ADAMS COUNTY

CONSTRUCTION AGREEMENT

THIS CONSTRUCTION AGREEMENT ("Agreement") is made as of this 3 day of October 2017, by and between the Board of County Commissioners of Adams County, Colorado, located at 4430 South Adams County Parkway, Brighton, Colorado 80601, hereinafter referred to as the "County," and, ROADSAFE TRAFFIC SYSTEMS, INC., located at 6260 Downing Street, Denver, Colorado, 80216, hereinafter referred to as the "Contractor."

The County and the Contractor, for the consideration herein set forth, agree as follows:

1. RESPONSIBILITIES/SERVICES OF THE CONTRACTOR

1.1. The Contractor shall furnish all of the labor, machinery, equipment, materials, and supplies necessary to perform all of the work shown on the plans and described in the specifications, and in all other documents incorporated herein by reference, entitled:

Invitation for Bid: 2017.339 Pavement Marking

- 1.2. The Contractor shall perform in accordance with the project scope and provisions of the Invitation for Bid, and, in addition to the terms set forth in this Agreement, the Contractor agrees to be bound by and to perform in accordance with the following specified documents attached hereto and incorporated herein as if fully written into this Agreement:
 - 1.2.1. All terms set forth in the DOCUMENTS attached hereto and identified as:
 REQUEST FOR PROPOSAL, BID PROPOSAL, BID SCHEDULE, BID
 BOND, CONSTRUCTION AGREEMENT, PERFORMANCE &
 PAYMENT BONDS, INSURANCE, BIDDER'S CLIENT LIST, BIDDER'S
 CREDIT LIST, NOTICE OF AWARD, ACCEPTANCE OF NOTICE OF
 AWARD, NOTICE TO PROCEED, LETTER OF ACCEPTANCE,
 APPLICATION FOR EXEMPTION CERTIFICATE, FIELD ORDER,
 CHANGE ORDER, APPLICATION FOR PAYMENT, PARTIAL WAIVER
 OF LIEN, FINAL WAIVER OF LIEN, CERTIFICATE OF FINAL
 COMPLETION, PROJECT DRAWINGS AND ANY SPECIAL DETAILS.
- 1.3. The Contractor agrees that it has satisfied itself as to the nature and location of the work, the character, quality, and quantity of the materials to be encountered, including subsurface conditions, the equipment and facilities needed to complete the work, the local conditions, and all other matters which can affect the work under this Agreement and Contractor assumes the risk should the conditions enumerated in this section differ from what Contractor anticipated.
- 1.4. When required by any document incorporated into this Agreement, certain specified materials shall not be incorporated in the work until tests have been made and the material found to be in accordance with the requirements of the specifications. All costs of initial testing shall be included in the price bid. The Contractor will pay for repeated tests due to failure of initial tests.

- 1.5. This Agreement does not guarantee to the Contractor any work except as authorized in accordance with this Section I, nor does it create an exclusive agreement for services.
- 1.6. The Contractor understands that close cooperation and coordination of this project with all or other contractors or subcontractors is required.
- 1.7. Emergency Services: In the event the Adams County Board of County Commissioners declares an emergency, the County may request additional services (of the type described in this Agreement or otherwise within the expertise of Contractor) to be performed by Contractor. If County requests such additional services, Contractor shall provide such services in a timely fashion given the nature of the emergency, pursuant to the terms of this Agreement. Unless otherwise agreed to in writing by the parties, Contractor shall bill for such services at the rates provided for in this Agreement.

2. <u>COMPLIANCE WITH C.R.S. § 8-17.5-101, ET. SEQ. AS AMENDED 5/13/08</u>

- 2.1. Pursuant to Colorado Revised Statute (C.R.S.), § 8-17.5-101, et. seq., as amended 5/13/08, the Contractor shall meet the following requirements prior to signing this Agreement (public contract for service) and for the duration thereof:
- 2.2. The Contractor shall certify participation in the E-Verify Program (the electronic employment verification program that is authorized in 8 U.S.C. § 1324a and jointly administered by the United States Department of Homeland Security and the Social Security Administration, or its successor program) or the Department Program (the employment verification program established by the Colorado Department of Labor and Employment pursuant to C.R.S. § 8-17.5-102(5)) on the attached certification.
- 2.3. The Contractor shall not knowingly employ or contract with an illegal alien to perform work under this public contract for services.
- 2.4. The Contractor shall not enter into a contract with a subcontractor that fails to certify to the Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this public contract for services.
- 2.5. At the time of signing this public contract for services, the Contractor has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services through participation in either the E-Verify Program or the Department Program.
- 2.6. The Contractor shall not use either the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while this public contract for services is being performed.
- 2.7. If Contractor obtains actual knowledge that a subcontractor performing work under this public contract for services knowingly employs or contracts with an illegal alien, the Contractor shall:

notify the subcontractor and the County within three days that the Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and terminate the subcontract with the subcontractor if within three days of receiving the notice required pursuant to the previous paragraph, the subcontractor does not stop employing or contracting with the illegal alien; except that the contractor shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

- 2.8. Contractor shall comply with any reasonable requests by the Department of Labor and Employment (the Department) made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).
- 2.9. If Contractor violates this Section II of this Agreement, the County may terminate this Agreement for breach of contract. If the Agreement is so terminated, the Contractor shall be liable for actual and consequential damages to the County.

3. RESPONSIBILITIES OF THE COUNTY

The County shall:

- 3.1. Provide information as to its requirements for the project.
- 3.2. Give prompt notice to the Contractor whenever the County observes or otherwise becomes aware of any defect in the project.
- 3.3. Provide reasonable assistance to the Contractor in obtaining approval from all governmental authorities having jurisdiction over the project, and such approvals and consents from such other individuals or bodies as may be necessary for completion of the project.
- 3.4. Furnish, or direct the Contractor to provide, at the County's expense, necessary additional services.

4. TERM

- 4.1. The initial term of this Agreement shall be for one (1) year from the date of execution, unless sooner terminated as specified elsewhere herein.
- 4.2. Extension Options: The County, at its sole option, may offer to extend this Agreement as necessary for up to two (2) option year extensions providing satisfactory service is given and all terms and conditions of this Agreement have been fulfilled. Such extensions must be mutually agreed upon in writing by the County and the Contractor.

5. PAYMENT AND FEE SCHEDULE

5.1. The County shall pay the Contractor for services furnished under this Agreement, and the Contractor shall accept as full payment for those services listed in Attachment A1 Pricing Form, the value shall not to exceed one hundred forty-nine thousand dollars, three hundred, thirty-six dollars and eighty-four cents (\$149,336.84).

- 5.2. The Contractor shall maintain hourly records of time worked by its personnel to support any audits the County may require, and shall bill the County monthly for costs accrued during the preceding month. Payments on these billings will be subject to estimates prepared by the Project Manager of the value of work performed and materials delivered and materials placed in accordance with the specifications. Upon submission of such billings to the County and approval by the Project Manager, payment shall be issued. It is understood and agreed that the County may require a maximum of thirty-one (31) days to process payment after receiving billing in the proper form.
- 5.3. The County may deduct money from the partial payments in an amount necessary to protect the interests of the County, and is dependent upon the following:
 - 5.3.1. If the Agreement is for one hundred fifty thousand dollars (\$150,000) or more, the County shall withhold five percent (5%) of monthly partial payments until the contract is completed satisfactorily and finally accepted by the County. For Agreements less than one hundred fifty thousand dollars (\$150,000), the County may withhold more than five percent (5%).
 - 5.3.2. All money withheld pursuant to this section shall be retained by the County no more than thirty (30) days after the project has been completed to satisfaction and has been finally accepted by the County. If the County finds that satisfactory progress is being made in all phases of the Agreement, the County may, upon written request of the Contractor, authorize payment from the withheld percentage. Before such payment is made, the County shall determine that satisfactory and substantial reasons exist for the payment, and shall require written approval from any surety furnishing bonds for the work performed under the terms of this Agreement.
- 5.4. Fund Availability: The County has appropriated sufficient funds for this Agreement for the current fiscal year. Payment pursuant to this Agreement, whether in full or in part, is subject to and contingent upon the continuing availability of County funds for the purposes hereof. In the event funds become unavailable, as determined by the County, the County may immediately terminate this Agreement or amend it accordingly. To the extent allowed by the Colorado Taxpayer Bill of Rights and Title 29 of the Colorado Revised Statutes, the County represents that it has appropriated an amount of money for this Agreement that is at least equal to the contract price.

6. LIQUIDATED DAMAGES

- 6.1. The Contractor agrees that time is of the essence in the performance of this Agreement. If the Contractor is delayed for any reason beyond its control, the Contractor shall submit the reason for the delay in writing to the Project Manager who shall decide whether it sufficiently justifies an extension of the completion date.
- 6.2. All decisions of the Project Manager are at his/her complete discretion and will be final.
- 6.3. Time is of the essence in the performance of this Agreement. In the event the Contractor shall fail to complete all the work to be performed by the completion time aforementioned, the Contractor shall pay to the County as and for liquidated damages, not as a penalty, the applicable sum set forth in the schedule below, for each and every calendar day that the Contractor shall be in default. From more than to and including:

	Daily	
Orig	Charge	
From More Than	Up To and Including	Amount
0	150,000	500
150,000	250,000	600
250,000	500,000	800
500,000	500,000 1,000,000	
1,000,000	2,000,000	2,000
2,000,000	4,000,000	3,300
4,000,000	10,000,000	3,900
10,000,000 and up		3,900*
* plus 300 per ea	sch additional \$1,000,00	0 contract
amount or p	oart thereof over \$10,00	0,000

- 6.4. Any deduction assessed as liquidated damages under this section shall not relieve the Contractor from liability for any damages or costs resulting from delays to other contractors on the job or to other projects caused by a failure of the Contractor to complete the work according to the agreed time.
- 6.5. Any extension(s) of the completion date authorized by the Project Manager pursuant to this section shall not relieve the Contractor from liability for any damages or costs resulting from delays to other contractors on the job. The Contractor agrees to indemnify and hold the County harmless from any claim against the County resulting from the Project Manager authorizing an extension of the completion date or from the Contractor's failure to complete this Agreement by the completion date aforementioned.
- 6.6. Permitting the Contractor to continue and finish the work, or any part thereof, after elapse of the agreed time will not operate as a waiver on the part of the County of any of its rights under this Agreement.

7. DAMAGES ARISING FROM BREACH OF PERFORMANCE OBLIGATIONS

7.1. Notwithstanding anything else set forth in this Agreement, if Contractor fails to comply with all terms of this contract, including but not limited to, its obligation to perform its work in a workmanlike manner in accordance with all codes, plans, specifications and industry standards, Contractor shall be liable to County for all damages arising from the breach, including but not limited to, all attorney fees, costs and other damages.

8. WARRANTY

8.1. The Contractor warrants and guarantees to the County that all work, equipment, and materials furnished under the Agreement are free from defects in workmanship and materials for a period of one year after final acceptance by the County. The Contractor further warrants and guarantees that the plans and specifications incorporated herein are free of fault and defect sufficient for Contractor to warrant the finished product after completion date. Should the Contractor fail to proceed promptly in accordance with this guarantee, the

County may have such work performed at the expense of the Contractor. This section does not relieve the Contractor from liability for defects that become known after one year.

9. SUBCONTRACTING

9.1. The Contractor may utilize the services of subcontractors on those parts of the work that would normally be performed by subcontractors. But the Contractor shall not subcontract any portion of the work until the written approval of such action has been obtained from the Project Manager. The Contractor shall be fully responsible to the County for the acts and omissions of its subcontractors and their employees.

10. CHANGE ORDERS

- 10.1. The County may, from time to time, require changes in the scope of the services of the Contractor to be performed herein including but not limited to additional instructions, additional work, and the omission of work previously ordered. The Contractor shall be compensated for all authorized changes in services, pursuant to the applicable provision in the Solicitation, or, if no provision exists, pursuant to the terms of a Change Order. No Change Order shall be issued unless the County has appropriated sufficient funds to pay for the Change Order in the event the amount due pursuant to the Agreement as altered by the Change Order would result in the total contract price exceeding the amount originally appropriated by the County for the Agreement.
- 10.2. The County may, upon mutual written agreement by the parties, extend the time of completion of services to be performed by the Contractor.

11. <u>INSPECTIONS</u>, <u>REVIEWS AND AUDITS</u>

- 11.1. When the work is completed, the Contractor shall file a written notice with the Project Manager that the work, in the opinion of the Contractor, has been finished. Within ten (10) days after the Contractor files the written notice, the Project Manager and the Contractor shall make a final inspection of the project to determine whether all of the work has been completed in accordance with this Agreement and with all documents incorporated herein. A final list shall be made by the County, in sufficient detail to fully outline to the Contractor the following items:
 - 11.1.1. Work to be completed, if any; and,
 - 11.1.2. Work not in compliance with the Agreement, if any; and,
 - 11.1.3. Unsatisfactory work for any reason, if any.
- 11.2. The County shall not authorize final payment until all items on the list, if any, have been completed to the satisfaction of the Project Manager.

12. CLEAN-UP

12.1. The Contractor shall frequently clean up all refuse or scrap materials resulting from the progress of the work. Upon completion of the work and prior to final inspection, the Contractor shall remove from the construction site and occupied adjoining property all refuse, unused

materials, forming lumber, sanitary facilities, and any other materials belonging to the Contractor or subcontractors. Failure of the Contractor to clean up and restore the site satisfactorily will result in the County doing so. The cost will be charged to the account of the Contractor or his/her surety.

13. PROJECT ADMINISTRATION

- 13.1. The Project Manager does not have the authority to alter or modify the terms of this Agreement.
- 13.2. The Project Manager is designated by the County to exercise authority on its behalf under this Agreement, and to see that it is performed according to its terms. The Project Manager shall furnish all explanations or directions and inspections necessary to carry out and complete satisfactorily the services contemplated and provided for under this Agreement. The Project Manager shall also approve all report formats and related procedures, and shall be responsible for final acceptance of all work performed. Any conflict between the plans or specifications, and any other document incorporated herein, shall be submitted in writing to the Project Manager for review and determination.
- 13.3. If the Contractor considers any work demanded to be outside the Agreement requirements, or considers any determination of the Project Manager to be unfair, the Contractor shall immediately ask for a written instruction or decision from the Project Manager and shall proceed to perform the services to conform to the Project Manager's determination. If the Contractor considers such instructions or decision to be unsatisfactory, it shall, within five (5) days after their receipt, file a written protest with the Adams County Purchasing Office stating the objections and the reasons therefore. Unless protests or objections are made in the manner specified and within the time limit stated herein, the Contractor hereby waives all grounds for protests.
- 13.4. All claims, disputes, and other matters in question arising out of or relating to the Agreement documents or breach thereof between the Project Manager and the Contractor shall be submitted to the Adams County Purchasing Office.

14. **NONDISCRIMINATION**

- 14.1. The Contractor shall not discriminate against any employee or qualified applicant for employment because of age, race, color, religion, marital status, disability, sex, or national origin. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices provided by the local public agency setting forth the provisions of this nondiscrimination clause.
 - 14.1.1. The Contractor will cause the foregoing provisions to be inserted in all subcontracts for any work covered by this Agreement so that such provisions will be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.

15. INDEPENDENT CONTRACTOR

15.1. In providing services under this Agreement, the Contractor acts as an independent contractor and not as an employee of the County. The Contractor shall be solely and entirely responsible for his /her acts and the acts of his /her employees, agents, servants, and subcontractors during the term and performance of this Agreement. No employee, agent, servant, or subcontractor of the Contractor shall be deemed to be an employee, agent, or servant of the County because of the performance of any services or work under this Agreement. The Contractor, at its expense, shall procure and maintain workers' compensation insurance as required by State law and personal injury and property damage insurance in the coverage amounts as described in Section XIV. Pursuant to the Workers' Compensation Act § 8-40-202(2)(b)(IV), C.R.S., as amended, the Contractor understands that it and its employees and servants are not entitled to workers' compensation benefits from the County. The Contractor further understands that it is solely obligated for the payment of federal and state income tax on any moneys earned pursuant to this Agreement.

16. <u>INDEMNIFICATION</u>

16.1. The Contractor agrees to indemnify and to hold the County and its agents harmless for, from, and against any and all claims, suits, expenses, damages or other liabilities, including reasonable attorney fees and court costs, arising out of damage or injury to persons or property caused or sustained by any person, persons, or entities as a result of the performance or failure of the Contractor, its agents or employees, or any subcontractor to provide services pursuant to the terms of this Agreement.

17. INSURANCE

- 17.1. The Contractor shall furnish a certificate of insurance for commercial general liability, comprehensive automobile liability, workers' compensation, and professional liability upon notification of award and prior to performance. Work shall not commence under this Agreement until the Contractor has submitted to the County, and received approval thereof, the certificate of insurance showing compliance with the following types and coverage of insurance.
 - 17.1.1. <u>Commercial General Liability Insurance</u>: to include products liability, completed operations, contractual, broad form property damage, and personal injury.

Each Occurrence

\$1,000,000

General Aggregate

\$2,000,000

17.1.2. Comprehensive Automobile Liability Insurance: to include all motor

vehicles owned, hired, leased, or borrowed.

Bodily Injury/Property Damage \$

\$1,000,000 (each accident)

Personal Injury Protection

Per Colorado Statutes

17.1.3. Workers' Compensation Insurance:

Per Colorado Statutes

17.1.4. <u>Professional Liability Insurance*</u>: to include coverage for damages or claims for damages arising out of the rendering, or failure to render, any professional services.

Each Occurrence

\$1,000,000

- *This insurance requirement applies only to Contractors who are performing services under this Agreement as professionals licensed under the laws of the State of Colorado, such as physicians, lawyers, engineers, nurses, mental health providers, and any other licensed professionals.
- 17.2. The Contractor's commercial general liability, comprehensive automobile liability, workers' compensation, and professional liability insurance policies and/or certificates of insurance shall be issued to include Adams County and the Colorado Department of Transportation (CDOT) as an "additional insured" and shall include the following provisions:
 - 17.2.1. Underwriters shall have no right of recovery or subrogation against the County, it being the intent of the parties that the insurance policies so affected shall protect both parties and be primary coverage for any and all losses resulting from the actions or negligence of the Contractor.
 - 17.2.2. The insurance companies issuing the policy or policies shall have no response against the County for payment of any premiums due or for any assessments under any form of any policy.
 - 17.2.3. Any and all deductibles contained in any insurance policy shall be assumed by and at the sole risk of the Contractor.
- 17.3. If any of the said policies shall be or at any time become unsatisfactory to the County as to form or substance, or if a company issuing any such policy shall be or at any time becomes unsatisfactory to the County, the Contractor shall promptly obtain a new policy, submit the same to the Purchasing Agent of Adams County for approval, and thereafter submit a certificate of insurance as herein provided. Upon failure of the Contractor to furnish, deliver, and maintain such insurance as provided herein, this Agreement, at the election of the County, may be immediately declared suspended, discontinued, or terminated. Failure of the Contractor to obtain and/or maintain any required insurance shall not relieve the Contractor from any liability under the Agreement, nor shall the insurance requirements be construed to conflict with the obligations of the Contractor concerning indemnification.
- 17.4. If the Contractor is a Joint Venture, then the respective parties thereto are each individually held fully responsible for completion of the project according to the terms of this Agreement. The parties thereto also have joint and several liabilities to the County for any liquidated damages assessed or for performance bond claims against the Joint Venture. The performance bond and all insurance required by this Agreement shall set forth the identity of each party to the Joint Venture.

18. <u>TERMINATION</u>

- 18.1. Termination of Agreement for the Convenience of the County: The County, at its sole option and discretion, may terminate this Agreement at any time by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least fifteen days before the effective date of termination. If the Agreement is terminated by the County, the Contractor will be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of the Contractor covered by this Agreement, less payments of compensation previously made.
- 18.2. <u>Termination of Agreement for Cause:</u> If, through any cause, the Contractor shall fail to fulfill its obligations under this Agreement in a timely and proper manner, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Agreement, the County shall thereupon have the right to immediately terminate this Agreement upon giving written notice to the Contractor of such termination and specifying the effective date thereof.
- 18.3. Ownership of Partially Completed Work: All work accomplished by the Contractor prior to the date of such termination shall be recorded and tangible work documents shall be transferred to and become the sole property of the County prior to payment for services rendered.
- 18.4. Notwithstanding the above, the Contractor shall not be relieved of liability to the County for damages sustained by the County by virtue of any breach of the Agreement by the Contractor and for the purposes of setoff until such time as the exact amount of damages due the County from the Contractor is determined.

19. BONDING:

19.1. The Contractor shall secure a Performance Bond and a Payment Bond each in the amount of one hundred percent (100%) of the Agreement price with a corporate surety approved by the County and licensed to do business in the State of Colorado, said bonds to be released at the sole discretion of the County.

20. MUTUAL UNDERSTANDINGS

- 20.1. <u>Jurisdiction and Venue:</u> The laws of the State of Colorado shall govern as to the interpretation, validity, and effect of this Agreement. The parties agree that venue and jurisdiction for disputes regarding performance of this Agreement are with the District Court of Adams County, Colorado.
- 20.2. Compliance with Laws: The Contractor, at all times during the performance of this Agreement, agrees to strictly adhere to all applicable federal, state, and local laws, rules, and regulations that affect or govern the work as contemplated under this Agreement. If applicable, the Contractor and subcontractors shall abide by all applicable provisions of the Davis-Bacon Act for payment of wages to employees and the Contract Work Hours and Safety Standards Act. The parties hereto aver that they are familiar with §§ 18-3-301, et seq., C.R.S. (Bribery and Corrupt Influences), as amended, and §§ 18-8-401, et seq., C.R.S. (Abuse of

Public Office), as amended, the Clean Air Act (42 U.S.C. 7401-7671q), and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended, and that no violation of such provisions are present. Contractor warrants that it is in compliance with the residency requirements in §§ 8-17-101, et seq., C.R.S.

