

**CITY OF FLAGSTAFF  
AMENDMENTS  
to  
MAG STANDARD SPECIFICATIONS  
FOR PUBLIC WORKS CONSTRUCTION  
(General Provisions)**

*The*  
**MAG UNIFORM STANDARD SPECIFICATIONS**  
*for*  
**PUBLIC WORKS CONSTRUCTION**  
is hereby amended to include the following:

**PART 100 - GENERAL CONDITIONS**

**SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS**

**102.1 ELIGIBILITY AND PREFERENCE:**  
(revise to include the following)

If requested by the City, a Bidder shall furnish satisfactory evidence of the Bidder's competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of statements covering the Bidder's experience on similar work, a list of equipment that would be available for the work and a list of key personnel that would be available.

In addition, if requested, a Bidder shall furnish the City of Flagstaff with satisfactory evidence of the Bidder's financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the Bidder's financial resources and liabilities as of the last calendar year or the contractor's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the Bidder shall further certify whether the Bidder's financial responsibility is approximately the same as stated or reported by the public accountant. If the Bidder's financial responsibility has changed, the Bidder shall qualify the public accountant's statement or report to reflect the Bidder's true financial condition at the time such qualified statement or report is submitted to the City of Flagstaff.

The Bidder shall submit such "evidence of competency" and "evidence of financial responsibility" to the City of Flagstaff no later than five (5) working days after receipt of a written request by the City of Flagstaff.

Each bidder, contractor and subcontractor shall possess and maintain the appropriate contractor's license for the work included in this contract. The appropriate license shall be as required by the Arizona State Registrar of Contractors and as required by Arizona Revised Statutes Chapter 10, Title 32.

**102.2 CONTENTS OF PROPOSAL PAMPHLET:**  
(revise to include the following)

The Plans, Specifications and other Documents designated in the Contract Documents shall be considered a part of the Contract whether attached or not.

The City of Flagstaff reserves the right to refuse to issue a proposal form or accept a proposal form from a prospective Bidder if they are in default for any of the following reasons:

- (A) Failure to comply with any prequalification regulations of the City of Flagstaff, if such regulations are cited or otherwise included in the Proposal as a requirement for bidding;
- (B) Failure to pay or satisfactorily settle all bills due for labor and materials on former contracts in force (with the City of Flagstaff) at the time the City of Flagstaff issues the Proposal to a prospective Bidder;
- (C) Contractor, as a company owner, has defaulted under previous contract(s) with the City of Flagstaff in the prior five calendar years;
- (D) Record of unsatisfactory work on previous contract(s) with the City of Flagstaff in the prior five calendar years.

**102.2 CONTENTS OF PROPOSAL PAMPHLET:**  
(third paragraph, revise last sentence to read as follows)

In the case of conflict, the following order of precedence shall govern:

1. Construction Plans and Addenda
2. Special Provisions
3. General Provisions and MAG Revisions
4. City of Flagstaff Standards and Specifications
5. MAG Standards and Specifications
6. ADOT Standards and Specifications
7. FHWA Manual of Uniform Traffic Control Devices

**102.4 EXAMINATION OF PLANS, SPECIAL PROVISIONS AND SITE OF WORK:**  
(revise to include the following)

Before submitting a bid, each bidder shall examine the site and obtain information that pertains to the physical conditions of the site that may affect the cost, progress or performance of the work. Any restrictions or difficulties relating to the completion of the work shall be considered in accordance with the terms and conditions of the contract documents.

**102.7 IRREGULAR PROPOSALS:**  
(revise to include the following)

The City of Flagstaff reserves the right to reject any irregular Proposal and the right to waive technicalities for acceptance of Proposals, if such waiver is in the best interest of the City of Flagstaff and conforms to local laws and ordinances pertaining to the letting of construction contracts. Proposals shall be considered irregular for the following additional reasons:

- (A) If the Proposal contains unit prices that are obviously unbalanced.
- (B) If the Proposal is not accompanied by the proposal guaranty specified by the City.

**102.12 DISQUALIFICATION OF BIDDERS:**  
(revise to include the following)

A Bidder shall also be considered disqualified if the Bidder is considered in default for any reason specified in Subsection 102.2 as amended by this MAG Amendment.

**102.13 SUCCESSFUL BIDDERS:**  
(revise paragraph to read as follows)

The City of Flagstaff shall provide up to six (6) sets of plans and Contract Documents at no cost. A direct expense fee shall be charged for any additional copies.

**SECTION 103 - AWARD AND EXECUTION OF CONTRACT**

**103.6 CONTRACTOR'S INSURANCE:**

**103.6.1 GENERAL:**  
(revise subsection to read as follows)

The Contractor and its Subcontractors, at Contractor's and Subcontractors' own expense, shall purchase and maintain the herein stipulated minimum insurance with companies duly licensed, possessing a current A.M. Best, Inc. Rating of A-, 7, or approved by the City. The insurance company shall be licensed in the State of Arizona. Policies and forms shall be satisfactory to the City.

All insurance required herein shall be maintained in full force and effect until all work and/or services required to be performed, under the terms of the Contract, are satisfactorily completed and formally accepted. At the sole discretion of the City, failure to do so may constitute a material breach of this Contract.

The Contractor's insurance shall be primary insurance as respects the City. Any insurance or self-insurance maintained by the City shall not contribute to it.

Contractor shall not fail to comply with the claim reporting provisions of the insurance policies or cause a breach of any insurance policy warranty that would affect coverage afforded under insurance policies to protect the City.

The insurance policies (except Worker's Compensation) shall contain a waiver of transfer of rights of recovery (subrogation) against the City, its agents, representatives, directors, officers, and employees for any claims arising out of the Contractor's acts, errors, mistakes, omissions, work or service.

The insurance policies may provide coverage, which contains deductibles or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to the City under such policies. The Contractor shall be solely responsible for the deductible and/or self-insured retentions, and the City, at its option, may require the Contractor to secure payment of such deductibles or self-insured retentions by a Surety Bond or an irrevocable and unconditional letter of credit.

The City reserves the right to request and to receive, within 10 working days, certified copies of any or all the herein required insurance policies and/or endorsements. The City shall not be obligated, however, to review same or to advise Contractor of any deficiencies in such policies and endorsements, and such receipt shall not relieve Contractor from, or be deemed a waiver of the City's right to insist on, strict fulfillment of Contractor's obligations under this Contract.

Except for Worker's Compensation, the insurance policies, required by this Contract shall name the City, its agents, representatives, officers, directors, officials and employees as additional insureds.

### **Required Coverage**

#### **A. Commercial General Liability**

The Contractor shall maintain Commercial General Liability insurance with a limit of not less than \$1,000,000 for each occurrence with a \$2,000,000 Products/Completed Operations Aggregate and a \$2,000,000 General Aggregate Limit. The Policy shall include coverage for bodily injury, broad form property damage, personal injury, products and completed operations and blanket contractual coverage. Coverage will be at least as broad as Insurance Service Office, Inc. Policy Form CG 00011093 or any replacements thereof. The coverage shall not exclude X, C, U.

