FI84 9/96
Division of Finance

CONTRACT # 069107

STATE OF UTAH CONTRACT

1. CONTRACTING PARTIES: This contract is between the following Agency of the State of Utah:

Dept. of Transportation (Agency Name) | 810 (Agency Code) | Proc./Richfield District (Division) referred to as STATE and the following:

CONTRACTOR Staker Parson dba Western Rock Products (Name)
820 North 1080 East (Address)
St. George (City) | UT (State) | 84770 (Zip Code)
Gillman Fife (Contact Person) | (435) 628-4384 (Phone Number)
870674587 (Federal ID#) | 11392H (Vendor Number) | 74512150040, 74512150135, 74512150170, 74512150100, 74512150160 & 74512150175 (Commodity Code(s))

LEGAL STATUS OF CONTRACTOR
- ____ Sole Proprietor
- ____ Non-Profit Corporation
- X For-Profit Corporation
- ____ Partnership
- ____ Government Agency

2. CONTRACT TYPE AND PURPOSE:

This is a requirements contract to provide the State with various types of hot mix asphalt. A performance bond in the amount of $262,535.40 is required.

3. PROCUREMENT: This contract is entered into as a result of the Procurement process on bid PM6030, Requisition # 810 66000000050, FY 2006.

4. CONTRACT PERIOD: Effective date 29 - Jan. - 2006. Termination date 28 - Jan. - 2007, unless terminated early or extended in accordance with the terms of this contract. Renewal Options (if any) None.

5. CONTRACT COSTS: This is a requirements contract. See Attachment C for pricing.

6. ATTACHMENT A: Division of Purchasing's Standard Terms and Conditions.
ATTACHMENT B: Scope of Work.
ATTACHMENT C: Itemized Price List.
ATTACHMENT D: Special Terms and Conditions.
Any conflicts between Attachment A and other Attachments will be resolved in favor of Attachment A.

7. DOCUMENTS INCORPORATED INTO THIS CONTRACT BY REFERENCE BUT NOT ATTACHED:
A. All other governmental laws, regulations or actions applicable to the goods and/or services authorized by this Contract.
B. Utah State Procurement Code, Procurement Rules and Contractor's responses to Bid # PM6030 dated 21 - Dec. - 2005.

IN WITNESS WHEREOF, the parties sign and cause this contract to be executed.

CONTRACTOR
SEE ATTACHED

Contractor's Signature
GILLMAN E FIFE
Contractor's Name
MANAGER
Title

STATE OF UTAH

Tracy Conti, Operations Engineer
FEB 09 2006
Director, Division of Purchasing
CONTRACT RECEIVED AND PROCESSED BY DIVISION OF FINANCE
FEB 10 2006
Director, Division of Finance

Debra Boulton	(801) 965-4070	(801) 965-4073	dboulton@utah.gov
Agency Contact Person	Phone Number	Fax Number	Email Address

REC'D FEB 16 2006

MAIL TO:

STATE OF UTAH
DIVISION OF PURCHASING
3150 STATE OFFICE BUILDING, CAPITOL HILL
P.O. BOX 141061
SALT LAKE CITY, UTAH 84114-1061
TELEPHONE (801) 538-3026
www.purchasing.utah.gov

Invitation to Bid

Solicitation Number: **PM6030**

Due Date: **12/21/05 at 2:00 P.M.**

Date Sent: December 5, 2005

Agency Contract

Goods and services to be purchased: **HOT MIX ASPHALT FOR THE DEPARTMENT OF TRANSPORTATION**

Please complete

Company Name Staker & Parsons Co / DBA Western Rock		Federal Tax Identification Number 87-0674587	
Ordering Address 820 N 1080 E	City St. George	State Ut	Zip Code 84770
Remittance Address (if different from ordering address)	City	State	Zip Code
Type ☑ Corporation ☐ Partnership ☐ Proprietorship ☐ Government	Company Contact Person		
Telephone Number (include area code) 435-628-4384	Fax Number (include area code) 435-628-1248		
Company's Internet Web Address	Email Address		
Discount Terms (for bid purposes, bid discounts less than 30 days will not be considered)	Days Required for Delivery After Receipt of Order (see attached for any required minimums)		

The following documents are included in this solicitation: Solicitation forms, instructions and general provisions, and specifications. Please review all documents carefully before completing.

