Right-of-Way Construction Standards and Requirements

All work within the City Right-of-way shall conform to the Des Moines Street Development Standards, the most recent edition of the Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction, and the following requirements:

Construction Control and Inspection

Control of Work

Work performed in the construction or improvement of public or private roads and utilities shall be done to the satisfaction of the City and in accordance with these Standards and Requirements, the approved plans, and any other Specifications or guidelines for the project.

It is emphasized that no work may be started until such plans are approved. Any revision to such plans shall be approved by the City Transportation Engineer and/or the City Surface Water Management Engineer before being implemented. Failure to receive the City's approval can result in removal or modification of construction improvements at the applicant's expense to bring it into conformance with the approved plans.

Control of Materials

When requested, the applicant shall notify the City Transportation Engineer and/or the City Surface Water Management Engineer of proposed sources of supply for all materials to be furnished. Representative preliminary samples or test data of the character and quality prescribed may be required to be submitted by the applicant for examination by the City Transportation Engineer and/or the City Surface Water Management Engineer.

Only materials conforming to the requirements of the WSDOT/APWA Standard Specifications and these Standards shall be used in the work, unless otherwise approved by the City Transportation Engineer and/or the City Surface Water Management Engineer. Any of the materials proposed to be used may be inspected or tested at any time during their preparation and use. If after testing it is found that sources of supply that were previously approved do not furnish a uniform product, or if the product from any

approved source proved unacceptable at any time, the contractor shall furnish approved materials from other approved sources.

The contractor shall, at any time requested, submit to the City Transportation Engineer and/or the City Surface Water Management Engineer properly authenticated documents or other satisfactory proofs as to their compliance with the contract requirements. If the examination of the documents reveals any defects in the work, such defects shall be repaired or replaced as the City may direct before final acceptance. The cost of all such repairs and replacements shall be borne by the applicant.

Samples and Tests

At the direction of the City Transportation Engineer and/or the City Surface Water Management Engineer, the applicant shall direct a certified testing laboratory to conduct necessary field and/or lab tests of materials or methods.

All testing shall be in accordance with ASTM and/or AASHTO standards, WSDOT Standards, or other common industry standards approved by the City Transportation Engineer and/or the City Surface Water Management Engineer.

The field tests of materials shall be made as deemed necessary by the City Transportation Engineer and/or the City Surface Water Management Engineer at no cost to the City. In general, tests shall be made at the frequency as outlined by the applicable sections of the Standard Specifications.

The developer shall furnish, without charge, samples of all materials as requested by the City Transportation Engineer and/or the City Surface Water Management Engineer. Materials shall not be used until approved.

The testing laboratory representative should be present during all field tests. Regardless, the City Transportation Engineer and/or the City Surface Water Management Engineer shall be furnished with certified copies of the complete test reports direct from the testing lab.

Materials shall be delivered on the work in advance in such quantities as to afford the City Transportation Engineer and/or the City Surface Water Management Engineer an opportunity to make tests before the materials are to be used.

Bonding

Bonds or other allowable securities will be required by the City to guarantee the performance or maintenance of required civil-related work. The type and amount of security will be determined by the City Transportation Engineer and/or the City Surface Water Management Engineer. Types of securities include, but are not limited to, binding a surety or an assigned savings account. Typically the City will select an assignment of funds.

Protection of Public and Private Utilities

The contractor shall be responsible for locating all existing utilities and protecting the same against damage whether shown on the plans or not. The contractor shall support and protect all pipes, curbs, conduits, poles, wires or other apparatus which may be in any way affected by the work, and do everything to support, sustain, and protect the same, under, over, along, or across said work. In case any of said public or private utilities should be damaged, they shall be repaired by the contractor whenever feasible on the private/public utility having control of same, and the expense of such repairs, shall be the responsibility of 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 the breaking of any water pipe, sewer, or gas pipe, electric conduit or other utility by or through his/her negligence.

Damage to Private Property and Improvements

The contractor's work shall be confined to the jobsite premises and necessary off-site easements and they shall not enter upon or place materials on other private premises except by written consent of the individual owners, and shall hold harmless the City from all suits and actions of every kind that might result from the use of private property.

The contractor shall take adequate precautions to protect existing lawns, trees and shrubs outside public right-of-way, sidewalks, curbs, pavements, utilities, adjoining property, structures, and to avoid damage thereto, and shall at their own expense completely repair any damage thereto caused by their operations to the satisfaction of the City Transportation Engineer and/or the City Surface Water Management Engineer. All impacted property owners must be notified in advance of said work.