Such policy shall contain a severability of interest provision and shall not contain a sunset provision or commutation clause, nor any provision, which would serve to limit third party action over claims. The Commercial General Liability additional insured endorsement shall be at least as broad as the Insurance Service Office, Inc. Additional Insured, Form B, CG 20101185, and shall include coverage for Contractor's operations and products and completed operations.

## **B. Owners and Contractor's Protective Liability**

The Contractor shall purchase and maintain, at all times during prosecution of the work, services or operations under this Contract, an Owner's and Contractor's Protective Liability insurance policy for bodily injury and property damage, including death, which may arise in the prosecution of the Work or Contractor's operations under this Contract. Coverage shall be on an occurrence basis with a limit not less than \$1,000,000 per occurrence, and the policy shall be issued by the same insurance company that issues the Contractor's Commercial General Liability insurance.

## **C. Automobile Liability**

Contractor shall maintain Commercial/Business Automobile Liability insurance with a combined single limit for bodily injury and property damage of not less than \$1,000,000 each occurrence with respect to the Contractor's any auto, all owned autos, scheduled autos, hired autos, non-owned autos assigned to or used in performance of the Contractor's work. Coverage will be at least as broad as coverage code 1, "any auto", (Insurance Service Office, Inc. Policy CA 00011293, or any replacements thereof). Such insurance shall include coverage for loading and off-loading hazards. If hazardous substances, materials or wastes are to be transported, MCS 90 endorsement shall be included and \$5,000,000 per accident limits for bodily injury and property damage shall apply.

## **D. Worker's Compensation**

The Contractor shall carry Worker's Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of Consultant's employees engaged in the performance of the work or services; and Employer's Liability insurance of not less than \$100,000 for each accident, \$100,000 disease for each employee, and \$500,000 disease policy limit.

In case any work is subcontracted, the Contractor will require the Subcontractor to provide Worker's Compensation and Employer's Liability to at least the same extent as required of the Contractor.

## **E. Builder's Risk (Property) Insurance (As Required)**

When the project includes construction of a new building, an addition to an existing building, modifications to an existing building, or as otherwise may be required by the contracting agency, the Contractor shall purchase and maintain, on a replacement cost basis, Builder's Risk insurance in the amount of the initial Contract Amount as well as subsequent modifications thereto for the entire work at the site. At a minimum, the policy limits of such insurance shall be equal in face amount to the full Contract Amount. Such Builder's Risk insurance shall be maintained until final payment has been made or until no person or entity other than the City has an insurable interest in the property required to be covered, whichever is earlier. This insurance shall include interests of the City, the Contractor, and all Subcontractors and Sub-Subcontractors in the work during the life of the Contract and course of construction and shall continue until the work is completed and accepted by the City.

For new construction projects, the Contractor agrees to assume full responsibility for loss or damage to the work being performed and to the buildings under construction. For renovation construction projects, the Contractor agrees to assume responsibility for loss or damage to the work being performed at least up to the full Contract Amount, unless otherwise required by the Contract Documents or amendments thereto.

Builder's Risk insurance shall be on an all-risk policy form and shall cover false work and temporary buildings. Builder's Risk insurance shall insure against risk of direct physical loss or damage from external causes including debris removal, demolition occasioned by enforcement of any applicable legal requirements and shall cover reasonable compensation for Architect's service and expenses required as a result of such insured loss and other "soft costs" as required by the Contract.

Builder's Risk insurance must provide coverage from the time any covered property becomes Contractor's control and/or responsibility and continue without interruption during construction or renovation or installation, including any time during which the covered property is being transported to the construction installation site, and while on the construction or installation site awaiting installation. The policy will provide coverage while the covered premises or any part thereof is occupied. Builder's Risk insurance shall be primary and not contributory.

If the Contract requires testing of equipment or other similar operations, at the option of the City, the Contractor will be responsible for providing property insurance for these exposures under a Boiler Machinery insurance policy.

Required coverage may be modified by an amendment to the Contract Documents.

### **Certificates of Insurance**

Prior to commencing work or services under this Contract, Contractor shall furnish the City with Certificates of Insurance, or formal endorsements as required by the Contract, issued by Contractor's insurer(s), as evidence that policies providing the required coverage, conditions and limits required by this Contract are in full force and effect.

In the event any insurance policies required by this contract are written on a "claims made" basis, coverage shall extend for two years past completion and acceptance of the Contractor's work or services and as evidenced by annual Certificates of Insurance.

If a policy does expire during the life of the Contract, a renewal certificate must be sent to the City fifteen (15) days prior to the expiration date.

All Certificates of Insurance shall be identified with bid/project number and project name. A \$25.00 administrative fee will be assessed for all certificates received without the appropriate bid serial number and title.

## **Cancellation and Expiration Notice**

Insurance required herein shall not expire, be canceled, or materially changed without thirty (30) days written notice to the City.

## **SECTION 104 - SCOPE OF WORK**

### **104.1.3 WATER SUPPLY:** (revise to include the following)

The Contractor is advised that the use of fire hydrants as a source of construction water is not guaranteed and is subject to the restrictions, terms and conditions of the City of Flagstaff Water Services (Utilities) Department. Prior to submitting a bid, the Contractor shall determine such restrictions, terms and conditions and shall incorporate the costs thereof into his or her proposal.

If hydrants are not available as a source of construction water, reclaimed water is available at the Wildcat Hill Wastewater Treatment plant on East Highway 66 and at the south end of Babbitt Drive at the Rio De Flag Water Reclamation Plant. Additional reclaimed water bulk loading sites are in other areas of the city. The contractor should obtain current locations from the Water Services Department. **Current rates for the reclaimed water shall apply.**

Prior to loading, hauling and applying reclaim water, the Contractor shall be required to obtain the necessary no fee permit at the Wildcat Hill Wastewater Treatment Plant or from the Rio De Flag plant and shall be responsible for complying with all permit and ADEQ requirements regarding the use of reclaim water.

### **104.2 ALTERATION OF THE WORK:**

#### **104.2.3 DUE TO EXTRA WORK:** (revise to include the following)

When Allowance and/or Contingency items are provided for in the contract, the funds are encumbered for use at the discretion of the Project Manager. The funds are to cover unanticipated costs to complete items of work not included in the Contract Documents or may be applied to any work deemed necessary by the Owner. Work would include, but not limited to, unanticipated conditions, scope changes, addressing errors or omissions, and/or construction changes that are warranted for project completion consistent with the purpose of the work. The amount of the allowance item is determined by the City and is not subject to individual bid pricing. All bidders shall incorporate the amount pre-entered in the bid proposal and shall reflect the same in the total amount bid for the project.

The allowance item provides an estimated funding to cover unforeseen changes that may be encountered and corresponding extra work needed to complete the contract. Any work which is to

be paid out of this allowance shall be authorized in writing and approved by Field Order prior to proceeding with the work. Extra work shall be paid for in the following order of precedence: 1.) by extension of unit bid prices, 2.) by negotiated price or 3.) by a time and materials basis in accordance with MAG Section 109.5.

