CITY OF NEWBERG SPECIAL PROVISIONS FOR INSTALLATION OF UNDERGROUND UTILITIES

A supplement to Right-of-Way Permit for Subsurface Work

I. SPECIFICATIONS AND DETAILS

All construction and materials shall conform to the latest regulations, specifications, codes, standards, and requirements of the City of Newberg, American Public Works Association (APWA), Oregon Department of Transportation (ODOT), and Oregon Health Division (OHD), except as modified by these Special Provisions. In case of a conflict, the most stringent requirements shall govern.

The construction site shall be in accordance with all applicable OSHA regulations.

Other agency specifications for construction material or methods may be substituted as satisfactory alternates, if equal or better, only with prior written approval of the Public Works Director or his/her representative. Engineering reports and laboratory tests may be required by the City to substantiate alternate materials or specifications at no cost to the City.

II. PLANS, SPECIFICATIONS, ENGINEERING

A. Preparation of plans, specifications, construction and inspection for the underground utility should be performed under the supervision of a licensed civil engineer, registered in the State of Oregon. Plans prepared by the utility companies for the distribution of gas, electric power or for telecommunication service need not be prepared by registered engineers, but shall be reviewed by the utility companies for compliance with the requirements.

B. Plans shall be submitted on a maximum size sheet of 36" x 24" and must be neat, clear, legible and complete in all respects. The scale shall be commensurate with the detail and in no case smaller than 1" = 100' plan, and 1" = 5' profile. Power facilities must be submitted in profile where the trade size of a single conduit exceeds six inches (6") in diameter or where multiple conduits including the concrete encasements are sixty (60) square inches or greater in cross-sectional area. In addition, profiles may be required by the City in cases of possible alignment or grade conflicts, cover problems or crossing conflicts. Plans should be submitted concurrently with the permit application for review.

   The City may require submission of a set of as-built plans, if any field changes were affected.

III. STREET OPENING RESTRICTIONS

The City places a restriction on the excavation of any City streets that are newly constructed, or have been reconstructed, repaved or re-surfaced within the last five

(5) years of time, except in the event of an emergency. A permit is still required for emergency work but the application at the City will be expedited.

When all other non-street opening alternates are exhausted for non-emergency work, approval may be granted by the City staff on a case by case situation. However, in all cases, more stringent requirements shall be followed. A City map showing street moratorium, as subject to change, is available upon request.

IV. EXCAVATION, BACKFILL, COMPACTION, LINE DEPTH AND TESTING

A. Excavation – All excavation shall conform to the requirements of Section 405 of the Oregon Standard Specifications for Construction 2002, as revised, except as modified in these Special Provisions. Notification of all utilities is required by calling 1-800-332-2344 at least two (2) business days but no more than ten (10) business days in advance of an excavation.

   The maximum length of open trench shall not exceed 200 feet at any one time and shall not remain open overnight. Trenches shall be covered with steel plates for temporary protection at the close of each work day. Pin the plates and cold patch with asphalt concrete if left in travel path. When steel plates are used to bridge across a trench on streets with a posted speed of 30 MPH or greater, the steel plates shall be recessed into the asphalt to provide a smooth travel path.

B. Backfill Materials – Backfill shall be granular material such as ¾"-0" crushed rock.

   Backfill for an approved street moratorium work shall be a controlled density fill (CDF). CDF is a highly flowable lean concrete mixture of fly ash, cement, commercial grade sand, water and admixtures, if necessary. CDF shall attain a 28-day compressive strength of no less than 100 psi and no more than 150 psi. A written certification of a 28-day cylinder report from a trial CDF batch shall be submitted for approval prior to its use. It shall be placed to the bottom of the existing pavement layer, or three (3) inches minimum from the surface, whichever is greater, and shall be properly plated until adequately set to accommodate traffic loads and allow for the placement of the asphalt concrete surface. A mix design shall be submitted for City review.

C. Compaction – Select appropriate equipment based on the type of material being compacted and the layer thickness. After compaction of each layer, the density shall be at least 95% of maximum density in backfills. Care shall be exercised for the initial compaction over any flexible pipe.

D. Minimum Depth of Lines – All underground utility lines shall have a minimum cover of three (3) feet beneath the finish surface. Cover is defined as the difference in elevation between the top of the line or pipe and the ultimate gutter grade of the roadway if paving will follow or to the top of the existing pavement. For facilities in easement areas, cover is defined as the difference in elevation between the top of the line or pipe and the natural or regraded ground surface, whichever is less.

E. Testing

1. Compaction Tests – Follow AASHTO T180, Method D, for a minimum 95% modified Proctor density.

2. Frequency – The tests shall be made at the locations and depths specified by the Public Works Director or his/her representative. A minimum of one set of tests will be required for each four feet (4') of trench depth for trenches within two feet (2') of a paved road or back of curb. Otherwise, one set of tests will be required for each six feet (6') of trench depth.

   The minimum number of passing tests per set anticipated for specification compliance may be estimated as follows:

   a. Pavement cut crossing – one (1) set of passing tests per crossing.
   b. Longitudinal pavement cuts or the edge of the trench within two feet (2') of a paved road or back of curb – one set of passing tests per five hundred feet (500'), with one set of passing tests minimum per City block.
   c. All other locations – one set of passing tests per one thousand feet (1,000'), with one set of passing tests minimum per City block.