- 20.3. Record Retention: The Contractor shall maintain records and documentation of the services provided under this Agreement, including fiscal records, and shall retain the records for a period of three (3) years from the date this Agreement is terminated. Said records and documents shall be subject at all reasonable times to inspection, review, or audit by authorized federal, state, or county personnel.
- 20.4. <u>Assignability:</u> Neither this Agreement, nor any rights hereunder, in whole or in part, shall be assignable or otherwise transferable by the Contractor without the prior written consent of the County.
- 20.5. <u>Waiver:</u> Waiver of strict performance or the breach of any provision of this Agreement shall not be deemed a waiver, nor shall it prejudice the waiving party's right to require strict performance of the same provision, or any other provision in the future, unless such waiver has rendered future performance commercially impossible.
- 20.6. <u>Force Majeure:</u> Neither party shall be liable for any delay or failure to perform its obligations hereunder to the extent that such delay or failure is caused by a force or event beyond the control of such party including, without limitation, war, embargoes, strikes, governmental restrictions, riots, fires, floods, earthquakes, or other acts of God.
- 20.7. <u>Notice:</u> Any notices given under this Agreement are deemed to have been received and to be effective:
 - 20.7.1. Three (3) days after the same shall have been mailed by certified mail, return receipt requested; and,
 - 20.7.2. Immediately upon hand delivery; or,
 - 20.7.3. Immediately upon receipt of confirmation that an E-mail was received.
 - 20.7.4. For the purposes of this Agreement, any and all notices should be addressed to the contacts listed below:

Department:

Adams County Public Works, Operations Division

Contact:

Jeremy Reichert, Operations Manager

Address:

4955 East 74th Avenue

City, State, Zip:

Commerce City, Colorado 80022

Phone:

303.853.7130

E-mail:

swells@adcogov.org

Department:

Adams County Attorney's Office 4430 South Adams County Parkway

Address: City, State, Zip:

Brighton, Colorado 80601

Phone:

720.523.6116

Contractor:

Roadsafe Traffic Systems, Inc.

Contact:

Robert Streno, Estimator

Address:

6260 Downing Street

City, State, Zip:

Denver, Colorado 80216

Phone:

303.298.3407

E-mail:

rstreno@roadsafetrffic.com

- 20.8. <u>Integration of Understanding:</u> This Agreement contains the entire understanding of the parties hereto and neither it, nor the rights and obligations hereunder, may be changed, modified, or waived except by an instrument in writing that is signed by the parties hereto.
- 20.9. <u>Severability:</u> If any provision of this Agreement is determined to be unenforceable or invalid for any reason, the remainder of this Agreement shall remain in effect, unless otherwise terminated in accordance with the terms contained herein.
- 20.10. <u>Authorization</u>: Each party represents and warrants that it has the power and ability to enter into this Agreement, to grant the rights granted herein, and to perform the duties and obligations herein described.
- 20.11. Confidentiality: All documentation related to this Agreement will become the property of Adams County. All documentation maintained or kept by Adams County shall be subject to the Colorado Open Records Act, C.R.S. 24-72-201 et seq. ("CORA"). The County does not guarantee the confidentiality of any records.

The remainder of this page is left blank intentionally.

CONTRACTOR'S CERTIFICATION OF COMPLIANCE

Pursuant to Colorado Revised Statute, § 8-17.5-101, et.seq., as amended 5/13/08, as a prerequisite to entering into a contract for services with Adams County, Colorado, the undersigned Contractor hereby certifies that at the time of this certification, Contractor does not knowingly employ or contract with an illegal alien who will perform work under the attached contract for services and that the Contractor will participate in the E-Verify Program or Department program, as those terms are defined in C.R.S. § 8-17.5-101, et. seq. in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the attached contract for services.

CONTRACTOR:

RoadSafe Traffic Systems, Inc.	<i>a</i> ,
Company Name	
^	
Robert Streno Name (Print or Type)	-
rvaine (Trint of Type)	
IL 15.	
Signature	
Estimator Title	· -

Note: Registration for the E-Verify Program can be completed at: https://www.vis-dhs.com/employerregistration. It is recommended that employers review the sample "memorandum of understanding" available at the website prior to registering

Signature Page

IN WITNESS WHEREOF, the Parties have caused their names to be affixed hereto.

BOARD OF COUNTY COMMISSIONERS ADAMS COUNTY, COLORADO	
By: 50 Menus	10 3 17
Chair	Date
CONTRACTOR ROADSAFE TRAFFIC SYSTEMS, INC.	
By:	
Rabert Streno	9/18/17
Name (Print or Type)	Date:
112	Estimator
Authorized Signature	Title
Attest:	CHannal
Stan Martin, Clerk and Recorder	Deputy Clerk
APPROVED AS TO FORM:	2 Chlyt
Adams County Attorney's Office	Attorney's Signature
NOTARIZATION:	
COUNTY OF A dams	
STATE OF	
Signed and sworn to before me this 18th day of Sep	tember 2017,
by Roberty Streno,	tribet white in a second party and the second
Notary Public	GARLY EVANS NOTARY PUBLIC STATE OF COLORADO
My commission expires on:	NOTARY ID 20114023987 COMMSSION EXPIRES APR. 22, 2019

ATTACHMENT A

(All Documents following this page of the Agreement)

Attachments:

- 1. Price Schedule
- 2. BID, dated June 29, 2017
- 3. Contractor's Certification of Compliance
- 4. Contractor's Signature Page

NOTICE CONCERNING BID SCHEDULE

CONTRACTOR must bid the entire schedule. CONTRACTOR may be considered unresponsive if they do not include bids for all items. The estimated quantities listed on the bid form are estimates only, and indicate relative amounts of anticipated work. All items will be considered complete in place.

BID SCHEDULE 2017.339 PAVEMENT MARKINGS

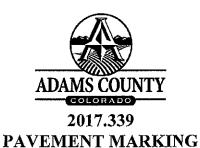
Item	Description (Epoxy)	Quantity	Unit	Unit Bid	Project Cost
602101	Pavement Marking - 4" Yellow	89,716	SF	\$ <u>6</u> (2	\$ 55 , 623, 92
602102	Pavement Marking - 4" White	124,579	SF	\$ 0.62	\$ 77, 238 98
602103	Pavement Marking - 8" White	1,067	SF	\$ 0.62	\$ _661.54
	SUBTOTAL (Epoxy)			\$ 133, 52	4. 44

Item	Description (Removal)	Quantity	Unit	Unit Bid	Project Cost
602106	Removal of Epoxy / Paint Striping	13,177	SF	\$ <u> 20</u> \$	15,812.40
:	SUBTOTAL (Removal)			\$ 15,8/2	40

BID GRAND TOTAL \$ 149, 336.84 (Epoxy and Removal)

2017 Pavement Line Marking Program List

	Route		4" White	ite	4" Yellow	wo	8" White	hite	Project Sub Totals	Totals
Name	From	Το Το	F	.S.	5	SF	Ľ	쏬	5	SF
Broadway	HWY 36	Greenwood BLVD	140	47	1,120	373	370	247	1,630	299
Buckley RD	350' S/of Cameron Dr	120th Ave	12,950	4,317	7,992	2,664			20,942	6,981
Buckley RD	E. 136th Ave	350' S/of Cameron Dr	9,314	3,105	8,204	2,735	145	97	17,663	5,937
Colorado BLVD	E. 144th Ave	E. 151st Ave	9,242	3,081	10,347	3,449			19,589	6,530
Coronado Pkwy (N)	Washington St	York St	2,600	1,867	11,200	3,733			16,800	5,600
Coronado Pkwy (S)	Washington St	York St	5,280	1,760	10,560	3,520	80	53	15,920	5,333
Dahlia St	I-76 Frontage Rd	E 88th Ave	11,550	3,850	2,970	066	190	127	14,710	4,967
Hilltop Cir	El Paso Bívd	Bronco Rd	2,400	800	1,180	393	09	40	3,640	1,233
McElwain Blvd	Devonshire Blvd	E 88th Ave	7,150	2,383	9,365	3,122	275	183	16,790	5,688
Monaco St	I-76 Frontage Rd	s of E 96th Ave	8,660	2,887	7,116	2,372			15,776	5,259
Monaco/McKay Rd	E 96th Ave	E 104th Ave	10,095	3,365	8,588	2,863			18,683	6,228
Riverdale Rd	1250's of McKay Rd	E 128th Ave	23,578	7,859	22,396	7,465			45,974	15,324
Samuel Dr	Pecos St	W 72nd Ave	2,735	912	3,680	1,227	285	190	6,700	2,329
Steele St	E 78th Ave	E 86th Ave	10,550	3,517	10,490	3,497			21,040	7,014
Strasburg Rd	E 144th Ave	Colfax St	151,555	50,518	47,831	15,944	1,285	857	200,671	67,319
W 56th Ave	Lincoln/Broadway	Washington St	550	183	4,140	1,380			4,690	1,563
E 78th Ave	Pearl St	Washington St	50	17	595	198	150	100	795	315
E 78th Ave	Washington St	York St	4,223	1,408	11,980	3,993	200	333	16,703	5,734
E 78th Ave	York St	Steele St	5,250	1,750	3,299	1,100	_		8,549	2,850
E 88th Ave	Quail Run	HWY 79	83,860	27,956	54,218	18,076			138,078	46,032
E 88th Ave	HWY 79	Strasburg Rd	51,855	17,285	21,756	7,252			73,611	24,537
E 144th Ave	HWY 79	Strasburg Rd	51,900	17,300	31,596	10,532			83,496	27,832
Pecos St	W 64th Ave	W 52nd Ave	690'9	2,023	14,432	4,811	1,402	468	21,903	7,302
Pecos St	W 84th Ave	W 64th Ave	18,303	6,101	31,881	10,627	3,585	2,390	53,769	19,118
W 64th Ave	RR Crossing	Federal Blvd	6,360	2,120	2,435	812	240	160	9,035	3,092
W 64th Ave	Pecos St	I-76 Overpass to 62nd Ave	6,250	2,083	8,458	2,819	270	180	14,978	5,082
W 62nd Ave	W 64th Ave	Broadway St	4,800	1,600	4,880	1,627	120	80	008'6	3,307
Colorado Blvd	E 160th Ave	E 168th Ave	10,100	3,367	8,466	2,822	205	137	18,771	6,326
Hayesmount Rd	E 156th Ave	E 168th Ave	15,621	5,207	16,172	5,391	133	44	31,926	10,642
E 152nd Ave	Imboden Rd	Kirby St B3	4,125	1,375	4,052	1,351				
Imboden Rd	E 88th Ave	Bridge St	13,260	4,420	5,123	1,708	162	108		:



Transportation Department

CONTRACTOR'S STATEMENT

I have read and fully understand all the special conditions herein set forth in the foregoing paragraphs, and by my signature set forth hereunder, I hereby agree to comply with all said special conditions as stated or implied. In consideration of the above statement, the following bid is hereby submitted.

WE THE UNDERSIGNED HEREBY ACKNOWLEDGE RECEIPT OF

Addenda # None Addenda # None If None, Please write NONE.

RoadSafe Traffic Systems, Inc.	<u> </u>
Company Name	Date
G260 Downing St.	Mil
Address	Signature
Denver, CO BOZIG	Robert Streno
City, State, Zip Code	Printed Name Estimator
Adams County	
County	Title
303 · Z98 · 3407	303.798.0905
Telephone	Fax
retreno a roadsafe traffic.	cam
Email Address	

License No. (If applicable)

I, the undersigned, as Secretary of the Corporation submitting the foregoing Bid, hereby certify that, under and pursuant to the bylaws and resolutions of said corporation, each officer who has signed said Bid on behalf of the corporation is fully and completely authorized so to do. (SEAL)

CONTRACTOR'S CERTIFICATION OF COMPLIANCE

Pursuant to Colorado Revised Statute, § 8-17.5-101, et.seq., as amended 5/13/08, as a prerequisite to entering into a contract for services with Adams County, Colorado, the undersigned Contractor hereby certifies that at the time of this certification, Contractor does not knowingly employ or contract with an illegal alien who will perform work under the attached contract for services and that the Contractor will participate in the E-Verify Program or Department program, as those terms are defined in C.R.S. § 8-17.5-101, et. seq. in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the attached contract for services.

CONTRACTOR:					
RoadSafe Traffic Systems, In	ne.	•		·	
<u>. 15. mg (</u>		·	Co/20	רו/ו	
Company Name	3.	Date			
	•				
Mess			٠		
Signature			. :		
Robert Streno Estimator					
Name (Print or Type)	-				
Name (Fint of Type)		•	Maria Taring		
Title					:

Note: Registration for the E-Verify Program can be completed at: https://www.vis-dhs.com/employerregistration. It is recommended that employers review the sample "memorandum of understanding" available at the website prior to registering

BID 2017:339 PAVEMENT MARKINGS

Bid of RoadSafe Traffic Systems, Inc.	(hereinafter called CONTRACTOR)
organized and existing under the laws of the State of	leleware, doing business as
(an) (a) Corporation .*(Insert "corporation	n, partnership, individual", as applicable)

To the Owner:

In accordance with the advertisement of Adams County Inviting bids for HE-IFB-2017-339 PAVEMENT MARKINGS hereinbefore named, and in conformity with the Agreement Plans, Agreement Documents, Specifications, and Special Provisions and all Addenda pertaining thereto, all on file at the office of the Adams County Finance Department/Purchasing Division, 4430 S. Adams County Pkwy., 4th Floor Suite C4000A Brighton, Colorado, 80601-8212.

CONTRACTOR hereby certifies that this bid is made and submitted without fraud or collusion with any other person, firm or corporation whatsoever; that an examination has been made of the site, of the work, and Agreement form, together with the Plans, Specifications, and Special Provisions for the construction of the above named project.

CONTRACTOR understands that the estimated quantities of work shown herein are approximate only and are subject to increase or decrease; that all quantities of work, whether increased or decreased within the limits specified in the General Requirements, are to be performed at the unit prices or lump sums as shown on the attached schedule; that at the time of opening bids, a total bid only will be read, but that comparison of bids will be based on the correct summation of item totals obtained from the unit prices or lump sum totals bid as provided in 104.1 of the Instructions to CONTRACTORs.

CONTRACTOR proposes to furnish all necessary machinery, equipment, tools, labor, and other means of construction, and to furnish all materials specified in the manner and at the time prescribed, all in accordance with the terms of the Agreement Documents, Plans, Specifications, and the Special Provisions forming apart thereof.

CONTRACTOR further proposes to do all Extra Work which may be required to complete the contemplated improvements at unit prices or lump sums to be agreed upon in writing prior to starting such work, or if such prices or sums cannot be agreed upon, to perform such work as provided in 112.4 and 115.3 of the General Requirements.

CONTRACTOR further proposes to execute the form of Agreement and Performance and Payment Bonds within 10 days after receiving written Notice of Award.

CONTRACTOR further proposes to perform all work in accordance with the Agreement Documents, Plans, Specifications, and Special Provisions and in a good and workmanlike manner, and to renew or repair any work which may be rejected due to defective materials or workmanship, prior to final completion and acceptance by the County's Project Engineer.

CONTRACTOR hereby agrees to commence work under the awarded agreement on or before the agreement starting date and to fully complete the Project within the terms stated in the Invitation to Bid and Agreement Documents.

EXHIBIT A(All Documents following this page of the Agreement)

Exhibit:

1. IFB 2017.339 Scope of Work

EXHIBIT A

ADAMS COUNTY FORMAL INVITATION FOR BID 2017.339

PAVEMENT MARKING

Public Works Department

All documents and Addendum related to this BID will be posted on the Rocky Mountain Bid System at: http://www.rockymountainbidsystem.com/Bids/ViewOpenSolicitations.asp

BID Issuance Date:

Tuesday, June 13, 2017

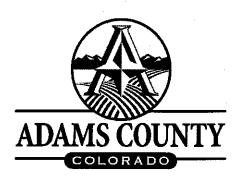
Written questions regarding this IFB will be accepted through

Tuesday, June 20, 2017 by 2:00 p.m.

BID OPENING DATE

Thursday, June 29, 2017 Time: 2:00 p.m.

Location: Adams County Government Center 4430 South Adams County Parkway 4th Floor, C4000A Brighton, Colorado 80601



All submitted Bids will be publicly opened and read aloud at the time and place stated above.

All Bids are subject to the terms and conditions, specifications and the special instructions attached hereto.

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101 GENERAL PROVISIONS

101.1 ABBREVIATIONS

Wherever the following abbreviations are used in these specifications, standard details, or plans, they are to be construed the same as the respective expressions represented.

		İĊ	Centigrade or Curb
AASHTO	American Association of State	CC or C/C	Center to Center
70.01110	Highway and Transportation	CCA	Colorado Contractor's Association,
	Officials		inc.
AB	Aggregate Base	CDOT	Colorado Department of
ABAN	Abandon		Transportation
ABC	Aggregate base course	CE	City or County Engineer
AC	Asphalt cement or concrete	CEM	Cement
ACB	Asphalt concrete base	CF	Curb face
ACI	American Concrete Institute	CFS	Cubic Feet per second
ACPA	American Concrete Pipe	CIP	Cast Iron pipe
,,,,,,	Association	CIPP	Cast-in-place concrete pipe
ACWS	Asphalt concrete wearing surface	CL or C	Centerline
AGC	Associated General	- CM	Centimeter
	CONTRACTORs of America, Inc.	CMP	Corrugated metal pipe
AGG	Aggregate	co	Clean out
AISC	American Institute of Steel	COL	Column
	Construction	CONC	Concrete
ANSI	American National Standards	CONST	Construct
	Institute	CP	Concrete pipe (non-reinforced)
APPROX	Approximate	CRS	Colorado Revised Statutes
APWA	American Public Works Association	СТВ	Cement Treated Base
ASCE	American Society of Civil Engineers	CU	Cubic
ASME	American Society of Mechanical	CY	Cubic Yards
	Engineers		
ASPH	Asphalt	DEG	Degree
ASTM	American Society for Testing	DIA	Diameter
	Materials	DIM	Dimension
AVE	Avenue	DIP	Ductile Iron Pipe
AWSC	American Welding Society Code	DIV	Division
AWWA	American Water Works Association	DR	Drive
		DRCOG	Denver Regional Council
BBL	Barrel		of Governments
BC	Beginning of curve	DRWG	Drawing
BCR	Beginning of curb return	DWY	Driveway
BEG	Beginning		
BK	Book or Back	EA	Each
BLVD	Boulevard	EASE	Easement
вм	Bench Mark	E	East
BOCC	Adams County Board of County	ECR	End of curb return
	Commissioners	EEO	Equal Employment Opportunity
BRG	Bearing	EL or ELEV	Elevation
BST	Bituminous Surface Treatment	EQUA or EQ	Equation
BTB	Bituminous Treated Base	EVC	End of vertical curve
BTU	British Thermal Units	EX or EXIST	Existing
BVÇ	Beginning of vertical curve	i <u>-</u>	
		F_	Fahrenheit
		FB	Field Book