It shall be understood that the amount for this item in the proposal is an estimate only and no guarantee is given that the full amount or any portion thereof will be utilized. It shall not be utilized without first obtaining an approved Field Order signed by the Contractor and the Project Manager.

**105.2.1 RECORD DRAWING PREPARATION AND COORDINATION**  
(revise to include new subsection as follows)

Record drawing preparation shall be the obligation of the Contractor whose purpose is to accurately record and depict the as-built conditions. During the construction phase and prior to backfilling or covering of improvements, the Contractor shall have the work surveyed and recorded for record drawing preparation.

The Contractor shall maintain a redline working copy of the project plans which shall include changes made in construction of the project. The redline copy of the plans shall be updated weekly.

**105.2.2 RECORD DRAWING (As-Built Plans)**  
(revise to include new subsection as follows)

The Contractor shall retain an Arizona licensed civil engineer to record as-built information per Arizona Revised Statute § 32-152. Water and sewer record drawing certification shall comply with ADEQ R18-5-508 (drinking water) and ADEQ R18-9-E301 (sewage collection) requirements for as-built drawings. Unless otherwise noted, the City will complete and submit the Engineer's Certificate of Completion to ADEQ.

Prior to the City's final approval and acceptance of public improvements (sanitary sewer, water, storm sewer, streets) as-built plans must be submitted to the City for review and acceptance per Engineering Standard Specifications.

Submittal shall be two sets of blue or black line paper sets, copied from the original mylar set. One set will be reviewed by the City and returned with applicable comments. Comments are to be addressed and two paper sets resubmitted for City's final approval. A reference checklist is available from the office of the City Engineer.

Upon City and ADEQ (when applicable) review and approval of the submittal, one set of mylars shall be submitted to the City as a permanent record. All record drawing plan sets shall contain a statement by a licensed professional engineer, currently registered to practice in Arizona, certifying that the drawings are per the as-built condition. The record set requires the seal and signature of the registrant.

Payment shall be lump sum for all work required to develop the necessary documents, including but not limited to coordination, field inspection, survey, drafting, printing and engineer's seal. The fee shall include as-built information for all record changes within the project area.

## **SECTION 105 - CONTROL OF WORK**

### **105.8 CONSTRUCTION STAKES, LINES AND GRADES:** (revise entire subsection to read as follows)

The Contractor shall be responsible for all required construction staking, including preconstruction staking for relocation of existing utilities. All construction staking is to be done under the direct supervision of a Registered Land Surveyor or Civil Engineer. All costs associated with this work are to be included in the amount bid for the items of work to which it is incidental or appurtenant. No separate payment will be made for construction staking.

### **105.10 INSPECTION OF THE WORK** (revise to include the following)

The Contractor is responsible for Quality Control of the work. The City will perform Quality Assurance; frequency of testing will be determined by the City. The Contractor shall be responsible for coordinating and scheduling all inspections of the work and shall confirm that the required inspections and material testing are completed and accepted prior to proceeding with additional work. The Contractor is required to perform the work to a confidence level that the City's Quality Assurance will validate that the work meets specification(s).

### **105.11 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK:** (revise to include the following)

Any work and/or materials condemned by the Project Manager as inferior or not in compliance with the Contract, Specifications and Plans shall be immediately removed by the Contractor. Materials and/or work so condemned shall be removed and promptly replaced and executed in accordance with the Contract, Specifications and Plans without any expense to the Owner. The Contractor shall bear the expense of making good on all work of other contractors destroyed or damaged by such removal and replacement.

### **105.12 MAINTENANCE DURING CONSTRUCTION:** (revise to include the following)

The Contractor is responsible to provide adequate drainage for the construction area at all times. Damage to any portion of the work caused by the Contractor's failure to provide adequate drainage of the construction area shall be repaired at the Contractor's expense. A contract time extension will not be granted for any additional time required to make such repairs.

The Contractor shall control open excavations and stockpiling in a manner to prevent water from running into excavations. Obstructions of surface drainage shall be avoided and means shall be provided whereby storm water and wastewater can flow uninterrupted in existing or established pipes, flow courses, other surface drains, temporary drains or channels.

Material for backfill or for protection of excavations within public roads or easements shall be placed and shaped to cause the least possible interference to public travel. In no event shall any flows be allowed to enter private property.

**105.16 MAINTENANCE DURING WINTER SUSPENSION OF WORK**

(revise to include new subsection as follows)

The City retains the right to declare a winter shutdown. If work has been suspended due to winter weather, the Contractor shall be responsible for maintenance and protection of the improvements and of partially completed portions of the work until final acceptance of the project. Winter suspension shall be by field order, change order or original contract. If repairs and/or maintenance are needed during the suspension, the Contractor is required to perform the repairs and/or maintenance within twenty-four (24) hours of notification from the City. If the needed repairs and/or maintenance are not addressed within the timeframe, the City will accomplish the work and deduct the cost from monies due or become due to the Contractor.

The City shall provide snow removal operations on active traffic lanes only. All other snow removal and maintenance operations shall be the responsibility of the Contractor. All cost associated with snow removal and proper disposal shall be considered incidental to the work including the repair of temporary surface improvements due to normal wear and snow removal operations.

**SECTION 107 - LEGAL REGULATIONS AND RESPONSIBILITY TO THE PUBLIC**

**107.1 LAWS TO BE OBSERVED:**

(revise to include the following)

(G) TAX EXEMPTION: Certain material, machinery and equipment to be installed in this project is exempt from sales tax or use tax as allowed in Arizona Revised Statutes Section 42-5061, 42-5009 and Section 42-5159 and by the Administrative Rules and Regulations of the Arizona Department of Revenue; ACC R15-5-608, R15-5-120 and R15-5-2314.

The City wishes to rely upon the expertise of the contractor in the purchase of items that qualify for the tax exemption. With respect to purchase of the qualifying items, the Contractor is authorized to act as an agent for the City. This agency agreement is strictly limited to the purchase of the qualifying items to be used in the construction of the project and will not otherwise affect or alter the respective rights, responsibilities and remedies of the parties as specified under this contract. The contractor shall furnish the City a list of suppliers and the material, machinery and equipment to be furnished by each. The City will then issue the materials and equipment exemption certificate to each supplier

pursuant to A.R.S. §42-5009 (A) (2). The contractor's applicable unit bid prices for items qualifying for this tax exemption should not include sales or use tax. The materials, machinery and equipment that are a part of this project and to which the exemption applies are listed below:

1. Pipes, valves and appurtenances four (4) inches in diameter or larger used to transport potable water,
2. Any additional material, machinery or equipment identified in the Special Provisions.

**107.2 PERMITS:**  
(revise to include the following)

The City of Flagstaff shall issue a no fee permit for work in City right-of-way for this Contract. The City shall work with the Contractor to obtain a permit for work in State of Arizona right-of-way from the Arizona Department of Transportation. The Contractor may not commence work until these permits are issued.