The undersigned certifies that the goods or services offered are produced, mined, grown, manufactured, or performed in Utah. Yes ✓ No_____. If no, enter where produced, etc._____

Offeror's Authorized Representative's Signature Gillman E. Fife	Date 12/15/05
Type or Print Name Gillman E. Fife	Position or Title Mgr

ATTACHMENT A: STATE OF UTAH STANDARD TERMS AND CONDITIONS

1. **AUTHORITY:** Provisions of this contract are pursuant to the authority set forth in 63-56, Utah Code Annotated, 1953, as amended, Utah State Procurement Rules (Utah Administrative Code Section R33), and related statutes which permit the State to purchase certain specified services, and other approved purchases for the State.

2. **CONTRACT JURISDICTION, CHOICE OF LAW, AND VENUE:** The provisions of this contract shall be governed by the laws of the State of Utah. The parties will submit to the jurisdiction of the courts of the State of Utah for any dispute arising out of this Contract or the breach thereof. Venue shall be in Salt Lake City, in the Third Judicial District Court for Salt Lake County.

3. **LAWS AND REGULATIONS:** Any and all supplies, services and equipment furnished will comply fully with all applicable Federal and State laws and regulations.

4. **RECORDS ADMINISTRATION:** The Contractor shall maintain, or supervise the maintenance of all records necessary to properly account for the payments made to the Contractor for costs authorized by this contract. These records shall be retained by the Contractor for at least four years after the contract terminates, or until all audits initiated within the four years, have been completed, whichever is later. The Contractor agrees to allow State and Federal auditors, and State Agency Staff, access to all the records to this contract, for audit and inspection, and monitoring of services. Such access will be during normal business hours, or by appointment.

5. **CONFLICT OF INTEREST:** Contractor represents that none of its officers or employees are officers or employees of the State of Utah, unless disclosure has been made in accordance with 67-16-8, Utah Code Annotated, 1953, as amended.

6. **CONTRACTOR, AN INDEPENDENT CONTRACTOR:** The Contractor shall be an independent contractor, and as such, shall have no authorization, express or implied, to bind the State to any agreements, settlements, liability, or understanding whatsoever, and agrees not to perform any acts as agent for the State, except as herein expressly set forth. Compensation stated herein shall be the total amount payable to the Contractor by the State. The Contractor shall be responsible for the payment of all income tax and social security amounts due as a result of payments received from the State for these contract services. Persons employed by the State and acting under the direction of the State shall not be deemed to be employees or agents of the Contractor.

7. **INDEMNITY CLAUSE:** The Contractor agrees to indemnify, save harmless, and release the State OF UTAH, and all its officers, agents, volunteers, and employees from and against any and all loss, damages, injury, liability, suits, and proceedings arising out of the performance of this contract which are caused in whole or in part by the negligence of the Contractor's officers, agents, volunteers, or employees, but not for claims arising from the State's sole negligence.

8. **EQUAL OPPORTUNITY CLAUSE:** The Contractor agrees to abide by the provisions of Title VI and VII of the Civil Rights Act of 1964 (42USC 2000e) which prohibits discrimination against any employee or applicant for employment or any applicant or recipient of services, on the basis of race, religion, color, or national origin; and further agrees to abide by Executive Order No. 11246, as amended, which prohibits discrimination on the basis of sex; 45 CFR 90 which prohibits discrimination on the basis of age; and Section 504 of the Rehabilitation Act of 1973, or the Americans with Disabilities Act of 1990 which prohibits discrimination on the basis of disabilities. Also, the Contractor agrees to abide by Utah's Executive Order, dated March 17, 1993, which prohibits sexual harassment in the work place.

9. **SEPARABILITY CLAUSE:** A declaration by any court, or any other binding legal source, that any provision of this contract is illegal and void shall not affect the legality and enforceability of any other provision of this contract, unless the provisions are mutually dependent.

10. **RENEGOTIATION OR MODIFICATIONS:** This contract may be amended, modified, or supplemented only by written amendment to the contract, executed by the same persons or by persons holding the same position as persons who signed the original agreement on behalf of the parties hereto, and attached to the original signed copy of the contract.

11. **DEBARMENT:** The Contractor certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction (contract), by any governmental department or agency. If the Contractor cannot certify this statement, attach a written explanation for review by the State. The Contractor must notify the State Director of Purchasing within 30 days if debarred by any governmental entity during the Contract period.

12. **TERMINATION**: Unless otherwise stated in the Special Terms and Conditions, this contract may be terminated, with cause by either party, in advance of the specified termination date, upon written notice being given by the other party. The party in violation will be given ten (10) working days after notification to correct and cease the violations, after which the contract may be terminated for cause. This contract may be terminated without cause, in advance of the specified expiration date, by either party, upon 90 days prior written notice being given the other party. On termination of this contract, all accounts and payments will be processed according to the financial arrangements set forth herein for approved services rendered to date of termination.