Construction Inspection

The City Transportation Engineer and/or the City Surface Water Management Engineer may appoint project engineers, assistants, and inspectors as necessary to inspect the work and materials and they will exercise such approval authority as the City Transportation Engineer and/or the City Surface Water Management Engineer may delegate. Such inspection may extend to any or all parts of the work and to the preparation and/or manufacture of the materials to be used.

All work performed within the public right-of-way or easements, or as described in these standards, whether by or for a private developer, will be done to the satisfaction of the City and in accordance with the WSDOT/APWA Standard Specifications, any approved plans and City Standards. The City Transportation Engineer and/or the City Surface Water Management

Engineer must approve any revision to construction plans before being implemented.

Generally, on all privately developed infrastructure road and drainage facility construction proposed or in progress by a private developer, control and inspection will be done by the City's Engineering Inspector on behalf of the City Transportation Engineer, and the City's Surface Water Management Inspector on behalf of the City Surface Water Management Engineer.

The applicant is ultimately responsible for quality control of construction and the assurance of meeting the standards. The Inspectors will monitor these activities with enforcement authority when requirements are not met.

All materials provided by the contractor shall be subject to inspection and approval by the Inspectors at any time during the progress of work until final acceptance. The contractor's construction schedule shall include sufficient time for materials testing and any required verification by the Inspector.

All roadway and drainage infrastructures must be inspected. Subgrade inspection will not commence until density tests confirm that the compaction is in accordance with the Specifications.

Authority and Duties of Inspectors

The Inspectors will have the authority to reject defective material and suspend work that is being done improperly. The Inspector may advise the applicant or contractor of any faulty work or materials; however, failure of the Inspector to advise the applicant or contractor does not constitute acceptance or approval.

The City's right to conduct inspections is to determine if acceptable construction practices are being followed. The inspection process does not make the City an insurer or guarantor of contractor compliance or competence. Responsibility for any failures to follow these Standards rests solely with the developer and its agents.

At the Inspector's order, the applicant/contractor shall immediately remedy, remove, replace, or dispose of unauthorized or defective work or materials and bear all the costs of doing so.

The Inspector's will have the authority to require revisions to approved engineering plans when necessary due to conflicting field conditions.

Failure to comply with the provisions of these Standards may result in stop work orders, removal of work accomplished, or other penalties.

All work conducted on electrical and communications systems shall be permitted and inspected by the City of Des Moines Electrical Inspector.

Inspection Scheduling

Prior to any critical task being started the applicant/developer/contractor must schedule an inspection in advance.

At a minimum the following critical tasks require advance notification:

Pre-construction Conference
Three working days prior notice. Pre-construction conference must precede the beginning of construction and include the applicant, contractor, design engineer, utilities, and other applicable participants. Plan approvals and permits must be in hand prior to the conference. Utilities in good standing with the City are not required to schedule a Pre-construction meeting.

Clearing and Temporary Erosion/Sedimentation Control
One working day notice prior to initial site work involving drainage and installation of temporary erosion/sediment control.

Utility and Storm Drainage Installation
One working day notice prior to trenching and placing of storm sewers and underground utilities such as sanitary sewer, water, gas, power, telephone, and TV lines.

Utility and Storm Drainage Backfill and Compaction
One working day notice before backfill and compaction of storm sewers and underground utilities.

Sub-grade Completion
One working day notice at the stage that underground utilities and roadway grading are complete; to include placement of gravel base if required.

Curb, Gutter and Sidewalk Forming
One working day notice to verify proper forming and preparation prior to pouring concrete.

Curb, Gutter and Sidewalk Placement
One working day notice to check placement of concrete.
Crushed Surfacing Placement
One working day notice to check placement and compaction of crushed surfacing base course and top course.

Paving
Three working days notice in advance of paving with asphalt or Portland Cement Concrete.

Signing, Striping, and Pavement Markings

Three working days notice in advance of final application, and after layout work has been completed.

Structural
Three working days notice prior to each critical stage such as placement of foundation piling or footings, placement and assembly of major components, and completion of structure and approaches. Structural tests and certification requirements will be as directed by the City Transportation Engineer and/or the City Surface Water Management Engineer.