**107.2.1 TEMPORARY USE PERMITS:**  
(revise to include new subsection as follows)

A Temporary Use Permit (and Above Ground Fuel Storage Permit if applicable) is required prior to the establishment of any temporary construction yard, material storage area or staging area located within City limits and outside the public right-of-way or project limits. The Contractor is responsible for obtaining the necessary Temporary Use Permit from the agency with jurisdictional authority.

The time required to process the Temporary Use Permit is approximately twelve (12) calendar days. The Contractor shall submit the necessary permit application no later than ten (10) calendar days following the Notice of Award. Any delays experienced by the Contractor in acquiring the Temporary Use Permit shall not necessarily be grounds for delaying the project Notice to Proceed.

**107.2.2 DISPOSAL OF WASTE AND SURPLUS MATERIAL:**  
(revise to include the following)

All disposal costs, regardless of disposal site, shall be included in the bid unit price for the related item of work and no direct payment will be made for disposal of waste or surplus materials. This right of disposal does not apply to any substance or items that are regarded as toxic and/or hazardous by the City, the State of Arizona or the United States Government.

Alternate disposal sites may be proposed by the Contractor but are subject to all applicable local ordinances and codes. In addition to the property owner's written authorization, all disposal sites within the city limits are subject to review and approval by the Temporary Use Permit process. The disposal of material at alternate disposal sites will not be allowed without written authorization of the owner, approval of the appropriate jurisdictional authority, and the issuance of all necessary permits.

**107.2.3 ABOVE GROUND FUEL STORAGE PERMIT:**  
(revise to include new subsection as follows)

If required, Above Ground Fuel Storage Permits may be obtained from the City of Flagstaff Fire Department, located at 211 West Aspen Avenue, Flagstaff, AZ. The Contractor is responsible for obtaining the permit.

**107.5 SAFETY, HEALTH, AND SANITATION PROVISIONS:**

**107.5.4 HANDLING, REMOVAL AND DISPOSAL OF SURPLUS MATERIAL AND ASBESTOS CONTAINING MATERIALS (ACM)**  
(revise to include new subsection as follows)

The Contractor is responsible for handling, removal and disposal of all soil material generated by the project as described in the General Provisions.

The City requires compliance with Environmental Protection Agency (EPA), Arizona Department of Environmental Quality (ADEQ) and Occupational Safety and Health Administration (OSHA) asbestos regulations for all City projects.

Utility pipes constructed of materials other than metal or polyvinyl chloride (PVC) require testing prior to any disturbance of the pipes to determine if regulated levels of asbestos are present in the pipe material. Suspect pipe materials requiring testing typically include vitrified clay and cement pipe (transite). Asbestos testing is not required for metal pipes.

City Public Works/Sustainability & Environmental Management staff are available to collect samples and submit the samples for analyses. **The City of Flagstaff will provide testing free of charge.** If the pipe does not contain regulated levels of asbestos, the contractor may disturb and remove the piping. If utility piping contains regulated levels of asbestos, an asbestos abatement contractor must perform any disturbance/removal of the pipe materials. This is required to ensure workers are not exposed to any asbestos fibers.

Work may require the proper handling, removal and disposal of regulated asbestos piping and materials generated by cutting or breaking the pipe to remove it from the ground. If asbestos containing materials (ACM) removal is necessary on the project, the City of Flagstaff requirements for handling, removal and disposal are as follows:

- If an infrastructure or building material that is not either wood, glass or metal is encountered during the project and has not yet been either assumed or positively identified to be ACM then the material(s) must be sampled in accordance with regulations generated by the EPA Asbestos Hazard and Emergency Response Act (AHERA) 40 CFR 763 as well as OSHA 29 CFR 1910.1101, by a certified AHERA Building Inspector and sent to a National Voluntary Laboratory Accreditation Program (NVLAP) certified laboratory for analysis.

- Once materials of concern are assumed or properly identified to be ACM then material removal is required according to OSHA 29 CFR 1910-1926.1101 by a certified asbestos abatement worker, and NOT a general contractor (GC). However, if the GC holds the appropriate asbestos certifications (AHERA Asbestos Operations and Maintenance), which the City would need to verify is current, then the GC could perform the asbestos abatement.

The City requires the General Contractor arrange for abatement of assumed and/or identified ACM by a certified asbestos abatement contractor and to arrange area and/or clearance air monitoring by a third party certified asbestos consultant. If applicable to the project, copies of abatement activities and air monitoring shall be provided to City of Flagstaff Environmental Management staff.

In the event of large disturbances to ACM, compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 61, Subpart M shall be followed. Notification would be required the Arizona Department of Environmental Quality <http://www.azdeq.gov/environ/air/asbestos/> 10 working days in advance of the start of a large project. This notification is not typically required for utility pipe work but could be required for a very large project involving numerous saw cuts of utility pipes.

**If ACM removal is necessary on the project, the City of Flagstaff requirements for ACM disposal at the City’s Cinder Lake Landfill are as follows:**

Only non-friable asbestos waste is accepted for disposal at Cinder Lake Landfill. PRIOR to disposal of non-friable ACM, obtain the necessary forms, which are:

- Non-Friable Asbestos Waste Acceptance Application and accompanying instructions
- Non-Friable Asbestos Waste Shipment Record (WSR)

The Asbestos Waste Acceptance Application is available at the City of Flagstaff’s website or by contacting the City of Flagstaff Environmental Management staff. A Waste Shipment Record is required to accompany each load of non-friable asbestos waste taken to the Cinder Lake Landfill.

Assure the non-friable ACM is properly handled and wrapped. Non-friable ACM must be thoroughly wetted using amended water PRIOR to being wrapped in 6-millimeter poly and be tightly sealed with duct tape. If the material is heavy (such as transite pipe), has sharp edges, or may easily puncture the poly wrap, a double layer of poly will be necessary. The Cinder Lake Landfill scale house attendant will inspect the load to ensure it is properly wrapped. Containers holding non-friable ACM shall be carefully unloaded and placed in a designated location. Dumping using a hydraulically lifted bed of a truck is not permitted (dump truck), as the poly wrap may be torn open.

If using a large bin for disposal, attach a copy of the Waste Shipment Record to the disposal bin. If not using a City of Flagstaff disposal bin, make sure the delivery driver takes a copy of the

SIGNED Non-Friable Asbestos Waste Acceptance Application and the Waste Shipment Record to the Cinder Lakes Landfill with the waste delivery.

If using a City of Flagstaff disposal bin call City Environmental Services at (928) 774-0668 to schedule a pick-up for the disposal bin. Please be sure to provide the driver with the SIGNED Non-Friable Asbestos Waste Acceptance Application and the Waste Shipment Record and be sure to clarify if you would like the disposal bin emptied and removed or emptied and returned to the work site. When disposal is completed, the Landfill Manager will sign the Waste Shipment Record and landfill staff will provide or mail a copy of the Waste Shipment Record.

Cutting of utility pipes generates Regulated Asbestos Containing Material (dust from cutting) and breaking pipes may generate RACM. RACM requires disposal at the Joseph City Landfill or at other landfills located in southern Arizona.

All work relating to the removal and disposal of unknown and/or unanticipated hazardous materials as described above shall be paid per MAG 109.4.3.