13. **NON APPROPRIATION OF FUNDS:** The Contractor acknowledges that the State cannot contract for the payment of funds not yet appropriated by the Utah State Legislature. If funding to the State is reduced due to an order by the Legislature or the Governor, or is required by State law, or if federal funding (when applicable) is not provided, the State may terminate this contract or proportionately reduce the services and purchase obligations and the amount due from the State upon 30 days written notice. In the case that funds are not appropriated or are reduced, the State will reimburse Contractor for products delivered or services performed through the date of cancellation or reduction, and the State will not be liable for any future commitments, penalties, or liquidated damages.

14. **SALES TAX EXEMPTION:** The State of Utah's sales and use tax exemption number is E33399. The tangible personal property or services being purchased are being paid from State funds and used in the exercise of that entity's essential functions. If the items being purchased are construction materials, they will be converted into real property by employees of this government entity, unless otherwise stated in the contract.

15. **WARRANTY:** The contractor agrees to warrant and assume responsibility for all products (including hardware, firmware, and/or software products) that it licenses, contracts, or sells to the State of Utah under this contract for a period of one year, unless otherwise specified and mutually agreed upon elsewhere in this contract. The contractor (seller) acknowledges that all warranties granted to the buyer by the Uniform Commercial Code of the State of Utah apply to this contract. Product liability disclaimers and/or warranty disclaimers from the seller are not applicable to this contract unless otherwise specified and mutually agreed upon elsewhere in this contract. In general, the contractor warrants that: (1) the product will do what the salesperson said it would do, (2) the product will live up to all specific claims that the manufacturer makes in their advertisements, (3) the product will be suitable for the ordinary purposes for which such product is used, (4) the product will be suitable for any special purposes that the State has relied on the contractor's skill or judgment to consider when it advised the State about the product, (5) the product has been properly designed and manufactured, and (6) the product is free of significant defects or unusual problems about which the State has not been warned. Remedies available to the State include the following: The contractor will repair or replace (at no charge to the State) the product whose nonconformance is discovered and made known to the contractor in writing. If the repaired and/or replaced product proves to be inadequate, or fails of its essential purpose, the contractor will refund the full amount of any payments that have been made. Nothing in this warranty will be construed to limit any rights or remedies the State of Utah may otherwise have under this contract.

16. **PUBLIC INFORMATION::** Contractor agrees that the contract will be a public document, and may be available for distribution. Contractor gives the State express permission to make copies of the contract and/or of the response to the solicitation in accordance with the State of Utah Government Records Access and Management Act. The permission to make copies as noted will take precedence over any statements of confidentiality, proprietary information, copyright information, or similar notation.

17. **DELIVERY:** Unless otherwise specified in this contract, all deliveries will be F.O.B. destination with all transportation and handling charges paid by the Contractor. Responsibility and liability for loss or damage will remain with Contractor until final inspection and acceptance when responsibility will pass to the State except as to latent defects, fraud and Contractor's warranty obligations.

18. **ORDERING AND INVOICING:** All orders will be shipped promptly in accordance with the delivery schedule. The Contractor will promptly submit invoices (within 30 days of shipment or delivery of services) to the State. The State contract number and/or the agency purchase order number shall be listed on all invoices, freight tickets, and correspondence relating to the contract order. The prices paid by the State will be those prices listed in the contract. The State has the right to adjust or return any invoice reflecting incorrect pricing.

19. **PAYMENT:** Payments are normally made within 30 days following the date the order is delivered or the date a correct invoice is received, whichever is later. All payments to the Contractor will be remitted by mail unless paid by the State of Utah's Purchasing Card (major credit card).

20. **PATENTS, COPYRIGHTS, ETC.:** The Contractor will release, indemnify and hold the State, its officers, agents and employees harmless from liability of any kind or nature, including the Contractor's use of any copyrighted or un-copyrighted composition, secret process, patented or un-patented invention, article or appliance furnished or used in the performance of this contract.

21. **ASSIGNMENT/SUBCONTRACT:** Contractor will not assign, sell, transfer, subcontract or sublet rights, or delegate responsibilities under this contract, in whole or in part, without the prior written approval of the State.

22. **DEFAULT AND REMEDIES:** Any of the following events will constitute cause for the State to declare Contractor in default of the contract: 1. Nonperformance of contractual requirements; 2. A material breach of any term or condition of this contract. The State will issue a written notice of default providing a ten (10) day period in which Contractor will have an opportunity to cure. Time allowed for cure will not diminish or eliminate Contractor's liability for damages. If the default remains, after Contractor has been provided the opportunity to cure, the State may do one or more of the following: 1. Exercise any remedy provided by law; 2. Terminate this contract and any related contracts or portions thereof; 3. Impose liquidated damages, if liquidated damages are listed in the contract; 4. Suspend Contractor from receiving future solicitations.