Punch-list Inspection
15 working days prior to overall check of road or drainage project site, to include completion of paving and associated appurtenances and improvements, cleaning of drainage system, and all necessary clean-up.

Final Inspection
Prior to final approval of construction work, acceptance and release of construction performance financial guarantees, the applicant/contractor shall pay any required fees, submit any required maintenance and defect financial guarantees, provide a certificate of monumentation and submit required record drawings reflecting all minor and design plan changes of the road and drainage systems.

Final Maintenance Inspection
The final maintenance inspection is performed by the City 45 days prior to the end of the maintenance period. Prior to release of the maintenance financial guarantee, there shall be successful completion of the maintenance period, replacement/repair of any failed facilities, and the payment of any outstanding fees.

Penalties for Failure to Notify and Obtain Approval

Notification by the applicant or the applicant's contractor is essential for the City to verify, through inspection, that the work meets Standards. Failure to notify and obtain approval will result in the City requiring sampling and testing with certification by a private laboratory. Costs of such testing and certification shall be borne by the applicant. If the test results conclude that the unauthorized work doesn't meet the Standards, the applicant will be required to remove the unauthorized material and replace it with materials that meet at his/her own expense. At the time that such action is directed by the City Transportation Engineer and/or the City Surface Water Management Engineer, further work on the development may be limited or prohibited until all directed tests have been completed, approved, and all corrections identified by the City have been made to the satisfaction of the City Transportation Engineer and/or the City Surface Water Management

Engineer. If necessary, the City may take further action as set forth in the DMMC.

Call Before You Dig

All developers/contractors are responsible for timely notification of all utilities in advance of any construction in right-of-way or utility easements. The utility One-Call Underground Location Center phone number is 1-800-424-5555. This number should be prominently displayed on the work site. A minimum of two working days advanced notice is required.

Emergency Work

Should the work of a developer/contractor result in an emergency street or utility shutdown during non-working hours, the direct overtime costs of responding City personnel and any responding utility personnel will be billed to the responsible party. The Des Moines Public Works 24-hour emergency telephone number is (206)-550-5612.

Hours of Operation

Hours of operation will be from 7:00 AM to 7:00 PM, Monday through Friday, and 8:00 AM to 5:00 PM on Saturdays, Sundays, and Holidays per DMMC 14.04.170, except that the hours of operation for earth moving activities shall be 8:00 AM to 5:00 PM everyday per DMMC 14.24.130.

Traffic Control

A traffic control plan is required for any construction on or along traveled roadways. The contractor will be responsible for interim traffic control during construction on or along traveled roadways. Traffic control will follow the guidelines of the WSDOT/APWA Standard Specifications, and the MUTCD.

A Traffic Control Plan will be submitted to, and approved by the City Transportation Engineer prior to the start of construction. Traffic control shall follow the guidelines of Section 1-07.23 of the WSDOT/APWA Standard Specifications.

All barricades, signs, coning, and flagging will conform to the requirements of the MUTCD. Signs must be legible and visible, and shall be removed at the end of each work day if not applicable after construction hours.

All work zone traffic control devices used shall meet or exceed the requirements of crashworthiness as defined by the FHWA NCHRP Report 350. “Crashworthy” means they have met the test and evaluation criteria of Report 350 and/or have received a “Letter of Acceptance” from the FHWA.

All necessary and/or required traffic control devices will be in place prior to the beginning of the project construction, or on a daily basis during project construction.

All traffic signing, striping, and pavement markings removed during a construction project shall be replaced. Temporary striping shall be used on a limited basis and only as approved by the City Transportation Engineer. The engineering services division shall be contacted a minimum of 3 days in advance of installation to verify channelization layout.

When removal of existing pavement markings is required, a full-width overlay may be required by the City Transportation Engineer to remove any reflections of the old markings.

When road closures and detours cannot be avoided, the contractor will notify the Engineering Inspector within a minimum of 48 hours. The City will require a detour plan to be prepared, submitted, and approved prior to closing any portion of a City roadway.

When temporary road closures cannot be avoided the applicant/contractor shall post a notice of temporary road closure sign in accordance with the requirements of the City Transportation Engineer a minimum of 10 days prior to the closing. The types and locations of the signs shall be shown on a detour plan. A proposal for a road closure and a detour plan must be prepared and submitted to the City Transportation Engineer at least 20 working days in advance, (40 calendar days if arterial) and approved prior to closing any City road. In addition, the applicant/contractor must notify, in writing, local fire, school, or law enforcement authorities, Metro transit, garbage/recycling services, and any other affected persons as directed by the City Transportation Engineer at least 10 days prior to closing.