**107.8            107    USE OF EXPLOSIVES:**  
(first paragraph, revise second sentence to read as follows)

The Contractor shall submit a blasting plan for approval and obtain a Blasting Permit from the City of Flagstaff Fire Department, located at 211 W. Aspen Avenue, Flagstaff, Arizona.

(revise to include the following)

The Contractor shall submit a copy of the approved blasting plan to the Project Manager. The plan shall include as a minimum; safety layout, drilling pattern, size and depth of bore, weight and type of charge, delay sequence, contractor's anticipated peak particle velocity at the right-of-way line or nearest structure, and the proposed seismograph locations.

A record of each blast shall be kept and all records including seismograph reports shall be available for inspection. Each record shall provide as a minimum; location, date and time of blast, name of person in charge, number of holes burdened, spacing, diameter and depth of holes, boring logs to determine top of rock, type and total amount of explosives used, direction and distance to nearest building, type of detonators and delay periods used, and exact locations of seismographs.

When blasting operations are to be conducted within 200 feet of a water line, sewer line or other underground utility, the Contractor shall take additional precautionary measures. The Contractor shall notify the owner of the facility a minimum of two weeks in advance that such blasting operations are intended. At their discretion, the Owner may perform pre-blast, post-blast pressure tests or other inspection of the facility. If any damage occurs because of blasting operations, the Contractor shall be responsible for the restoration of the facility to pre-blast conditions.

**107.9 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE:**  
(revise to include the following)

The Contractor is responsible for replacing and/or restoring the site, landscaping and owner's improvements associated with the project to the pre-existing condition using in-kind materials. All cost shall be included in the bid as incidental to the work, unless otherwise specified in the bid schedule or plans.

Within easements, the Contractor is responsible for removing existing improvements and salvaging items (not identified for removal) for relocation after the public improvements are completed. Close coordination between the Contractor and property owners and/or residents is required.

(revise to include the following)

Survey monuments and property corners shall be identified, protected and not disturbed except as noted on the plans. All costs associated with protecting or re-establishing disturbed survey monuments and property corners shall be the sole responsibility of the contractor. Re-establishing all monuments and property corners shall be performed by a current Licensed Arizona Surveyor pursuant to the Arizona Board of Technical Registration and all applicable state statutes. Monuments and property corners shall be in place and visible prior to final acceptance of the project.

**107.11 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES:**  
(revise to include the following)

All power poles, pedestals, guy wires and underground facilities shall be removed and/or relocated by the respective owners of the facilities. The contractor is responsible for the notification and coordination with the utility companies to ensure that this work is accomplished in a manner consistent with the construction schedule. Payment for Franchise Utility coordination and location is incidental to the cost of the work.

The Contractor shall perform utility potholes and identify potential conflicts prior to commencement of underground work. The utility pothole information and identification of potential conflicts shall be provided to the Project Manager at least two weeks prior to performing underground work including trenching or pipeline construction.

**SECTION 108 - COMMENCEMENT, PROSECUTION AND PROGRESS**

**108.1 NOTICE TO PROCEED:**  
(revise to include the following)

Time is of the essence in submitting the initial and revised construction schedule and traffic control plan. Each is a requirement that precedes the Contractor's right and the City's obligation to proceed with the agreement.

The Notice to Proceed shall be issued for a start date no later than twenty-seven (27) calendar days following receipt of the Notice of Award. The Contractor shall be required to submit a construction schedule and traffic control plan in accordance with the Contract Documents and the following:

The Contractor shall within seven (7) calendar days of receiving the Notice of Award, submit a construction schedule and traffic control plan to the Project Manager. The Project Manager shall promptly review the construction schedule and traffic control plan and either approve them or provide a written list of the items that will require revision. The Contractor shall submit the revised construction schedule and traffic control plan within five (5) calendar days of receiving the Project Manager's list of required revisions. The corrected construction schedule and traffic control plan submittal shall address all comments from the Project Manager's list of required revisions.

If the Project Manager approves the second submission of the construction schedule and traffic control plan, a notice will be issued specifying the date on which the Contractor may proceed with the work. If it is determined that the construction schedule and/or traffic control plan are not adequate to manage the contract, the Contractor shall be notified in writing. Within three (3) full business days following receipt of the notice, the Contractor shall elect to:

1. Submit a revised final construction schedule and traffic control plan together with a cashier's check or bank draft in the amount of two and one half (2 1/2) percent of the contract price as liquidated damages for the delay time lost to that date; or
2. Do nothing, in which case this contract shall be deemed terminated at the Contractor's election. The Contractor shall then have no right or duty to continue performance and the City shall be released from all liability to the Contractor under this agreement.

In the event the Contractor elects the first alternative, the Project Manager shall approve the final construction schedule and traffic control plan if acceptable, in which case the City shall be entitled to the liquidated damages or shall reject the construction schedule and traffic control plan and return the check or draft. In the latter event, the contract shall be deemed terminated, the liquidated damages provision shall not apply, and the City shall be entitled to recover its actual damages incurred for the Contractor's breach of agreement.

### **108.3 CORRESPONDENCE TO THE CONTRACTOR:**

(revise to include the following)

In addition to written communication to the Project Manager, the Contractor shall provide and maintain a contact located within ten miles of the job site at all times throughout the duration of the Contract. The designated contact shall be accessible by telephone at all times to respond to agency requirements and emergencies. The local location and phone number(s) shall be provided to the Project Manager prior to issuance of the Notice to Proceed. Any changes of the location or phone number(s) shall be reported immediately to the Project Manager.

If a response is needed, the Contractor is required to respond and perform the repairs and/or maintenance within two (2) hours of notification from the City. If the needed repairs and/or maintenance are not addressed within the timeframe, the City will accomplish the work and deduct the cost from monies due or become due to the Contractor.

**108.4 CONTRACTOR'S CONSTRUCTION SCHEDULE:**  
(revise to include the following)

The Contractor's schedule shall include, as a minimum, the following:

- Identification of project tasks with assigned dates and durations, which reflect anticipated sequencing of construction activities on scheduled working days;
- All anticipated subcontractors that will be used during the course of the work;
- The anticipated number of crews to expedite the progress and ensure prompt completion of the work;

Definition of a crew;

- personnel (*e.g. operator, laborer*)
  - equipment (*e.g. Cat 325 Excavator, 950 Loader*)
  - workdays anticipated or scheduled per week (*e.g. Monday through Friday*)
  - work hours anticipated or scheduled per day (*e.g. 7:00 am to 3:30 pm*)
- Anticipated adverse weather days for weather dependent activities, weekends and holidays.
  - Specific long lead times for delivery of equipment and materials;
  - Critical path project schedules may be required as provided for by the Special Provisions or Project Addenda.

**108.5 LIMITATION OF OPERATIONS:**  
(third paragraph, revise to read as follows)

Except in emergencies endangering life or property, written permission shall be obtained from the City prior to performing any work on weekends, legal holidays or after regular work hours (hereinafter defined as 7:00 a.m. to 5:00 p.m. - Monday through Friday). Inspection and testing will not be provided on Sundays or City legal holidays without prior approval from the Project Manager (72-hour advance notice) and total compensation by the Contractor for any necessary personnel, equipment and services.

