampling methods or procedures used to obtain a material sample. Even when the person obtaining a sample carefully follows standard sampling methods or procedures, some amount of sampling variability will occur.

2.1.2. **Testing variability** is the result of variation inherent in performing a test method and variation inherent in the test equipment. Even when the person performing a test carefully follows standard testing methods and even when the test equipment is properly calibrated, some amount of testing variability will occur.

2.1.3. **Material variability** is essentially due to the inherent variation that naturally exists in a given material. It is quite unrealistic to expect perfect homogeneity in any raw or processed source of construction materials (e.g., soils, aggregate, HMA, PCC, steel, paint). The inherent variation for most construction materials, on a relative basis, is usually small.

2.1.4. **Construction variability** is the result of variation that is inherent in production methods and construction operations. The largest amount of construction variability is generally attributed to the production and placement process.

2.1.5. Additional construction variability (i.e., beyond the expected or accepted range) can be introduced through inconsistent production methods and construction operations. This is why good, consistent quality control, both at the source/plant and in the field, is essential in minimizing the amount of construction variability as a component of overall inherent variability.

2.1.6. Additional sampling variability and testing variability (i.e., beyond the expected or accepted range) can be introduced through deviations from standard sampling method and test procedures by the person(s) performing the sampling and testing, or as a result of test equipment that is not properly calibrated or properly functioning. Sampling and testing variability, combined, have been stated as comprising up to 50 percent of the total overall variation in test results. Specification

limits were developed to take standard sampling and testing variability into account. However, it is important not to compound or add to the expected range of inherent variability due to sloppy practices. Consistent and careful adherence to proper sampling and testing procedures can minimize these two components of overall inherent variability.

3. REFERENCE DOCUMENTS

2.1 *AASHTO Standards*

- FOP for R 90, Sampling of Aggregates
- R 76, Reducing Samples of Aggregates to Testing Size
- T 255, Total Evaporable Moisture Content of Aggregate by Drying
- FOP for T 27, Particle Size Distribution of Aggregate
- FOP for T 11, With Materials Finer than 75um (No. 200) Sieve in Mineral Aggregate by Washing
- T 335, Determining the Percentage of Fracture in Coarse Aggregate
- T 176, Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
- R 97, Sampling Asphalt Mixtures
- R 47, Reducing Samples of Hot Mix Asphalt (HMA) to Testing Size
- T 329, Moisture Content of Hot Mix Asphalt (HMA) by Oven Method
- T 308, Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method
- T30, Mechanical Analysis of Extracted Aggregate
- T 209, Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt Paving Mixtures
- T 167, Standard Method of Test for Compressive Strength of Hot Mix Asphalt
- T 166, Bulk Specific Gravity of Compacted Hot Mix Asphalt using Saturated Surface-Dry Specimens
- R 30, Mixture Conditioning of Hot-Mix Asphalt (HMA)
- FOP for R 66, Sampling Asphalt Materials
- T 164, Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
- T 319, Quantitative Extraction and Recovery of Asphalt Binder from Asphalt Mixtures
- T 303, Lime for Asphalt Mixtures
- T 312, Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor
- T 324, Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)
- T 33, Bulk Specific Gravity and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method
- R 79, Standard Practice for Rapid Drying of Compacted Asphalt Specimens Using Vacuum Drying Apparatus
- T 269, Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
- T 283, Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
- TM 13, Volumetric Properties of Hot Mix Asphalt

- R 67, Sampling Asphalt Mixtures after Compaction (Obtaining Cores)
- T 309, Temperature of Freshly Mixed Portland Cement Concrete
- T 119, Slump of Hydraulic Cement Concrete
- T 121, Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
- T 152, Air Content of Freshly Mixed Concrete by the Pressure Method
- T 23, Method of Making and Curing Concrete Test Specimens in the Field
- T 265, Laboratory Determination of Moisture Content of Soils
- T 99, Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and 305-mm (12-in.) Drop
- T 180, Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and 457-mm (18-in.) Drop
- T 85, Specific Gravity and Absorption of Course Aggregate
- T 355, Determining the Percentage of Fracture in Coarse Aggregate
- T 310, In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
- T 272, One-Point Method for Determining Maximum Dry Density and Optimum Moisture
- T 304, Uncompacted Void Content of Fine Aggregate
- R 64, Standard Practice for Field Sampling and Fabrication of 50-mm (2-in) Cube Specimens using Grout (Non-Shrink) or Mortar
- T 359, Pavement Thickness by Magnetic Pulse Induction

ASTM Standards

- FOP for D 4791, Flat and Elongated Particles in Coarse Aggregate
- D 1075, Standard Test Method for Effect of Water on Compressive Strength of Compacted Bituminous Mixtures (Immersion-Compression)
- D 6857, Standard Test Method for Maximum Specific Gravity and Density of Bituminous Paving Mixtures Using Automatic Vacuum Sealing Method
- D 8159, Standard Test Method for Automated Extraction of Asphalt Binder From Asphalt Mixtures (Asphalt Analyzer™)
- D 8225, Standard Method of Test for Determination of Cracking Tolerance Index of Asphalt Mixture Using the Indirect Tensile Cracking Test at Intermediate Temperature

Idaho Standards

- IT 13, Measuring Mortar-Making Properties of Fine Aggregate Idaho
- IT 15, Degradation
- IT 72, Evaluating Cleanness of Cover Coat Material
- IT 74, Vibratory Spring-Load Compaction for Coarse Granular Material
- IT 116, Disintegration of Quarry Aggregates (Ethylene Glycol)
- IT 144, Specific Gravity and Absorption of Fine Aggregate Using Automatic Vacuum Sealing (CoreLok) Method
- IT 61, Sampling and Viscosity Testing Emulsified Asphalt Binders in the Field

- IT 146, Determination of Reclaimed Asphalt Pavement (RAP) Aggregate Bulk (Dry) Specific Gravity (G_{sb})
- IR 128, Sampling Concrete for Chloride Analysis
- IT 131, Total Chloride Content of Hardened Concrete by Gran Plot Method
- IT 133, Determination of the Rate of Evaporation of Surface Moisture from Concrete
- IR 143, Field Sampling of Hydraulic Cement and Fly Ash
- IT 147, Measuring Texture Depth of Portland Cement Concrete Using a Tire Tread Depth Gauge
- IR 7, Inspecting/Sampling Paint and Curing Compound
- IT 121, Determining Total Solids-Latex Percent
- IT 8, Resistance R-Value and Expansion Pressure of Compacted Soils and Aggregates
- IR 162, Taking Undisturbed Soil Samples for Laboratory Consolidation, Shear and Permeability Tests
- Idaho Transportation Department Quality Assurance Manual

WAQTC Standards

- TM 13, Volumetric Properties of Hot Mix Asphalt
- TM 2, Sampling Freshly Mixed Concrete
- IR 87, Pavement Straightedge Procedures
- IT 120, Determining Volume of Liquids in Horizontal or Vertical Storage Tanks

4. SUMMARY OF THE PRACTICE

4.1. This practice describes the testing and analysis needed to perform a comparison of split samples tested by different parties against an allowable degree of test result difference attributed to testing variability.

5. TERMINOLOGY

5.1. *Individual Split Sample Acceptable Range*— The allowable tolerance between individual split sample test results when properly sampled and split.

5.2. *Paired t-Test*— Uses the difference between each pair of tests of the split samples and determines whether the difference is much different from zero.

5.3. *Split Increment*— A representative portion of a split sample that is larger than the minimum size needed for a single party to perform the desired testing.

5.4. *Split Sample*— A sample that will be used for split sample comparison testing.

6. MATERIAL SAMPLING AND SPLITTING AND TESTING

6.1. Obtain a sample in accordance with the Department's approved sampling procedure.

6.1.1. Ensure that the sample is large enough for each party to receive a split increment larger than the minimum sample size.

6.2. Split each sample in accordance with the Department's approved splitting procedure.

6.2.1. Ensure that each split increment meets the minimum sample size for the testing to be performed.

6.3. Each party will test in accordance with Department's approved testing procedures.

6.4. Repeat steps 6.1 to 6.3 until the desired number of split samples are obtained to perform the analysis.

Note: It is recommended to compare a minimum of 3 split samples for material that will be subject to statistical based acceptance (e.g., HMA, aggregates)

7. COMPARISON OF RESULTS

7.1. Compare the split increments for each split sample using the D2S limits (Section 9).

7.2. Compare the sets of split increments for all split samples using the paired t-test (Section 8).

Note: The D2S comparison is simple and can be done for each split sample that is obtained. However, this procedure compares only 2 test results (from one split sample), and is not very powerful due to the limited amount of data being evaluated. The paired t-test, compares multiple sets of split samples, and is a better method for comparison since this test uses the differences between multiple pairs of tests and determines whether the average difference is statistically different from zero.

7.3. Use the ITD-1237 form to perform and report the comparison.

7.4. When differences in results have been identified, the parties will collaborate and investigate to determine the source of the inconsistency and make necessary corrections.

7.5. The possible source of the inconsistencies and any corrections made will be documented on the ITD-1237 form.

8. PAIRED T-TEST COMPARISON (RECOMMENDED)

8.1. Determine the individual difference between split sample test results (X_{dif}) for each split sample.

$$x_{dif} = x_A - x_B$$

Where:

X_{dif} = Individual difference between split sample test results.