23. **FORCE MAJEURE:** Neither party to this contract will be held responsible for delay or default caused by fire, riot, acts of God and/or war which is beyond that party's reasonable control. The State may terminate this contract after determining such delay or default will reasonably prevent successful performance of the contract.

24. **PROCUREMENT ETHICS::** The Contractor understands that a person who is interested in any way in the sale of any supplies, services, construction, or insurance to the State of Utah is violating the law if the person gives or offers to give any compensation, gratuity, contribution, loan or reward, or any promise thereof to any person acting as a procurement officer on behalf of the State, or who in any official capacity participates in the procurement of such supplies, services, construction, or insurance, whether it is given for their own use or for the use or benefit of any other person or organization (63-56-1002, Utah Code Annotated, 1953, as amended).

25. **CONFLICT OF TERMS:** Contractor Terms and Conditions that apply must be in writing and attached to the contract. No other Terms and Conditions will apply to this contract including terms listed or referenced on a Contractor's website, terms listed in a Contractor quotation/sales order, etc. In the event of any conflict in the contract terms and conditions, the order of precedence shall be: 1. State Standard Terms and Conditions; 2. State Additional Terms and Conditions; 3. Contractor Terms and Conditions.

SECTION 02742P
HOT MIX ASPHALT (HMA)

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Products and procedures for supplying Type I Hot Mix Asphalt (HMA) for overlays placed with a laydown machine and Type II Hot Mix Asphalt (HMA) for overlays placed with a motor grader. HMA comprised of aggregate, asphalt binder, lime and other additives.

B. Mix materials at a central mixing plant.

1.2 RELATED SECTIONS

A. Section 02741: Hot Mix Asphalt (HMA)

B. Section 02745: Asphalt Material

C. Section 02746: Hydrated Lime

D. Section 02769: Optional Use of Reclaimed Asphalt Pavement (PG Projects)

1.3 REFERENCES

A. AASHTO PP 28: Standard Practice for Superpave Volumetric Design for Hot-Mix Asphalt (HMA)

B. AASHTO T 11: Materials Finer Than 75 m (No. 200) Sieve in Mineral Aggregates by Washing

C. AASHTO T 19: Unit Weights and Voids in Aggregate

D. AASHTO T 27: Sieve Analysis of Fine and Coarse Aggregates

E. AASHTO T 30: Mechanical Analysis of Extracted Aggregate

F. AASHTO T 89: Determining the Liquid Limit of Soils

G. AASHTO T 90: Determining the Plastic Limit and Plasticity Index of Soils

H. AASHTO T 96: Resistance to Abrasion of Small Size Coarse Aggregate by Use of the Los Angeles Machine

I. AASHTO T 104: Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate

J. AASHTO T 112: Clay Lumps and Friable Particles in Aggregate

K. AASHTO T 176: Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test

L. AASHTO T 195: Determining Degree of Particle Coating of Bituminous-Aggregate Mixtures

M. AASHTO T 255: Total Moisture Content of Aggregate by Drying

N. AASHTO T 304: Uncompacted Void Content of Fine Aggregate

O. AASHTO T 308: Determining the Asphalt Binder Content of Hot-Mix Asphalt (HMA) by the Ignition Method

P. ASTM D 4791: Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

Q. ASTM D 5821: Determining the Percentage of Fractured Particles in Coarse Aggregate

R. UDOT Materials Manual Part 8

S. UDOT Minimum Sampling and Testing Guide

1.4 ACCEPTANCE

A. A lot equals a quantity of HMA between 300 and 3000 tons and may be several days' accumulation.
   1. Divide each lot into three approximately equal size sublots.

B. The Department takes random samples at the roadway.
   1. Determine random numbers/locations from a random numbers table UDOT Materials Manual Part 8 Section 981: Random sampling and Testing
   2. Obtain samples in accordance with UDOT Materials Manual Part 8 Section 984: Sampling Methods.

C. The Department takes one random PG binder sample per lot.
   1. Sampling Procedure: UDOT Minimum Sampling and Testing Guide, Section 509.

D. Region Lab personnel perform acceptance tests:
   1. Asphalt Binder Content: One per sublot using ignition oven. AASHTO T 308.
   2. Aggregate gradation: One test per sublot on the residue of the ignition oven tests. AASHTO T 30.