Overtime compensation for City personnel shall be as follows:

- Construction Supervisor @ \$ 43.00/hour
- Inspector II @ \$ 35.00/hour
- Inspector I @ \$30.00/hour
- Lab Tech I @ \$ 25.00/hour
- Vehicle @ \$1.80/hour

**108.7 DETERMINATION AND EXTENSION OF CONTRACT TIME:**  
(revise to include the following)

The contract time, including final cleanup of the project site and storage areas, may be extended because of weather conditions that cannot be reasonably anticipated from established weather patterns. Adverse weather day patterns (identified below) were determined as being equal to or greater than twenty-five (25) percent of the historical monthly average as recorded by the National Weather Service at Pulliam Airport.

Month	January	February	March	April	May	June
Adverse Weather Days	7	7	8	6	4	3

Month	July	August	September	October	November	December
Adverse Weather Days	12	11	7	5	5	6

Contract time extensions due to adverse weather may be considered warranted when actual work critical to the timely completion of the project is delayed for fifty (50) percent or more of the Contractor's scheduled workday. Number of days may include time for which job progress has been affected by adverse weather during scheduled working days. The number of days that the scheduled work is impacted by adverse weather shall be recorded weekly during the construction period.

For delay of critical work from adverse weather experienced during the prior week's work, the Contractor is required to submit a written claim request for additional contract time no later than the next normally scheduled weekly project meeting,

The City may convert any delays meeting the above requirements to calendar days and extend the contract period as necessary. No additional compensation will be allowed for direct and indirect overhead expenses associates with any such contract time extensions.

**108.8 GUARANTEE AND WARRANTY PROVISIONS:**  
(revise to include the following)

If requested by the City, the Contractor shall return to the project site eleven months after acceptance of the project and visually inspect, in the presence of the Owner's Representative, all accessible construction items and appurtenances. All defective materials and/or workmanship shall be satisfactorily repaired or replaced at the sole expense of the Contractor.

All costs for the 11-month inspection and repair shall be borne by the Contractor and in figuring his or her bid, the Contractor shall include an appropriate amount for such inspection and possible required repair, and no additional payment will be allowed.

**108.10 FORFEITURE AND DEFAULT OF CONTRACT:**  
(revise to include new section)

Due to Failure to Prosecute the Work

If the Contractor fails to prosecute the work in accordance with the contract, including requirements of the progress schedule, the City may correct these deficiencies after three days after providing written notice to the Contractor. The cost of these remedies shall be charged against the Contractor. A change order may be issued to make the necessary changes in the contract and to make an appropriate reduction in the contract price. Such a change order shall not require the signature or approval of the Contractor. The remedy shall not prejudice the City's use of any other remedy, which the City may be entitled to use.

**108.12 AUTHORIZED SIGNATURES:**  
(revise to include new section)

The Contractor shall provide a notarized list of all authorized signatures for project related documents. Only those individuals listed by the Contractor on the project Authorized Signature form shall be authorized to sign the contract, contract change orders, time extensions, bonds, securities, pay requests, certifications or other documents that affect the execution of the Contract.

**108.13 SUBSTANTIAL COMPLETION:**  
(revise to include new section)

The project is substantially complete and liquidated damages will no longer be assessed when all of the following have occurred:

- (A) All original bid items of work have been completed, accepted and pedestrian and vehicular traffic can move unimpeded through the project;
- (B) The only work left for completion is incidental, causes no disruption to pedestrian and vehicular traffic, and does not affect the safety and convenience of the public;

The decision whether the project is substantially complete is within the sole discretion of the Project Manager.

Once substantial completion is granted, the Contractor shall actively work to achieve Final Acceptance of the construction phase of the Contract within 15-calendar days from the Substantial Completion date of that phase. Failure to prosecute the remaining work within this time-period will result in the resumption of time charges and the application of liquidated damages from the date scheduled for final acceptance.

The Contractor is responsible for maintenance and repairs of any project work until final acceptance, at which time the City will accept the improvements for operation and maintenance.

**108.14           SUSPENSION and TERMINATION:**  
(revise to include new section)

**City's Right to Stop Work**

City may, at its discretion and without cause, order Contractor in writing to stop and suspend the Work. Such suspension shall not exceed one hundred and eighty (180) consecutive days.

Contractor may seek an adjustment of the Contract Price and/or Contract Time if its cost or time to perform the Work has been adversely impacted by any suspension or stoppage of Work by City.

**Termination for Convenience**

Upon receipt of written notice to Contractor, City may, at its discretion and without cause, elect to terminate this Agreement. In such event, City shall pay Contractor only the direct value of its completed Work and materials supplied as of the date of termination. Contractor shall be entitled to profit and overhead on completed Work only but shall not be entitled to anticipated profit or anticipated overhead.

If the City suspends the Work for one hundred eighty-one (181) consecutive days or more, such suspension shall be deemed a termination for convenience.

Upon such termination, Contractor shall proceed with the following obligations.

1. Stop Work as specified in the notice.
2. Place no further subcontracts or orders.
3. Terminate all subcontracts to the extent they relate to the work terminated. Contractor shall ensure that all subcontracts contain this same termination for convenience provision.
4. At the City's sole discretion and if requested in writing by the City, assign to the City all right, title and interest of Contractor under the subcontracts subject to termination.
5. Take any action that may be necessary for the protection and preservation of the property related to this Agreement that is in the possession of Contractor and in which the City has or may acquire an interest.
6. Contractor shall submit complete termination inventory schedules no later than one hundred twenty (120) days from the date of the notice of termination.

The City shall pay Contractor the following:

1. The direct value of its completed Work and materials supplied as of the date of termination.
2. The reasonable and direct, actual costs and expenses attributable to such termination. Reasonable costs and expenses shall not include, among other things, anticipated profit, anticipated overhead, or costs arising from Contractor's failure to perform as required under this Agreement.
3. Contractor shall be entitled to profit and overhead on completed Work only, but shall not be entitled to anticipated profit or anticipated overhead. If it is determined that Contractor would have sustained a loss on the entire Work had they been completed, Contractor shall not be allowed profit and the City shall reduce the settlement to reflect the indicated rate of loss.

Contractor shall maintain all records and documents for three (3) years after final settlement. These records shall be maintained and subject to auditing as prescribed in Section 7.7.

### **The City's Right to Perform and Terminate for Cause**

If the City provides Contractor with a written order to provide adequate maintenance of traffic, adequate cleanup, adequate dust control or to correct deficiencies or damage resulting from abnormal weather conditions and Contractor fails to comply in a time frame specified, the City may have work accomplished by other sources at Contractor's sole expense.

If Contractor persistently fails to

1. provide a sufficient number of skilled workers,
2. supply the materials required by the Contract Documents,
3. comply with applicable Legal Requirements,
4. timely pay, without cause, sub-consultants and/or subcontractors,
5. prosecute the Work with promptness and diligence to ensure that the Work is completed by the Contract Time, as such times may be adjusted, or
6. perform material obligations under the Contract Documents, then the City, in addition to any other rights and remedies provided in the Contract Documents or by law, shall have the rights set forth below.