3. Tests shall be taken at four-foot (4') or six-foot (6') vertical increments in the same vertical plane. Copies of all test reports shall be identified as to project and location by the testing laboratory and forwarded to the City inspector. The compaction test(s) shall meet the required compaction prior to the installation of additional lifts of fill material and all lifts shall meet compaction prior to pavement restoration.

4. The City inspector reserves the right to order load tests to determine the suitability and adequacy of the backfill prior to pavement restoration. Such tests shall be performed with a vehicle, loaded to approximately an eighteen thousand (18,000) pound axle load. Movement or settlement of backfill shall be cause for rejection of the work by the City. Load retest and corrective measures as necessary shall be at the expense of the utility owner and/or contractor.

V. PAVEMENT CUTTING, PAVEMENT RESTORATION & BORING

A. All cuts in asphalt or concrete pavement shall have saw cut or neat and straight edges, extending at least six inches (6") beyond each side of the trench ("T-cut"). Excavated pavement material shall be removed from the site and properly disposed of.
B. The asphalt material used for the replacement of pavement cuts shall be class 'C' asphalt. The thickness of the pavement and aggregate base replaced shall be consistent with the thickness of the existing asphalt pavement and base but in no case less than a compacted thickness of four inches (4"). Sand and seal all joints at pavement cuts.

C. All concrete replacement shall be Class A (28-day compressive strength at no less than 3,000 psi). No site batch concrete is allowed. The thickness of Portland Cement Concrete pavement replacement shall be consistent with the thickness of the existing section, but in no case less than six inches (6"). The existing pavement shall be trimmed to a neat edge and the joint shall be properly sealed to insure a proper bond between the existing and new pavements.
D. It is required that all roadway crossing of lines four inches (4") in diameter or less be bored under the pavement in street moratorium.
E. Surface Tolerance – The completed surface, when ready for acceptance, shall be thoroughly compacted, smooth and even, true to grade and cross-section, and free from ruts, humps, depressions, or irregularities. When a 10-foot straightedge is laid on the finished surface and parallel or perpendicular with the centerline of the road, the surface shall vary in no place more than 1/8 inch from the lower edge of the straightedge. No "burning or infrared heating" is allowed to lower pavement high points.

VI. SURFACE RESTORATION OF GRAVELED OR EARTH SURFACE ROADS

The surface replacement for gravel surfaced roads shall be consistent with the existing surface material in place.

Fill placed on existing gravel surfaced roads or earth surfaced roads to obtain minimum allowable cover over the pipe or utility lines shall be placed to proper grade for the full widths of the existing roadway and shall be compacted and graded to the satisfaction of the City Inspector. Care shall be taken to avoid altering or impeding natural drainage and creating dust or maintenance problems that did not exist prior to work.

VII. MISCELLANEOUS

The utility company shall secure a right-of-way (subsurface) permit from the City prior to the start of any subsurface construction operations within the City's rights-of-way. Follow instructions on the permit application form. Adhere to all the general and special provisions for the approved work.

The permittee shall notify the property owner or resident of adjoining occupied property at least twenty-four (24) hours prior to disruption of access to the property, and at no time deny access to the property longer than eight (8) consecutive hours, and shall provide adequate means for crossings, if necessary.

The permittee shall notify the inspector twenty-four (24) hours prior to beginning any work or testing. The inspector will inform the permittee which stages of construction will require inspection.

The permittee is responsible for insuring all other utilities not impeded during and after the approved work.

Only rubber-tired equipment shall be used on pavement, except that crawler equipment using street pads may be used.

The contractor shall prevent the unnecessary discharge of dust and dirt into the air in dry weather and mud on pavement in wet weather. During the course of work, the permittee shall maintain the work area in a clean and orderly condition. Excess excavation, debris, etc., will not be permitted to accumulate on the road surface or shoulders. Work shall progress in such a manner that no condition, such as soft trenches, drop-offs from the edge of pavement, unnecessary lane restrictions, etc., will exist. Upon completion of the installation, the permittee/contractor shall clean the pavement surface and restore the site to the satisfaction of the City inspector.

VIII. DETAILS

The permittee/contractor shall follow any applicable City standard drawings. Some are noted here for convenience but not limited to them. Approval of any new detail drawings as suggested by utility companies may be granted on a case by case situation.

A. City Standard Drawings
   - 201 Trench Backfill
   - 202 Pipe Bedding
   - 517 Trench Paving
   - 527 Asphalt Pavement Repair

B. Supplemental (S) Details
   - S201 Alternate CDF Backfill for a Small Service Cut or Repair (as approved by the City)

SUPPLEMENTAL DETAIL NO. S201
NOT TO SCALE
(AS MODIFIED FROM DRAWING NO. W-00-09-A FROM NW NATURAL GAS)

ALTERNATE CDF BACKFILL FOR A SMALL SERVICE CUT OR REPAIR
(NOT FOR MAIN LINE OR WHERE TRUCK LOAD OF CDF IS NOT PRACTICAL)