FND Found FPS Feet per second FPS Feet per second FS Finished surface FSS Federal Specifications and Standards FT Foot or feet G Gutter GA Gage GALV Galvanized GL Ground line GPM Gallons per minute GPM Gallons per minute HDWL Headwall HORUZ Horizontal HORUZ Horizontal HORUZ Horizontal HIDI Invert Elevation IEEE Institute of Electrical and Electronic Engineers IN Inch INP IN Inch IN	F & C FH FL or F	Frame & cover Fire hydrant flow line	MUTCD	Manual of Uniform Traffic Control Devices
Standards FT Foot or feet G Gutter GA Gage GALV Galvanized GL Ground line GPM Gallons per minute GR Grade H High or height HDWL Headwall HORIZ Horizontal ID Improvement District or inside diameter III Inch II	FPS FS	Feet per second Finished surface	NBS NCPI	National Bureau of Standards National Clay Pipe Institute
G Gutter GA Gage GALV Galvanized GL Ground line GPM Gallons per minute GR Grade H High or height HORIZ Horizontal HOWY Highway ID Improvement District or inside diameter IE Invert Elevation INV Invert IP Iron Pipe IPS Iron Pipe Size IRRIG Irrigation JT Joint JC Junction Chamber JCT Junction Chamber JCT Junction Structure LE Length LD Local depression LF Linear Feet LH Lamp hole LIN Linear LONG MAX Maximum MISC Miscellaneous ML or M Monument line MMM Millimeter MISC Mascelaneous ML or M Monument line MMM Millimeter MMN Monument line MMN Millimeter MISC Miscelaneous ML or M Monument line MMN Millimeter MMN Monument line MMN Millimeter MMN Monument line MMM Millimeter MMN Monument line MMN Monument line MMN Millimeter MMON Menotithe or monument Misc Miscelaneous ML or M Monument line MMN Millimeter MMON Menotithe or monument		Standards	NEC	National Electric Code National Electrical Manufacturer's
H High or height HDWL Headwall HORIZ Horizontal HWY Highway D Improvement District or inside diameter E Invert Elevation IEE Institute of Electrical and Electronic Engineers IN Inch INV Invert IP Iron Pipe IPS Iron Pipe Size IRRIG Irrigation JC Junction Chamber JC Junction Chamber JC Junction Structure L Length L Length L Length L Length L Length L Linear Feet LIN Linear LONG Longitudinal LT Left M Map or maps MAX Maximum MEAS Measured MH Manhole Rame and cover MIN Millerear MM Monument line MM Monument line MM Monument line MM Monument line MM Millimeter MM Monument line Mmonument line MM Monument line MM Millereter MM Monument line MM Millereter MM Monument line MM Monument line MM Millereter MM Manument line MM Millereter	GA GALV GL GPM	Gage Galvanized Ground line Gallons per minute	NP NPI NSC NSF	National Fire Protection Association Non-plastic Non pay item National Safety Council National Sanitation Foundation
HORIZ Horizontal HWY Highway OSHA Occupational Safety and Health Administration ID Improvement District or inside diameter IE Invert Elevation EEE Institute of Electrical and Electronic Engineers IN Inch Inch INV Invert IP Iron Pipe IPS Iron Pipe Size Iron Pipe Size IPP Power pole IRRIG Irrigation JT Joint Joint PRO Power pole PPM Parts per million JC Junction Chamber JCT Junction Structure L Length Pround PROP Proposed or property PSI Junction Structure L Length Pround Proposed or property PSI Powned per square foot PST Devent of Elephone pole PVMT Pavement LE Linear Feet Linear Feet LIN Linear Long Long Longitudinal LT Left RC Reinforced concrete pipe M Map or maps RD RD Road Naximum MEAS Measured MH Manhole RTM Monument line MM Millimeter MMO Monolithic or monument MON Monolithic or monument	Н		NO	Number
ID	HORIZ	Horizontal	OD	Outside diameter Occupational Safety and Health
IEEE		diameter		
IN Inch INV Invert IP Iron Pipe IPS Iron Pipe Size IRRIG Irrigation JT Joint JC Junction Chamber JS Junction Structure JS Junction Structure L Length LB Pound LB Pound LB Pound LB Pound LB Pound LD Local depression LF Linear Feet LH Lamp hole LIN Linear LONG LONG LONG LONG MAX Maximum MEAS Measured MH Manhole MHF&C Monolithic or monument MISC Miscellaneous ML or M Monolithic or monument MISC Miscellaneous ML or M Monolithic or monument PL Property Ine PL Property place interesection or plastic index PL Property Ine PL Property Ine PC Point of furve PRC Point of Spiral PP Power pole PPRC Point of Feverse curve PRC Point of reverse curve PRC Point of Feverse curve PRC Point of Spiral PP Power pole PVM Parts per million PRC Point of Spiral PP Power pole PVM Parts per million PRC Point of Spiral PP Power pole PVM Parts per million PRC Point of Feverse curve PRC Point of Spiral PP Power pole PVM Parts per million PRC Point of Spiral PP Power pole PVM Parts per million PRC Point of Spiral PP Power pole PVM Parts per million PRC Property PRC Point of Spiral PP Power pole PVM Parts per million PRC Proper pole PVM Parts per million PRC Pounds per square inch PRC Pounds per square inch PRC Pounds per square fot PRC Pounds per square fot PRC Pounds per square fot PRC Pounds per square f		Institute of Electrical and Electronic		Point of compound curve or
IPS Iron Pipe Size IRRIG Irrigation POS Point of Curve POS Point of Spiral PP Power pole PPM Parts per million PRC Point of reverse curve PROP Proposed or property PSI Pounds per square inch PSF Pounds per square inch PSF Pounds per square foot PT or POT Point of Tangent PATP Power and telephone pole PVMT Pavement PATP PATP Power and telephone pole PVMT Pavement PATP PATP POWER AND PATP PATP POWER AND PATP PATP POWER AND PATP PATP POWER AND PATP PATP PATP PATP PATP PATP PATP PAT	INV	Inch Invert		Point of intersection or plastic index
JT Joint JC Junction Chamber JCT Junction JS Junction Structure L Length LB Pound LD Local depression LF Linear Feet LH Lamp hole LIN Linear LONG Longitudinal LT Left MAX Maximum MEAS Measured MH Manhole MHF&C Manhole frame and cover MIN Millimeter MON Monolithic or monument MISC Miscellaneous ML or M Monument line MM Monor monument MISC Miscellaneous ML or M Monoment line MMM Monor monument MISC Miscellaneous ML or M Monoment line MMM Millimeter MON Monolithic or monument PMM Parts per million PRC Point of Teverse curve PROP Proposed or property PSI Pounds per square foot PT or POT Point of Tangent P&TP Power and telephone pole PVMT Pavement R Radius R Radius R Radius R Radius R RAGius R Radius R RC Reinforced concrete RCP Reinforced concrete RCP Reinforced, Reinforcing RET WALL Retaining Wall	IPS	Iron Pipe Size	POC POS	Point of Curve Point of Spiral
JS Junction Structure L Length LB Pound LD Local depression LF Linear Feet LH Lamp hole LIN Linear LONG Longitudinal LT Left M Map or maps MAX Maximum MEAS Measured MH Manhole MHF&C Manhole frame and cover MIN Minutes or minimum MISC Miscellaneous ML or M Monument line MM Millimeter MON Monolithic or monument PSI Pounds per square inch PSF Pounds per square foot PT or POT Point of Tangent P&TP Power and telephone pole PVMT Pavement R Radius R R Radius R RC Reinforced concrete RCP Reinforced concrete pipe R D Road R DWY Roadway REINF Reinforced, Reinforcing RET WALL Retaining Wall	JC	Junction Chamber	PPM PRC	Parts per million Point of reverse curve
LB Pound LD Local depression LF Linear Feet LH Lamp hole LIN Linear LONG Longitudinal LT Left Map or maps MAX Maximum MEAS Measured MH Manhole MHF&C Manhole frame and cover MIN Minutes or minimum MISC Miscellaneous ML or M Monument line MM Millimeter MON Monolithic or monument P&TP Power and telephone pole PVMT Pavement Ratius R Radius R Readius RC Reinforced concrete RCP Reinforced concrete RCP Reinforced, Reinforced, Reinforcing RET WALL Retaining Wall	JS	Junction Structure	PSI PSF	Pounds per square inch Pounds per square foot
LH Lamp hole LIN Linear LONG Longitudinal LT Left RC Reinforced concrete RCP Reinforced concrete pipe M Map or maps MAX Maximum MEAS Measured MH Manhole MHF&C Manhole frame and cover MIN Minutes or minimum MISC Miscellaneous ML or M Monument line MM Millimeter MON Monolithic or monument Q Rate of flow Rate of flow R Radius RC Reinforced concrete RCP Reinforced concrete RCP Reinforced, Reinforced, Reinforcing REINF Reinforced, Reinforcing RET WALL Retaining Wall	LB LD	Pound Local depression	P&TP	Power and telephone pole
LT Left RC Reinforced concrete RCP Reinforced concrete pipe M Map or maps RD Road MAX Maximum RDWY Roadway MEAS Measured REINF Reinforced, Reinforcing MH Manhole RET WALL Retaining Wall MHF&C Manhole frame and cover MIN Minutes or minimum MISC Miscellaneous ML or M Monument line MM Millimeter MON Monolithic or monument	LH	Lamp hole	Q	Rate of flow
MAX Maximum MEAS Measured MH Manhole MHF&C Manhole frame and cover MIN Minutes or minimum MISC Miscellaneous ML or M Monument line MM Millimeter MON Monolithic or monument RDWY Roadway REINF Reinforced, Reinforcing RET WALL Retaining Wall	· ·		RC ·	Reinforced concrete
	MAX MEAS MH MHF&C MIN MISC ML or M	Maximum Measured Manhole Manhole frame and cover Minutes or minimum Miscellaneous Monument line Millimeter	RD RDWY REINF	Road Roadway Reinforced, Reinforcing

RGRCP	Rubber Gasket Reinforced Concrete Pipe
RPM	Revolutions Per Minute
RT R/W or ROW	Right Right-of-way
S SAE	South or slope Society of Automotive Engineers
SAN SC	Sanitary Spiral to Curve
SCCP SD	Steel cylinder concrete pipe Storm drain or Sewer District
SDDTC	Storm Drainage Design and Technical Criteria
SDL SEC	Saddle Seconds
SECT	Section
SE SF	Southeast Square feet
SHT SPEC	Sheet Specifications
SPR	Simplified Practice Recommendation
SPMH	Special manhole
SS ST	Sanitary sewer Street
STA STD	Station Standard
STR GR STRUCT	Structural grade Structure or structural
SW	Southwest
SY	Square Yard
T TEL	Tangent Distance Telephone
TEMP TH	Temporary Test hole
TP	Telephone pole
TR TRANS	Tract Transition
TS TSC	Traffic signal or Tangent to spirial Traffic signal conduit
TYP	Typical
UD&FCD	Urban Drainage and Flood Control District
USDCM	Urban Storm Drainage Criteria Manual
UL USC&GS	Underwriters Laboratories
	United States Coast and Geodetic Survey
USGS	United States Geological Survey
V VC	Velocity of flow Vertical curve
VCP VERT	Vitrified clay pipe Vertical
V LIXI	v Gi tigal

W WI WS WT	West or width Wrought iron Wearing surface Weight
YD ·	Yard
" 0 % # @ /	feet or minutes inches or seconds degrees percent number or pound at per equals

101.2 DEFINITIONS AND TERMS

Whenever the following terms or pronouns are used in these specifications or in other contract documents, the intent and meaning shall be interpreted as follows:

Addendum: A Supplement to any of the Contract Documents issued, in writing, after advertisement of but prior to the opening of bids for a contract.

Advertisement: The public announcement, as required by law, inviting bids for work to be performed or materials to be furnished.

Agency: The government agency for which the construction is being done, either by permit or contract.

Agreement: The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are made a part thereof as provided therein.

Alternate Bid: An amount stated in the bid to be added to or deducted from the amount of the Base bid if the corresponding change in project scope, materials or methods of construction described in the bidding documents is accepted.

Application for Payment: The form accepted by the ENGINEER which is to be used by CONTRACTOR in requesting progress or final payment and which is to include such supporting documentation as required by the Contract Documents.

Award: The formal action of the governing body is accepting a proposal.

Backfill: Material placed in an excavated space to fill such space. For trenches this space will be the area from 1 foot above the top of the pipe or conduit to the existing or proposed finished grade of pavement.

Base Bid: The sum stated in the bid for which the bidder offers to perform the work described as the Base, to which Work may be added or deducted for sums stated in Alternate bids.

Base Course: The upper course of the granular base of a pavement or the lower course of an asphalt concrete pavement structure.

Bedding: Is the material placed in the area from the bottom of the trench to 1 foot above the top of the pipe or conduit.

Bid: The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bidder: Any qualified individual, firm, partnership, corporation or combination thereof, acting directly or through a duly authorized representative who legally submits a proposal for the advertised work.

Board of County Commissioners: The Adams County Board of Commissioners acting under the authority of the laws of the State of Colorado.

Bonds: Bid, Performance and Payment Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the Contract Documents.

Bond Issue Project: A project financed from bonds issued by the City or County pledging credit or a revenue resource.

Bridge: A structure, including supports, erected over a depression or an obstruction, as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads and having a length measured along the center of roadway of more than 20 feet between undercopings of abutments or extreme ends of openings for multiple boxes.

(Length) The length of a bridge structure is the over-all length measured along the line of survey stationing back to back of backwalls of abutments, if present, otherwise end to end of the bridge floor; but in no case less than the total clear opening of the structure.

(Roadway Width) The clear width measured at right angles to the longitudinal centerline of the bridge between the bottom or curbs or guard timbers or in the case of multiple height of curbs, between the bottom of the lower risers.

Budget Project: A project financed by funds from General Tax levies and shared revenue funds set aside in the annual budget adopted by the Board of Commissioners.

Building: Any structure built for the support, shelter, or enclosure of persons, animals, chattel or movable property.

Building Code: A regulation adopted by the governing body establishing minimum standards of construction for the protection of the public health, safety, and welfare in terms of measured performance rather than in terms of rigid specifications of materials and methods.

Calendar Day: Everyday shown on the calendar.

Call for Bids: The standard forms inviting proposals or bids.

Change Order: A written order issued by the ENGINEER to the CONTRACTOR to make changes in the work or to perform extra work, and setting forth conditions for payment and/or adjustment in time of completion.

City: A municipal corporation, organized and existing under and by virtue of the laws of the State of Colorado.

City/County Clerk: The duly authorized person who performs the duties of clerk for the Contracting Agency.

Completion Time: The number of calendar days for completion of an act, including authorized time extensions. In case a calendar date of completion is shown in the proposal in lieu of the number of calendar days, the contract shall be completed by that date. The time within which an act is to be done shall be computed by excluding the first and including the last day; and if the last day be Sunday or a legal holiday, that shall be excluded.

Conflicting Utility Line: An existing utility line, shown or not shown on the plans, is conflicting line when any part falls within the trench pay widths as listed or within the dimensions, as shown on the plans, for appurtenant structures.

Construction Project: The erection, installation, remodeling, alteration, of durable facilities upon, under, or over the ground. This shall include, but is not limited to buildings, roadways and utility pipes, lines, poles or other structures.

Contingent Bid Item: This is a minor bid item which is likely, but not certain, to occur during the course of work. If the ENGINEER determines that this work is required, the CONTRACTOR will accomplish the work and payment will be made based on the contingent unit bid price included in the proposal. Since the quantity listed in the proposal is primarily for bid comparison, the amount of work required by the ENGINEER may vary materially from this.

Contract: The written instrument executed by the CONTRACTOR and the Contracting Agency by which the CONTRACTOR is bound to furnish all labor, equipment, and materials and to perform the work specified, and by which the Contracting Agency is obligated to compensate the CONTRACTOR therefore at the prices set forth therein. The Contract Documents are herewith by reference made a part of the contract as if fully set forth therein.

Contract Documents: All the integral documents of the contract, including but not limited to, Call for Bids, Plans, Standard Specifications and Details, Special Provisions, Proposal Addenda, Performance Bond, Payment Bond, Certificates of Insurance, Ordinance, Contract, and Change Orders.

Contracting Agency: The legal entity that has contracted for the performance of the work or for whom the work is being performed.

Contractor: The individual, firm, partnership, corporation or combination thereof entering into a contract with the Contracting Agency to perform the advertised work.

Council: The City Council which by law constitutes the Legislative Department of a City.

County: Adams County, organized and existing under and by virtue of the laws of the State of Colorado.

Culvert: Any structure not classified as a bridge, which provides an opening under or adjacent to the roadway.

Days: Unless otherwise designated, days will be understood to mean calendar days.

Director: Director of Public Works for Adams County, Colorado.

Emergency: Unforeseen occurrences and combinations of circumstances involving the public welfare or the protection or work already done under the Contract Documents, or which endanger life or property and call for immediate action or remedy.

Engineer: The person appointed by the Director of Public Works, acting directly or through an authorized representative, who is responsible for engineering and administrative supervision of the project.

Equipment: (Construction) - All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of work. (Installed) - All material or articles used in equipping a facility as furnishings or apparatus to fulfill a functional design.

Extra Work: An item of work not provided for in the contract as awarded but found essential to the satisfactory completion of the contract within its intended scope.

Field Order: A written set of emergency instructions to the CONTRACTOR issued only where the time required for preparation and execution of a formal Change Order would result in a delay or a stoppage of work, or would allow a hazardous condition to exist.

Flooding: Flooding will consist of the inundation of the entire lift with water, puddled with poles or bars to insure saturation of the entire lift.

Force Account Work: Extra work performed by the CONTRACTOR for which no bid price has been established and which is defined in Section 115.3.

Foundation: For buildings or structures, this will be the substructure. For pipe this will be the native material or prepared material on which the pipe rests; normally, this is the bottom grade line of the trench.

Full Depth Pavement: An asphalt concrete pavement structure in which the granular base and subbase are replaced by proportionate thickness of asphalt concrete.

Holiday: Holidays recognized by collective bargaining agreements in the State of Colorado are:

New Years Day Memorial Day Independence Day Labor Day Thanksgiving Day Christmas Day

Additional holidays recognizable by the State of Colorado Cities and Counties are:

Martin Luther King's Birthday Presidents Day Columbus Day (observed) Veteran's Day

When New Years Day, Independence Day or Christmas Day fall on Sunday, the following Monday shall be considered a holiday.

Additional legal holidays, when designated by the Governor or President of the United States, will also be recognized by the State, City and/or County.

Improvement District Project: A project financed by assessments against the property included in a special assessment district authorized under, or implemented by an act of the legislature of the State and/or a procedural ordinance of the City of County.

Inspector: The ENGINEER'S authorized representative assigned to make detailed inspections of contract performance.

Jetting: The densification of material, using a continuous supply of water, under pressure, transmitted to the material through a rigid pipe of sufficient length to reach the bottom of the lift being densified. In all cases, the entire lift will be completely saturated working from the top to the bottom.

Laboratory: The established materials testing laboratory of the Contracting Agency's, Engineering Department, or other laboratories acceptable to and/or authorized by the ENGINEER to test materials and work involved in the Contract.

Liquidated Damages: A daily charge made against the CONTRACTOR for each working day, including free time, that any work shall remain uncompleted after elapse of Contract time.

Major Item: Any item of work and/or materials having an original contract value which exceeds ten percent of the amount of the original contract.

Materials: Any substance specified in the project, equipment and other material used or consumed in the performance of the work.

Median: The portion of a divided highway separating the roadways used by traffic going in opposite directions.

Method of Measurement: The manner in which a "Pay Item" is measured to conform with the "Pay Unit".

Non Pay Item: An item of work for which no separate payment will be made under the proposal, but which must be included as an incidental cost for payment on an associated item included in the proposal.

Notice of Award: A letter from the City or County Clerk advising the CONTRACTOR that he is the successful bidder and the Council of Board of Commissioners has accepted his proposal.

Notice to Proceed: A directive issued by the Engineer, authorizing the CONTRACTOR to start the work or improvements required in the Contract.

Obligee: One to whom another is obligated.

Open Trench: The excavated area shall be considered as open trench until all the aggregate base course for pavement replacement has been placed and compacted or, if outside of a pavement area, until the excavated area is brought to finish grade or natural grade.

Owner: The City or County, acting through its legally constituted officials, officers or employees.

Pavement: Any surface of streets, alleys, sidewalks, courts, driveways, etc., consisting of mineral aggregate bound into a rigid or semi-rigid mass by a suitable binder such as, but not limited to, portland cement or asphalt cement.

Pavement Structure: The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

Pay Item: A detail of work for which separate payments are to be made under the Contract, as specified in the proposal.

Payment Bond: The security provided by the CONTRACTOR solely for the protection of claimants, supplying labor and materials to the CONTRACTOR or his Subcontractors.

Performance Bond: The security by the CONTRACTOR solely for the protection of the Contracting Agency and conditioned upon the faithful performance of the contract in accordance with the plans, specifications and conditions thereof.

Permit: The license to do construction in public rights-of-way and/or easements; issued by an Agency to a CONTRACTOR working for another party.

Plans: All approved drawings or reproductions thereof pertaining to the work and details therefor, which are made a part of the Contract Documents.

Plant: The Contractors and/or subcontractors facilities, including but not limited to small tools and mobile equipment, located on and/or offsite, necessary for preparation of materials and prosecution of work for the project.

Principal: The individual, firm or corporation primarily liable on an obligation, as distinguished from a surety.

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

Project: A specific coordinated construction or similar undertaking identified by a single project number and bid and awarded as one contract. On occasion two or more projects may be bid and awarded as a single contract.

Project Manager: The person appointed by the Director of Public Works, acting directly or through an authorized representative, who is responsible for engineering and administrative supervision of the project.

Project Special Conditions: See definition for Special Conditions.

Proposal: The offer of a bidder on the prescribed form, to perform the work and to furnish the labor and materials at the prices quoted.

Proposal Form: The approved form on which the Contracting Agency requires bids to be prepared and submitted for the work.

Proposal Guarantee: The security furnished with a bid to guarantee that the bidder will enter into the contract if his bid is accepted.

Proposal Pamphlet: The book or pamphlet pertaining to a specific project, containing proposal forms, special provisions and other information necessary for and pertinent to the preparation of the proposal or bid.

Referred Documents: On all work authorized by the Contracting Agency, any referenced documents in the specification, i.e.; Bulletins, Standards, Rules, Methods of Analysis or test. Codes and Specifications of other Agencies, Engineering Societies or Industrial Associations, refer to the Latest Edition thereof, including Amendments, which are in effect and published at the time of Advertising for bids or the issuing of a permit for the work, unless otherwise stated.

Resident Project Representative: The authorized representative of ENGINEER who may be assigned to the site or any part thereof. Also called the Inspector.

Reasonably Close Conformity: Compliance with reasonable and customary manufacturing and construction tolerances where working tolerances are not specified. Where working tolerances are specified, reasonably close conformity means compliance with such working tolerances.

Right-of-Way: A general term denoting, land, property or interest therein, usually in a strip, acquired for or devoted to a street, highway, or other public improvement.

Road: A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Roadside: A general term denoting the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.

Roadside Development: Those items necessary to the complete roadway which provide for the preservation of landscape materials and features; the rehabilitation and protection against erosion of all areas disturbed by construction through seeding, sodding, mulching and the placing of other ground covers; such suitable planting and other improvements as may increase the effectiveness and enhance the appearance of the roadway.

Roadway: The portion of the right-of-way intended primarily for vehicular traffic, and including all appurtenant structures and other features necessary for proper drainage and protection. Where curbs exist, it is that portion of roadway between the faces of the curbs.

Salvageable Material: Material that can be saved or salvaged. Unless designated or directed by the ENGINEER or shown on the plans, all salvageable material shall remain the property of the CONTRACTOR.

Sewers: Conduits and related appurtenances employed to collect and carry off water and waste matter to a suitable point of final discharge.

Shop Drawings: Drawings or reproduction of drawings, detailing; fabrication and erection of structural elements, false work and forming for structures, fabrication of reinforcing steel, installed equipment and installation of systems, or any other supplementary plans or similar data, which the CONTRACTOR is required to submit for approval.