Upon the occurrence of an event set forth above, City may provide written notice to Contractor that it intends to terminate this Agreement unless the problem cited is cured, or commenced to be cured, within seven (7) days of Contractor's receipt of such notice.

If Contractor fails to cure, or reasonably commence to cure, such problem, then City may give a second written notice to Contractor of its intent to terminate within an additional seven (7) day period.

If Contractor, within such second seven (7) day period, fails to cure, or reasonably commence to cure, such problem, then City may declare this Agreement terminated for default by providing written notice to Contractor of such declaration.

Upon declaring this Agreement terminated and for the purpose of completing the Work, City may enter upon the premises and take possession of all materials, equipment, scaffolds, tools, appliances and other items thereon, which have been purchased or provided for the performance of the Work. Contractor hereby transfers, assigns and conveys all items, which have been purchased or provided for the performance of the Work to the City for such purpose and to employ any person or persons to complete the Work and provide all of the required labor, services, materials, equipment and other items.

In the event of such termination, Contractor shall not be entitled to receive any further payments under the Contract Documents until the Work shall be finally completed in accordance with the Contract Documents. At such time, Contractor shall be entitled to be paid only for Work performed and accepted by the City prior to its default.

If City's cost and expense of completing the Work exceeds the unpaid balance of the Contract Price, then Contractor shall be obligated to pay the difference to City. Such costs and expenses shall include not only the cost of completing the Work, but also losses, damages, costs and expense, including attorneys' fees and expenses, incurred by City in connection with the re-procurement and defense of claims arising from Contractor's default.

If the City improperly terminates the Agreement for cause, the termination for cause shall be converted to a termination for convenience in accordance with the provisions of 108.14

## **SECTION 109 - MEASUREMENTS AND PAYMENTS**

### **109.1 MEASUREMENT OF QUANTITIES:** (revise to include the following)

It is the responsibility of the Contractor to conform to the Contract Documents, including plans, typical sections and specifications including but not be limited to dimensions, materials, application rates and densities. The Contractor shall take all actions necessary to ensure that the work conforms to the contract documents. The Contractor shall cooperate fully with the Project Manager or Project Manager's representative to correct any known nonconformity to the contract documents.

### **109.1 MEASUREMENT OF QUANTITIES:** (delete the second paragraph)

Unless otherwise specified, longitudinal and surface (plane) measurements will be made in a horizontal plane.

## **PART 200 - EARTHWORK**

### **SECTION 201 - CLEARING AND GRUBBING**

#### **201.3 CONSTRUCTION METHODS:** (revise to include the following)

The Contractor shall make every effort possible to avoid damaging existing trees. If any trees suffer limb damage, the Contractor shall cut branches to the nearest branch crotch or to the branch collar at the trunk.

No separate payment will be made for trimming trees. The cost shall be considered incidental to the work.

### **SECTION 205 – ROADWAY EXCAVATION**

#### **205.1 DESCRIPTION** (revise to include the following)

The bid schedule unit cost for excavation, backfill and embankment work shall include the cost of rock excavation, handling rock or disposing of rock and no separate measurement or payment shall be made. Rock shall be defined as any highly cemented or hard material that may require additional efforts for removal, handling or disposal.

**205.2 UNSUITABLE MATERIAL:**  
(third paragraph, revise to read as follows)

Should unsuitable material be encountered at subgrade elevation in cut areas or at existing grade in fill areas, the unsuitable material shall be removed and replaced with suitable fill material in accordance with MAG Section 210 and MAG Section 211.

Determination of unsuitable material and the limits and depths of required removal and replacement shall be at the sole discretion of the Project Manager. In no case shall any unsuitable material be removed without prior written consent of the Project Manager.

Measurement and payment for removal and replacement of unsuitable material will be by the cubic yard as shown in the proposal. Payment shall be compensation in full for the work complete and in-place including any borrow, permits, pit royalties, all excavation, hauling, placing, compacting, conditioning, watering and proper disposal, together with all appurtenant costs.

**205.3 MEASUREMENT**  
(revise to include the following)

Earthwork is incidental to the roadway construction and no additional payment will be made for roadway excavation. The Contractor shall be responsible for estimating and accounting for earthwork import and haul off. It is recommended that the Contractor review the report on geotechnical investigation and sampling results.

**PART 300 -- STREETS AND RELATED WORK**

**SECTION 301 - SUB-GRADE PREPARATION**

**301.1 DESCRIPTION:**  
(revise to include the following)

The untreated base or prepared subgrade shall be test rolled in the presence of the Engineering Inspector prior to the placement of asphalt paving materials. The equipment used to perform the test roll shall be approved by the Engineering Inspector. The Contractor shall be responsible for scheduling this test roll with the Inspector during regularly scheduled work. All costs associated with the test roll shall be considered incidental to and included in the cost of sub-grade preparation.

**SECTION 336 - PAVEMENT MATCHING AND SURFACING REPLACEMENT**

**336.1 DESCRIPTION:**  
(first paragraph, revise to include the following)

The exact points of pavement matching shall be determined in the field by the Engineering Inspector.

**336.2 MATERIALS AND CONSTRUCTION METHODS:**

**336.2.1 PAVEMENT WIDENING OR EXTENSIONS:**  
(first paragraph, revise second sentence to read as follows)

The minimum depth of cut shall be four (4) inches or Depth/4, whichever is greater.

**PART 400 -- RIGHT-OF-WAY AND TRAFFIC CONTROL**

**SECTION 401 - TRAFFIC CONTROL**

**401.5 GENERAL TRAFFIC REGULATIONS:**  
(revise to include the following)

Within seven (7) calendar days following receipt of the Notice of Award and in accordance with Section 108.1 of these General Provisions, the Contractor shall submit to the Project Manager a traffic control plan that shows the control of traffic in accordance with Part VI of the FHWA Manual on Uniform Traffic Control Devices for all phases of the work. The plan should include nights, weekends, shut down periods and an approximate schedule of street closures and detours.

The Traffic Control Plan is to detail the Contractor's proposal for routing traffic and pedestrians around the areas of construction. The Plan shall be coordinated with the proposed construction schedule and show how the locations of the various traffic and pedestrian control devices will change as construction progresses. The Plan shall allow for complete detours around the work areas.

Private and commercial driveways shall not be closed for any period exceeding eight hours during any twenty-four-hour period. The affected resident and the City shall be notified 48 hours in advance of any closure. Convenient access to driveways, houses and buildings along the line of work shall be maintained and temporary crossings or alternate access shall be provided and maintained in good condition, except during that period mentioned above. **Business access shall be maintained at all times by at least one driveway.**

(eleventh paragraph, revise to read as follows)

The Contractor will reinstall all permanent traffic control devices as required by the approved construction plans and specifications.

(twelfth paragraph, delete the last sentence)

Delete - The Traffic Engineering Department will reinstall all traffic signs.