E. Central Materials personnel perform the following acceptance tests:
   1. Sampling Procedure: UDOT Minimum Sampling and Testing Guide, Section 509.

F. The Department determines pay adjustment for asphalt content and gradation based on table 1, using the mean of the deviations of the individual test results from the job mix formula and the appropriate sample size column.
   1. Applied pay factor is the lowest pay factor for any of the pay sieves or asphalt content.
      a. Department may order the removal of and no payment made for the HMA if:
         1) Any single sieve deviates more than that allowed for 0.85 pay factor.
         2) Asphalt content deviates more than that allowed for 0.85 pay factor.
      b. The Department applies a 0.75 pay factor to HMA allowed to remain in place that is outside the limits of table 1.

G. The Department reserves the right to sample and test any portion of a day's production for verification purposes. Tests may be performed on any of the parameters used for materials classification or mix design as identified in Part 2: Products.
   1. For materials properties, i.e. aggregate, binder, additives, test results that do not meet the minimum requirements as outlined in Part 2 will result in an immediate resample and retest of the lot.
      a. The Department rejects the lot if the test results of the second sample do not meet minimum requirements.
   2. For mix design parameters and aggregate gradations, the Department rejects the lot if the test results fall outside the limits established in table 3.
   3. The supplier may initiate a dispute resolution action by following the requirements in Section 02741.

H. Contractor removes and disposes of any material ordered removed at their expense.
   1. Contractor performs or arranges for material removal.
   2. Contractor removes material within ten days of written notice.
   3. Department may remove material after ten days and deduct removal and disposal costs from monies due the contractor.

Table 1 Acceptance Schedule for Gradation/Asphalt Content				
Sieve Size	Pay Factor	Mean of deviations of the lot acceptance tests from the job mix (percentage points)		
		5, or more, Tests	4 Tests	3 Tests
Asphalt Content	1.00	0 – 0.38	0 – 0.41	0 – 0.46
	0.975	0.39 – 0.43	0.42 – 0.46	0.47 – 0.52
	0.95	0.44 – 0.47	0.47 – 0.51	0.53 – 0.58
	0.9	0.48 – 0.52	0.52 – 0.56	0.59 – 0.64
	0.85	0.53 – 0.56	0.57 – 0.61	0.65 – 0.69
½ inch	1.00	0 – 0.52	0 – 5.6	0 – 6.3
	0.975	5.3 – 5.8	5.7 – 6.3	6.4 – 7.1
	0.95	5.9 – 6.4	6.4 – 7.0	7.2 – 7.9
	0.9	6.5 – 7.1	7.1 – 7.7	8.0 – 8.7
	0.85	7.2 – 7.7	7.8 – 8.4	8.8 – 9.5
3/8 inch	1.00	0 – 4.9	0 – 5.3	0 – 5.9
	0.975	5.0 – 5.5	5.4 – 5.9	6.0 – 6.6
	0.95	5.6 – 6.1	6.0 – 6.6	6.7 – 7.3
	0.9	6.2 – 6.6	6.7 – 7.2	7.4 – 8.0
	0.85	6.7 – 7.2	7.3 – 7.9	8.1 – 8.9
#4	1.00	0 – 4.8	0 – 5.2	0 – 5.7
	0.975	4.9 – 5.4	5.3 – 5.8	5.8 – 6.3
	0.95	5.5 – 5.9	5.9 – 6.4	6.4 – 6.9
	0.9	6.0 – 6.5	6.5 – 7.0	7.0 – 7.5
	0.85	6.6 – 7.0	7.1 – 7.6	7.6 – 8.0
#8	1.00	0 – 4.0	0 – 4.3	0 – 4.8
	0.975	4.1 – 4.5	4.4 – 4.8	4.9 – 5.4
	0.95	4.6 – 4.9	4.9 – 5.3	5.5 – 6.0
	0.9	5.0 – 5.4	5.4 – 5.8	6.1 – 6.8
	0.85	5.5 – 5.8	5.9 – 6.3	6.9 – 7.4
#200	1.00	0 – 1.7	0 – 1.8	0 – 2.0
	0.975	1.8 – 1.9	1.9 – 2.0	2.1 – 2.2
	0.95	2.0 – 2.1	2.1 – 2.2	2.3 – 2.4
	0.9	2.2 – 2.3	2.3 – 2.4	2.5 – 2.7
	0.85	2.4 – 2.5	2.5 – 2.6	2.8 – 3.0

PART 2 PRODUCTS

2.1 ASPHALT BINDER

A. Asphalt cement
   a. Type I (paver placed) – use PG 64-34 asphalt cement
   b. Type II (grader placed) – use PG 58-22 asphalt cement

B. Refer to section 02745

C. Sampling Procedure: UDOT Minimum Sampling and Testing Guide, Section 509.

2.2 AGGREGATE

A. Crusher processed virgin aggregate material consisting of crushed stone, gravel, or slag.

B. Use the following requirements to determine the suitability of the aggregate.
   1. Coarse aggregates:
      a. Retained on No. 4 sieve.
   2. Fine aggregates:
      a. Clean, hard grained, and angular.
      b. Passing the No. 4 sieve.