X_A = Party A's individual test value.

X_B = Party B's individual test value.

Note: This difference is not the absolute difference, it is the algebraic difference. The subtraction (i.e., Party A's test value minus Party B's test value) is performed in the same direction for every set of split samples.

8.2. Determine the mean of the differences between the split sample test results, calculated as follows:

$$\overline{X}_{dif} = \frac{(x_{dif1} + x_{dif2} + \ldots x_{dif\,n})}{n}$$

Where:

$\overline{X}_{dif}$ = Mean of the differences between the split sample test results.

n = Number of split samples.

8.3. Compute the standard deviation of the differences between the split sample test results, calculated as follows:

$$S_{dif} = \sqrt{\frac{\sum(x_{dif} - \overline{X}_{dif})^2}{n - 1.0}}$$

Where:

S_{dif} = Standard deviation of the differences between the split sample test results.

8.4. Compute the paired t-statistic (t_{pair}) using the following equation:

$$t_{pair} = \frac{|\overline{X}_{dif}|}{\left(\frac{S_{dif}}{\sqrt{n}}\right)}$$

8.5. Compute the degrees of freedom (df). The degrees of freedom are the number of sample pairs (n) minus one, used to compute the t-statistic.

$$df = n - 1$$

8.6. Determine the two-tailed probability distribution (P-value) for the 2 data sets using the degrees of freedom (df) for a two-tailed t-test.

8.7. Compare the P-value to α (0.05).

8.7.1. If the P-value is greater than α, the paired t-test passes. There is reason to believe that the paired test results are similar and it can be concluded they are from the same population. (i.e., no differences in testing has been identified)

8.7.2. If the P-value is less than α, the paired t-test fails. The difference between the paired test results of the split samples is greater than is likely to occur from chance and therefore the results are not similar. (i.e., difference in testing has been identified)

9. D2S COMPARISON

9.1. Determine the individual difference between split sample test results (X_{dif}).

$$x_{dif} = x_A - x_B$$

Where:

X_{dif} = Individual difference between split sample test results.

X_A = Party A's individual test value.

X_B = Party B's individual test value.

9.1.1. For aggregates, compare X_{dif} to the QA Manual Table 390.01.1.

9.1.2. For concrete, compare X_{dif} to the QA Manual Table 390.01.2.

9.1.3. For HMA, compare X_{dif} to Table 1 in this method.

9.1.4. For all other materials, compare X_{dif} to the precision statement in the test method performed (if available).

9.2. If X_{dif} is greater than the individual split sample acceptable range, they are considered outside of allowable tolerances. (i.e., a difference in testing has been identified)

Table 1 – Allowable HMA Single Individual Split Sample Variations

Test Method	Quality Characteristic	Acceptable Range of Split Sample Results
AASHTO T 308	Asphalt Content (%)	0.15
AASHTO T 30	95 to 100% passing a sieve	1.6
	40 to 94% passing a sieve	3.5
	25 to 39% passing a sieve	2.4
	10 to 24% passing a sieve	2.3
	5 to 9% passing a sieve	1.6
	2 to 4% passing a sieve	1.2
	0 to 1% passing a sieve	0.9
AASHTO T 209	G_{mm}	0.012
AASHTO T 166	G_{mb}	0.017
WAQTC TM 13	G_{se}	0.012
	P_a	0.30
	VMA	0.30
	DP	0.15

10. EXAMPLES

10.1. A Department lab and a Contractor lab performed a split sample comparison on 5 samples. The table below presents the split sample test results for theoretical maximum specific gravity (G_{mm}) to determine whether a difference exists between the Department's and the Contractor's results.

Example 10.1 – AASHTO T 209 Results			
Split Sample Number	Contractor's Results	Department's Results	Difference (X_{dif})
1	2.396	2.405	-0.009
2	2.368	2.374	-0.006
3	2.377	2.381	-0.004
4	2.395	2.390	0.005
5	2.381	2.379	0.002
		$\bar{X}_{dif}$ =	-0.0024
		S_{dif} =	0.00577
		P-value =	0.405

10.1.1. Conclusion: Since the calculated P-value is greater than 0.05 (Section 8) and the X_{dif} of each test is less than the individual split sample acceptable range (Section 9), the split sample comparison indicates that there is not a significant difference in testing between these labs.

Idaho Standard Practice for

Nuclear Density Gauge Correlation

IDAHO Designation: IR-154-21

1. SCOPE

1.1. This Standard Practice is used to determine the nuclear density gauge correlation for each nuclear gauge used for acceptance testing.

1.2. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the user's responsibility of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations before use.*

2. REFERENCE DOCUMENTS

2.1 *AASHTO Standards*

- FOP for T 355, Method A, In-Place Density of Asphalt Mixtures by Nuclear Methods
- FOP for R 67, Sampling Asphalt Mixtures After Compaction (Obtaining Cores)
- FOP for T 166, Method A, Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface Dry Specimens
- T 331, Bulk Specific Gravity and Density of Compacted Asphalt Mixtures using Automatic Vacuum Sealing Method

2.2 *Idaho Standards*

- Idaho IR 148, Stratified Random Sampling

3. SUMMARY OF THE PRACTICE

3.1. The bulk specific gravity (G_{mb}) of the core is a physical measurement of the in-place asphalt mixture and can be compared with the nuclear density gauge readings. Comparing the core value to the corresponding gauge values, a correlation can be established.

3.2. The correlation can then be used to adjust the gauge readings to the in-place density of the cores. The core correlation is gauge-specific and must be determined without traffic allowed on the pavement between nuclear density gauge readings and obtaining the core. When using multiple nuclear density gauges, each gauge will be correlated to the core locations before removal of the core.

3.3. Correlation of the nuclear density gauge with pavement cores must be made on the first lot of paving (within 24 hours) or anytime a change of the testing conditions occurs (see Section 8).

Note: *The Department must correlate all gauges that will be used for acceptance testing for each gauge correlation section.*

4. APPARATUS

4.1. *Density Gauge*— With accessory equipment as specified in FOP for AASHTO T 355.

4.2. *Coring Equipment*— With accessories as specified in FOP for AASHTO R 67 for collecting 6-inch diameter pavement cores.

4.3. *Measuring Device*— Approved measuring device capable of measuring gauge correlation section and sub-section lengths.

5. TERMINOLOGY

5.1. *Gauge Correlation Section*— Pavement placed during production paving that is used to correlate the nuclear density gauge(s) used for acceptance. The gauge correlation section must be constructed to the same placement width and thickness and on the same underlying material as the course it represents.

5.2. *Gauge Correlation Sub-Section*— A portion of the gauge correlation section in equal-length to other sub-sections that is represented by a single test location.

5.3. *Job Mix Formula* (JMF)— End result of a successful mix design that is the Contractor's selected mixture to be produced and includes the aggregate gradation and asphalt binder percentage.

5.4. *Test Location*— The stratified random location within a gauge correlation sub-section where testing will be performed.

5.5. *Test Site Density*— The uncorrected density reading taken on the compacted pavement after finish rolling is complete at a test site for correlation to cores. It is obtained by using the test procedure specified in FOP for AASHTO T 355 without applying a gauge correlation factor. Filler material must be applied as required in the procedure before taking test site density readings.

5.6. *Stratified Random Sampling* —Method used to ensure the specimens for the sample are obtained from throughout the test section, and are not concentrated in one portion of the test section. All sample locations will be determined by the Engineer using a random sampling system in accordance to Idaho IR 148.

6. PROCEDURE

6.1. *Determine the gauge correlation section and testing locations as follows:*

6.1.1. Gauge correlation for each correlation section will be within the first 1,000 tons and consist of a minimum of 1,000 feet of production and anytime there is a change of conditions (Section 8).

6.1.2. Divide the total length of the gauge correlation section into 10 equal-length sub-sections.

6.1.3. Identify a test location for each gauge correlation sub-section in accordance with IR 148.

6.2. *Determine the in-place density using the nuclear density gauge for each test location as follows:*

6.2.1. Determine in-place density using the nuclear density gauge(s) for each test location in accordance with FOP for AASHTO T 355.

Note: *It is recommended that the Contractor's QC personnel also determine in-place density at each test location to develop a correlation factor for QC purposes.*

6.2.2. The ITD-820 form will be used by the Department personnel as the original source document to record the test site densities for each gauge at each test location.

6.3. *Determine the bulk specific gravity (G_{mb}) for each sub-section as follows:*

6.3.1. After the pavement has cooled sufficiently to avoid deformation during coring, the Contractor will obtain 1 core at each test site from each segment in accordance with FOP for AASHTO R 67 in the Engineer's presence. The Engineer will immediately receive the cores. The relative position of the core to the nuclear gauge readings for each test location is illustrated in Figure 1.

Note: The Contractor may core for quality control purposes.

6.3.2. Determine the G_{mb} of each core in accordance with FOP for AASHTO T 166 Method A or AASHTO T 331.

Note: *Determine the G_{mb} of all cores for the gauge correlation section using the same procedure.*

6.3.2.1. Determine the bulk density of the each core by multiplying G_{mb} by 62.245 lb/ft^3 and report the value to the nearest 0.1 lb/ft^3.