Shoulder: The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

Sidewalk: That portion of the roadway primarily constructed for the use of pedestrians.

Special Conditions: The special conditions, requirements, additions, and/or revisions to the Standard Specifications, applicable to the work, to cover conditions or requirements peculiar to the project under consideration.

- (A) <u>Project Special Conditions</u>. Special Conditions peculiar to the project and not otherwise thoroughly or appropriately set forth in the standard specifications or plans.
- (B) <u>Standard Special Conditions</u>. Special directions or requirements not otherwise thoroughly or appropriately set forth in the standard specifications, and which are peculiar to a selected group of projects or which are intended for temporary use.

Specifications: The descriptions, directions, provisions, and requirement for performing the work as contained in the Contract Documents.

State: The State of Colorado.

Standard Details: Uniform detail drawings of structures or devices adopted as Standard Details by the ENGINEER.

Standard Specifications: Uniform general specifications adopted as Standard Specifications by the ENGINEER.

Storm Drain: Any conduit and appurtenance intended for the reception and transfer of storm water.

Street: Streets, avenues, alleys, highways, crossings, lanes, intersections, courts, places, and grounds now open or dedicated or hereafter opened or dedicated to public use and public ways.

Structures: Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, end walls, sewers, service pipes, underdrains, foundation drains, fences, swimming pools, and other features which may be encountered in the work and not otherwise classed herein.

Subbase: The lower course of the base of a roadway, immediately above the subgrade.

Subcontractors: Those having direct contracts with the CONTRACTOR and those who furnish material worked into a special design according to the Plans and Specifications for the work, but not those who merely furnish material not so worked.

Subgrade: The supporting structures on which the pavement and its special undercourses rest.

Substantial Completion: The work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, and Owner as evidenced by a definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it was intended. The terms "substantially complete" and "substantially completed" as applied to any work refer to Substantial Completion thereof. The work must meet the following criteria for Substantial Completion to apply:

- 90% of all pay items have been completed and are eligible for payment.
- The facility is ready for use.
- All traffic features have been completed.
- A "punch list" of remaining work has been prepared and accepted.

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

Superintendent: The CONTRACTOR's authorized representative in responsible charge of the work.

Superstructure: The entire structure or building except the substructure.

Supplemental Specifications: Additions and revisions to the Standard Specifications that are adopted subsequent to issuance of the printed book.

Supplementary General Conditions: Requirements, or revisions, to the Standard General Conditions, applicable to the work, and to cover conditions or requirements peculiar to the project under consideration.

Supplier: Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site. **Surety**: The individual, firm or corporation, bound with and for the CONTRACTOR for the acceptable performance, execution, and completion of the work, and for the satisfaction of all obligations incurred.

Surface Course: The finish or wearing course of an asphalt concrete pavement structure.

Title or Headings: The titles or headings or the sections and subsections herein are intended for convenience of reference and shall not be considered as having any bearing on their interpretation.

Township, City, Town or District: A subdivision of the County used to designate or identify the location of the proposed work.

Traveled Way: The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

Utility: Pipe lines, conduits, ducts, transmission lines, overhead or underground wires, railroads, storm drains, sanitary sewers, irrigation facilities, street lighting traffic signals, and fire alarm systems, and appurtenances of public utilities and those of private industry, businesses or individuals solely for their own use or use of their customers which are operated or maintained in, on, under, over or across public right-of-way or public or private easement.

Waterworks (Water Supply System): The reservoirs, pipe lines, wells, pumping equipment, purification works, mains, service pipes, and all related appliances and appurtenances utilized in the procurement, transportation and delivery of an adequate, safe, and palatable water supply for the Contracting Agency.

Work: Any of all of the improvements mentioned and authorized to be made, and the construction, demolition, reconstruction, and repair of all or any portion of such improvements, and all labor, services, incidental expenses, and material necessary or incidental thereto.

Working Day: A calendar day, exclusive of Saturdays, Sundays and Contracting Agency recognized legal holidays, on which weather and other conditions not under the control of the CONTRACTOR will permit construction operations to proceed for the major part of the day

with the normal working force engaged in performing the controlling item or items of work which would be in progress at that time.

Written Notice: Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the Work.

101.3 REFERENCES TO ENGINEER

In order to avoid cumbersome and confusing repetition of expressions in these specifications, it is provided that whenever anything is, or is to be, done, if, as, or, when, or where contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted, reserved, suspended, established, approval, approved, disapproved, acceptable, unacceptable, suitable, accepted, satisfactory, unsatisfactory, sufficient, insufficient, rejected, or condemned, it shall be understood as if the expression were followed by the words by the ENGINEER or to the ENGINEER.

101.4 REFERENCES TO PROJECT MANAGER

It shall be understood that any references to ENGINEER in the Contract Documents, plans or Specifications shall be interpreted as the PROJECT MANAGER, as identified in the Contract Agreement.

102 BIDDING REQUIREMENTS AND CONDITIONS

102.1 BIDDER'S REPRESENTATION

Each bidder by making his/her bid represents that:

- (A) He/she has read and understands the bidding documents and his/her bid is made in accordance therewith.
- **(B)** He/she has visited the site and has familiarized themself with the local conditions under which the Work is to be performed.
- (C) His/her bid is based upon the materials, systems and equipment described in the bidding documents without exceptions.
- (D) Cost of appurtenant items of work, material, and equipment not listed separately, not shown on the drawings or not specified but necessary to complete the Work in accordance with the Contract Documents are to be included in the unit price bid, or the total amount bid; whichever is called for in the bid documents.
- (E) Bids are made on each separate item of work shown in the Proposal, with reasonable relation to the probable cost of doing the work included in such item, and that the right is reserved by the COUNTY to reject wholly any bid in case an item or

items thereof are obviously unbalanced or appear to be so unbalanced as to affect or to be apt to affect adversely any interest of the COUNTY.

102.2 QUALIFICATION OF CONTRACTORS

102.2.1 Submission of Credit and Client Lists

The CONTRACTOR is required to submit the Credit and Client Lists provided with the required information. **See attachments.**

102.2.2 Availability of Equipment and Organization

A bidder otherwise qualified may be required, either before or after the bid opening, to demonstrate availability of equipment and organization, not otherwise committed, to perform the work within the time limit specified in the Contract Documents. Bidders will be required to fully inform the Engineer or Authorized Representative of their commitments to other work so that he may form an opinion as to their availability for prompt performance of this contract.

102.3 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- (A) Bidders shall promptly notify the Contract Engineer of any ambiguity, inconsistency or error which they may discover upon examination of the bidding documents or of the site and conditions.
- **(B)** Bidders requiring clarification or interpretation of the bidding documents shall make such request promptly!
- **(C)** Any interpretation, correction of change of the bidding documents will be made by Addendum. Interpretations, corrections or changes of the bidding documents made in any other manner will not be binding, and bidders shall not rely upon such interpretations, corrections and changes.

102.4 INVESTIGATION OF THE SITE

Bidder shall examine the site of the proposed work and all documents pertaining to the work. It is mutually agreed that the submission of a proposal shall be considered prima facie evidence that the bidder has made such examination and is familiar with the character, quality and quantity of the work to be performed and material to be furnished.

Although the bidder is not required to make such an inspection before bidding, for purposes of the CONTRACT it shall be conclusively presumed that by failing to make such an inspection, the bidder has waived the right to later claim extra payment or time extensions for conditions which would have been evident had the site been inspected.

After the submission of the proposal, no complaint or claim that there was any misunderstanding as to the quantities, conditions or nature of the work will be entertained.

102.5 SUBSTITUTIONS PRIOR TO BID

- (A) The materials, products and equipment described in the bidding documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.
- (B) No substitution will be considered unless written request for approval has been submitted by the bidder, and has been received by the Engineer or the Authorized Representative at least seven (7) workdays prior to the date for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance and test data, and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment, or work that incorporation of the substitute would affect shall be included. The burden of proof of the merit of the proposed substitute is upon the proposer. The Engineer or Authorized Representative's decision of approval or disapproval of a proposed substitution shall be final.
- **(C)** If the Engineer or Authorized COUNTY Representative approves any proposed substitution, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
- **(D)** If, in the opinion of the Engineer or the Authorized COUNTY Representative, the material, process or article offered by the CONTRACTOR is not equal to that specified, then the CONTRACTOR must furnish the material, process, or article specified or one that, in the opinion of the Engineer or Authorized COUNTY Representative, is equal.

102.6 ADDENDA

- (A) Addenda will be mailed, faxed or delivered to all who are known by the COUNTY to have received a complete set of bidding documents.
- **(B)** Copies of Addenda will be made available for inspection wherever bidding documents are on file for that purpose.
- (C) Each bidder shall ascertain prior to submitting his bid that he has received all Addenda issued, and he shall acknowledge their receipt in his bid.

105 MISCELLANEOUS PROVISIONS

105.1 SALES AND USE TAXES

C.R.S. 39-26-114 (1) (1) (1973) concerning Sales Tax Exemptions provides that a CONTRACTOR on a public improvement project shall not be required to pay State sales tax or RTD tax on purchases associated with the project. The bidder must apply for and obtain a CERTIFICATE OF EXEMPTION from the State Department of Revenue. It is the responsibility of the successful bidder on this project to obtain a Certificate. Further, the bidder shall not include the cost of any sales or use tax exempted by statute in his/her bid amount, nor shall

the COUNTY pay for any such tax which CONTRACTOR may pay as a result of <u>failure</u> to apply for a tax exempt certificate.

105.2 CITY, STATE AND FEDERAL LAWS

Bidders shall familiarize themselves with the provisions of the laws of the State of Colorado, of the Federal Government, all local laws and all regulations may pursuant to any of them pertaining to the proposed work and shall comply with the same.

106 PROJECT SPECIAL CONDITIONS

106.1 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

Bidders shall promptly notify the COUNTY of any ambiguity, inconsistency or error which they may discover upon examination of the bidding documents or of the site and conditions.

Bidders requiring clarification or interpretation of the bidding documents shall make such requests in writing to the Contract Specialist by e-mail at hellis@adcogov.org until the close of business on or before, Tuesday, May 30, 2017, by 2:00 p.m.

106.2 CONTRACT COMPLETION

The contract shall remain in effect for one year, with an option to renew for two additional one-year terms.

106.3 SCHEDULING THE WORK

Some portions of the work shall immediately follow the County's paving and chip seal operations. Those roads are identified in the markings list in the Bid portion of this document. The Contractor shall maintain close contact with the County on the progress of the paving and chip seal programs. As a road becomes ready for striping, the County Project Manager or authorized representative will notify the contractor by phone, fax, or in writing regarding the scheduling of striping operations. For the roads that require striping under the paving and chip programs, the Contractor shall have 10 working days from the date of written notification by the County to begin striping operations. Failure to begin striping on any scheduled road within the allotted time shall be cause for the County to assess a fine of \$450 per calendar day for each violation. Once striping has commenced for a particular roadway(s), the contractor shall continue operations until all striping work is complete.

All roads listed in the bid sheet, that are **not identified as part of the overlay and chip programs** shall be completed by **November 1, 2017.**

106.4 MOBILIZATION AND TRAFFIC CONTROL

The Contractor will be required to submit a traffic control plan to the County for approval before the work is started. Mobilization and traffic control costs will not be paid for separately but shall be included in the unit costs of the work bid. See the Construction Specifications in this document.

107 THE CONTRACT FOLLOWING EXECUTION:

107.1 MATERIALS

Unless otherwise stipulated, the CONTRACTOR shall provide and pay for all materials, labor, water, tools, equipment, light power, transportation, and other facilities necessary for the execution and completion of the work. The CONTRACTOR shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

107.2 PROGRESS SCHEDULE

The CONTRACTOR shall submit, at such times as may reasonably be requested by the ENGINEER, schedules which shall show the order in which he/she proposes to carry on the work, with dates at which the CONTRACTOR will start the several parts of the work, and estimated dates of completion of the several parts. The special provisions or Plans may require that certain phases or parts of the work be completed first or in a certain order. If the CONTRACTOR elects to use PERT or CPM charts, he/she shall furnish copies of them and all revisions thereto or amendments thereto as the work progresses to the ENGINEER upon request.

107.3 SCHEDULE OF UNIT PRICES

107.3.1

Promptly following the execution of the contract documents for all lump sum contracts, the CONTRACTOR shall prepare and transmit to the ENGINEER two Copies of an itemized breakdown showing the unit quantities of each major construction item and the corresponding unit prices. Such unit prices shall contain all costs including profit of each item complete in place. The total cost of all items shall equal the contract price for the project. This breakdown when approved by the ENGINEER, will be used primarily in determining payment due the CONTRACTOR on periodical estimates. If, in the opinion of the ENGINEER, any unit price submitted by the CONTRACTOR is unbalanced, a detailed breakdown of the items contained in the unit will be required.

107.3.2

For contracts bid on a unit price basis, unit bid prices for completed work will be used in determining payment due the CONTRACTOR on periodical estimates. Partially completed units may be paid for in periodical estimates.

107.4 SURVEYS

The COUNTY will furnish all site surveys, easements, pipeline licenses, etc. necessary to authorize construction of any permanent works required in the Specifications where such work is to be done on property other than the COUNTY's.

107.5 ASSIGNMENT OF CONTRACT

No assignment by the CONTRACTOR of this contract or any part thereof or of the funds to be received thereunder by the CONTRACTOR will be recognized unless such assignment has had the written approval of the COUNTY and the surety has been given due notice of such assignment and has furnished written consent thereto. Such written approval by the COUNTY shall not relieve the CONTRACTOR of the obligations incurred by him under the terms of this contract. In addition to the usual recitals in assignment contracts, the following language must be set forth:

"It is agreed that the funds to be paid to the assignee under this assignment are subject to a prior lien for services rendered or materials supplied for the performance of the work called for in said contract in favor of all persons, firms, or corporations rendering such services or supplying such materials."

107.6 SUBLETTING OF CONTRACT

The CONTRACTOR shall as soon as practical after signing the contract, notify the ENGINEER in writing, giving the names and qualifications of all subcontractors proposed for work and shall not employ any that the ENGINEER may within a reasonable time object to. The CONTRACTOR will not be allowed to subcontract more than fifty percent (50%) of the total monetary value of the contract without prior approval of the OWNER. The CONTRACTOR is responsible to the OWNER for the acts and omissions of his/her Subcontractors, and of their direct and indirect employees, to the same extent as he/she is responsible for the acts and omissions of his/her employees. The Contract Documents shall not be construed as creating any contractual relation between any Subcontractor and the OWNER. The CONTRACTOR shall notify the ENGINEER of each subcontract he/she awards, giving:

- A. Name, address, and telephone number of the sub Contractor
- B. Branch of work covered
- C. Total price of subcontract
- D. Date of subcontract

Subcontractors, before commencing work, must file with the ENGINEER satisfactory certificates in duplicate showing insurance coverage. Failure of the subcontractor to provide such certificates shall not relieve the CONTRACTOR of his/her obligation to insure and to hold the COUNTY harmless. Subcontractors shall also file with the ENGINEER copies of applicable permits and licenses required to do the subcontracted work.

107.7 OTHER CONTRACTS

The COUNTY may award other contracts for additional work, and the CONTRACTOR shall fully cooperate with such other contractors and carefully fit his/her own work to that provided under the other contracts as may be directed by the ENGINEER. The CONTRACTOR shall not commit or permit any act which will interfere with the performance of work by any other contractor.

108 STANDARD SPECIAL CONDITIONS:

108.1 FORM OF TECHNICAL SPECIFICATIONS

The detailed specifications may be of the abbreviated or outline type and the CONTRACTOR must supply omitted words or phrases by inference. "Omissions of words or phrases such as 'the CONTRACTOR shall,' 'in conformance with,' 'shall be,' 'as noted on the plans,' 'according to the plans,' 'a,' 'an,' 'the,' and 'all' are intentional."

The specifications are performance oriented and are intended to provide an end product of quality. They are not to be construed as establishing means, methods, or techniques to be used by the CONTRACTOR to obtain the expected results.

Whenever the context so admits or requires, all references herein in one number shall be deemed extended to and including the other number, whether singular or plural, and the use of any gender shall be applicable to all genders.

108.2 NOTICE TO PROCEED

A written NOTICE TO PROCEED with Work will be issued by the ENGINEER, and CONTRACTOR shall start the work within fourteen (14) calendar days of the date of NOTICE TO PROCEED. Thereafter, CONTRACTOR shall prosecute the Work at such place or places as the ENGINEER directs and shall fully complete in every detail all the work to be done under the CONTRACT within the time limit set forth in the CONTRACT or any authorized extensions to the CONTRACT time.

108.3 COPIES OF DRAWINGS AND SPECIFICATIONS

Upon receiving NOTICE OF AWARD, the CONTRACTOR may obtain from the COUNTY the first six (6) sets of drawings and specifications at no cost to the CONTRACTOR. Additional sets of drawings and specifications and other available data may be purchased on a cash sale basis from the COUNTY.

Subcontractors and suppliers may obtain drawings and other data from the CONTRACTOR or they may purchase copies on a cash sale basis from the COUNTY Public Works Department at current reproduction prices.

108.4 INSURANCE

To assure OWNER that CONTRACTOR is always capable of fulfilling specified indemnification obligations, CONTRACTOR is required to purchase and maintain insurances of the kind and in amounts specified in the CONTRACT Documents. However, insurance requirements contained in the CONTRACT documents shall not be deemed to limit or define obligations of CONTRACTOR as provided in attachment 'B' located in the Contract Forms section.

108.5 PROGRESS SCHEDULE & SEQUENCE OF OPERATIONS

The construction schedule shall include the dates for submission, approval, and delivery of any detail drawings or materials.

108.5.1

Within ten days of the date of the Agreement, the CONTRACTOR shall submit for approval of the ENGINEER a chart, the form of which is included in the CONTRACT Documents, showing the estimated progress schedule for the component divisions of the work, a balanced cost breakdown, together with a composite curve showing the estimated progress schedule for the entire project. The bar graph shall be completed showing the estimated percentage of each item in increments of 10% or 20%, depending on the value of the item. For purposes of comparison, the CONTRACTOR shall submit with each Application for Payment a chart in identical form showing the actual rate of progress to date for the component divisions and for the Project as a whole. The actual rate of progress shown on the chart shall only include work completed and shall not include stored materials. If an extension of CONTRACT TIME is granted by the ENGINEER for any justifiable reason, the CONTRACTOR shall submit a revised construction schedule in accordance with the approved extension.

108.5.2

Within seven (7) days of the date of the Agreement, the CONTRACTOR shall also submit for review by the ENGINEER a complete balanced cost breakdown approved by the CONTRACTOR's Surety Company of the various component divisions of work items bid on a lump sum basis. All overhead items shall be prorated over the various items of actual work and no overhead items such as Insurance, Move In, Superintendence, General Conditions, falsework, scaffolding, temporary construction, etc., will be allowed to be listed separately for partial progress payment.

108.5.3

The CONTRACTOR shall submit for approval a planned sequence of construction indicating the approximate dates and time duration of street closings, utility interruptions, etc. if required.

108.5.4

In the event that the rate of actual progress of the work falls behind the estimated progress indicated on the approved chart, the CONTRACTOR shall accelerate the work by placing additional forces and equipment on the project so that the project will be completed within the CONTRACT time.

108.5.5

The CONTRACTOR shall not begin construction of any work until he/she has notified the ENGINEER of his/her intention to do so, stating the time when work is to commence. Such notices shall be at least twenty-four (24) hours prior to the time when actual work is to commence. Two working days advance notice is required for surveying and staking.

108.5.6

In the event the CONTRACTOR temporarily leaves a job for more than three consecutive working days, he/she shall notify the ENGINEER upon his/her return to work. The CONTRACTOR shall keep the ENGINEER advised as to work schedule. Any work performed at times or places outside of the established work schedule shall be regarded as contrary to and outside of the terms of this CONTRACT and the ENGINEER or his/her authorized representative may order such work removed and replaced without obligation on the part of the OWNER to pay for such removal and replacement.

108.6 INTERRUPTION WITH OWNER'S NORMAL OPERATIONS

Portions of the work will be performed in or adjacent to areas in which the OWNER'S normal operation must proceed without interruption during the construction work. The CONTRACTOR shall conduct the work in these areas in such a manner as to create a minimum of disturbance and inconvenience to the OWNER and to the public. Street closing, if required, shall be scheduled with the governmental agency responsible for streets and the Fire Department.

108.7 UNEMPLOYMENT COMPENSATION

Before final payment will be made by the OWNER, the CONTRACTOR must file with the OWNER a written clearance from the State Commissioner of Labor and other applicable state office certifying that all payment then due, including payment by subContractors on the project, under the Statutes covering Unemployment Compensation have been made, all in full conformance with the Statutes in effect at the place or work.

108.8 DISCRIMINATION

In connection with the performance of work under this CONTRACT, CONTRACTOR agrees not to discriminate against any employee or applicant for employment because of race, religion, color or national origin. The aforesaid provision shall include, but not be limited to, the following: 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. CONTRACTOR agrees to post hereafter in conspicuous places, available for employees and applicants for employment, notices setting forth the provisions of the nondiscrimination clause. See also section 117.

CONTRACTOR further agrees to insert the foregoing provision in all subcontracts, except subcontracts for standard commercial supplies or raw materials.

108.9 FIELD CONDITIONS

Logs of test holes, ground water levels, and any accompanying soil reports as furnished by the COUNTY are furnished for general information only. The field condition so set forth shall not constitute a representation or warranty, expressed or implied, that such conditions are actually existent. CONTRACTORs shall make their own investigations and form their own estimates of the site conditions.