**401.7 PAYMENT:**  
(revise paragraph to read as follows)

Payment for all work and materials required to prepare a traffic control plan and provide traffic control during construction shall be made at the lump sum price shown on the Bid Schedule. Full compensation for any required traffic control devices, flaggers, uniformed off-duty law enforcement officers, pilot cars and drivers shall be included in the lump sum contract price and no additional payment shall be allowed. Progress payments shall be made based on the Contractor's estimate for percent complete as approved by the Owner.

**SECTION 425 TOPSOIL**

**425.2 MATERIALS:**  
(revise to read as follows)

Overburden topsoil shall be salvaged and reused when possible. All topsoil, whether overburden or imported, shall be free of roots, heavy clay, clods, noxious weed seeds, coarse sand, large rocks, sticks, brush, litter and other deleterious material and meet the requirements of MAG Section 795. The Project Manager's approval of the proposed topsoil shall be obtained before delivery to the project.

**425.4 MEASUREMENT:**  
(revise paragraph to read as follows)

Topsoil shall be measured lump sum, complete and in place unless indicated otherwise by the bid schedule.

**425.5 PAYMENT:**  
(revise to read as follows)

Topsoil will be paid for in accordance with the contracted price for furnishing and placing topsoil, as described and specified. Progress payment shall be made based on the Contractor's estimate for percent complete as approved by the Owner.

**SECTION 431 – EROSION CONTROL**  
(revise to include new section as follows)

**431.1 DESCRIPTION**

Erosion control applies to improvements within the city and as part of the erosion control section of a Storm Water Pollution Prevention Plan (SWPPP). Materials, means and methods for erosion control and stabilization, Best Management Practices (BMPs), Erosion Control Plans (ECPs) and SWPPPs are described in the City of Flagstaff Stormwater Design Manual.

The Contractor shall stabilize all disturbed areas within the project site and as shown on the plans. Work shall be performed according to the provisions of this Section and shall include but not be limited to the furnishing, hauling, placement and application of erosion control materials.

The Contractor is responsible for complying with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit program. This generally includes submittal of a Notice of Intent to the Arizona Department of Environmental Quality (ADEQ) and Notice of Termination to ADEQ for the project. Preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for the site is required per ADEQ and City of Flagstaff standards.

The cost for complying with the NPDES permit and the SWPPP, including the erosion control devices, shall be included in the NPDES & SWPPP Requirements portion of the Contractor's bid. It is recommended that contractors see the ADEQ Smart NOI (Notice of Intent) program website (<http://az.gov/webapp/noi/main.do>) for information and processes.

Progress payment shall be made based on the Contractor's estimate for percent complete as approved by the Owner.

#### **432.1 NATIVE SEEDING**

Erosion control and native seeding shall comply with Chapter 13-17 of the City of Flagstaff Engineering Standards.

All areas to be seeded that are accessible to machinery shall be tilled to a minimum depth of four (4) inches. Areas inaccessible to machinery shall be hand tilled and prepared to a minimum depth of two (2) inches. Cut slopes of 2:1 or steeper do not require tilling. Cultivation on sloping terrain shall run perpendicular to the direction to the slope. If weeds or herbaceous plant material interferes with proper seedbed preparation, the contractor shall remove them from the seedbed.

Contractor shall remove and dispose of all debris and other objectionable material that may interfere with seeding operations.

The area to be seeded shall be relatively smooth and all surface irregularities (e.g. rills, tire marks) shall be filled and firmed to conform to the desired cross sections. The seedbed shall be rolled both before and after the seeding operation with a minimum of one pass of a cultipacker or drag harrow.

Seed shall be sown when conditions will promote germination and growth. Normal non-irrigated permanent native seed application dates are between April 1 and June 15, between August 15 and September 20 and after the first frost (recurring overnight temperature of 28 degrees F) until snowfall. Seeding work shall be performed only after planting and other work affecting ground surface is complete.

To assist in establishment of the permanent seed mix, a nurse crop shall be used for this work. Preapproved nurse crop seed shall be one of the following, incorporated with the specified permanent seed mix;

Annual ryegrass	( <i>Lolium multiflorum</i> )	30 lbs/acre
Oats	( <i>Avena sativa</i> )	60 lbs/acre
Regreen©	( <i>Triticum aestivum x Elytrigia elongata</i> )	30 lbs/acre

Alternative species may be acceptable but are subject to prior approval from the City Project Manager or duly authorized representative.

When cut or fill slopes are greater than six (6) feet in height and steeper than 3H:1V, the seeded area shall be covered with American Excelsior Company straw/coconut blanket or an approved equal. Installation shall be per the manufacturer's written directions.

**440.10. (D) SEQUENCING**  
(add the following section)

The irrigation system shall be installed, inspected, approved and operable prior to the installation of plant materials, landscape fabric and ground plane treatments (*decomposed granite, landscape rock, mulch, etc.*)

**PART 600 - WATER AND SEWER**

**SECTION 601 - TRENCH EXCAVATION, BACKFILLING AND COMPACTION**

**601.2 EXCAVATION:**

**601.2.1 GENERAL:**  
(revise to include the following)

All excavation, including trench excavation, shall be performed in any substance and material encountered. The cost is considered incidental to and is to be included in the price for the bid item to be constructed or installed. No special payment shall be made for trench excavation other than rock excavation as specified under Trench Rock Excavation.

Trench Rock Excavation

Trench rock is defined as consolidated igneous, metamorphic and/or sedimentary material in the original bed and/or in well-defined ledges that cannot be removed by a mechanical method and therefore requires pneumatic hammering, drilling or blasting for removal. Example of mechanical methods include hand tools, trenching machine, backhoe, ≥195 horsepower hydraulic excavator with ripping teeth or equivalent.

Boulders and pieces of rock having a volume of more than 27 cubic feet (1 cubic yard) shall be considered rock.

For projects where trench rock excavation is anticipated, the estimated contingent quantity is shown in the proposal under the applicable bid item. The contingency quantity is an estimate only and no

guaranty is given that any portion will be utilized. Trench rock excavation will be paid for separately at the unit price bid per cubic yard for Trench Rock Excavation.

Measurement of Trench Rock Excavation shall be per cubic yard in place. This volume of rock will be measured by the City representative, using the maximum trench width allowed in accordance with MAG Table 601-1, the lineal footage of actual rock excavation required, and the actual depth of rock as determined by inspection of the trench after rock excavation and before backfilling.

**ADOT PART 700 - MATERIALS**

**ADOT SECTION 708 – PERMANENT PAVEMENT MARKINGS**

**708-5 BASIS OF PAYMENT:**  
(replace the first paragraph)

Delete the first paragraph and replace with;

Longitudinal pavement striping as described and specified in the contract documents shall be paid for at the contract lump sum amount, complete in place, including glass beads.

**SECTION 710 - ASPHALT CONCRETE**

**710.1 GENERAL:**  
(revise to include the following)

The asphaltic concrete designation shall be 3/4 inch, except as required by the project plans or Special Provisions.

**End of Document**