6.3.3. The ITD-820 form from Section 6.2.2 will be used by the Department personnel as the chain of custody documentation and the original source document used to record the G_{mb} of each core.

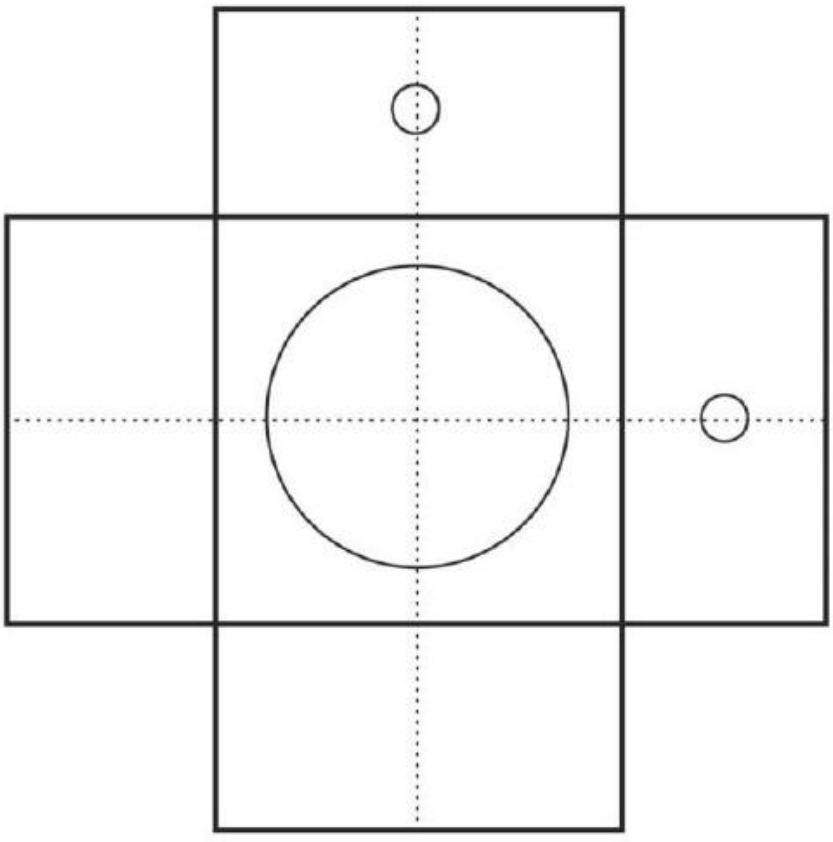

Figure 1. *Footprint of the gauge test site. Core location in the center of the test site.*

7. CALCULATION OF CORRELATION

7.1. *Calculate a correlation factor for the nuclear gauge reading as follows*:

7.1.1. Calculate the difference between the core density and nuclear gauge density at each test site to the nearest 0.1 lb/ft^3. Calculate the average difference and standard deviation of the differences for the entire data set to the nearest 0.1 lb/ft^3.

7.1.2. If the standard deviation of the differences is equal to or less than ±2.5 lb/ft^3, the correlation factor applied to the nuclear density gauge reading will be the average difference calculated in Section 7.1.1.

7.1.3. If the standard deviation of the differences is greater than ±2.5 lb/ft^3, the test location with the greatest variation from the average difference must be eliminated from the data set, and the data set properties and the correlation factor recalculated following Sections 7.1.1 and 7.1.2.

If the standard deviation of the modified data set still exceeds the maximum specified in Section 7.1.2, additional test sites will be eliminated from the data set, and the data set properties and the correlation factor will be recalculated following Sections 7.1.1 and 7.1.2. If the data set consists of less than 5 test locations, additional test sites must be established.

8. CHANGE OF CONDITIONS

8.1. A correlation factor is valid only for:

8.1.1. A specific project.

8.1.2. A specific JMF.

8.1.3. For the specific nuclear density gauges correlated.

8.1.4. Specific gauge thickness setting.

8.1.5. Specific gauge mode setting.

8.1.6. Specific underlying material.

8.1.7. Specific pavement thickness.

8.1.8. A specific pavement lift.

8.1.9. A specific calendar year.

8.2. Re-correlation of the gauge must occur when any of the above conditions change.

9. REPORT

9.1. The Department will report the results of testing on the ITD-820 form.

9.2. Project information.

9.3. Make, model, and serial number of the nuclear density gauge.

9.4. Stratified, random numbers.

9.5. Location of test and thickness of layer tested.

9.6. Underlying material.

9.7. Mixture type.

9.8. JMF identification.

9.9. Date.

9.10. Density standard.

9.11. Gauge readings.

9.12. Name and signature of individual performing AASHTO T 355.

9.13. Name and signature of individual performing AASHTO R 67.

9.14. Name and signature of individual performing AASHTO T 166 or T 331.

9.15. Nuclear gauge correlation to 0.1 lb/ft^3.

Idaho Standard Practice for

Procedures for Checking Asphalt Mix Plant Calibrations

IDAHO Designation: IR-155-21

1. SCOPE

1.1. These procedures are used in conjunction with the Department's Standard Specifications for Highway Construction for checking asphalt drum mix plants to assess plant conformance. This procedure is used for original plant approval, annual plant approval, after plant relocation (if necessary), or trouble shooting. If, at any time the Engineer has reason to believe plant calibration should be checked and provides documentation supporting the reason(s), only the meter(s) or scale(s) in question will be considered verified if the indicated metered or scaled amount, at a production rate within the range stated in the Plant Quality Control Plan, is confirmed when within ±1.0% of the actual scaled or measured amount. Some variations from this procedure may be necessary depending upon the configuration of the plant, including volumetric plants.

1.1.1. Volumetric plants are defined as those plants that meter some or all constituent materials using volumetric metering, such as a volumetric asphalt meter rather than a mass flow meter, or aggregate feeder gate and conveyor speed settings rather than individual belt scales.

1.2. All calibration procedures stated below are required to be completed in the Department's presence for plant verification, unless the Department waives, in writing, witness of calibration. Documentation will be provided to the Department that the tests have been completed and meet specification tolerances. If the Engineer requests how to read and interpret the plant information provided, the Contractor will inform the Engineer.

1.3. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the user's responsibility of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations before use. All individuals must comply with the Contractor's safety program requirements at the plant.*

2. MEASURING DEVICES

2.1. Any weighing device used for payment must meet Section 109.01.A.6.b.

2.2. All measuring devices must meet the current edition of the National Institute of Standards and Technology Handbook 44, except as modified by Table 2.1. The Contractor must provide all personnel and equipment for calibrating measuring devices.

2.3. Balance and zero conditions of scales must be checked daily, and at any other time requested by the Department. The Engineer may, at any time, direct that any measuring device be tested by the producer or an outside agency if there is any doubt about the accuracy of the measuring device. Certificates of inspection must be posted in a prominent place in the plant, and a copy must be promptly submitted to the Engineer.

2.4. Production plant tolerances must meet the following table:

Table 2.1

Material	Measurement Tolerance [a]	Unit of Measure
Aggregate	0.2%	Weight
RAP	0.2%	Weight
Asphalt	0.2%	Weight or Volume
Additives	0.5%	Weight or Volume

[a] Measurement tolerance equals the smallest scale or meter graduation divided the quantity or volume measured (e.g., 20-pound graduations / 10,000 pounds measured = 0.2%)

3. BELT SCALES ON COLD FEEDERS

3.1. Use a certified scale(s) to check each individual belt scale, including RAP, at its high production rate and low production rate, as stated in the Plant Quality Control Plan. The Contractor will determine the amount of material needed to ensure plant calibration is accurate within ±1.0%. A minimum of 2 tests will be run at each range to check for repeatability and eliminate any outliers.

3.2. ***Plant Test Procedure:***

3.2.1. Each bin and its belt scale are tested individually.

3.2.2. Some plants may have to use a zero percent moisture input to ensure accuracy.

3.2.3. Check the belt scale accuracy at both high range and low range by running material over the belt scale and checking the indicated computer weight (accumulator) against the actual net weight of the material in the truck.

3.2.4. The allowable error must not exceed ±1.0% from the certified truck scale weight.

3.2.5. The final belt scale (totalizer) will be checked at its high production rate and low production rate, as stated in the Plant Quality Control Plan. The Contractor will determine the amount of material needed to ensure plant calibration is accurate within ±1.0%

4. BELT SCALE ON VOLUMETRIC PLANTS

4.1. ***Plant Test Procedure:***

4.1.1. The final belt scale will be tested using two high-production rate runs and two low-production rate runs as stated in the Plant Quality Control Plan. The allowable error must not exceed ±1.0%.

5. FEEDER BINS ON VOLUMETRIC PLANTS

5.1. Use a certified scale(s) to check each individual volumetric feeder, including RAP, gate setting and underbelt speed, at its high production rate and low production rate, as stated in the Plant Quality Control Plan. The Contractor will determine the amount of material needed to ensure plant calibration is accurate within ±1.0%. A minimum of 2 tests will be run at each range to check for repeatability and eliminate any outliers.