108.10 SUBSTITUTIONS

Plans and specifications may contain references to equipment, materials or patented processes by manufacturer, trade name, make or catalog number. Such references shall be regarded as establishing a standard of quality, finish, appearance, performance or as indicating a selection based upon compatibility with existing equipment or materials. It shall not be construed as limiting the selection to a specified item or source.

The use of an alternate or substitute, item or source will be permitted, subject to the following:

- (A) No consideration will be given to requests for substitution prior to award of the CONTRACT.
- (B) After the award and to permit consideration and approval without delaying the work, the CONTRACTOR shall submit a written request for substitution. The request shall include all information necessary for proof of equity and suitability for substitution. CONTRACTOR shall submit samples when required.
- (C) ENGINEER will evaluate the information submitted, perform tests when necessary and make comparisons. ENGINEER will then make the final decision as to the acceptability of the proposed substitution.

108.11 COORDINATION WITH OTHER CONTRACTORS

108.11.1

Progress of the work may be affected by coordination of other work being performed by the OWNER or other CONTRACTOR, and the CONTRACTOR shall investigate such a possibility and make allowances therefore. Should the CONTRACTOR sustain any damage through any act or omission of any other CONTRACTOR having a CONTRACT with the OWNER, the CONTRACTOR shall have no claim against the OWNER for such damage, but shall have a right of action against the other CONTRACTOR to recover the damages sustained by reason of the acts or omissions of such CONTRACTOR.

108.11.2

If, through acts of neglect on the part of the CONTRACTOR, any other CONTRACTOR or any SubContractor shall suffer loss or damage on their work, the Contractor agrees to settle with such other Contractor or Subcontractor by agreement or arbitration, if such other Contractor or Subcontractor will so settle. If such other CONTRACTOR or

SubContractor sues the OWNER and/or ENGINEER on account of any damage alleged to have been so sustained, the OWNER and/or ENGINEER shall notify the CONTRACTOR who shall defend and hold harmless the OWNER and the ENGINEER at such proceedings at the CONTRACTOR'S expense and if any judgment against the OWNER and/or ENGINEER arises therefrom the Contractor shall pay or satisfy it, including all attorney's fees and court costs which may accrue against the OWNER and/or the ENGINEER.

108.12 APPLICABLE CODES AND STANDARDS

All work and business activity conducted in the performance of the CONTRACT shall conform to the requirements of all National, State or local laws, ordinances, building codes or other regulations that are in effect at the place of work.

108.13 SHOP DRAWINGS AND SAMPLES

108.13.1

The CONTRACTOR shall submit to the ENGINEER for review, in accordance with the accepted schedule of Shop Drawing submissions, copies of all Shop Drawings, as specified below. The data shown on the Shop Drawings shall be complete with respect to dimensions, design criteria, materials of construction and the like to enable the ENGINEER to review the information as required. Within 14 days after Notice to Proceed has been issued, the CONTRACTOR shall submit to the ENGINEER, five (5) copies of a schedule of shop drawing submittals which shall indicate the date the ENGINEER can expect to receive the shop drawings on the various equipment and construction details. Scheduling to assure completion within CONTRACT period will be the sole responsibility of the CONTRACTOR, however, the CONTRACTOR shall submit shop drawings on an earlier date than indicated on the schedule if requested to do so by the ENGINEER.

108.13.2

The CONTRACTOR shall check and verify all field measurements, all dimensions on shop setting drawings, and all schedules required for the work of all the various trades. All shop and setting drawings, certificates, concrete or asphalt mix designs, and required design computations approved by the CONTRACTOR shall be submitted in sufficient number of copies to provide the ENGINEER with three copies and up to three additional copies as may be desired by the CONTRACTOR, for himself, his/her subContractors and/or suppliers. The shop drawings shall be neatly packaged by the CONTRACTOR into identical sets with a signed submittal form stapled to each set. Each submittal shall be accompanied by an equal number of copies of the submittal form bound in these CONTRACT Documents for reproduction by the CONTRACTOR. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number will form a serial number for identifying each submittal. If initial submittal, indicate by check mark; if re-submittal, indicate by inserting the transmittal number of the previous submission of the same item.

108.13.3

The review of Shop Drawings by the ENGINEER is for the purpose only of checking for general conformance with the design concept of the project and for general compliance with the information given in the CONTRACT Documents. Any action taken on Shop Drawings by the ENGINEER does not relieve the CONTRACTOR of responsibility for proper dimensioning, for detailing of connections and incorporating into the work satisfactory materials and equipment meeting the requirements of the CONTRACT Documents. If errors in Shop Drawings are not detected in the ENGINEER'S review, the CONTRACTOR is not relieved from the responsibility to comply with the CONTRACT Documents and the ENGINEER'S review shall never be construed as permitting the CONTRACTOR to proceed in error. It is understood that where a Shop Drawing is submitted for review for compliance with a performance specification, it is impossible to determine with certainty whether the item or process covered by the Shop Drawing will conform to the requirements of the CONTRACT Documents. Regardless of any information contained or not contained in the Shop Drawings, the requirements of the drawings and specifications and other CONTRACT Documents must be followed and are not waived or superseded in any way by the Shop Drawing review.

108.13.4

Shop Drawings shall be submitted covering all equipment and structural details proposed by the CONTRACTOR and for such other items required by the specifications or requested by the ENGINEER. Where Shop Drawings consist of special drawings prepared by the Contractor, his/her SubContractor, or suppliers, one reproducible paper sepia copy and three prints thereof shall be submitted to the ENGINEER in lieu of the several copies specified above. The Contractor shall furnish additional copies of final corrected Shop Drawings upon request.

108.13.5

Upon final review of shop drawings the Contractor shall furnish to the ENGINEER for use by the OWNER five (5) copies of operating and maintenance manuals, spare parts catalogs for each item of mechanical and electrical equipment, if any, and the source of procurement and unit price of spare parts. Also, there shall be submitted a list by the equipment manufacturer indicating the quantity of each spare part recommended for efficient operation for a one-year period. All submittals required by this paragraph shall be submitted with the Application for Payment in which the equipment is included.

108.13.6

The Contractor will also submit to the ENGINEER for review, with such promptness as to cause no delay in work, all samples required by the CONTRACT Documents. All samples will have been checked by and deemed to have been approved by the Contractor, identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended.

108.13.7

At the time of each submission, the CONTRACTOR shall in writing call the ENGINEER'S attention to any deviations that the Shop Drawing or sample may have from the requirements of the CONTRACT Documents.

108.13.8

Any action taken on a separate item as such will not indicate that the same action applies to the assembly in which the item functions. The CONTRACTOR shall make any corrections required by the ENGINEER and shall return the required number of corrected copies of Shop Drawings and resubmit new samples until the ENGINEER does not take exception to them. The CONTRACTOR shall direct specific attention in writing on resubmitted Shop Drawings to revisions other than the corrections called for by the ENGINEER on previous submissions. The CONTRACTOR'S submission of any Shop Drawings or samples shall constitute a representation to the OWNER and the ENGINEER that the CONTRACTOR has either determined and verified all quantities. dimensions, measurements to fit adjacent work, field construction criteria, materials, catalogue numbers and similar data or he/she assumes full responsibility for doing so. and that he/she has reviewed or coordinated each Shop Drawing or sample with the requirements of the work and the CONTRACT Documents. The CONTRACTOR'S submission of Shop Drawings shall constitute a representation to the OWNER and the ENGINEER that the CONTRACTOR certifies that the items submitted meet the latest requirements of the Occupational Safety and Health Act of 1970, including any standards or regulations established by the U.S. Secretary of Labor in the administration of said Act, as of the date of bid opening.

108.13.9

No work requiring a Shop Drawing or sample submission shall be commenced until the submission has been reviewed by the ENGINEER. A copy of each reviewed Shop Drawing and each sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER or Project Representative.

108,13,10

The ENGINEER'S review of Shop Drawings or samples shall not relieve the CONTRACTOR from his/her responsibility for any deviations from the requirements of the CONTRACT Documents unless the CONTRACTOR has in writing by separate letter called the ENGINEER'S attention to such deviation at the time of submission and the ENGINEER has given written approval to the specific deviation, nor shall any action taken by the ENGINEER relieve the CONTRACTOR from responsibility for errors or omissions in the Shop Drawings.

108.14 MATERIALS TESTS AND CERTIFICATES

All materials to be incorporated in the work may be subject to sampling, testing and approval, and samples furnished shall be representative of the material to be used. The ENGINEER may select samples, or may require that samples be delivered by CONTRACTOR to a laboratory designated by ENGINEER.

The Contracting Agency will pay for the initial or normal test required by ENGINEER to guard against unsuitable materials or defective workmanship. Additional tests, required due to failure of the initial or normal test(s), shall be paid for by CONTRACTOR. ENGINEER will designate the laboratory which will accomplish the additional test(s).

The procedure and methods used to sample and test materials will be determined by ENGINEER. Unless otherwise specified, samples and tests will be made in accordance with either the Materials Testing Manual of the Contracting Agency; the standard methods of AASHTO or ASTM, which were in effect and published at the time of advertising for bids.

The laboratory responsible for the test shall furnish at least one copy of the test results to the Contracting Agency or his designated representative, to CONTRACTOR, and to the appropriate material supplier.

With respect to certain manufactured materials, ENGINEER may permit the use of some materials prior to sampling and testing provided they are delivered with either a certificate of compliance or analysis or both, stating that the materials comply in all respects with the requirements of the specifications. These certificates shall be furnished in triplicate and clearly identify each delivery of materials to the work area. The certificates shall be signed by a person having legal authority to bind the supplier or manufacturer.

108.15 FIELD TESTS

108.15.1

The construction specifications contained in the CONTRACT documents, the Colorado Department of Highways Standard Specifications for Road and Bridge Construction dated 1991 or most recent edition, special provisions thereto and as amended by the Adams County Public Works Department shall apply to roadway testing and inspection requirements.

The testing of all materials and construction shall be in conformance with the appropriate AASHTO or ASTM specifications. See section 700.

108.15.2

All test and inspection results performed by a testing firm in the employment of the CONTRACTOR shall be submitted to the Engineer or his field representative at the time of testing or within fifteen working days after the testing or retesting date.

108.15.3

Any work performed inside Adams County R.O.W. and associated easements shall be tested by the COUNTY or an approved materials testing firm. Materials testing firms shall be approved by the ENGINEER on an annual basis and must employ a full time registered professional engineer who directly supervises work of the firm. The costs of testing and associated reporting are paid by the OWNER or the CONTRACTOR as specified in the Project Special Conditions.

108.16 RECORD DRAWINGS

108.16.1

CONTRACTOR shall maintain at the construction site one complete set of approved drawings suitable marked to show all deviations from the original set of drawings and other information as specified. Supplementary sketches shall be included, if necessary, to clearly indicate all work as constructed.

108.16.2:

All work shall be clearly shown and the record drawings shall be satisfactory to OWNER. One complete set of the record drawings shall be furnished to ENGINEER for OWNER'S information prior to or with submittal of the final Application for Payment. Failure of CONTRACTOR to maintain an up to date set of record drawings on the project site shall be reason to withhold payments. All underground lines shall be referenced to surface landmarks so the exact location can be determined from the record drawings.

108.17 FIRST AID AND REPORTING OF ACCIDENTS

CONTRACTOR shall be solely and exclusively responsible for the determining of requirements of first aid facilities and for providing such first aid facilities at the site, as are necessary to supply first aid service to anyone who may be injured in connection with the work. CONTRACTOR must promptly report in writing to ENGINEER and OWNER all accidents whatsoever arising out of, or in connection with, the performance of the work, whether on, or adjacent to the site, which causes death, personal injury, or property damages, giving full details and statements of witnesses. In addition, if death or serious injuries or damages are caused, the accident shall be reported immediately by telephone or messenger to both ENGINEER and OWNER. If any claim is made by anyone against CONTRACTOR or any subcontractor on account of any accident, CONTRACTOR shall promptly report the facts in writing to ENGINEER and OWNER, giving full details of the claim.

108.18 PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this CONTRACT shall be deemed to be inserted herein and the CONTRACT shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the CONTRACT

shall forthwith be physically amended to make such insertion or correction without change in the CONTRACT Amount or CONTRACT Time.

108.19 FIRE PROTECTION

Adequate provisions shall be made throughout the construction of the project to ensure that fire fighting equipment can reach each property within the general area.

108.20 INTERRUPTION OF WATER SERVICE (Waterworks)

CONTRACTOR shall be obligated to give all affected water users adequate advanced warning before shutting off water service for any reason. CONTRACTOR shall not interrupt service to any user without prior written approval of the agency or department operating the water system.

The work of this Contract will be coordinated in a manner that will insure that no user is out of service for a period of more than four hours. Each anticipated outage will be scheduled so that all affected users are notified in writing a minimum of 24 hours in advance of the outage. The operation of any existing valves will be at the direction and approval of the appropriate Water and Sanitation District Inspector.

108.21 PRICES

In the event of discrepancy between unit prices quoted in the proposal and the extensions or totals, the unit prices shall control. The prices are to include the furnishing of all materials, plant, equipment, tools, and all other facilities and the performance of all labor, and services necessary or proper for the completion of the work.

108.22 TEMPORARY UTILITIES

CONTRACTOR shall pay for installation, use and disconnecting of all temporary utilities required for use in constructing the project.

108.23 PERMITS, LICENSES AND MISCELLANEOUS FEES

CONTRACTOR shall be responsible for obtaining all the necessary permits and licenses required by law. All utility connection charges or other miscellaneous fees shall be paid by CONTRACTOR.

108.24 FIELD FACILITIES

The CONTRACTOR shall provide all materials, labor, tools, equipment, water, sanitary, heat, light, power, transportation, supervision, field office facilities, telephone, and other related services and facilities of whatever nature necessary to execute and complete the work in accordance with the CONTRACT documents.

108.25 ACCEPTANCE

(A) Partial acceptance

If at any time during the prosecution of the project CONTRACTOR substantially completes a unit or portion of the project, such as a structure, utility service, or a section of road or pavement, he/she may request the ENGINEER to make final inspection of that work. If ENGINEER finds, upon inspection, that the work has been satisfactorily completed in compliance with the CONTRACT he may accept the work as being completed. Such partial acceptance shall in no way void or alter any terms of the CONTRACT.

(B) Final Acceptance

Upon due notice from CONTRACTOR of presumptive completion of the entire project, ENGINEER will make an inspection. If all construction provided for and contemplated by the CONTRACT is found completed to his satisfaction, that inspection shall constitute the final inspection and ENGINEER will make the final acceptance. The warranty period will then commence. See sections 108.12, 115.16 CONTRACTOR will be notified in writing of this acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, ENGINEER will give the CONTRACTOR the necessary instructions for correction of same, and the CONTRACTOR shall immediately comply with and execute such instructions. Upon correction a final inspection will be made to assure the work has been satisfactorily completed. In such event, ENGINEER will make the final acceptance and notify CONTRACTOR in writing of this acceptance as of the date of the final inspection.

108.26 WARRANTY PROVISIONS

CONTRACTOR shall warrant the work against defective workmanship or faulty materials for a period of 1 year from the date of Certificate of Final Acceptance under the CONTRACT, ordinary wear and tear and unusual abuse or neglect excepted.

Any omission on the part of ENGINEER to condemn defective work or materials at the time of construction shall not be deemed an acceptance, and CONTRACTOR will be required to correct defective work or materials at any time before substantial completion and within 1 year thereafter.

Should any defects develop within 1 year from the date of Certificate of Final Acceptance due to faults in workmanship or materials CONTRACTOR shall, within ten (10) working days of receipt of written notice from Contracting Agency, begin making the necessary repairs to the satisfaction of the ENGINEER. Such work shall include the repair or replacement of other work or materials damaged or affected by making the above repairs or corrective work, all at no additional cost to the Contracting Agency.

In case of work, materials, or equipment for which written warranties are required by the special provision the CONTRACTOR shall provide or secure from the appropriate Subcontractor or supplier such warranties addressed to and in favor of the Contracting Agency

and deliver same to the ENGINEER prior to final acceptance of the work. Delivery of such warranties shall not relieve the CONTRACTOR from any obligation assumed under any other provisions of the CONTRACT.

The warranties and guarantees provided in this subsection of the CONTRACT documents shall be in addition to and not in limitation of any other warranties, guarantees or remedies required by law.

110 PLANS, SPECIFICATIONS AND RELATED DATA

110.1 INTENT OF PLANS AND SPECIFICATIONS

The intent of the Plans and Specifications is that the CONTRACTOR furnish all labor and materials, equipment and transportation necessary for the proper execution of the work unless specifically noted otherwise. The CONTRACTOR shall do all the work shown on the Plans and described in the Specifications and all incidental work considered necessary to complete the project in an acceptable manner, and to fully complete the work or improvement, ready for use, occupancy and operation by the Owner.

It is further the intention of the Plans and Specifications to set forth requirements or performance, type of equipment and structures, and standards of materials and construction, to require new material and equipment unless otherwise indicated, and to require complete performance of the work without specific reference to any minor component part. It is not intended, however, that materials or work not covered by or properly inferable from any heading, branch, class or trade of the Specifications shall be supplied unless distinctly so noted. Materials or work described in words, which so applied have a well known technical or trade meaning, shall be held to refer to such recognized standards.

110.2 CONFLICT

If there is conflicting variance between the Plans and the Specifications, or other CONTRACT Documents, the PROJECT SPECIAL CONDITIONS controls first, then plans shall control.

110.3 DISCREPANCIES IN PLANS

Any discrepancies found between the Plans and Specifications and site conditions, or any errors, omissions or ambiguities in the Plans or Specifications shall be immediately reported to the Engineer.

Questions as to meaning of Plans and Specifications shall be interpreted by the Engineer, whose decision shall be final and binding on all parties concerned. See also Paragraph 111.1. The ENGINEER will provide the CONTRACTOR with such information as may be required to show revised or additional details of construction. The CONTRACTOR will not be allowed to take advantage of any errors or omissions in the Plans and Specifications. The ENGINEER will provide full information when errors or omissions are discovered. Any work done by the CONTRACTOR, after his discovery of such discrepancies, errors or omissions and prior to a decision by the ENGINEER, shall be done at the CONTRACTOR'S risk.

110.4 ADEQUACY OF PLANS AND SPECIFICATIONS

Responsibility for adequacy of the design and for sufficiency of the Plans and Specifications shall be borne by the OWNER. The complete requirements of the work to be performed under the CONTRACT shall be set forth in Plans and Specifications to be supplied by the OWNER through the ENGINEER or by the ENGINEER as representative of the OWNER.

110.5 OWNERSHIP OF PLANS AND SPECIFICATIONS

All original or duplicated drawings and Specifications and other data prepared by the ENGINEER shall remain the property of the ENGINEER, and they shall not be re-used on other work.

110.6 DIMENSIONS

Figured dimensions on the Plans will be used in preference to scaling the drawings. Where the work of the CONTRACTOR is affected by finish dimensions or manufacturer's equipment, these shall be determined by the CONTRACTOR at the site, and he shall assume the responsibility therefore.

110.7 MODELS

All models prepared for this work, in accordance with requirements of Plans or Specifications, shall become the property of the OWNER at the completion of the work.

111 ENGINEER-OWNER-CONTRACTOR RELATIONS

111.1 GENERAL

The CONTRACTOR, his/her sub-contractors and employees are "independent" from the County and shall not be considered employees of the County under any circumstance.

111.2 ENGINEER'S RESPONSIBILITY AND AUTHORITY

The ENGINEER shall observe the work on behalf of the OWNER, and will provide general assistance during construction insofar as proper interpretation of the CONTRACTOR requirements is affected.

The ENGINEER shall not be responsible for the acts or omissions of the CONTRACTOR'S superintendent or other employees.

All materials used and all completed work by the CONTRACTOR shall be subject at all times to the observation, test, and approval of the ENGINEER. The CONTRACTOR shall furnish such samples of materials for examination and tests as may be requested by the ENGINEER and shall furnish any information required concerning the nature or source of any materials or equipment which he/she proposes to use.

The construction, fabrication, and manufacturer of any equipment or materials specified herein may be inspected by the ENGINEER at the plant or factory and the ENGINEER shall have free access to make such inspection.

Any materials, equipment, or work which does not satisfactorily meet the Specifications may be condemned by the ENGINEER by giving a written notice to the CONTRACTOR. All condemned materials, equipment, or work shall be promptly taken out and replaced.

Any defective material, equipment, or work may be rejected by the ENGINEER at any time prior to final acceptance by the OWNER even though said defective items may have been previously overlooked.

The ENGINEER shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, interpretation of Plans and Specifications and all questions as to the acceptable fulfillment of the CONTRACT on the part of the CONTRACTOR. All decisions of the ENGINEER shall be final.

111.3 SUSPENSION OF WORK BY ENGINEER

When, in judgment of the ENGINEER, unfavorable weather or any other condition makes it impractical to secure first-class results, or should the CONTRACTOR fail to carry out the provisions of the CONTRACT or supply materials meeting the requirements of the Specifications, the ENGINEER may issue to the CONTRACTOR a written order to suspend work on all or any part of the CONTRACT work. When conditions are again favorable for prosecution of the work, the ENGINEER will issue to the CONTRACTOR a written order to resume the suspended work. Orders to suspend work will not be written for intermittent shutdowns due to weather conditions unless the suspension of work is to be for an extended period of time. The CONTRACTOR shall take every precaution to prevent any damage or unreasonable deterioration of the work during the time it is closed down.