Haul Routes

When required by the City Transportation Engineer, a haul route agreement and/or plan must be prepared by the permittee and submitted for review and approval prior to beginning hauling.

A haul route agreement will generally be required for new and expanded hauling operations within the right-of-way. Haul route agreements are necessary to ensure that trucking activities do not impact roadway capacity, cause damage or accelerated deterioration to City roads, and to minimize impacts to surrounding residences and businesses.

These activities involve, but are not limited to, development construction, major utility construction, and similar operations. These agreements may be required through the SEPA process, or by the City Transportation Engineer. The absence of an agreement does not absolve the user from restoring the right-of-way.

Generally, a right-of-way use, special use, or conditional use permit will be required in conjunction with a haul route agreement. The agreement must be signed by the permittee prior to issuance of the permit to protect the integrity of the roadway surface and other roadway features within the right-of-way.

Additionally, existing operations may require a haul route agreement through a conditional use, special use, or right-of-way use permit.

At a minimum, the agreement shall include the haul route, type and number of haul vehicles, hauling period, hours of operation, signage and flagging, daily maintenance, and periodic and final right-of-way and roadway restoration. The City Transportation Engineer must approve the route. Failure to use the approved designated haul route may result in prohibition or limitation of further work on the development/property until such time as the requirements of the haul route are fulfilled.

The City Transportation Engineer and permittee shall make joint pre-activity and post-activity inspections of the proposed haul route. Conditions of the road prior to the anticipated activity will be analyzed, documented and agreed upon by the parties prior to signing the agreement and issuance of the permit. The City Transportation Engineer may require a restoration financial guarantee prior to signing the agreement. When hauling activities have been completed, conditions are again documented. The post-activity inspection will not be conducted until at least 30 days after completion of hauling activities. If damage occurred as a result of the hauling, prior to release of the financial guarantee the applicant is required to make necessary repairs or compensate the City for the actual costs required to repair the damage.

Pavement and Subgrade

Materials and application procedures shall be in accordance with WSDOT/APWA Standard Specifications.

Hot mix asphalt (HMA) for wearing course shall not be placed on any traveled way between October 1 of any year and April 1 of the following year without written approval from the City Transportation Engineer. Asphalt for prime coat shall not be applied when the ground temperature is lower than fifty degrees Fahrenheit without written approval from the City Transportation Engineer. When discharged, the temperature of the HMA shall not exceed the maximum temperature recommended by the asphalt binder manufacturer. For surface temperature limitations, see Section 5-04.3(16) of the WSDOT/APWA Standard Specifications. Each truckload shall be covered with a suitable tarpaulin while in transit to prevent unnecessary heat loss.

Asphalt shall not be applied to wet material. Asphalt shall not be applied during rainfall or before any imminent storms that might damage the construction. The Inspector will have the discretion as to whether the surface and materials are dry enough to proceed with construction.

Pavement Cuts

Installations of utilities under all hard surface roadways within the City's right-of-way shall be jacked or bored, unless the utility can be installed just prior to reconstruction or overlay of the roadway. Exceptions will be on a case-by-case basis through a deviation request and with the expressed written

permission of the City Transportation Engineer if it can be shown that jacking or boring are not possible due to conflicts or soil conditions. The current WSDOT/APWA Standard Specifications, Sections 7-08 and particularly 7-08.3(3), will generally apply unless otherwise stated.

When approved, the open cut shall be a neat-line cut made by saw cutting a continuous line. Trench sides shall be kept as nearly vertical as possible. Compaction and restoration must be done as detailed below and immediately after the trench is backfilled, so as to cause the least disruption to traffic. The asphalt or cement pavement shall be cut a minimum of 2 feet beyond the edges of the trench.

Any applicant intending to trench existing or proposed City roads shall notify the City not less than 1 working day prior to beginning utility construction. Failure to notify may necessitate testing or retesting by the City at the expense of the Applicant. Furthermore, the work may be suspended pending satisfaction of test results.

With the exception of emergency repairs (as determined by the City), newly paved and overlayed street sections shall not be cut within the first 24 months of the pavement or pavement product application. Newly paved and overlayed street sections that are less then 24 months old which are cut shall require a full width overlay of the impacted area, as determined by the City Transportation Engineer.