5.2. Test Procedure:

5.2.1. Each bin and its gate setting(s) and underbelt speed(s) are tested individually.

5.2.2. Record the gate setting and underbelt speed at both high range and low range by running material over the belt scale and recording the indicated computer weight or the actual net weight of the material in the truck divided by the run time and record the tons per hour for those settings.

6. ASPHALT METER ACCURACY

6.1. The asphalt meter is checked at its estimated high production rate and low production rate, as stated in the Plant Quality Control Plan. Run 2 checks at each rate.

6.2. ***Test Procedure:***

6.2.1. Enter the correct specific gravity or lb/gal and temperature for the liquid asphalt being used for the test into the computer system. The Contractor will determine the amount of material needed to ensure plant calibration is accurate within ±0.5%. Follow the manufacturer's recommendation for calibration of the asphalt meter or the asphalt metering system. The calibration tank must be certified or verified with test weights before calibrating the asphalt meter.

6.2.2. Check the asphalt meter accuracy at the high range and low range by running material through the meter and checking the indicated computer weight (accumulator) against the actual net weight of the material in the truck or calibration tank. For volumetric meters, convert the actual net weight to volume using the specific gravity and correcting for temperature.

A minimum of 2 test runs at the high production rate and low production rate will provide repeatability and eliminate any outliers.

7. BAGHOUSE FINES RETURN SYSTEM

7.1. If baghouse fines are returned, the returns will be in accordance with the quality control plan.

8. MINERAL FILLER SYSTEM

8.1. If mineral filler (e.g., lime, other mineral additive) is added separately and does not come into contact with the other aggregates until it is in the drum mixer, it is handled in the same manner as the asphalt meter check.

Note: *This is not the baghouse fines return system. The fines in the baghouse fines return system has contact with the other aggregates before reaching the drum mixer.*

8.2. *Materials and Equipment:*

8.2.1. Calibration vessel, container, or truck with sufficient capacity for calibrating mineral filler.

8.3. *Test Procedure:*

8.3.1. The mineral filler is pumped through its meter into a tared calibration vessel where it is weighed on an approved scale and compared against the quantity as recorded by the plant automation. The Contractor will determine the amount of material needed to ensure mineral filler calibration is accurate within ±5.0%.

9. ANTI-STRIP ADDITIVE CALIBRATION

9.1. Anti-stripping additive calibration check must be performed in a manner satisfactory to the Engineer; at both the high and low production rates and all percentages of additive addition in accordance with the Plant Quality Control Plan. The Contractor will determine the amount of material needed to ensure anti-strip additive calibration is accurate within ±0.5%.

10. NO-FLOW SYSTEM

10.1. Aggregate, RAP, mineral filler system, and asphalt interlocks must issue an audible alarm if a no-flow situation occurs.

10.2. *Test Procedure:*

10.2.1. The no-flow test will be run on each cold feed bin including RAP.

10.2.2. Material will be placed in the bin, and the bin will be allowed to run empty. An audible alarm must immediately occur.

10.2.3. The asphalt and mineral filler systems will be placed in a "No-Flow" condition or otherwise halted and an audible warning must immediately occur.

11. REPORTS

11.1.1. After the plant calibration and/or verification is complete, the Contractor will supply the Engineer with a printout of all calibration numbers which verify the calibration of the system and show that it meets all Department specifications. The Engineer will sign and date a copy for the Contractor to retain.

11.1.2. The Contractor will supply upon request either a display or printout of all calibration numbers that verify the calibration of the system has not changed since the annual calibration and still meets Department specifications.

Idaho Standard Practice for

Determining Rolling G_{mm}

IDAHO Designation: IR-156-21

1. SCOPE

1.1. This Standard Practice is used to determine the maximum theoretical specific gravity (G_{mm}) used for calculating percent compaction of in-place density during production paving.

1.2. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the user's responsibility of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations before use.*

2. REFERENCE DOCUMENTS

2.1 *AASHTO Standards*

- FOP for T 209, Bowl Method, Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
- FOP for T 355, In-Place Density of Asphalt Mixtures by Nuclear Method
- FOP for R 97, Sampling Asphalt Mixtures
- FOP for R 47, Reducing Samples of Hot Mix Asphalt to Testing Size

2.2 *Idaho Standards*

- Idaho IR 148, Stratified Random Sampling
- Idaho IR 125, Acceptance Test Strip for Hot Mix Asphalt (HMA)

3. SUMMARY OF THE PRACTICE

3.1. The maximum theoretical specific gravity (G_{mm}) for determining the percent compaction will be determined using a rolling, consecutive 2-lot average (i.e., the most recent 2 completed lots) of the Department's acceptance test results. For the first 2 lots of production paving, the average G_{mm} from the test strip is used for determining percent compaction.

4. PROCEDURE

4.1. *Determine the rolling G_{mm} for each lot as follows:*

4.1.1. For the first 2 lots of production paving, use the average of all Department acceptance G_{mm} results from the test strip.

Note: The Department must provide the G_{mm} preliminary results before production the next day to the Contractor.

4.1.2. For all other lots of production paving, use the average of all Department acceptance G_{mm} results from the previous 2 lots.

Note: For previously used mix designs, use the average of Lot 1 results of the current project for the first 2 lots of production paving.

4.2. The rolling G_{mm} established in this procedure is used for performing the calculations in the FOP for AASHTO T 355 for the current lot.

5. PROCEDURE FOR TEST RESULT CHALLENGE

5.1. When test result challenge resolution is performed in accordance with Subsection 106.07 of the Standard Specifications, the original Department acceptance test results are replaced with the challenge resolution test results and the rolling G_{mm} for the subsequent lots will be re-determined.

5.2. The rolling G_{mm} established in 5.1 will be used for performing the calculations in place of the G_{mm} determined in Section 4.

6. EXAMPLE

6.1. The table below presents the G_{mm} results from the samples for the first 4 completed lots of production paving. Lot 1 was the test strip. The rolling G_{mm} for the first 5 lots are calculated as follows:

6.1.1. Lot 1 rolling G_{mm} = 2.402 (average of lot 1 combined G_{mm})

6.1.2. Lot 2 rolling G_{mm} = 2.402 (average of lot 1 combined G_{mm})

6.1.3. Lot 3 rolling G_{mm} = 2.399 (average of lot 1 and lot 2 combined G_{mm})

6.1.4. Lot 4 rolling G_{mm} = 2.398 (average of lot 2 and lot 3 combined G_{mm})

6.1.5. Lot 5 rolling G_{mm} = 2.392 (average of lot 3 and lot 4 combined G_{mm})

Lot Number	Sample Number	Combined G_{mm}
1	1	2.396
1	2	2.410
1	3	2.401
2	4	2.395
2	5	2.419
2	6	2.389
2	7	2.391
2	8	2.392
3	9	2.381
3	10	2.422
3	11	2.398
4	12	2.379
4	13	2.388
4	14	2.391
4	15	2.385

Idaho Standard Practice for

Verification of Ignition Oven Correction Factor Specimen Materials by Gsa Comparison

IDAHO Designation: IR-161-25

1. SCOPE

1.1. This method sets forth the accepted procedures for preparing specimens and testing to verify the materials originally submitted for the bulk stone specific gravities (Gsb) testing are the same materials being used to create the Ignition Oven Correction Factor Specimens (IOCFS).

1.2. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use*.

2. REFERENCE DOCUMENTS

2.1. *Idaho Standards*

- ITD Standard Specifications for Highway Construction.
- Contract specific 405 special provisions.
- Contract specific Standard Specifications for Highway Construction Supplemental Specifications.
- Contract specific Quality Assurance Manual.
- WAQTC qualifications
- FOP WAQTC AASHTO R 76

2.2. *WAQTC AASHTO Standards*

- WFOP AASHTO T 144

3. TERMINOLOGY

3.1. For the purpose of this test method, the term "Contractor" shall be defined as any individual(s) or company interested in investigating a materials source with the intent of meeting Idaho Transportation Department specifications.

4. MATERIALS AND PREPARATION

4.1. The samples will be taken from the same sorted and fractionated aggregates being used in the mix design process and that are being used to create the IOCFS.

5. PREPARING THE SAMPLE

5.1. The Contractor or Contractor's representative is responsible for preparing the sample of materials for the Gsa verification.

5.1.1. The sampler must be qualified as a Superpave Mix Design Technician (SPMDT) or currently qualified for WAQTC Aggregate Testing Technician. No other individual qualification is needed.

5.1.2. The contractors will identify and label each container by source, stockpile and by sieve designation.

5.1.3. The Department will randomly select a single **fine aggregate** stockpile.

5.1.4. The contractor's representative will batch each sample separately and according to the selected stockpile's target gradation as defined in the JMF and batching tolerances in Table 5.1 Batching Tolerances.

Table 5.1 Batching Tolerances

Sieve Size	Allowable Difference
Larger than No. 8	± 3.0 %
No 8 Sieve	± 2.0 %
Smaller than No 8 and Larger than No 200	± 1.5 %
Smaller than No 200 Sieve	± 1.0 %

5.1.5. Blend two separate samples; each with a minimum of 3,000 g from the stockpile material that has been separated by sieve size. The Engineer will randomly select and identify the samples as 1- Gsa Verification and 2 - Gsa Verification Dispute.