Suspension of the work by the ENGINEER shall not furnish any grounds for claims by the CONTRACTOR for damages or extra compensation, but the period of such suspensions shall be allowed in determining the revised date for completion as hereinafter provided. The CONTRACTOR shall not suspend work under the CONTRACT, except as permitted in Paragraph 111.5, without the written order of the ENGINEER as stated in the preceding paragraph. The CONTRACTOR will be required to work a sufficient number of hours per day in order to complete the project within the work days specified. The question as to the necessity of discontinuing any portion of the work by reason of unfavorable weather conditions shall be determined by the ENGINEER. See also Paragraph 111.9 for suspension of work by Inspectors.

111.4 SUSPENSION OF WORK BY OWNER

The OWNER may at any time suspend the work, or any part thereof, by giving ten days' notice to the CONTRACTOR in writing. The work shall be resumed by the CONTRACTOR within ten days after the date fixed in the written notice from the OWNER to CONTRACTOR to do so.

If the work, or any part thereof, shall be stopped by the notice in writing aforesaid, and if the OWNER does not give notice in writing to the CONTRACTOR to resume work at a date within a year of the date fixed in the written notice to suspend, then the CONTRACTOR may abandon that portion of the work so suspended, and he/she will be entitled to the estimate and payments for all work done on the portions so abandoned, if any. See also Paragraph 115.9.

If suspension of all or part of the work causes additional expense not due to the fault or negligence of the CONTRACTOR, the OWNER shall reimburse the CONTRACTOR for the additional expense incurred due to suspension of the work. Claims for such compensation, with complete substantiating records, shall be filed with the ENGINEER within ten (10) days after the date of order to resume work in order to receive consideration. This paragraph shall not be construed as entitling the CONTRACTOR to compensation for delays due to inclement weather, failure to furnish additional surety or sureties specified herein, for suspension made at the request of the CONTRACTOR, or for any other delay provided for in the CONTRACT Documents.

111.5 SUSPENSION OF WORK BY CONTRACTOR

The CONTRACTOR may suspend work upon ten (10) days' written notice to the OWNER and the ENGINEER, for any of the following reasons:

If an order of any court or other public authority caused the work to be stopped or suspended for a period of ninety (90) days through no act or fault of the CONTRACTOR or his/her employees.

If the ENGINEER should fail to act upon any Request for Payment, in the manner set forth in Paragraph 115.5, within ten (10) days after it is presented in accordance with the General Conditions.

If the OWNER should fail to act upon any Request for Payment, in the manner set forth in Paragraph 115.6, within thirty (30) days after its approval by the ENGINEER.

If the OWNER should fail to pay the CONTRACTOR any sum within thirty (30) days after its award by arbitrators.

111.6 EXAMINATION OF COMPLETED WORK

If the ENGINEER requests it, the CONTRACTOR at any time before acceptance of the work shall remove or uncover such portions of the finished work as may be directed. After examination, the CONTRACTOR shall restore said portions of the work to the standard required by the Specifications. Should the work thus exposed or examined prove acceptable, the uncovering or removing, and the replacing of the covering or making good of the parts removed shall be paid for as Extra Work, in accordance with requirements of Paragraph 115.3; but should the work so exposed or examined provide unacceptable, the uncovering, removing and replacing shall be at the CONTRACTOR'S expense.

111.7 CONTRACTOR'S SUPERINTENDENTS

A qualified superintendent, who is acceptable to the ENGINEER, shall be maintained on the work and give efficient supervision to the work until its completion. The superintendent shall have full authority to act in behalf of the CONTRACTOR, and all directions given to the superintendent shall be considered given to the CONTRACTOR. In general, the ENGINEER'S instructions shall be confirmed in writing and always upon written request from the CONTRACTOR.

111.8 CONTRACTOR'S EMPLOYEES

Incompetent or incorrigible employees shall be removed from the project by the CONTRACTOR or his/her representative when requested by the ENGINEER, and such persons shall not again be permitted to return to the project without the written consent of the ENGINEER.

There shall be no discrimination against any employee or applicant for employment because of race, creed, national origin or color. This provision shall be included in all subcontracts.

111.9 INSPECTORS

Inspectors may be appointed by the ENGINEER or OWNER to see that the work is performed in accordance with the Plans and Specifications.

Inspectors shall have authority to suspend all or a portion of the work which is not being properly performed and, subject to the final decision of the ENGINEER, to condemn and reject defective work and materials.

Inspectors shall have no authority to permit deviation from the Plans and Specifications and the CONTRACTOR shall be liable for any deviations made without a written order from the ENGINEER. If requested by the CONTRACTOR, the suspension order will be given in writing. Inspectors shall not act as foremen or perform other duties for the CONTRACTOR.

111.10 LANDS BY OWNER

Prior to issuance of Notice to Proceed, the OWNER shall provide the lands, as specified, upon which the work under the CONTRACT is to be performed including rights-of-way for construction and access. Any delay in furnishing these lands by the OWNER shall be deemed proper cause for adjustment in the CONTRACT amount, and/or the time of completion.

111.11 LANDS BY CONTRACTOR

Any additional land and access thereto that may be required for temporary construction facilities or for storage of materials shall be provided by the CONTRACTOR with no liability to the OWNER. The CONTRACTOR shall confine his/her apparatus and storage of materials and operation of his/her workmen to those areas described in the Plans and Specifications and such additional areas which he/she may provide as approved by the ENGINEER.

111.12 PRIVATE PROPERTY

The CONTRACTOR shall not enter upon private property for any purpose without obtaining permission, and he/she shall be responsible for the preservation of all property along and adjacent to the street and/or right-of-way, and shall use every precaution necessary to prevent damage or injury thereto. He/she shall use suitable precautions to prevent damage to pipes, conduits, and other underground structures, and shall protect carefully from disturbance or damage all monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.

111.13 REMOVAL OF CONSTRUCTION EQUIPMENT

At the termination of this CONTRACT, before acceptance of the work by the OWNER, the CONTRACTOR shall remove all of his/her equipment, tools and supplies from the property of the OWNER. Should the CONTRACTOR fail to remove such equipment, tools, and supplies, the OWNER shall have the right to remove them. See also Paragraph 111.15.

111.14 OWNER'S RIGHT TO CORRECT DEFICIENCIES

If the CONTRACTOR should neglect to construct the work properly or fail to perform any provisions of this CONTRACT, the OWNER after ten (10) days written notice to the CONTRACTOR may, without prejudice to any other remedy he/she may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the CONTRACTOR. See also Paragraph 115.11.

111.15 OWNER'S RIGHT TO TERMINATE CONTRACT AND COMPLETE THE WORK

If the CONTRACTOR should be adjudged a bankrupt; or if he/she should make a general assignment for the benefit of his/her creditors; or if a receiver should be appointed on account of his/her insolvency; or if should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials; or if he/she should fail to make prompt payments to the subCONTRACTORs or for materials or labor; or persistently disregard laws, ordinances, or the instructions of the ENGINEER; or otherwise be guilty of a substantial violation of any provision of the CONTRACT, then the OWNER, upon the certificate of the ENGINEER that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the CONTRACTOR seven days' written notice, terminate the employment of the CONTRACTOR and take possession of the premises and of all materials, tools, and appliances thereon and finish the work by whatever method he/she may deem expedient. In such case, the CONTRACTOR shall not be entitled to receive any further payment until the work is finished.

If the unpaid balance of the CONTRACT price shall exceed the expense of finishing the work, including compensation for additional material, administrative services, and engineering fees, such excess shall be paid to the CONTRACTOR. If such expense shall exceed such unpaid balance, the CONTRACTOR shall pay the difference to the OWNER. The expense incurred by the OWNER as herein provided, and the damage incurred through the CONTRACTOR'S default, shall be certified by the ENGINEER.

See also Paragraph 115.11.

111.16 CONTRACTOR'S RIGHT TO TERMINATE CONTRACT

The CONTRACTOR may terminate CONTRACT upon ten (10) days' written notice to the OWNER and the ENGINEER, if an order of any court or other public authority caused the work to be stopped or suspended for a period of ninety (90) days through no act or fault of the CONTRACTOR or his/her employees. See also Paragraph 115.12.

111.17 RIGHTS OF VARIOUS INTERESTS

Wherever work being done by the OWNER'S forces or by other CONTRACTORs is contiguous to work covered by this CONTRACT, the respective rights of the various interests involved shall be established by the ENGINEER, to secure the completion of the various portions of the work in general harmony.

111.18 SEPARATE CONTRACTS

The OWNER reserves the right to let other contracts in connection with this project. The CONTRACTOR shall cooperate with other CONTRACTORs with regard to storage of materials and execution of their work. The CONTRACTOR shall inspect and promptly report to the ENGINEER any irregularities which he/she may detect which will not permit him to complete his/her work in a satisfactory manner. The CONTRACTOR shall not be responsible for defects which develop due to the work of others after the work is completed. The CONTRACTOR shall report to the ENGINEER immediately any difference between completed work by others and the Plans.

111.19 SUBCONTRACTS

At the time specified by the CONTRACT Documents or when requested by the ENGINEER, the CONTRACTOR shall submit in writing to the OWNER for approval the names of the subcontractors proposed for the work. Subcontractor s may not be changed except at the request of and with the approval of the OWNER. The CONTRACTOR is responsible to the OWNER for the acts and omissions of his/her subcontractors, and of their direct and indirect employees, to the same extent as he/she is responsible for the acts and omissions of his/her employees. The CONTRACT Documents subcontractor shall not be construed as creating any contractual relation between any subcontractor and the OWNER.

The CONTRACTOR agrees to bind every subcontractor and every subcontractor agrees to be bound by the terms of the CONTRACT, the CONTRACT Documents, the Plans, the General Conditions or CONTRACT, the Supplementary General Conditions, the Special Conditions and the Specifications as far as applicable to his/her work, including the following provisions of this Section, unless specifically noted to the contrary in a subcontract approved in writing as adequate by the OWNER or ENGINEER.

The subcontractor agrees to be bound to the CONTRACTOR by the terms of the CONTRACT, the CONTRACT Documents, the Plans, the General Conditions of CONTRACT, the

Supplementary General Conditions, the Special Conditions and the Specifications and to assume toward the CONTRACTOR all the obligations and responsibilities that the CONTRACTOR, by those documents, assumes toward the OWNER. The CONTRACTOR agrees to be bound to the subcontractor by all the obligations that the OWNER assumes to the CONTRACTOR under the terms of said documents, and by all the provisions thereof affording remedies and redress to the CONTRACTOR from the OWNER.

The CONTRACTOR shall not assign, sublet, or transfer the whole or any part of the work herein specified without the written consent of the OWNER. Any such assignment, subletting, or transfer shall not in any manner relieve the CONTRACTOR from any of the responsibilities assumed herein.

For convenience of reference and to facilitate the letter of Contracts and subcontracts, the Specifications are separate into titled sections. Such separations shall not, however, operate to make the ENGINEER an arbiter to establish limits to the contracts between CONTRACTOR and subcontractors.

111.20 WORK DURING AN EMERGENCY

The CONTRACTOR shall perform any work and shall furnish and install any materials and equipment necessary during an emergency endangering life or property. In all cases he/she shall notify the ENGINEER of the emergency as soon as practicable, but he/she shall not wait for instructions before proceeding to properly protect both life and property. In cases where the CONTRACTOR cannot or does not meet the emergency, the OWNER may take action as outlined above. See also Paragraph 112.3.

111.21 ORAL AGREEMENTS

No oral order, objection, claim or notice by any party to the others shall affect or modify any of the terms or obligations contained in any of the CONTRACT Documents, and none of the provisions of the CONTRACT Documents shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing, signed by the parties to be bound, and no evidence shall be introduced in any proceeding of any other waiver or modification.

111.22 CONSTRUCTION SCHEDULE

After being awarded the CONTRACT, and if requested by the ENGINEER, the CONTRACTOR shall immediately prepare and submit to the ENGINEER for approval a progress schedule which will insure the completion of the project within the time specified. Adequate equipment and forces shall be made available by the CONTRACTOR to start work immediately upon order of the ENGINEER and to carry out the schedule to completion of the CONTRACT within the time specified.

111.23 DELAYS AND EXTENSION OF CONTRACT TIME

Delays caused by injunction or legal actions, "Acts of God", or other causes beyond the control of the CONTRACTOR shall entitle the CONTRACTOR to an extension of time within which to complete the work.

Application for such extension of time shall be made to the OWNER by the CONTRACTOR within ten days after the occurrence of such delay and shall state reasons for the request for the extension of time.

No extensions of time shall be valid unless it is given in writing by the OWNER.

111.24 WORKING HOURS

Unless special arrangements are made with the Engineering Department, working hours shall be 8:00 am to 4:00 PM, Monday through Friday. No work shall be performed on observed holidays, weekends, or nights unless special permission is granted by the PROJECT ENGINEER.

In order to assure proper availability of construction supervision or other personnel from the PROJECT ENGINEER'S staff, two (2) days written notice shall be delivered to the PROJECT ENGINEER prior to any work performed on Saturdays, Sundays, nights or observed holidays.

The failure by the CONTRACTOR to provide minimum notices shall not be considered for time extensions or extra compensation.

111.25 FREE TIME

When applicable, time will not be charged during the months of December, January, February, and March unless otherwise stipulated in the proposal. This time is defined as "free time". Work may continue during free time if conditions permit.

END OF ENGINEER-OWNER-CONTRACTOR RELATIONS

112 SCOPE OF WORK

112.1 ADDITIONAL INSTRUCTIONS

If the instructions and Plans are not sufficiently clear to permit the CONTRACTOR to proceed with the work, the ENGINEER shall, either upon his/her own initiative or upon the request of the CONTRACTOR, furnish additional written instructions, together with additional drawings as may be necessary. When such request is made by the CONTRACTOR, it must be in ample time to permit the preparation of the instructions and drawings by the ENGINEER before the construction of the work covered by them is undertaken. Such additional instructions and drawings shall be consistent with the CONTRACT Documents and shall have the same force and effect as if contained in the CONTRACT Documents.

For the purpose of avoiding delays in the preparation of such additional instructions and drawings, the ENGINEER and the CONTRACTOR shall jointly prepare a schedule showing the time for the commencement of the work to be included in them and the time the CONTRACTOR shall furnish the necessary shop drawings which may be necessary for their preparation. The CONTRACTOR shall do no work without proper drawings or instructions and shall, at his/her own expense, replace and work wrongly executed.

112.2 INCREASE OR DECREASE OF WORK

The OWNER reserves the right to make such alterations in the Plans or in the quantities of work to the extent authorized by law and as may be considered necessary. Such alterations shall be in writing by the ENGINEER and shall not be considered as a waiver of any conditions of the CONTRACT nor to invalidate any of the provisions thereof; provided, however, that the execution of a supplemental agreement acceptable to both parties of the CONTRACT will be necessary before any alteration is made which involves (1) an increase or decrease of more than 20% of the total cost of the work, calculated from the original proposal quantities and the unit CONTRACT prices, or the original lump sum, as applicable, or (2) an increase or decrease of more than 20% in the quantity of any one major CONTRACT item.

For condition (2) above, a major item is defined as any item, unless otherwise indicated on the Plans or designated in the Special Conditions, the CONTRACT price for which amounts to 10% or more of the total CONTRACT price as determined by either the original lump sum bid or by the original quantities and the unit CONTRACT prices.

When an alteration requires the execution of a supplemental agreement, the agreement shall be fully executed before any work on the alteration is started. Alterations involving an increase of more than 20% in the net of any one minor CONTRACT item may be the basis for either party to the CONTRACT to require a supplemental agreement.

See Paragraph 115.3 for method of payment.

112.3 EXTRA WORK

Any extra work made necessary by alteration of or additions to the Plans or by other reasons for which no price is provided in the CONTRACT, shall be performed by the CONTRACTOR as directed by the ENGINEER and he/she shall be compensated therefor as provided under Paragraph 115.3.

Extra work which by reason of its character or extent is covered by a supplemental agreement between the OWNER and the CONTRACTOR, must have the written consent of the surety on the bond, but extra work and change orders not covered by a supplemental agreement will not require the consent of the surety. See also Paragraph 112.2.

112.4 CHANGED CONDITIONS

Should the CONTRACTOR encounter subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT, or unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the CONTRACT, which changed or unusual conditions will be considered by the CONTRACTOR as the basis for a claim for extra compensation, the CONTRACTOR shall promptly and before any such conditions are disturbed, notify the ENGINEER of the alleged conditions in writing, with copies to the OWNER.

If the OWNER is not given written notice prior to the condition being disturbed, the CONTRACTOR will be deemed to have waived any claim or claims for extra compensation in any manner arising out of the changed or unusual conditions.

The OWNER shall instruct the ENGINEER to investigate and issue a decision on claim within a reasonable time. ENGINEER'S decision shall cover change, if any, in either or both time or money.

If the OWNER shall determine the conditions to be such as to justify a claim for additional compensation, he shall provide for additional payment for the particular phase of work in question by a negotiated agreement with the CONTRACTOR upon new unit CONTRACT prices, by cost plus an agreed percentage, or by any other equitable arrangement mutually agreed upon by the OWNER and the CONTRACTOR and consented to in writing by the surety to the bond. In any event, the CONTRACTOR shall not be relieved, unless permitted to do so by the OWNER, from his/her obligation of resuming construction operations pending decision as to the validity of a claim, or pending the execution of a negotiated agreement to cover additional costs if a claim shall be recognized under the provisions of this Section of the specifications.

112.5 SALVAGE

Unless otherwise indicated on the Plans or in the Special Conditions, all castings, pipe and any other waste material taken from the work shall be the property of the CONTRACTOR.

112.6 CLEANUP

The CONTRACTOR shall at his/her own expense clean up and remove all refuse and unused materials of any kind resulting from the work. Upon failure to do so within seventy-two (72) hours after request by the ENGINEER, the work may be done by the OWNER and the cost thereof be charged to the CONTRACTOR and deducted from his/her final estimate. See also Paragraph 115.5.

End of Scope of Work

113 MATERIALS AND WORKMANSHIP

113.1 QUALITY OF EQUIPMENT AND MATERIALS

In order to establish standards of quality, the ENGINEER has, in the detailed Specifications, referred to certain products by name and catalog number. This procedure is not to be construed as eliminating from competition other products of equal or better quality by other manufacturers where fully suitable is design.

The CONTRACTOR shall furnish a complete list of proposed desired substitutions, together with such engineering and catalog data as the ENGINEER may require. List and information must be submitted prior to submittal of first progress payment estimate.

The CONTRACTOR shall abide by the ENGINEER'S judgment when proposed substitute materials or items of equipment are judged to be unacceptable and shall furnish the specified material or item of equipment in such case. All proposals for substitutions shall be submitted in writing by the CONTRACTOR and not by individual trades or material suppliers. The ENGINEER will approve or disapprove proposed substitutions in writing within a reasonable time. No substitute materials shall be used unless approved in writing.

113.2 MATERIALS FURNISHED BY THE OWNER

Materials specifically indicated will be furnished by the OWNER. The fact that the OWNER is to furnish material is conclusive evidence of its acceptability for the purpose intended, and the CONTRACTOR may continue to use it until otherwise directed. If the CONTRACTOR discovers any defect in material furnished by the OWNER, he/she shall notify the ENGINEER. Materials furnished by the OWNER, which are not of local occurrence, will be provided at locations listed on Plans or in Specifications. The CONTRACTOR shall be responsible for material loss or damage, including that caused by third parties, after his/her receipt of material.

113.3 MATERIALS FURNISHED BY THE CONTRACTOR

All materials used in the work shall meet the requirements of the respective Plans and Specifications. All materials not otherwise specifically indicated shall be furnished by the CONTRACTOR.

113.4 STORAGE OF MATERIALS

Materials shall be so stored as to insure the preservation of their quality and fitness for the work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and/or they shall be placed under cover. Stored materials shall be located so as to facilitate prompt inspection. Private property shall not be used for storage purposes without the written permission of the OWNER or lessee. Unless otherwise stipulated in the PROJECT SPECIAL CONDITONS, no payment will be made for temporary storage of materials intended for use in the project.

113.5 REJECTED WORK AND MATERIALS

All materials which do not conform to the requirements of the CONTRACT Documents, are not equal to samples approved by the ENGINEER, or are in any way unsatisfactory or unsuited to the purpose for which they are intended, shall be rejected.

Any defective work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause shall be removed and the work shall be reexecuted by the CONTRACTOR.

Defective work or material may be condemned by the ENGINEER any time before the final acceptance of the work. Notice of such condemnation shall be given in writing by the ENGINEER. Such condemned work or material shall be removed or disposed of to the satisfaction of the ENGINEER within ten (10) days after written notice is given by the ENGINEER. Should the CONTRACTOR fail to remove rejected work or materials within ten (10) days after written notice to do so, the OWNER may remove them and store the materials. Failure or neglect on the part of the ENGINEER to condemn unsatisfactory material or reject inferior workmanship will in no way release the CONTRACTOR, nor shall it be construed to mean the acceptance of such work, nor shall the final acceptance bar the OWNER from recovering damages in case fraud was practiced, or for defective work resulting from the CONTRACTOR'S dishonesty. No compensation will be made for defective work or materials.

Work done contrary to or regardless of the instructions of the ENGINEER, work done without lines, grade and/or cross section stakes and grades shown on the Plans or as given by the ENGINEER, or any deviation made from the Plans and Specifications without written authority will be considered unauthorized and at the expense of the CONTRACTOR, and will not be measured or paid for by the OWNER. Any and all work so done may be ordered removed and replaced immediately at the CONTRACTOR'S expense.

See also Paragraph 115.8.

113.6 MANUFACTURER'S DIRECTIONS

Manufactured articles, material and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer unless herein specified to the contrary.