C. Meet gradation requirements in Table 3. (AASHTO T 11, AASHTO T 27)

Table 2
Aggregate Properties - HMA

Test Method	Test No.	Requirements
Two Fractured Face	ASTM D 5821	90% min.
Fine Aggregate Angularity	AASHTO T 304	45 min.
Flat and Elongated, 1 to 3 ratio	ASTM D 4791 (Based on 3/8 inch sieve and above)	20% max.
L.A. Wear	AASHTO T 96	35% max.
Sand Equivalent	AASHTO T 176 (Pre-wet method)	50 min.
Plasticity Index	AASHTO T 89 and T 90	0
Unit Weight	AASHTO T 19	75 lb/cu. ft., min.
Soundness (sodium sulfate)	AASHTO T 104	16 % max. loss with five cycles
Clay Lumps and Friable Particles	AASHTO T 112	2% max
Natural Fines		10% max

Table 3 Aggregate Gradations			
Sieve Size		**1/2 inch Nominal mix. Percent Passing**	**3/8 inch Nominal mix. Percent Passing**
Control **Sieves**	**3/4 inch**	100.0	-
	1/2 inch	90.0 - 100.0	100.0
	3/8 inch	<90	90.0 - 100.0
	No. 4	-	< 90
	No. 8	28.0 - 58.0	32.0 - 67.0
	No. 200	2.0 - 10.0	2.0 - 10.0

2.3 HYDRATED LIME

A. Use a minimum of 1 percent (by dry weight of aggregate) hydrated lime.

B. Meet the requirements of Section 02746.

2.4 VOLUMETRIC DESIGN

A. Comply with all requirements for Superpave Volumetric Mix Design according to Asphalt Institute, SP-1, and SP-2, AASHTO PP 28, Table 5 and the following:
   1. Meet all volumetric mix design requirements for a ½ inch nominal target gradation.

B. Submit the Volumetric Mix Design data for verification at least 10 working days before beginning delivery. Do not begin production until verification is complete.
   1. Include all information regarding selection of design aggregate structure showing the target values of percent passing on all sieves listed in Table 3, and the design asphalt binder content.
   2. Provide information that aggregate proposed for use meet the requirements of Table 2.
   3. Supply QC data for target job mix gradation selection. Use those target values for price adjustments.

C. Moisture Susceptibility
   1. Incorporate hydrated lime into all volumetric designs. Use 1 percent, minimum, for Method A and 1½ percent, minimum for Method B (Section 02746).

D. Designate asphalt binder supplier.

E. Use gyratory mixing and compaction temperatures between 295 °F and 310 °F.

F. The Department Region Materials Lab verifies the Volumetric Mix Design. UDOT Materials Manual of Instruction Part 8-960: Guidelines for Superpave Volumetric Mix Design. The Region Materials Engineer may accept the Volumetric Mix Design from data submitted with the proposed mix design based on a previously verified mix design. The Region Materials Engineer reserves the right to verify any mix design submitted.

G. Comply with the following requirements for Superpave volumetric mix design:

Table 4
Volumetric Design Gyrations

20 Years Design ESALS (Million)	Compaction Parameters			Voids Filled with Asphalt (VFA) (%)
	$N_{initial}$ /% of G_{mm}*	N_{design} /% of G_{mm}*	N_{max} /% of G_{mm}*	
0.3 to <3	7/# 90.5	75/ ≥ 96.5	115/ # 98	70 - 80

* G_{mm}: Maximum specific gravity of Mix. (Rice Method)

Table 5
Volumetric Design Requirements

Dust Proportion Range	0.6 - 1.40
Hamburg Wheel Tracker UDOT Materials Manual of Instruction Part 8-990	Maximum 10 mm impression at 20,000 cycles.

H. Prepare and submit 2 sets (5 samples each) of ignition oven calibration samples.
1. Department uses these samples to determine the correction factors for the Region and Field lab ignition oven.
2. Submit samples a minimum of three working days prior to paving.