6. VERIFICATION TESTING

6.1. Verification testing will be performed by the same lab that completed the original stockpile Gsa/Gsb testing.

6.2. Determine the Gsa for the Verification Sample (Sample 1) following the procedures outlined in IT 144.

6.3. Compare the resulting Gsa value to the originally published Gsa value for the corresponding stockpile/source.

6.4. For stockpiles containing more than 10% retained on the #4 sieve, the original Gsa value may be a harmonic mean.

6.5. The maximum allowable difference between the Verification Gsa and the original published Gsa is:

IT 144: ≤ 0.015

6.6. If the difference between the Verification Gsa and the original Gsa is less than or equal to the tolerance, the Gsa is considered verified.

6.7. If the difference is greater than the tolerance, proceed to Dispute Testing.

7. DISPUTE PROCEDURE

7.1. Dispute testing may be performed concurrently with the verification testing. Logistics for this testing must be coordinated during the pre-batch meeting.

7.2. Determine the Gsa for the Verification Dispute using IT-144.

7.3. The Info Only sample (3) will be tested in the same laboratory as the original Verification sample and, if possible, by the same technician(s) using the same equipment. The results of this testing will be used for laboratory quality assurance only.

7.4. The Verification Dispute sample will be tested in a separate, qualified laboratory that did not conduct the original verification. This lab does not need to be AASHTO accredited.

7.5. If the difference between the Verification Dispute Gsa and the original Gsa values are less than or equal to the tolerance given in 6.5, the Gsa is verified.

7.6. If the difference is greater than the tolerance given in 6.5, the Gsa is not verified and all IOCFS materials shall be rejected and the Contractor must resample from the appropriate stockpiles and prepare new IOCFS specimens.

8. REPORTING

8.1. The calculations and results of this verification will be reported on the form ITD 4666.

9. NOTES:

9.1.1. No effort to recreate the original stockpile gradation is necessary.

9.2. The Contractor is encouraged to witness the Dispute Testing.

9.3. Verification testing should, when feasible, be performed in the same lab that conducted the original Gsa testing.

Idaho Standard Practice for

Verification of Ignition Oven Correction Factor Specimen "Blank" Gradation

IDAHO Designation: IR-162-25

1. SCOPE

1.1. This process governs the verification of "blank" Ignition Oven Correction Factor Specimens (IOCFS) for all ITD (and consultant acceptance) laboratories involved in determining aggregate correction factors. The Contractor's QC laboratory is not included.

1.2. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. REFERENCE DOCUMENTS

2.1. *Idaho Standards*

- ITD Standard Specifications for Highway Construction.
- Contract specific 405 special provisions.
- Contract specific Standard Specifications for Highway Construction Supplemental Specifications.
- Contract specific Quality Assurance Manual.
- WAQTC qualifications
- AASHTO T 308

2.2. *WAQTC AASHTO Standards*

- WFOP AASHTO T 27/11
- WFOP AASHTO T 308

3. TERMINOLOGY

3.1. For the purpose of this test method, the term "Contractor" shall be defined as any individual(s) or company interested in investigating a materials source with the intent of meeting Idaho Transportation Department specifications

3.2. "Blank" follows the description given in FOP AASHTO T 308 and AASHTO T 308.

3.3. Batch (noun): a group or set of similar objects prepared at the same time, distributed at the same time and in the case of this method, expected to be verified at the same time

3.4. Supplementary "Blanks" (noun): an additional batch of "blanks" and IOFCS not verified with the originally verified batch.

4. BLANK SELECTION AND USE

4.1. A maximum of three blanks will be used for verification of one batch of "blanks."

4.2. The three "blanks" will typically be the "blanks" constructed for the Test Strip laboratory, Dispute laboratory and the Acceptance laboratory.

4.3. If an additional batch of IOCFS are created separately from a verified batch, a minimum of three "blanks" will be required and the verification process begun again.

5. ADDITIONAL "BLANKS" FROM A VERIFIED BATCH

5.1. The outcome of this verification process determines the acceptability of any number "blanks" and IOCFS made for additional laboratories if the "blanks" are from the verified batch. No additional process or testing is needed to verify these additional "blanks."

6. VERIFICATION TOLERANCE:

6.1. Use the tolerances given in the table "Batching Tolerances" from the project specifications to compare the "blank" gradation to the JMF in determining the acceptability of the "blank" samples.

7. VERIFICATION PROCESS

7.1. The "blank" designated for the Test Strip laboratory will be designated as the primary blank.

7.2. The blanks designated for the other two laboratories involved (typically Acceptance and Dispute laboratories) will be designated as the secondary blanks

7.3. One "blank" will be selected as the primary "blank." The remaining two blanks will be designated as the secondary "blanks."

7.4. Test the primary blank using FOP AASHTO T 27/11.

7.5. All the "blanks" for all the laboratories represented with this batch are verified if the primary blank gradation meets the required tolerances. No further "blank" verification is required for the complete batch of "blanks" and IOFCS.

7.6. If the primary blank does not meet the tolerance, perform FOP AASHTO T 27/11 on the remaining two blanks.

7.7. All the "blanks" for all the laboratories represented with this batch are verified if both secondary "blank" gradations meet the required tolerances. No further "blank" verification is required for the complete batch of "blanks" and IOFCS.

7.8. If either of the two secondary blanks do not meet the required tolerances, all blanks and ICOFS specimens from this batch must be discarded and the entire process of creating the IOCFS and “blanks” must be repeated.

8. REPORTING

8.1. The calculations and results of this verification will be reported on the form ITD 4666.

9. “BLANK” VERIFICATION TESTING LABORATORIES

9.1. Blank verification testing will be conducted in the laboratory where the test results will be applied, in order to determine the aggregate correction factor, i.e., the “blank” to be used in the test strip laboratory will be tested in the Test Strip Laboratory.

9.2. For supplementary batches, verification testing of the primary blank will be performed in the acceptance laboratory. Verification testing for Supplementary blanks will be performed in either the test strip laboratory or the dispute laboratory."

Idaho Standard Practice for

QUALITY CONTROL PLAN (QCP) DEVELOPMENT AND IMPLEMENTATION

IDAHO Designation: IR-158-21

1. SCOPE

1.1. The purpose of this guide is to establish minimum requirements for the Contractor's quality control system and quality control plan (QCP). It is intended that these requirements be used as a procedural guide in detailing the inspection, sampling, and testing deemed necessary to maintain compliance with the Department's specifications.

2. GENERAL REQUIREMENTS

2.1. As stated in the Standard Specifications for Highway Construction, a QCP must be developed by the Contractor/producer and submitted in writing to the Engineer at the preconstruction conference. Acceptance of the QCP by the Engineer will be contingent upon its concurrence with the Standard Specifications and this standard method. For this reason, the QCP will clearly describe the methods by which the quality control program will be conducted. For example, the items to be controlled, tests to be performed, testing frequencies, sampling locations, and techniques will be included with each item listed separately. Also include a table stating what actions will occur when test results indicate specification limits are approached or exceeded. See Table 1 at end of this guide for an example. Also, a detailed plan of action regarding disposition of non-specification material will be included. Such a plan will provide for immediate notification of all parties involved in the Quality Assurance process in the event nonconforming situations are detected. Example 1. Quality Control Plan may be used as an example.

2.2. Inspection and testing records must be maintained, kept current, and made available for periodic review by Department personnel throughout the life of the contract. All other documentation (e.g., date of inspections, tests performed, temperature measurements, and accuracy, calibration or re-calibration checks performed on production of testing equipment) will be recorded.

2.3. The Contractor will maintain standard equipment and qualified personnel in accordance with the contract and specification requirements for the item(s) being produced.

3. QUALITY CONTROL PLAN

3.1. Operation quality control plans will be submitted for each contract/project to the Engineer for approval. Distribution of the approved quality control plans will be made by the Engineer.

3.2. Follow Example 1. Quality Control Plan as a general guideline but at a minimum include the following:

3.2.1. Contract bid item covered by the quality control plan.

3.2.2. Sampling location and techniques.

3.2.3. Sampling plan.

3.2.4. Tests and test methods.

3.2.5. Testing frequencies.

3.2.6. Testing forms to be used.

3.2.7. Inspection frequencies and areas of inspection.

3.2.8. Detailed description of production and placement equipment and methods.

3.2.9. Detailed calibration processes and procedures (if applicable)

3.2.10. Documentation procedures, including:

3.2.10.1. Inspection and test record requirements and document management.

3.2.10.2. Temperature measurements.

3.2.10.3. Accuracy, calibration, or recalibration checks performed on production or testing equipment.

3.2.11. QC personnel, including the company official ultimately responsible for the quality of work.

4. ADDENDA TO THE QUALITY CONTROL PLAN

4.1. Addenda are defined as an addition or deletion to the QCP. Each page of the QCP that is revised is required to include the project key lead number, bid item number, date of revision, and means of identifying the revision. The addenda are required to be signed and dated by the Contractor's representative who is responsible for insuring that all items of work will comply with Department Specifications and subsequently signed and dated when approved by the Engineer.

EXAMPLE 1

¾” Aggregate Type B Base Quality Control Plan

Date:
To: (RESIDENT ENGINEER)
From: (CONTRACTOR(s) NAME)
Subject: 3/4” Aggregate Type B for Base Quality Control Plan

1. Project Information

1.1. We are submitting our Quality Control Plan, developed in accordance with Idaho IR 158 for:

Project Number:_____
Lead Key Number:_____
Bid Item Number:_____
Date Submitted:_____

1.2. (NAME) will be responsible for insuring that all items of work will comply with the contract and Department specifications.