113.7 CUTTING AND PATCHING

The CONTRACTOR shall do all necessary cutting and patching of the work that may be required to properly receive the work of the various trades or as required by the Plans and Specifications to complete the work. He/she shall restore all such cut or patched work as directed by the ENGINEER. Cutting of existing structures that will endanger the work, adjacent property, workmen or the public shall not be done unless approved by the ENGINEER and under his direction.

113.8 PATENTS

All fees or royalties for patented inventions, equipment, or arrangements that may be used in any manner connected with the construction or erection of the work, or any part thereof, shall be included in the price mentioned in the CONTRACT.

The CONTRACTOR shall protect and hold harmless the OWNER against any and all claims or litigation by reason of infringement of any patent rights on any materials, equipment, or construction furnished by the CONTRACTOR.

113.9 GUARANTEE

The CONTRACTOR shall guarantee all work and material against all defects for the period specified in the Form of Bond or Standard Special Conditions. The CONTRACTOR shall repair or replace any such defective work and/or material to conform to the provisions of this CONTRACT and without expense to the OWNER, within ten (10) working days after notification in writing by the OWNER of such defective work or material. If the CONTRACTOR shall not have made said repairs or replacements or have made arrangements for the correction thereof within the period specified above, the OWNER shall do so and shall charge the cost of same to the CONTRACTOR. The CONTRACTOR shall perform the work so as to cause the OWNER a minimum of inconvenience and interruption of services.

See also Paragraph 108.26 and 115.16.

113.10 BOND

Prior to the signing of the CONTRACT, the CONTRACTOR shall furnish a good and sufficient Performance and Payment Bond on the form provided in the full amount of the CONTRACT.

Bond shall guarantee faithful performance of the provisions of the CONTRACT, including the guarantee of all work and material against all defects for the period specified in the Form of Bond, and the payment of all bills and obligations arising from said CONTRACT. Surety Companies must have a *BEST'S* rating of A- or better

114 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

114.1 CONTRACTOR'S RESPONSIBILITY

The CONTRACTOR assumes full responsibility for the safekeeping of all materials and equipment and for all unfinished work until final acceptance by the OWNER, and if any of it be damaged or be destroyed from any cause, he/she shall replace it at his/her own expense.

The CONTRACTOR shall indemnify and hold harmless the OWNER against any liens filed for nonpayment of his/her bills in connection with the CONTRACT work. The CONTRACTOR shall furnish the OWNER satisfactory evidence that all persons who have done work or furnished materials, equipment, or service of any type under this CONTRACT have been fully paid prior to the acceptance of the work by the OWNER. See also Paragraph 115.14.

The CONTRACTOR shall indemnify and hold harmless the OWNER, the OWNER'S employees, the ENGINEER, and the ENGINEER'S employees from any and all liability, loss, cost, damage, and expense (including reasonable attorney's fees and court costs) resulting from, arising out of, or incurred by reason of any claims, actions, or suits based upon or alleging bodily injury, including death, or property damage rising out of or resulting from the CONTRACTOR'S operations under this CONTRACT, whether such operations be by himself or by any SubCONTRACTOR or by anyone directly or indirectly employed by either of them. The CONTRACTOR shall obtain insurance for this purpose, which shall insure the interests of the OWNER and ENGINEER as the same may appear, and shall file with the OWNER and ENGINEER certificates of such insurance.

114.2 USE OF PREMISES

The CONTRACTOR shall confine his/her equipment, storage of materials and operation of work to the limits indicated by law, ordinances, permits or direction of the ENGINEER, and shall not unreasonably encumber the premises with his/her materials.

114.3 CONFINE OPERATIONS WITHIN RIGHTS-OF-WAY AND EASEMENTS

It shall be the CONTRACTOR'S responsibility to confine his/her construction activities within the limits of easements, property lines and limits of construction. Any damage to persons or property resulting from encroaching beyond these limits shall be the sole responsibility of the CONTRACTOR.

114.4 SAFETY

Precautions shall be exercised at all times by the CONTRACTOR for the protection of persons, employees and property. The safety provisions of applicable laws and local building and construction codes shall be observed.

The operations of the CONTRACTOR for the protection of persons, and for guarding against hazards of machinery and equipment, shall meet the requirements of state law.

The CONTRACTOR shall provide and maintain, at his/her own expense and on a 24-hours basis, all necessary safeguards such as watchmen, warning signs or signals, barricades and night lights at all unsafe places at or near the work. Special care shall be exercised to prevent vehicles, pedestrians, and livestock from falling into open trenches or being otherwise harmed as a result of the work.

The CONTRACTOR shall in all cases maintain safe passageways at all road crossings, crosswalks and street intersections, and shall do all other things necessary to prevent accident or loss of any kind.

All employees and subCONTRACTORs of the CONTRACTOR shall wear reflective safety vests and hard hats when working within County Right of Way.

114.5 FAILURE TO PAY FOR LABOR AND MATERIALS

If, at any item, the CONTRACTOR fails to pay the SubCONTRACTOR or the laborers employed upon the work, or fails to pay for the materials used therein, the OWNER may withhold from the money which may be due the CONTRACTOR under this agreement such amount or amounts as may be necessary for the payment of such SubCONTRACTORs, laborers, or materials, and may, acting as agent for the CONTRACTOR, apply the same to such payments and deduct the same from the final estimate of the CONTRACTOR.

114.6 PROTECTION OF PUBLIC AND PRIVATE UTILITIES

Reasonable effort has been made by the OWNER to furnish interferences with the Project such as above ground and underground telephone cables, gas mains, sewers, water mains, drains, etc.; there may be others which are not shown. It shall be the responsibility of the CONTRACTOR to locate and care for all such interferences at no extra cost to the OWNER. It shall be the CONTRACTOR'S responsibility to contact the appropriate representatives of local utility companies prior to the commencement of work which might affect said utility installations and operations of such utilities to verify the exact location, size and type of utility installations affected by the Project.

The CONTRACTOR shall support and protect by timbers or otherwise, all pipes, conduits, poles, gas mains, sewers, wires or other apparatus which may be in any way affected by the work. If, through the CONTRACTOR'S operations, any of said pipes, conduits, poles, wires, or apparatus should be damaged, they shall be repaired by the authorities having control of same, and the expense of such repairs shall be charged to the CONTRACTOR.

The CONTRACTOR shall further be responsible for any damage done to any street or other public property, or to any private property by reason of breaking of any water pipe, sewer or gas pipe, electric conduit, or other utility by or through his/her negligence.

114.7 DAMAGE TO EXISTING IMPROVEMENTS AND UTILITIES

Should any such utility be damaged in the trenching operations, the CONTRACTOR shall immediately notify the OWNER of such utility and, unless authorized in writing by the OWNER

of utility, the CONTRACTOR shall not attempt to make repairs except to prevent further damage to property. Duplicate copies of any written authorization given to the CONTRACTOR to make repairs shall be filed with the ENGINEER and shall be so worded as to save harmless the OWNER of any responsibility whatsoever relative to the sufficiency of the repairs.

The CONTRACTOR shall take adequate precautions to protect existing lawns, trees and shrubs outside rights-of-way, sidewalk, curbs, pavements, utilities, adjoining property, and structures, and to avoid damage thereto. He/she shall at his/her own expense completely repair any damage thereto caused by his/her operations to the satisfaction of the ENGINEER, except as otherwise provided in other portions of these Specifications. This includes storage of materials and construction traffic in areas of landscape and also within the dripline of all trees.

All costs incidental to the foregoing shall be included in the original contract unit prices for the project.

114.8 MOVING OF PUBLIC AND PRIVATE UTILITIES

Prior to awarding the CONTRACT, the OWNER will notify all affected utilities to move such of their installations as would be within the confines of the finished improvement. It shall be the responsibility of the CONTRACTOR to coordinate his/her work with that of the utilities in such manner as to cause the least possible interference, and as may be further provided in the Special Conditions and Specifications.

It is provided that no utility, private or public, shall be moved to accommodate the CONTRACTOR's equipment or his/her method of operation when such utility does not conflict with the installation of the improvement under construction unless the costs of such removal shall be at the expense of the CONTRACTOR.

If a conflict that is not shown on the Drawings develops between an existing utility and the work required by this Contract, the CONTRACTOR shall promptly notify the owner of the utility and the ENGINEER immediately in writing, so that arrangements can be completed without delay to the work.

114.9 MAINTENANCE OF TRAFFIC

During Construction the CONTRACTOR shall provide for the safe and expeditious movement of traffic through the construction site. He/She shall also provide and maintain in a safe condition temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages, and farms.

Before proceeding with construction, the CONTRACTOR shall submit to the **Traffic Operations Superintendent** for approval a detailed proposal in writing and/or drawing(s) of his/her method of handling traffic during construction including no parking requirements.

Details in the plan will include, but not be limited to: hours of work in compliance with these specifications, placement of signs and barricades, use of traffic control devices such as cones, barriers, and barricades, use of traffic control devices such as signal control, temporary

striping, maintenance of detours, dust abatement, and the length of lane closure tapers, all of which shall be in accordance with the "**Manual on Uniform Traffic Control Devices**" and any supplements thereto published by the U.S. Department of Transportation, Federal Highway Administration 1988.

The CONTRACTOR will not be permitted to have construction equipment or materials in the lanes open to traffic at any time unless directed by the Adams County Traffic Division. The CONTRACTOR shall remove and reset all construction signs prior to any adjacent construction. Any damage signs shall be replaced in kind or repaired by the CONTRACTOR.

The CONTRACTOR will be required to notify the **Traffic Operations Superintendent** 72 hours prior to date he/she intends to start construction.

The CONTRACTOR is cautioned that all personal vehicle and construction equipment parking will be prohibited where it conflicts with safety, access, or the flow of traffic.

The CONTRACTOR shall not be permitted to close any lane to traffic WITHOUT THE APPROVAL OF THE **Traffic Operations Superintendent**.

The CONTRACTOR shall conduct the work at all times in such a manner and sequence as will assure the least interference with traffic. He/She shall have due regard to the location of detours and to the provisions for handling of traffic. He/She shall not open up work to the prejudice or detriment of work already started. The ENGINEER may require the CONTRACTOR to finish a section on which work is in progress before work is started on additional sections if the opening of such section is essential to public convenience.

114.9.1 Existing Traffic Signs and Facilities

The Governmental Agency will make all necessary adjustments to traffic signals and traffic signal activators at no cost to the CONTRACTOR. Existing traffic and street name signs which will interfere with construction will be removed by the CONTRACTOR as required by CONTRACTOR'S Bid schedule. Upon completion of the project, the Governmental Agency will reset all such signs.

114.9.2 Detours

All detours directly relating to the project such as side street crossings, temporary bridges over freshly placed concrete, utilization of one or more lanes of the construction area for maintenance of traffic, and such related facilities for the maintenance of traffic shall be the responsibility of the CONTRACTOR, unless otherwise provided in the Plans or Special Conditions, the costs for which shall be included in the appropriate lump sum price, and will not be paid for separately.

114.9.3 Local and Emergency Traffic

Local traffic shall be provided access to private properties at all times, except during some urgent stages of construction when, as determined by the ENGINEER, it is impracticable to carry on the construction and maintain traffic simultaneously, such as

for the placing of asphalt concrete pavement, placing and curing of Portland cement concrete pavement, and deep sewer excavations which prohibit safe travel of vehicular traffic.

Emergency traffic such as police, fire, and disaster units shall be provided reasonable access at all times.

114.9.4 Protection of Pedestrian and Vehicular Traffic

The CONTRACTOR shall take every precaution to protect pedestrian and vehicular traffic. Refer to the Adams County Work Area Traffic Control Manual.

114.9.5 Restriction of Parking

Where parking is a hazard to through traffic or to the construction work, it shall be restricted either entirely or during the time when it creates a hazard. The CONTRACTOR must notify each resident by handbill 48 hours in advance. Handbills are to be supplied by the CONTRACTOR and approved by the County prior to use. "No Parking" signs shall be placed not less than 24 hours in advance of operations and shall state "No Parking 7 AM to 5 PM" together with the day of the week. Signs for this purpose shall be furnished and placed by the CONTRACTOR. The CONTRACTOR shall be responsible for and shall maintain the signs if they are used on any street which is directly involved in the construction work. If the parking signs are to be used beyond the confines of the work area, such as another street being used as a detour, the signs will be the responsibility of the CONTRACTOR, and will not be paid for separately.

114.9.6 Flaggers

The CONTRACTOR shall furnish at his/her own expense all flaggers who may be needed. Refer to the Adams County Work Area Traffic Control Manual. The cost for flaggers shall be included in the Traffic Control price and will not be paid for separately.

114.10 TRAFFIC CONTROL WITHIN AND ABUTTING THE PROJECT

The CONTRACTOR shall place and maintain all signs, barricades and warning lights within the limits of the project on all streets, alleys and driveways entering the project so that approaching traffic will turn right or left on existing undisturbed street before reaching the warning signs and barriers immediately abutting the project.

Barricades shall be furnished by the CONTRACTOR. The barricades shall conform to requirements of the Governmental Agency.

Unless otherwise provided in the Special Conditions, the Governmental Agency will assume responsibility for signs and traffic control devices beyond the limits hereinbefore described.

114.11 RAILROAD CROSSINGS

Wherever a project is being constructed beneath, at grade or above railroad tracks, the permits for the construction will have previously been secured by the OWNER. It shall be the CONTRACTOR'S responsibility, however, to contact the railroad company prior to constructing such crossings and to proceed with the construction as directed by the railroad company. The CONTRACTOR shall comply with all construction and additional insurance requirements of the railroad company. The CONTRACTOR shall hold the OWNER harmless from any and all damages resulting from his/her operations in the construction at such crossings.

114.12 SANITARY PROVISIONS

The CONTRACTOR shall provide and maintain in a neat and sanitary condition such accommodations for the use of his/her employees as may be necessary to comply with the requirements and regulations of the Governmental Agency having jurisdiction thereover. He/she shall permit no public nuisance. The cost for providing sanitary facilities shall be included in the work and shall not be paid for separately.

114.13 USE AND OCCUPANCY PRIOR TO COMPLETION OF CONTRACT

The OWNER shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding that the timer for completing the entire work or such portions may not have expired; but such taking possession and use shall not be deemed an acceptance of any portion of the work not completed in accordance with the CONTRACT Documents. Any claims which the OWNER may have against the CONTRACTOR shall not be deemed to have been waived by such occupancy.

If such prior use increases the cost of or delays the completion of uncompleted work or causes refinishing of completed work, the CONTRACTOR shall be entitled to such extra compensation, or extension of time or both, as the ENGINEER may determine.

114.14 PERSONAL LIABILITY OF PUBLIC OFFICIALS

Neither the ENGINEER nor any of his/her assistants, nor any other officer of the OWNER shall be personally responsible for any liability arising under or growing out of the CONTRACT. See also Paragraph 114.1.

114.15 NO WAIVER OF LEGAL RIGHTS

Should an error be discovered in or payment of unauthorized work be made by the final estimate or should dishonesty on the part of the CONTRACTOR be discovered in the work, the OWNER reserves the right, after the final payment has been made, to claim and recover by process of law such sums as may be sufficient to correct the error, to recover the overpayment, or to make good the defects in the work resulting from the CONTRACTOR's dishonesty.

114.16 SURVEY MONUMENTS

The CONTRACTOR will take every precaution to avoid disturbing survey monuments, crosses, witness posts, and reference marks. When the plans and specifications call for relocation and/or adjustment, the CONTRACTOR shall provide for a Colorado Licensed Land Surveyor to reference, replace or adjust said monuments, file the tie sheets and plats with the appropriate agency, and provide copies of said tie sheets and plats to the Engineer. The CONTRACTOR shall be liable for the replacement of any survey markers or monuments that are disturbed or destroyed without the approval of the ENGINEER.

114.17 CONSTRUCTION SURVEYS

Unless otherwise stated in the Project Special Conditions, the CONTRACTOR shall perform all construction staking. This work consists of all horizontal and vertical control required for the accurate location of the work. The reference points and bench marks are of necessity offset by predetermined distances and elevations. The CONTRACTOR must accurately transfer survey control information to the points of application to insure that all elements of the work are correctly located.

All control surveys shall be performed under the direct supervision of a Colorado Registered Land Surveyor, and in accordance with applicable Colorado Land Survey laws. The CONTRACTOR's surveyor shall verify and document the accuracy of all control monuments prior to using them for construction survey control.

A pre-survey conference will be held prior to any work being performed. Those present shall be the County construction surveyor or his designee, the ENGINEER or his designee, the CONTRACTOR'S representative, the Surveyor's representative, and the field surveyor. The CONTRACTOR'S surveyor shall provide at the conference his/her proposed work schedule correlated with the CONTRACTOR'S work schedule for written approval.

Where the Project Special Conditions specifically calls for the County to pay for construction surveys and the bid schedule contains a bid item for construction surveying, partial payment will be made as the work progresses in accordance with the following:

20% of the lump sum bid price for construction surveying will be paid when 1% of the original contract amount is earned.

70% of the lump sum price for construction surveying will be paid in direct proportion to the number of working days charged, divided by the original contract time.

The remaining 10% of the lump sum bid price for construction surveying will be paid at the time of project acceptance.

115 MEASUREMENT AND PAYMENT

115.1 MEASUREMENT

The determination of pay quantities of work performed under the CONTRACT will be made by the ENGINEER based upon the lines, grades and cross sections given, or measurements made by the ENGINEER or his/her assistants. All items will be computed in the units in the Proposal.

115.2 SCOPE OF PAYMENT

The CONTRACTOR shall accept the compensation, as provided in the CONTRACT, in full payment for furnishing all materials, labor, tools and equipment necessary to the completed work and for performing all work contemplated and embraced under the CONTRACT; also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the OWNER, and for all risks of every description connected with the prosecution of the work; also for all expenses incurred in consequence of the suspension or discontinuance of the work as herein specified; and for completing the work according to the Plans and Specifications. See also Paragraph 112.2.

Neither the payment of any estimate nor of any retained percentage shall relieve the CONTRACTOR or any obligation to make good any defective work or material. Payment will be made only for materials actually incorporated in the work. For payment of materials on site, see Paragraph 115.4.

The unit CONTRACT prices for the various bid items of the CONTRACT shall be full compensation for all labor, materials, supplies, equipment, tools and all things of whatsoever nature required for the complete incorporation of the item into the work the same as though the item were to read "In Place," unless the Plans and Special Conditions shall provide otherwise.

115.3 PAYMENT FOR EXTRA WORK

Adjustments, if any, in the amounts to be paid the CONTRACTOR by reason of any change, addition, or deduction, shall be determined by one or more of the following methods:

By an acceptable lump-sum proposal from the CONTRACTOR.

By unit CONTRACT prices contained in the CONTRACT Proposal, or by unit prices mutually agreed upon by the CONTRACTOR and the OWNER.

Payroll cost of labor plus 15% for profit, overhead and small tools, plus the amount of social security tax imposed by law upon the CONTRACTOR, plus the cost of worker's compensation, public liability insurance and employment security contributions.

Actual Cost of materials delivered to the work, including freight and hauling charges as shown by original receipted bills, plus 15%.

Equipment rental rates for machinery, tools and equipment, except small hand tools, as determined from current publications of the Association of Equipment Dealers or the State Department of Highways' most current edition of "Construction Equipment Rental Rate Schedule".

It shall be the responsibility of the CONTRACTOR before proceeding with any change to verify that the change has been properly authorized on behalf of the OWNER. No charge for extra work or any other change in the CONTRACT will be allowed unless the extra work or change has been authorized in writing by the Owner, and the compensation or method thereof is stated in such written authority.

See also Paragraphs 112.2, 112.3 and 112.4.

115.4 PROGRESS PAYMENTS, RETAINED PERCENTAGE

Partial payments will be made once each month as the work progresses, when the CONTRACTOR is performing satisfactorily under the CONTRACT. Said payments will be based upon progress estimates prepared by the ENGINEER of the value of work performed and materials placed in accordance with the CONTRACT and the value of the materials on hand in accordance with the Special Conditions. Request for partial payments shall be made on the forms specified in the CONTRACT Documents and shall be submitted by the first Friday of the month for work completed in the previous month. The amount of the progress estimate to be paid to the CONTRACTOR will be subject to the following:

- (A) Standard Retainment. The COUNTY will make a deduction from the progress estimate in the amount considered necessary to protect the interests of the COUNTY pursuant to Section 24-91-103, Colorado Revised Statutes 1973 as amended (CRS). That amount to be retained will be 10% of the value of the completed work, exclusive of mobilization and payments for materials on hand, to a maximum of 5% of the original CONTRACT amount. No further retainment will be withheld if the CONTRACTOR makes satisfactory progress in the CONTRACT work. The amount retained will be in effect until such time as final payment is made, with the following exceptions, each of which required the CONTRACTOR'S written request and consent of the Surety:
- 1. When 97-1/2% of the work has been completed, the ENGINEER may, at his discretion, reduce the retained amount to twice the value of the remaining work.
- 2. Upon completion and acceptance of the project, the ENGINEER may reduce the retainage to 2% of the original CONTRACT amount.
- 3. Further subsequent reductions may be made with the approval of the COUNTY.
- (B) Securities in Lieu of Standard Retainment. When the original CONTRACT amount exceeds \$80,000 (eighty thousand dollars), the CONTRACTOR may withdraw all or any portion of the standard retainment withheld to assure satisfactory performance of the CONTRACT, if the CONTRACTOR deposits and assigns acceptable securities to the COUNTY, as set forth in Section 24-91-105, CRS and the implementing regulations. Such securities so deposited shall at all times have a market value at least equal in value to the sums so withdrawn. If at any time the COUNTY determines that the market value of the securities has fallen below the sums so withdrawn, it shall give notice

thereof to the CONTRACTOR, who forthwith shall deposit additional acceptable securities in an amount sufficient to reestablish a total deposit of securities equal in value to the sums so withdrawn. This security substitution shall not apply if a part of the CONTRACT price is paid from federal, or other sources, and the federal or other source has requirements which are inconsistent with this subsection.