2.5 CONTRACTOR INITIATED CHANGES IN MIX DESIGN

A. Submit all requests in writing at least 12 hours prior to incorporating changes into production.

B. Submit a field volumetric mix design for all target changes.
   1. Field volumetric mix design verification consists of 3 sets of 2 gyratory specimens run at the new target gradation and/or asphalt binder content. Submit documentation substantiating mix was sampled from previous project production.
   2. If the field volumetric mix design meets the volumetric requirements, the Region Materials Engineer, provides written concurrence of the verified field volumetric mix design.
   3. If the field volumetric mix verification does not meet the volumetric requirements, submit a new laboratory volumetric mix design from a laboratory qualified by UDOT's Laboratory Qualification Program (LQP). Allow at least 5 working days for verification.
   4. The Department performs up to two volumetric mix design verifications at no cost to the Contractor. The Department charges $3000 for each additional laboratory and/or field verification required, including all laboratory or field volumetric mix design verifications required due to contractor initiated target changes.

C. Submit a new laboratory volumetric mix design if changes occur in the aggregate source, asphalt binder source or grade.

D. Do not make changes to production mix until request is reviewed and verified.

PART 3 EXECUTION

3.1 ADDING HYDRATED LIME

A. Method A, Lime Slurry; or Method B, Lime Slurry Marination: Refer to Section 02746.

3.2 HMA

A. Dry aggregate to an average moisture content of not more than 0.2 percent by weight. AASHTO T 255. Adjust burners to avoid damage or soot contamination of the aggregate.

B. Coat with asphalt binder 100 percent of the particles passing and 98 percent of the particles retained on the No. 4 sieve.
   1. AASHTO T 195.
   2. Discontinue operation and make necessary corrections if material is not properly coated.

C. Maintain temperature of the HMA between established limits.
   1. Do not overheat the material or cause thermal damage to the asphalt binder.
   2. Department rejects and Contractor removes materials heated over the established limits.
   3. Remove all material rejected by the Department for overheating. "

3.3 HMA PLANT

A. Provide:
   1. Positive means to determine the moisture content of aggregate.
   2. Positive means to sample all material components.
   3. Sensors to measure the temperature of the HMA at discharge.
   4. The ability to maintain discharge temperature of the mix in accordance with the mix design.

B. Asphalt Binder Storage Tanks:
   1. Provide calibrated tanks so the quantity of material remaining in the tank can be determined at any time.
   2. Provide a positive means of sampling the asphalt binder from the tanks.

C. Quality Control Testing
   1. Perform all quality control tests necessary to control the production and construction processes applicable to these specifications and listed in the QCP.
   2. Establish a testing program to control as a minimum: asphalt binder content, aggregate gradation, temperatures, and aggregate moisture,
   3. Monitoring: The Department reserves the right to monitor any QC testing.

END OF SECTION

K. AASHTO T 195: Determining Degree of Particle Coating of Bituminous-Aggregate Mixtures

L. AASHTO T 209: Maximum Specific Gravity of Bituminous Paving Mixtures

M. AASHTO T 255: Total Moisture Content of Aggregate by Drying

N. AASHTO T 308: Determining the Asphalt Binder Content of Hot-Mix Asphalt (HMA) by the Ignition Method

O. ASTM D 3665: Standard Practice for Random Sampling of Construction Materials

P. ASTM D 3666: Specification for Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials

Q. ASTM D 4791: Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

R. ASTM 5506: Practice for Organizations Engaged in the Certification of Personnel Testing and Inspecting Bituminous Paving Materials

S. ASTM D 5821: Determining the Percentage of Fractured Particles in Coarse Aggregate

T. Asphalt Institute SP-1, SP-2

U. UDOT Materials Manual of Instruction Part 8-209: Asphalt Binder Management Plan

V. UDOT Materials Manual of Instruction Part 8-958: Standard Test Method for Determining Rutting Susceptibility

W. UDOT Materials Manual of Instruction Part 8-984: Sampling Methods

1.4 ACCEPTANCE

A. A lot equals the number of tons of off-the shelf HMA delivered during each production day. The Department may

1. Take random samples informing the Contractor of the time and place for the sample not more than 15 minutes prior to the sampling.

2. May conduct the following tests:

a. Asphalt Binder Content, AASHTO T 308

b. Aggregate gradation, AASHTO T 30.

B. Engineer may accept material based upon visual inspection.

1. When acceptance is based upon visual inspection, the Engineer reserves the option of conducting any acceptance tests necessary to determine the material meets the project requirements.