2. Material Source

2.1. General Information:

Source Number:_____

Address of Source:_____

2.2. The aggregate source operation is under the direction of (NAME) who can be contacted at (ADDRESS, EMAIL, AND TELEPHONE).

2.3. (DETAILED DESCRIPTION OF THE PRODUCTION PROCESS)

3. Delivery and Placement

3.1. The field operation is under the direction of (NAME) who can be contacted at (ADDRESS, EMAIL, AND TELEPHONE).

3.2. (LIST OF EQUIPMENT TYPE, YEAR, MAKE, MODEL)

3.3. (DETAILED DESCRIPTION OF THE PLACEMENT PROCESS)

4. Quality Control Sampling and Testing,

4.1. The laboratory performing quality control testing is (LAB QUALIFICATION NUMBER), located at (LOCATION).

4.2. The quality control program is under the direction of (NAME OF PERSON), who can be contacted at (ADDRESS, EMAIL, AND TELEPHONE).

4.3. During the production operations of the aggregate we will perform at a minimum quality control tests per attached schedule. Sampling and testing will be the responsibility of (NAME(s), WAQTC number (NUMBER(s)).

4.4. During the placement operations of the aggregate (NAMES) will perform, at a minimum, quality control tests in accordance with the attached schedule. Also attached are the proposed method to select locations and/or times for sampling.

4.5. All testing will be completed by (NAME(s)), (WAQTC NUMBER(s)), within (HOURS) hours of sampling and all original documentation of results will be completed on the attached original documentation forms.

4.6. Testing reports and original source documents will be reviewed and checked by (NAME(s)), (WAQTC NUMBER(s)), within (HOURS) hours of testing being completed. All reporting will be completed on the attached forms.

5. Records.

5.1. Testing reports and all backup documentation will be located at (LOCATION) for review by the Department between the hours of (TIME) and (TIME) during the life of the contract/project.

5.2. Testing reports and all backup documentation will be located at (LOCATION) for review by the Department between the hours of (TIME) and (TIME) for (YEARS) after the completion of the project.

6. Notifications.

6.1. Any material found to be noncomplying will be addressed by (NAME) who will notify the Engineer immediately.

6.2. (NAME) will notify all appropriate Department personnel at least 48 hours before any work is to begin.

7. Nonconforming Material.

7.1. (STATE THE PROCESS FOR DISPOSITION OF NONCONFORMING MATERIAL)

Table 1: Example of QC Actions to Implement When Approaching or Exceeding Specification Limits

Test Description	Test Method	QC Action Limits		Situation		Action
		Single Test	4-Point Moving Avg. or Daily Avg.	Single Test	4-Point Moving Avg. or Daily Avg.	
Aggregate Gradation	FOP for AASHTO T 27 and AAHTO T 11	NA	Approaching Limit	5 percent on +#4 3 percent on -#4	Approaching Limit	Increase frequency of tests and prepare for process modification
Sand Equivalent	FOP for AAHTO T 76	NA	Approaching Limit	NA	Approaching Limit	Increase frequency of tests and prepare for process modification

Note: When 2 consecutive test results fail or if any of the 4-point moving average values fail, production will be suspended and corrective action will be taken. The process will be corrected before production resumes.

Idaho Standard Practice for

QUALITY CONTROL PLAN (QCP) REVIEW PROCESS

IDAHO Designation: IR-159-19

1. SCOPE

1.1. The purpose of this process is to establish a standard for reviewing the Contractor's quality control plan (QCP).

2. REFERENCE DOCUMENTS

2.1. Idaho Standards:

- IR 152, Asphalt Mixtures Quality Control Plan (QCP) Development and Implementation
- IR 155, Procedures for Checking Asphalt Drum Mix Plant Calibrations
- IR 158, Quality Control Plan Development and Implementation

2.2. Standard Specifications for Highway Construction

2.3. Quality Assurance Manual

2.4. Laboratory Operations Manual

3. GENERAL REQUIREMENTS

3.1. As stated in the Department's Standard Specifications for Highway Construction, a QCP must be developed in accordance with Idaho IR 158 and in concurrence with the Standard Specifications applicable to the bid item by the Contractor/producer and submitted in writing to the Engineer at the preconstruction conference. Acceptance of the QCP by the Engineer will be contingent upon its concurrence with the Standard Specifications and this standard method.

4. MINIMUM REQUIREMENTS OF A QUALITY CONTROL PLAN

4.1. Requirements shown in Idaho IR 158.

4.2. Subsection 106.03.A.2 of the Standard Specifications

4.3. Requirements of the contract bid item covered by the quality control plan (e.g., subsection 405.03.C of the Standard Specifications).

4.4. Sampling location and techniques.

4.5. Sampling plan.

4.6. Tests and test methods.

4.7. Testing frequencies.

4.8. Testing forms to be used, including examples.

4.9. Inspection frequencies and areas of inspection.

4.10. Detailed description of production and placement equipment and methods.

4.11. Detailed calibration processes and procedures (if applicable).

4.12. Documentation procedures, including:

4.12.1. Inspection and test record requirements and document management.

4.12.2. Temperature measurements.

4.12.3. Accuracy, calibration, or recalibration checks performed on production or testing equipment.

4.13. QC personnel, including the company point of contact responsible for the quality of work.

4.14. Processes for addressing non-conforming material.

5. REVIEW OF THE QUALITY CONTROL PLAN

5.1. Review the quality control plan to ensure it meets the minimum requirements in Section 4 and that adequate quality control measures are in place for the specific project.

6. REVIEW OF ADDENDA TO THE QUALITY CONTROL PLAN

6.1. Addenda are defined as an addition or deletion to the QCP. Each page of the QCP that is revised is required to include the project key lead number, bid item number, date of revision, and means of identifying the revision. The addenda are required to be signed and dated by the Contractor's representative who is responsible for insuring that all items of work will comply with the Department's specifications.

6.2. Review addenda to the quality control plan to ensure the revised QCP meets the minimum requirements and that adequate quality control measures are in place for the specific project.

7. APPROVAL OF THE QUALITY CONTROL PLAN

7.1. The QCP and each addenda will be approved only once the minimum requirements have been met.

7.2. The QCP, and addenda if applicable, as approved by the Department, is binding upon the Contractor as a contract requirement.

Idaho Standard Practice for

DEVELOPMENT, EVALUATION, AND APPROVAL OF HMA PLANT QUALITY CONTROL PLANS

IDAHO Designation: IR-160-21

1. SCOPE

1.1. This procedure covers requirements for plants producing hot mix asphalt (HMA) or warm mix asphalt (WMA) paving mixtures. The requirements in this procedure are the minimum requirements for a plant to meet 405.03.E of the Department's Standard Specifications for Highway Construction ("Standard Specifications").

1.2. *This procedure may involve hazardous materials, operations, and equipment and may not address all of the safety problems associated with the use of the test method. It is the user's responsibility to establish the appropriate safety and health practices and determe the applicability of regulatory limitations before use. All individuals must comply with the Contractor's safety program requirements at the plant.*

2. REFERENCE DOCUMENTS

2.1. AASHTO Standards:

- M 156, Standard Specifications for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures
- R 66, Sampling Asphalt Materials
- T 19M/T 19, Bulk Density ("Unit Weight") and Voids in Aggregate
- T 27, Sieve Analysis of Fine and Coarse Aggregates
- T 30, Mechanical Analysis of Extracted Aggregate
- T 84, Specific Gravity and Absorption of Fine Aggregate
- T 166, Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens
- R 97, Sampling Asphalt Mixtures
- T 209, Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)
- T 283, Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
- T 308, Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method
- T 312, Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor

3. TERMINOLOGY

3.1. Check—A specific type of inspection or measurement performed on equipment or materials to indicate compliance with the stated criteria (e.g., lime check, calibration check of the cold feed system).

3.2. Continuous Mix Plant—A manufacturing facility for producing asphalt paving mixtures that continuously proportions the aggregate, asphalt binder, RAP, and other chosen additives into the mix by a continuous volumetric or mass proportioning system without definite batch intervals.

3.3. Drum Mix Plant—A manufacturing facility for producing asphalt paving mixtures that continuously proportions the aggregate, heats and dries it in a rotating drum, adds any chosen additives, and simultaneously mixes the material with a controlled amount of asphalt binder.

3.4. Batch Plant - A manufacturing facility for producing asphalt paving mixtures that proportions and mixes the aggregate, asphalt binder, RAP, and other chosen additives into the mix by in discrete batches.

3.5. Hot Mix Plant (or Plant)—Any manufacturing facility used to produce asphalt paving mixtures.

3.6. Interlock—A system whereby plant production will be interrupted when any one of the interlocked raw material constituents fails to meet the targeted requirements established within the specifications or plant requirements.

3.7. Baghouse fines (dust) - That portion of the aggregate removed during drying and heating by the hot gas stream that accumulates in the particulate emission control baghouse. For purposes of this definition, aggregate removed from the hot gas stream by intermediate collectors such as knockout boxes is not considered baghouse fines.