- (C) SubContractor and Supplier Claims. In addition to standard retainment, the COUNTY shall withhold funds for all claims against the CONTRACTOR filed by subcontractors and suppliers, pursuant to Section 38-26-107, CRS.
- (D) No Payment. A partial payment will not be made when the total value of the work done since the last estimate amounts to less than \$500.

115.5 ENGINEER'S ACTION ON A REQUEST FOR PAYMENT

Within ten (10) days of submission of any Request for Payment by the CONTRACTOR, the ENGINEER shall:

Approve the Request for Payment as submitted; or

Approve such other amount as he shall decide is due the CONTRACTOR, informing the CONTRACTOR in writing of his reasons for approving the amended amount; or

Withhold the Request for Payment, informing the CONTRACTOR in writing or his reasons for withholding it.

115.6 OWNER'S ACTION ON AN APPROVED REQUEST FOR PAYMENT

Within thirty (30) days from the date of approval of a Request for Payment by the ENGINEER, the OWNER shall:

Pay the Request for Payment as approved; or

Pay such other amount as he shall decide is due the CONTRACTOR, informing the CONTRACTOR and the ENGINEER is writing of his/her reasons for paying the amended amount; or

Withhold payment informing the CONTRACTOR and the ENGINEER of his/her reasons for withholding payment.

115.7 PAYMENT FOR UNCORRECTED WORK

Should the ENGINEER direct the CONTRACTOR not to correct work that has been damaged or that was not performed in accordance with the CONTRACT Documents, an equitable deduction from the CONTRACT amount shall be made to compensate the OWNER for the uncorrected work.

115.8 PAYMENT FOR REJECTED WORK AND MATERIALS

The removal of work and materials rejected under Paragraph 113.5 and the re-execution of acceptable work by the CONTRACTOR shall be at expense of the CONTRACTOR, and

he/she shall pay the cost of replacing the work of other CONTRACTORS destroyed or damaged by the removal of the rejected work or materials and the subsequent replacement of acceptable work.

Removal of rejected work or materials and storage of materials by the OWNER in accordance with Paragraph 113.5 shall be paid by the CONTRACTOR within thirty (30) days after written notice to pay is given by the OWNER. If the CONTRACTOR does not pay the expenses of such removal and after ten (10) days' written notice being given by the OWNER of his intent to sell the materials, the OWNER may sell the materials at auction or at private sale and shall pay to the CONTRACTOR the net proceeds therefrom after deducting all the costs and expenses that should have been borne by the CONTRACTOR.

115.9 PAYMENT FOR WORK SUSPENDED BY THE OWNER

If the work or any part thereof shall be suspended by the OWNER and abandoned by the CONTRACTOR as provided in Paragraph 111.3, the CONTRACTOR will then be entitled to payment for all work performed on the portions so abandoned, plus 15% of the value of the uncompleted portion of the abandoned work to compensate for overhead, plant expense, and anticipated profit, and which action shall terminate the CONTRACT.

115.10 PAYMENT FOR WORK BY THE OWNER

The cost of the work performed by the OWNER in removing construction equipment, tools and supplies in accordance with Paragraph 111.13, and correcting deficiencies in accordance with Paragraph 111.14 and Paragraph 112.6, shall be paid by the CONTRACTOR.

115.11 PAYMENT FOR WORK BY THE OWNER FOLLOWING TERMINATION OF THE CONTRACT

Upon termination of the CONTRACT by the OWNER in accordance with Paragraph 111.14, no further payments shall be due the CONTRACTOR until the work is completed. If the unpaid balance of the CONTRACT amount shall exceed the cost of completing the work including all overhead costs, the excess shall be paid to the CONTRACTOR. If the cost of completing the work shall exceed the unpaid balance, the CONTRACTOR shall pay the difference to the OWNER. The cost incurred by the OWNER, as herein provided, and the damage incurred through the CONTRACTOR'S default, shall be certified by the OWNER, and approved by the ENGINEER.

115.12 PAYMENT FOR WORK TERMINATED BY THE CONTRACTOR

Upon termination of the CONTRACT by the CONTRACTOR in accordance with Paragraph 111.15, the CONTRACTOR shall recover payment from the OWNER for the work performed, plus loss on plant and materials, plus established profit and damages, as approved by the ENGINEER.

115.13 RELEASE OF LIENS

The CONTRACTOR shall deliver to the OWNER a complete release of all liens arising out of this CONTRACT before the retained percentage or before the final Request for Payment is paid. If any lien remains unsatisfied after all payments are made, the CONTRACTOR shall

refund to the OWNER such amounts as the OWNER may have been compelled to pay in discharging such liens including all costs and a reasonable attorney's fee.

115.14 ACCEPTANCE AND FINAL PAYMENT

When the CONTRACTOR shall have completed the work in accordance with the terms of the CONTRACT Documents, the ENGINEER shall certify his acceptance to the OWNER and his approval of the CONTRACTOR'S final Request for Payment, which shall be the CONTRACT amount plus all approved additions less all approved deductions and less previous payments made. The CONTRACTOR shall furnish evidence that he/she has fully paid all debts for labor, materials, and equipment incurred in connection with the work, following which the OWNER shall accept the work and release the CONTRACTOR except as to the conditions of the Performance Bond, any legal rights of the OWNER, required guarantees, and Correction of Faulty Work after Final Payment, and shall authorize payment of the CONTRACTOR'S final Request for Payment. The CONTRACTOR must allow sufficient time between the time of completion of the work and approval of the final Request for Payment for the ENGINEER to assemble and check the necessary data.

115.15 TERMINATION OF CONTRACTOR'S RESPONSIBILITY

The CONTRACT will be considered complete when all work has been finished, the final inspection made by the ENGINEER, and the project accepted in writing by the OWNER. The CONTRACTOR'S responsibility shall then cease, except as set forth in his/her Performance Bond and as required by the Guarantee Period.

115.16 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

The approval of the final Request for Payment by the ENGINEER and the making of the final payment by the OWNER to the CONTRACTOR shall not relieve the CONTRACTOR of responsibility for faulty materials or workmanship. The OWNER shall promptly give notice of faulty materials or workmanship and the CONTRACTOR shall promptly replace any such defects. The ENGINEER shall decide all questions arising under this Paragraph, and all such decisions shall be subject to arbitration. See also Paragraph 113.9.

116 COMPLIANCE WITH ENVIRONMENTAL PROTECTION, ENERGY CONSERVATION, AND HEALTH/SAFETY RULES AND REGULATIONS

The CONTRACTOR shall at all times comply with all ENVIRONMENTAL PROTECTION, ENERGY CONSERVATION, AND HEALTH/SAFETY RULES AND REGULATIONS of the city, county, state or federal agency which may have jurisdiction. Failure to comply may cause for suspension of work or termination of CONTRACT.

117 NONDISCRIMINATION PROVISIONS

During the performance of this CONTRACT the COUNTY for itself, its assignees and successors in interest, and the CONTRACTOR agree as follows:

117.1 COMPLIANCE WITH REGULATIONS

The CONTRACTOR will comply with the Regulations of the Department of Transportation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (Title 49, Code of Federal "Regulations" Part 21, hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this CONTRACT.

117.2 NONDISCRIMINATION

The CONTRACTOR, with regard to the work performed by him/her after award and prior to completion of the CONTRACT work, will not discriminate on the grounds of race, color, creed or natural origin in the selection and retention of subCONTRACTORs, including procurements of materials and leases of equipment. The CONTRACTOR will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulation, including employment practices when the CONTRACT covers a program set forth in Appendix C of the regulations.

117.3 SOLICITATIONS FOR SUBCONTRACTS, INCLUDING PROCUREMENT 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 equipment, each potential subCONTRACTOR or supplier shall be notified by the CONTRACTOR of the CONTRACTORS' obligations under this CONTRACT and the Regulations relative to nondiscrimination on the ground of race, color or national origin.

117.4 INFORMATION AND REPORTS

The CONTRACTOR will provide all information and reports required by the regulations, or orders and instructions issued pursuant thereto, and will permit access to their books, records, accounts, other sources of information, and their facilities as may be determined by the COUNTY it be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of the CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information the CONTRACTOR shall so certify to the COUNTY, and shall set forth what efforts have been made to obtain the information.

117.5 SANCTIONS FOR NONCOMPLIANCE

In the event of the CONTRACTOR's noncompliance with the nondiscrimination provisions of this CONTRACT, the COUNTY shall impose such CONTRACT sanctions as it may determine to be appropriate, including, but not limited to:

- (1) Withholding of payments to the CONTRACTOR under the CONTRACT until the CONTRACTOR complies, and/or;
- (2) Cancellation, termination or suspension of the CONTRACT, in whole or in part.

117.6 GOVERNOR'S EXECUTIVE ORDER

The CONTRACTOR will take all affirmative actions necessary and appropriate to implement, not only the letter but also the spirit of, the policy of equality of opportunity as construed by the courts to prevent discrimination because of race, creed, color, sex, national origin or ancestry.

117.7 INCORPORATION OF PROVISIONS

The CONTRACTOR will include the provisions of 117.1 through 117.7 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, orders, or instruction issued pursuant thereto. The CONTRACTOR will take such action with respect to any subcontract or procurement as the COUNTY may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that, in the event the CONTRACTOR becomes involved in, or is threatened with, litigation with a subCONTRACTOR or supplier as a result of such direction, the CONTRACTOR may request the COUNTY to enter into such litigation to protect the interests of the COUNTY.

PAVEMENT MARKING SPECIFICATIONS

General

Pavement markings will be installed on streets with current year asphalt overlay, chip seal with fog coat, and existing streets with good to fair asphalt pavement conditions.

All pavement markings shall comply with the Manual on Uniform Traffic Control Devices for Streets and Highways.

The pavement marking material shall be the following:

- Epoxy Pavement Marking Material (material specifications governed by CDOT Standard Specifications for Road and Bridge Construction subsection 713.17).
- Preformed Thermoplastic Marking Material. (material specifications governed by CDOT Standard Specifications for Road and Bridge Construction subsection 713.14).
- Glass Beads (material specifications governed by CDOT Standard Specifications for Road and Bridge Construction subsection 713.08).

The application of the Epoxy Pavement Marking Material will conform to the CDOT specifications given in section 627.05. The pay unit will be in square feet, including glass beads. Material used in excess of coverage will not be measured. See "Measurement and Payment for Pavement Markings" below for additional information.

The application of the Preformed Thermoplastic Pavement Marking Material will conform to the CDOT specifications given in section 627.09. The pay unit will be in square feet. Unmarked spaces between markings will not be included in the overall measurement. See "Measurement and Payment for Pavement Markings" below for additional information.

All pavement marking work performed under these contract documents shall be governed by the State of Colorado Department of Transportation Standard Specifications for Road And Bridge Construction, 2011 or latest edition.

627.05 Epoxy Pavement Marking. The epoxy pavement marking compound shall be applied with equipment that will precisely meter the two components in the ratio given in subsection 713.17(a). The equipment shall automatically shut off or warn the operator if one component is not being mixed. The equipment shall produce the required amount of heat at the mixing head and gun tip to provide and maintain the temperatures specified. Before mixing, the individual components A and B shall each be heated to a temperature of 80 to 140 °F. After mixing, the application temperature for the combined material at the gun tip shall be 80 to 140 °F. The 140 °F upper limit is the maximum temperature under any circumstances. Both pavement and air temperatures shall be at least 50 °F at the time of epoxy pavement marking application. The surface areas of new portland cement concrete payement and decks that are to receive markings shall be sandblasted prior to placement of the epoxy pavement marking. The amount of sandblasting shall be sufficient to remove all dirt, laitance, and curing compound residue. The surface areas of new asphalt pavement, existing asphalt pavement, and existing concrete pavement that are to receive markings shall be cleaned

with a high pressure air blast to remove loose material prior to placement of the epoxy pavement marking. Should any pavement become dirty, from tracked mud etc. as determined by the Engineer, it shall be cleaned prior to the placement of the epoxy pavement marking. When recommended by the epoxy manufacturer, a high pressure water blast integrated into the gun carriage shall be used to clean the pavement surface prior to epoxy pavement marking application. The water blast shall be followed by a high pressure air blast to remove all residual water, leaving only a damp surface. Epoxy pavement marking shall be applied to the road surface according to the epoxy manufacturer's recommended methods at 15 mils minimum thickness. Glass beads shall be applied into the epoxy pavement marking by means of a pressurized bead applicator at a rate of ½ pound per square foot, 25 pounds per gallon minimum.

Epoxy pavement marking and beads shall be applied within the following limits:

Application Rate or Coverage Per Gallon of Epoxy Pavement Marking

Minimum

Maximum

15 mil Marking:

100 sq. ft.

110 sq. ft.

Beads:

25 lbs.

627.09 Preformed Thermoplastic Pavement Marking. The markings shall consist of a resilient white or yellow thermoplastic product with glass beads uniformly distributed throughout the entire cross sectional area. Legends and symbols shall be capable of being affixed to bituminous pavements by heating. The markings shall conform to pavement contours, breaks and faults through the

action of traffic at normal pavement temperatures. The material shall have resealing characteristics with the capability of fusing with itself and previously applied thermoplastic markings under normal use.

The preformed thermoplastic markings shall be packaged in a protective plastic film with cardboard stiffeners where necessary to prevent damage in transit. The carton in which the material is packed shall be clearly labeled for ease of identification.

- (a) Application. Application temperature shall be as recommended by the manufacturer. The pavement and air temperature shall be as recommended by the manufacturer at the time of application. The materials shall be applied using a heating method recommended by the manufacturer. The CONTRACTOR shall provide the Engineer a copy of the manufacturer's installation recommendations prior to beginning the work. The pavement shall be clean, dry and free from debris. The preformed thermoplastic markings may be installed on top of existing thermoplastic markings after all loose material has been removed. The preformed thermoplastic markings shall not be installed on top of existing preformed plastic pavement markings without first removing the existing markings to a depth that insures removal of the adhesive backing of the preformed plastic. It shall not be installed on top of pavement marking paint without first removing the paint.
- (b) Equipment. The CONTRACTOR shall use a heating method specifically recommended by the manufacturer for the installation of preformed thermoplastic markings.

713.08 Glass Beads for Traffic Markings. Glass beads for Traffic Paint shall

conform to AASHTO M 247, Type 1 or Type 2, non-flotation grade.

Glass beads for Thermoplastic Pavement Marking shall conform to AASHTO M 247, Type 1.

Glass beads for epoxy pavement marking shall conform to AASHTO M 247, Type 1.

The beads shall be silicon treated to meet the requirements of Section 4.4.2 of AASHTO M 247.

Glass beads shall be furnished in fully identified containers and shall be free of extraneous material or clumps.

Glass beads for methyl methacrylate pavement marking shall conform to AASHTO M 247, type 1 non-floatation and shall be applied by the first bead applicator. Glass beads applied by the second bead applicator shall be AASHTO M 247, type 1 silane coated (AC-02) flotation beads.

- 713.17 Epoxy Pavement Marking Material. Only epoxy pavement marking material that is on the Department's Approved Products List may be used. Batches or lots of approved products will be accepted on the project by certified test report (CTR). The CTR shall confirm that the material meets all CDOT requirements and is the same material that was preapproved in the product evaluation process.
 - (a) Formulation. Epoxy pavement marking material shall be a two component, 100 percent solids, material formulated to provide simple volumetric mixing ratio of two volumes of component A and one volume of component B unless otherwise recommended by the material manufacturer.
 - (b) Composition. The component A of both white and yellow shall be within the following limits:

	White:	Yellow:
Pigments	Min % by weight 18%	% by weight
	Titanium Dioxide, (ASTM	21-27%
	D 476, Type II)	
Epoxy Resin	75-82%	73-79%

The pigment for yellow epoxy shall contain no lead or other material such that the cured epoxy could be considered a hazardous waste under EPA or CDPHE regulations. The CONTRACTOR shall submit to the Engineer a manufacturer's certification of compliance with this requirement.

- (c) *Epoxide Number.* The epoxy number of the epoxy resin shall be 0.38 ± 0.05 as determined by ASTM D 1652 for white and yellow component A on pigment free basis.
- (d) Amine Number. The amine number on the curing agent (component B) shall be 410 ± 50 per ASTM D 2071.
- (e) *Toxicity*. Upon heating to application temperature, the material shall not produce fumes which are toxic or injurious to persons or property.
- (f) Color and Weather Resistance. The mixed epoxy compound, both white and yellow, when applied to 3 inch x 6 inch aluminum panels at $15 \pm \frac{1}{2}$ mils of thickness with no glass beads and exposed in the Q.U.V. Environmental Testing

Chamber as described in ASTM G 154, shall conform to the following minimum requirements. (The test shall be conducted for 75 hours at 122 °F, 4 hours humidity, and 4 hours U.V., in alternating cycles. The prepared panels shall be cured at 77 °F for 72 hours prior to exposure.) The color of the white epoxy system shall not be darker than Federal Standard No. 595B-17778. The color of the yellow epoxy system shall conform to Federal Standard No. 595B-13538. The gloss values of both samples shall not be less than 70° after the test.

- (g) *Drying Time*. The epoxy pavement marking material shall have a setting time to a no-tracking condition of not more than 25 minutes at a temperature of 73 °F and above.
- (h) Curing. The epoxy material shall be capable of fully curing under the constant surface temperature condition of 25 °F and above.
- (i) Adhesion to Concrete. The catalyzed epoxy pavement marking material, when tested according to ACI Method 503, shall have such a high degree of adhesion to the specified (4000 psi minimum) concrete surface that there shall be a 100 percent concrete failure in the performance of this test.
- (j) Hardness. The epoxy pavement marking materials, when tested according to ASTM D 2240, shall have a Shore D Hardness between 75 and 100. Samples shall be allowed to cure at room temperature, 75 ± 2 °F for a minimum of 12 hours and a maximum of 48 hours prior to performing the indicated test.
- (k) Abrasion Resistance. The abrasion resistance shall be evaluated on Taber Abrader with a 1000 gram load and CS-17 wheels. The duration of the test shall be 1000 cycles. The wear index shall be calculated based on ASTM test method C-501 and the wear index for the catalyzed material shall not be more than 70. The tests shall be run on cured samples of material which have been applied at film thickness of $15 \pm \frac{1}{2}$ mils to code S-16 stainless steel plates. The samples shall be allowed to cure at 75 ± 2 °F for a minimum of 48 hours prior to performing the indicated tests.
- (I) Tensile Strength. When tested according to ASTM D 638, the epoxy pavement marking materials shall have a tensile strength of not less than 6000 psi. The Type IV Specimens shall be cast in a suitable mold and pulled at the rate of $\frac{1}{4}$ inch per minute by a suitable dynamic testing machine. The samples shall be allowed to cure at room temperature (75 \pm 2 °F) for a minimum of 12 hours and a maximum of 48 hours prior to performing the indicated tests.
- (m) Compressive Strength. When tested according to ASTM D 695, the catalyzed epoxy pavement marking materials shall have a compressive strength of not less than 12,000 psi. The cast sample shall be conditioned at room temperature, 75 ± 2 °F, for a minimum of 12 hours and a maximum of 48 hours prior to performing the tests. The rate of compression of these samples shall be no more than $\frac{1}{4}$ inch per minute.

Application Preparation

The CONTRACTOR will be responsible for sweeping of roadways prior to installation of pavement markings if deemed necessary by the Engineer.

The county will provide the striping design for each roadway. The CONTRACTOR will be responsible for layout of the design and removal of temporary pre-formed tab markings on overlay roads, and raised tabs on chip sealed roads.

Removal of pavement markings shall conform to the CDOT specifications in section 202.05. The pay unit will be in square feet.

202.05 Pavement Markings. Pavement markings shall be removed from the pavement to the maximum extent possible, by methods that do not materially alter or damage the surface or texture of the pavement, to the satisfaction of the Engineer. The proposed method of pavement marking removal shall be designated by the CONTRACTOR at the preconstruction conference, and approved by the Engineer. Operations that do not produce the desired result, damage the pavement, or may constitute a hazard to the traveling public will not be permitted. Materials deposited on the pavement as a result of removal of pavement markings shall be promptly removed so as not to interfere with traffic or roadway drainage.

Pavement markings, designated to be removed, shall be removed before any change is made in traffic patterns. Temporary marking tape sections longer than one foot shall be removed before placement of the final pavement course. All tape shall be removed on sections where tape conflicts with revised traffic lanes prior to opening of new lanes to traffic.

The pavement surface area to be covered with pavement marking material shall be sandblasted, or blast cleaned by another approved method, prior to the application of pavement primer or prior to the placing of pavement marking material when used without a pavement primer. A dustless-abrasive shot blasting, power washing, or other approved cleaning method may be used to do the sandblasting work. The sandblast shall be applied to remove all dirt, laitance, and curing compound residue. After sandblasting, all loose dust and dirt shall be removed before application of pavement primer or pavement marking material.

Measurement and Payment for Pavement Markings

All pavement markings as identified on the bid sheet shall be measured by the square foot-complete in place of each item in the bid schedule.

Payment shall be made at the Contract Unit Price. The bid price shall be considered to include all materials, labor, equipment, traffic control, sweeping and incidentals required to apply the pavement marking material in accordance with the Project Plans and Specifications and shall be full compensation for the item complete in place.

Payment of primer coat will be made by the square footage of line being applied for. Overspray square footage will not be included. Square footage of primer on the bid form is for all streets not in the current year overlay or chip seal. Should the Engineer determine that primer coat is not necessary for any street or section of street, that quantity of primer will be deleted from the contract.