The City Transportation Engineer, or designee, may in his or her discretion permit pot-holing (subject to conditions to alleviate the harmful effects) where conduit is to be placed underground by means of jacking or directional boring and the person seeking permission has provided satisfactory evidence that (a) such pot-holing is necessary to avoid interference with existing utilities; (b) such pot-holing is the only reasonable alternative available to locate existing utilities, and (c) such pot-holing will result in little or no visual or other detrimental impact to the street.

Pavement Cut Restoration

Restoration limits will be consistent with the City's pavement restoration details for trenches, or as determined by the City Transportation Engineer. Refer to the following Standard Drawings for more information:

DM.A7.1 - Pavement Patch Details: General Requirements
DM.A7.2 - Pavement Patch Details: Transverse Cuts
DM.A7.3 - Pavement Patch Details: Longitudinal Cuts
DM.A7.4 - Pavement Patch Details: Planning and Transverse Joints
DM.A7.5 - Pavement Patch Details: Exploratory Pothole Cuts

The restoration shall include but is not limited to repairing all failures and cracking of the paved surface, repairing failures caused by the construction

activity, rebuilding the cross-slope to uniformity, and overlaying the area where the pavement was removed.

At a minimum, all transverse cuts shall be patched in accordance with the Standard Drawings, and then overlayed to the nearest full lane width, or as determined by the City Transportation Engineer. Transverse cuts made in close proximity to a previous pavement patch area may require the two areas to be connected with a larger patch.

All longitudinal cut shall require a full lane overlay.

All diagonal pavement cuts shall require a full street overlay within the affected area.

All pavement cuts shall be subject to the City's pavement cut impact Fee Program. This fee is collected to mitigate the impact of pavement cuts on the overall quality and condition of the City's streets. Payment of the impact fee in no way releases the applicant's responsibility to provide quality repairs and construction. Improvements and/or repairs that fail shall be replaced or repaired at the expense of the applicant.

Trench Restoration and Compaction

1. The entire trench must meet 95 percent of the maximum density as determined by the compaction control tests described in Section 2-03.3(14)D of the WSDOT/APWA Standard Specifications.
2. Regardless of trench depth, a contractor can use native mineral soil or can import an unclassified mineral soil as backfill, provided the material meets the requirements of Section 9-03.14(3) of the WSDOT/APWA Standard Specifications for Common Borrow. The material shall not contain more than three-percent organic material by weight. The material shall be mechanically compacted to a minimum of 95 percent of maximum density. When the material remaining in the trench bottom is unsuitable, the excavation shall be continued to such additional depth and width as required by the Inspector. In any trench where compaction cannot be attained with the native or unclassified backfill, the trench must be backfilled and compacted with "Gravel Borrow" that meets the requirements of WSDOT/APWA Standard Specifications, Section 9-03.14(1), consistent with Table 7-2. The "Gravel Borrow" shall be mechanically compacted to a minimum of 95 percent of maximum density.
3. After backfill and compaction an immediate cold mix patch shall be placed and maintained in a manner acceptable to the City Transportation Engineer. On asphalt pavement, a permanent hot mix patch the same thickness as the existing asphalt or a minimum of 4", whichever is greater, shall be placed and sealed with a paving grade asphalt within 14 calendar

days. Cement concrete pavement shall be restored in accordance with Sections 5-05 and 6-02 of the WSDOT/APWA Standard Specifications.

4. Backfill used for trenches exceeding 15 feet in depth will require a soil analysis prior to plan approval.
5. Backfill outside the roadway prism shall be excavated material free of wood waste, debris, clods and/or any rocks exceeding 6” in any dimension and meet compaction requirements.
6. Restoration of a trench within an asphalt pavement shall include a minimum of 6” of crushed surfacing material and HMA the same thickness as the existing asphalt pavement or a minimum of 4”, whichever is the greater. When required, the roadway shall then be overlaid full-width with a minimum of 2” compacted depth HMA. Prior to the overlay, transverse joints and vertical curb lines shall be planed in accordance with Standard Drawing DM.A7.3. Exceptions to this overlay requirement will be granted only through an approved deviation, subject to approval by the City Transportation Engineer, after considering the pre-existing condition, damage caused by construction, and rating of the pavement. Concrete pavement shall be restored consistent with Sections 5-05 and 6-02 of the WSDOT/APWA Standard Specifications. Any concrete pavement traffic lane affected by the trenching shall have all affected panels replaced.