3.8. Mineral Filler—A finely divided mineral product with a maximum of 3 percent retained on the 0.800 mm (No. 30) sieve and at least 70 percent of which will pass a 0.075 mm (No. 200) sieve. The most common mineral fillers include pulverized limestone, other stone dust, hydrated lime, portland cement, fly ash, and certain natural deposits of finely divided mineral matter. Baghouse fines are not considered mineral filler.

4. PLANT REQUIREMENTS

4.1. Prerequisite for Plant Approval:

4.1.1. Inspection of Equipment—The plant owner or manager will schedule an inspection of the plant facilities to determine compliance with this standard. The equipment will be maintained in a satisfactory operating condition and be capable of its intended function at all times during production.

4.1.2. Quality Control Program—Each plant will have a quality control program and have a designated person to administer the program. This program will include the testing and control of the individual component materials and the final product produced at the plant. Plant operations will be conducted in a manner to ensure a uniform product is produced which will meet specified requirements.

4.1.3. Truck Scales—Scales must meet the requirements of 109.01.A.6.b of the Standard Specifications.

4.1.4. Uniformity—The plant must be capable of producing homogenous asphalt mixtures even though the individual components include such diverse materials as various sizes of aggregate from

stockpiles, reclaimed asphalt pavement (RAP), asphalt binder, and other admixtures, as required by the mix design.

5. WEIGHT MEASURING SYSTEMS

5.1. Furnish (at the Contractor's expense) certified scales to weigh bulk asphalt plant mixtures, regardless of the type of weight measuring system used for payment.

5.2. Ensure that the documentation for certified scales complies with state and/or federal requirements. Platform scales must be certified at a minimum annually. Certified scales must be certified/re-certified if they are moved, re-calibrated, or relocated.

5.3. Each platform scale system must be capable of taring truck weights with each load.

5.4. When not using platform scales, provide calibrated weighing devices that record the mixture's net weight delivered to the truck. Weighing devices will be calibrated at a minimum before the start of the paving season and each time a plant is moved to a new location. A net weigh system will include, but is not limited to, the following:

5.4.1. Hopper weigh system that delivers asphalt mixture directly to the truck.

5.5. The weighing system used to determine the net weight will have a printing system used in conjunction with automatic mixing systems. All printing systems must be approved by the engineer.

5.6. Verify adequate installation of the net weight scale mechanism or device by the manufacturer to ensure acceptable performance and operation.

5.7. Provide information on the project tickets per Section 109.01 of the Standard Specifications.

5.8. Certify the accuracy of the weighing system by an approved registered scale service person at least once annually or whenever the plant is moved or relocated.

6. EQUIPMENT FOR PREPARATION OF ASPHALT BINDER

6.1. Tanks for storage of asphalt binder must provide adequate capacity and means to ensure proper continuous circulation between the individual storage tank and proportioning units during the entire operating period.

6.2. The delivery and metering system for the asphalt binder must have adequate capacity to provide proper continuous flow between the storage tank, proportioning unit, and mixing equipment during the entire operating period.

6.3. Storage tank capacity and operation must allow for continuous operation of the plant and uniform temperature of the asphalt binder when it is introduced into the aggregate. Metering devices must be calibrated in accordance with Idaho IR 155. Any additives based on liquid volume or mass flow must be interlocked with an audible alarm system.

6.4. A sampling valve must be provided in the asphalt binder injection lines connecting the storage tanks to the asphalt binder control unit. The valve will be located in such a manner as to allow for adequate safety for the person obtaining the sample and to allow the Department to safely witness sampling.

6.5. Any tank used for storing polymer-modified asphalt binders must be equipped with an agitation system or circulation system to ensure the liquid asphalt is maintained in a homogenous state without separation.

6.6. The mechanisms used to introduce WMA additives to asphalt mixtures at the hot mix plant must be capable of uniformly feeding and metering the additive. WMA additives typically consist of additives added at the binder production facility, dry material added through cold feeds, or water injection. Depending on the type of WMA process, the plant must be equipped with automatic controls to monitor the feed system and interrupt plant production if there is an interruption in the feed process. Equipment used to produce WMA must be approved by the Engineer before mixture production.

7. COLD AGGREGATE FEEDERS

7.1. A mechanism that must be capable of uniformly feeding the aggregates into the dryer to ensure uniform production and temperature. The mechanism must be capable of accurately combining aggregates from different storage bins.

7.2. Cold bins for storing aggregates before proportioning will be monitored to ensure that bins do not become empty or restricted. The bins will be interlocked so that a production interruption will occur or an audible warning will sound if an interruption in supply of material from any cold feed bin occurs.

7.3. Adequate and convenient facilities must be provided for obtaining samples of the full flow of aggregate from the total of the bins.

7.4. Control will be based on frequent samples from each component aggregate as well as samples taken from the combined cold aggregate feeders.

7.5. All plants are to be equipped with a means of diverting aggregate on the conveyor belt away from the dryer and into an empty haul truck for cold bin calibration purposes.

8. RECLAIMED ASPHALT PAVEMENT (RAP)

8.1. The recycled mixture will be a homogenous mixture of RAP, virgin aggregate, hydrated lime (if required), asphalt binder, and any additives. If recycling capability is required, the plant will be equipped with mechanical means for feeding the desired weight of RAP into the mix.

8.2. RAP bins for storing material before proportioning will be monitored to ensure that the bins do not become empty or restricted. The bins will be interlocked so that a production interruption will occur or an audible warning will sound if any interruption in supply of material from any cold feed bin occurs.

8.3. Adequate and convenient facilities will be provided for obtaining samples of the full flow of RAP material from the total of the bins.

8.4. Use a hot mix plant for the recycling process with necessary modifications to process the recycled material. The ratio of the RAP to virgin aggregate will be controlled by weight.

8.5. For drum and continuous mix plants, use electronic belt weighing devices to monitor the flow of RAP and the flow of virgin aggregate.

8.6. Equip plants with an interlocking system of feeders and conveyors that synchronize the RAP flow with the virgin aggregate flow. Ensure that the electronic controls monitor the flow rates indicated by the belt weighing devices and automatically maintain the desired ratio at varying production

rates. Design the RAP feeder bins, conveyor system, and auxiliary bins (if used) to prevent the material from segregating and sticking. RAP will be screened before crossing the weigh bridge with a 2-inch to 3-inchscreen.

9. EMISSIONS CONTROLS FOR DUST COLLECTOR FINES

9.1. A dust collection system must be provided. The system will be made to waste the material collected, or to return all or any part of the collected material uniformly to the mixture.

9.2. Other emissions, with the exception of water vapor, , will be controlled to be in compliance with applicable environmental limits.

9.3. *Control the dust collection as follows:*

9.3.1. When collecting airborne aggregate particles and returning them to the mixture, ensure the return system delivers the desired portion of the collected dust uniformly into the aggregate mixture and wastes the excess.

10. SURGE AND STORAGE SYSTEMS

10.1. *Provide surge and storage bins as follows:*

10.1.1. Ensure that bins for asphalt mixture storage are insulated and have a working seal, top, and bottom to prevent outside air infiltration and to maintain an inert atmosphere during storage to ensure the asphalt mixture maintains temperature at the working temperature. Bins not intended for storage may be used as surge bins to hold asphalt mixtures for part of the working day; however, empty these surge bins completely at the end of each working day.

10.1.2. Ensure that surge and storage bins can retain a predetermined minimum level of mixture in the bin when trucks are loaded. The determination of the minimum mixture level will be based on minimizing mixture segregation and any other pertinent operational constraints.

10.1.3. Ensure that surge and storage systems do not contribute to mix segregation, loss of homogeneity, lumpiness, temperature loss, draindown, or stiffness.

10.2. A plant may be permitted to store asphalt mixtures in a silo after prior evaluation and approval by the Engineer. Use will conform with all limitations on retention time, type of mixture, heater operation, silo atmosphere, mix level, mix draindown time, or other characteristics set forth in the applicable specifications.

10.3. Approval of silos may be removed or restrictions may be applied if it is determined the silo contributes to segregation, does not maintain temperature, or fails in any other way to provide a homogeneous mix.

11. MINERAL FILLER

11.1. *When mineral filler is required as a mixture ingredient:*

11.2. Use a separate feed system to proportion the required quantity into the mixture with uniform distribution.

11.3. *Control the feeder system with a proportioning device that meets the following:*

11.3.1. Is accurate to within ±5 percent of the filler required by weight.

11.3.2. Has a convenient and accurate means of calibration.

11.3.3. Interlocks or audible/visual alarms with the aggregate feed or weigh system to maintain the correct proportions for all rates of production.

11.4. Provide flow indicators or sensing devices for the mineral filler system and interlock them with the plant controls to interrupt mixture production if the mineral filler introduction fails to meet the required target value after no longer than 60 seconds.

11.5. *Add mineral filler to the mixture as follows, according to the plant type:*

11.5.1. Continuous Plants Using Dryer Drum Mixtures—Add the mineral filler so that the dry mixing is accomplished no less than 18 inches before the addition of the asphalt binder and ensure that the filler does not become entrained into the air stream of the dryer.