C. Contractor performs all testing and quality control activities.

D. Contractor submits test results showing

1. Asphalt binder type, binder quantity by percentage of weight, aggregate gradation, moisture content, lime content and aggregate suitability to engineer prior to invoice for payment.
2. If contractor has a mix design for the material delivered as "off-the-shelf" such mix design may be submitted in lieu of item 1 above.

E. Engineer authorizes payment after test results are submitted.

PART 2 PRODUCTS

2.1 ASPHALT BINDER

A. Asphalt material: Refer to Section 02745.

END OF SECTION

Change One – December 1, 2003
Downloaded 02741 dated June 26, 2003 as document basis
Removed superpave and contract construction references - March 15, 2004
Added Contractor testing and payment conditions November 3, 2005

SECTION 02746
HYDRATED LIME

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Products and procedures for incorporating hydrated lime into all asphalts mixes.

1.2 REFERENCES

A. ASTM C 110: Physical Testing of Quicklime, Hydrated Lime, and Limestone.

B. ASTM C 1097: Hydrated Lime for Use in Asphaltic-Concrete Mixtures.

C. AASHTO M 303: Lime for Asphalt Mixtures.

D. AASHTO T 26: Quality of Water to be Used in Concrete.

E. AASHTO T 84: Specific Gravity and Absorption of Fine Aggregate.

F. AASHTO T 85: Specific Gravity and Absorption of Coarse Aggregate.

G. AASHTO T 255: Total Moisture Content of Aggregate by Drying.

1.3 QUALITY ASSURANCE

A. Prequalification: Hydrated Lime, through UDOT"s Quality Management Plan for Hydrated Lime.

PART 2 PRODUCTS

2.1 HYDRATED LIME

A. Hydrated Lime: Meet AASHTO M 303, Type I, as specified.
   1. Conform physical requirements to ASTM C 1097, subparagraph d.1.
   2. Use test method ASTM C 110, paragraph 5.4.

2.2 WATER

A. Potable Water. AASHTO T 26

PART 3 EXECUTION

3.1 APPLICATION

A. Add hydrated lime to all asphalt pavement mixes.
   1. Add the determined quantity of lime, following mix design.
   2. Base the amount of hydrated lime used on the dry weight of the aggregate.
   3. Use either Method A or B, following AASHTO T 84, AASHTO T 85, and AASHTO T 255, unless Method B is called for in the bid schedule.

B. Method A: Lime Slurry: One part lime and three parts water by weight.
   1. Maintain the lime slurry mix in a malted milk consistency.
   2. Deliver lime slurry to the twin shaft pugmill for mixing with aggregate.

C. Method B: Lime and Aggregate Stockpile Marination:
   1. Marinate the aggregate in the stockpile for 24 hours.

D. Mixing Methods A and B: Provide a horizontal twin shaft pugmill.
   1. Adjust mixing paddles in the pugmill so that the aggregate being discharged is completely coated by the lime slurry.
   2. Do not allow volume of material in the pugmill to extend above the vertical position of the blade tips.

3.2 CONTROLLING AND MONITORING

A. Control the lime batching operation by the Program Logic Control (PLC) System based upon production set up data.

B. Monitor the following aspects and record on the computer data log printout:
   1. Display target and actual rates.
   2. Belt weight bridge for lime.
   3. Locked-in water meter.
   4. Meter to transfer lime slurry.
   5. Closed end loop to mainframe computer.

3.3 QUALITY CONTROL

A. Tolerance Controls

1. Tolerance lime weight vessel static calibration ± 1.5 percent.
2. Dynamic delivery calibration ± 1.5 percent.
3. Inlet flow meter ± 2 percent.
4. Discharge flow meter ± 1.5 percent.

B. Verification

1. Submit to the Engineer Post Lottman Data on Hot Mix Asphalt.
2. Meet the system Tensile Stress Requirement.

END OF SECTION

ATTACHMENT D: SPECIAL TERMS AND CONDITIONS

7. **DELIVERY**: Contractor agrees to load UDOT trucks within a thirty (30) minute period after the plant has been advised the truck has arrived at the plant.

   Any standby time beyond the thirty (30) minute waiting time shall be assessed the Contractor at a rate of thirty-four dollars ($34.00) per hour per truck, or any portion thereof. Any standby time incurred shall be deducted from money due the Contractor.

   A breakdown or other problems not controlled by the Contractor, except underproduction, shall be cause to waive standby time charges, providing the Department driver is notified of the lost time within the thirty (30) minute period.

8. **PERFORMANCE BOND**: At the time the contract is executed, the Contractor shall provide a performance bond amounting to fifteen percent (15%) of the bid amount guaranteeing performance and payment.