12. HYDRATED LIME TREATMENT SYSTEM

12.1. *When hydrated lime is required as a mixture ingredient:*

12.2. Use a separate bin and feed system to store and proportion the required quantity into the mixture.

12.3. Ensure that the aggregate is uniformly coated with hydrated lime at least 18 inches before the addition of the asphalt binder to the mixture. Ensure the hydrated lime does not become entrained in the exhaust system of the dryer or plant.

12.4. *Control the feeder system with a proportioning device that meets the following:*

12.4.1. Is accurate to within ±10 percent of the hydrated lime required by weight.

12.4.2. Has a convenient and accurate means of calibration.

12.4.3. Interlocks or audible/visual alarms with the aggregate feed or weigh system to maintain the correct proportions for all rates of production to ensure mixture produced is properly treated with lime.

12.5. Provide flow indicators or sensing devices for the hydrated lime system and interlock or audible/visual alarms them with the plant controls to interrupt mixture production if hydrated lime introduction fails to meet the required target value after 60 seconds.

13. FIBER SUPPLY SYSTEM

13.1. *When stabilizing fiber is required as a mixture ingredient:*

13.2. Use a separate bin and/or feed system to store and uniformly proportion by weight the required quantity of fiber into the mixture.

13.3. Control the feeder system with a proportioning device that meets the following:

13.3.1. Is accurate to within ±10 percent of the fiber required by weight. Automatically adjust the feed rate to maintain the material within this tolerance at all times.

13.3.2. Has a convenient and accurate means of calibration.

13.3.3. Provides in-process monitoring, consisting of a digital display of output of feed rate, in pounds (kilograms) per min, to verify feed rate.

13.3.4. Interlocks or audible visual alarms with the aggregate feed or weigh system to maintain the correct proportions for all rates of production.

13.4. Provides flow indicators or sensing devices for the fiber system and interlocks them with the plant controls to interrupt mixture production if the fiber introduction fails to meet the required target value.

13.5. *Introduce the fiber as follows, according to the plant type:*

13.5.1. When a continuous or dryer-drum-type plant is used, add the fiber uniformly to the aggregate and disperse it before the injection of the asphalt binder. Ensure the fibers will not become entrained in the exhaust system of the dryer.

14. CALIBRATION OF PLANT EQUIPMENT

14.1. Calibration of the plant must meet Idaho IR 155.

14.2. *Calibration will occur, at a minimum:*

14.2.1. If the material changes, or if a plant component supply system effecting the ingredient proportions has been repaired, replaced, or adjusted, recalibrate the proportions.

14.3. *Calibrate the mixing plant as follows:*

14.3.1. Before producing mixture for the project, calibrate by scale weight the electronic sensors or settings for proportioning the mixture ingredients.

14.3.2. Calibrate the ingredient proportioning for the anticipated range of production rates as shown in the Plant QCP. Do not operate outside the calibration range without first calibrating the proportioning systems for the new range of production rates.

15. THERMOMETRIC EQUIPMENT

15.1. Provide appropriate recording thermometers, of suitable temperature ranges, to accurately assess the temperature of the asphalt mixture at or near the discharge point. Harden the thermometer mechanism as necessary to ensure durability of the device and continuous operation. Thermometers must be calibrated by the manufacturer for the full range of mixture production temperatures. The thermometers must be verified periodically during production to ensure their accuracy.

15.2. Measure the temperature at the discharge chute of the dryer and record the temperature data automatically.

16. DEVELOPING AND MAINTAINING A PLANT QUALITY CONTROL PLAN

16.1. Develop and maintain a Plant Quality Control Plan (Plant QCP). The plant must have an approved Plant QCP prior to the plant being used on Department projects. This plan must address each section of this procedure and describe how these requirements will or will not be met.

16.1.1. If any of the minimum requirements cannot be met; describe in detail why, and how, the plant will mitigate any adverse effects from deviation of this procedure's minimum requirements.

16.2. See Section 19 (Plant QCP template) for a template of the plant quality control plan.

17. PLANT QCP REVIEW

17.1. The Department will review the Plant QCP at a minimum of once per calendar year.

17.2. Review the Plant QCP to ensure all requirements in the previous sections are met or that adequate processes and procedures are in place to mitigate any adverse effects (See Section 16.1.1)

18. PLANT QCP APPROVAL

18.1. If the Plant QCP review finds that the plant's quality control plan is sufficient to ensure a quality product will be produced, the Plant QCP will be approved.

18.2. If the Plant QCP is approved, return a signed copy of the Plant QCP to the plant. The approval is valid for one calendar year.

Company Name:
Year:

Plant Quality Control Plan

Quality Control Plan Administrator

Name

Contact Information

Reviewed By:
Reviewed Date:

Approved By:
Approval Date:

Quality Control Plans for Plants

Template

1. Plant Description
    a. Plant Type (Drum/Batch)
    b. Plant Address
    c. Detailed narrative meeting the requirements of Subsection 17.1 and 17.1.1

2. Plant Laboratory Personnel
    a. Qualified Personnel/Contact Information/WAQTC#/ Exp. Date (Scanned Copy)

3. Laboratory Qualification
    a. Idaho Lab Qualification Number
        i. Date last completed
        ii. Certification Posted in Laboratory
    b. AMRL accreditation (if applicable)
        i. Date last completed

4. Plant Inspection
    a. Performed Yearly
        i. Certification is posted at plant
    b. Plant complies with Idaho IR 160

5. Truck Scales
    a. Calibration Frequency
    b. Testing agency – copies on file

6. Plant Weighing/Measuring Devices
    a. Calibration frequency
    b. Testing agency – copies on file

7. Aggregate Stockpiles
    a. Construction Method
        i. Separation/Labeling
        ii. Segregation Control
        iii. Moisture Control (if applicable)
    b. Testing (method/frequency)

8. RAP stockpile
    a. Construction methods of stockpiles
        i. Separation/Labeling
        ii. Segregation Control
        iii. Moisture Control (if applicable)

b. Testing (method/frequency)

9. Plant Mix Temperatures
    a. Plant Monitor/Control
    b. Temperature checks

10. Binder
    a. Storage
    b. Hauling
    c. Sampling (include location)
    d. Source Change – Notification/Start-up testing
    e. List how corrective action will be taken

11. Asphalt Mix Design
    a. Responsibility

12. Asphalt Mix Sampling
    a. Location for QC
    b. Plant check processes and procedures
    c. Sampling frequency
        i. Low tonnage (< 200 tons)
        ii. > 200 tons

13. Mix Gradation
    a. Test method

14. Asphalt Content
    a. Test method

15. Volumetric Properties
    a. Test methods

16. Mix Diagnostic and Corrective Action Plan
    a. Items to address: #13-15, and on-site density

17. Project Records – Idaho Standard Specs. 106.03.A.2.
    a. Maintain and make avalable to the Engineer upon request complete records (including hand written worksheets) of sampling, testing, actions taken to correct problems, and quality control inspection results. Provide copies of the Reports when requested.
    b. Control Charts

18. Truck Loading
    a. Loading method
    b. Segregation control

19. Warm Mix Capabilities (if applicable)
    a. Plant used for WMA?

b. Type: Foamed, Additive, etc.
c. Operation (e.g. rate(s), temperatures, etc.)

20. Anti-Strip
    a. Type/Brand
    b. Method of dosing

It is hereby certified that the information contained in this Plant Quality Control Plan meets the requirements of Idaho IR 160.

Company Name:

Signature:

First & Last Name:

Quality Control Plan Administrator

Title VI Special Provisions

In compliance with the United States Department of Transportation (USDOT) Standard Title VI/Non-Discrimination Assurances (DOT Order No. 1050.2A):

"The Idaho Transportation Department, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 US.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."

During the performance of work covered by this Contract, the Contractor for themselves, their assignees and successors in interest agree as follows to adhere to Appendix A and E of the USDOT Standard Title VI/Non-Discrimination Assurances:

APPENDIX A

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 (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 2 l.

3. **Solicitations for Subcontracts, 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 will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

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

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration (FHWA) may determine to be appropriate, including, but not limited to:

a. withholding payments to the contractor under the contract until the contractor complies; and/or
b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the

Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration **(**FHWA) may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 4 71, Section 4 7123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U .S.C. 1681 et seq).

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Non-segregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XI. Certification Regarding Use of Contract Funds for Lobbying
XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to *DBAconformance@dol.gov*. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to *DBAconformance@dol.gov*, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and the Companies do hereby make, constitute and appoint **Lindsey Carcamo** of **SALT LAKE CITY** , **Utah** , their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **16th** day of **February**, **2024**.

SEAL — TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA
SEAL — TRAVELERS CASUALTY AND SURETY COMPANY
SEAL — ST. PAUL FIRE AND MARINE INSURANCE CO.

State of Connecticut

By: _____
Bryce Grissom, Senior Vice President

City of Hartford ss.

On this the **16th** day of **February**, **2024**, before me personally appeared **Bryce Grissom**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, **2026**

ANNA P NOWIK NOTARY PUBLIC CONNECTICUT

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Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **8th** day of **June** , **2026** .

SEAL — TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA
SEAL — TRAVELERS CASUALTY AND SURETY COMPANY
SEAL — ST. PAUL FIRE AND MARINE INSURANCE CO.

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.