

## SECTION 00700

### GENERAL IMPROVEMENT REQUIREMENTS

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. This section defines the general requirements for improvements to be built by the Developer.

##### 1.02 GENERAL REQUIREMENTS

- A. The Developer is responsible to comply with these standard specifications. Alterations, substitutions, or changes from these standard specifications shall not be allowed unless prior authorization is obtained from the City Engineer. The developer is responsible for providing all documentation and research supporting requests for changes to these standards, and the associated costs. The City Engineer will decide all questions which may arise as to the quality and acceptability of alterations, substitutions, or changes proposed. In case any question should arise, relative to these standards, the final determination or decision of the City Engineer shall be complied with as a condition of the Developer receiving final approval of the work being questioned.
- B. The improvements shall include all street improvements in front of all lots and along all dedicated streets to a connection with existing improvements of the same kind or to the boundary of the subdivision nearest existing improvements.
- C. Public roads shall not exceed a grade of 8% without approval from the City Engineer. Under special circumstances grades up to 10% may be approved, conditioned upon 1) providing individual designs to construct ADA compliant handicap ramps, and 2) incorporating a 60' transition to a 4% grade at intersections.
- D. The developer is required to slurry seal all street improvements one year after final inspection.
- E. Layout must provide for future extension to adjacent development and to be compatible with the contour of the ground for proper drainage.
- F. All water, sewer, irrigation and any other buried utility or conduit shall be installed to the boundary lines of the subdivision. For existing lots of record the utility for which service is needed shall be extended through the entire frontage of the property unless otherwise directed by the City Engineer.
- G. All parcels receiving water, sewer, or irrigation service shall have their own independent services and laterals. These laterals or services shall be contained within the parcel or property for which the service is intended to eliminate special utility easements crossing adjacent properties. Deviation from this requirement, regardless of how or when it is determined to be in violation at the complete discretion of the City Engineer and Public Works Director.
- H. If construction requires a specification not found herewith and is deemed necessary by City Engineer, the City Engineer will be allowed two weeks to provide an adequate specification to control and provide guidelines for construction.
- I. Inspection: The term "inspection" or its derivatives means a review of the project, including but not limited to a visual review of the work completed to date. It does not include or imply an

exhaustive or detailed review of the Work nor does it create a duty on the part of the Engineer or Owner to detect latent defects.

- J. Temporary hard surfaced cul de sacs are required on all dead end public streets that will be extended and are greater than one lot in length. The cost of installing the future curb, gutter, sidewalk, driveway extension etc., when the temporary cul de sac is removed, shall be escrowed with the City.
- K. Easements for water, sewer, or storm drains not in the public right of way shall be a minimum of 20 feet for a single utility and dedicated solely to Heber City for the given use. Public Utility Easement's shall not be used in lieu of dedicated easements for new utilities and access.
- L. Public utility easements (PUE's) shall be 10ft wide around perimeter of standard lots. Cottage lots shall have the side lot PUE's reduced to 6 feet.
- M. The top back of curb shall be stamped in the following manner, showing locations of water, sewer, and secondary irrigation stub pipes:
  - a. A "W" stamp for culinary water.
  - b. An "S" stamp for sewer.
  - c. An "I" stamp for secondary irrigation.
  - d. A brass pin will be imbedded in the curb marking the location of each property line.

## PART 2 SUBMITTALS

### 2.01 DRAWINGS

- A. Complete and detailed construction plans and drawings of improvements shall be submitted on mylar to the City Engineer for signature prior to final approval of the project by City Council. The mylar construction drawings will not be signed by the City Engineer until the following items have also been completed:
  - 1. The plan check procedure has been completed.
  - 2. All required easements have been designated on the subdivision plat or dedicated by separate document to the City.
  - 3. An Engineers Estimate of the improvement costs has been submitted to the City.
- B. The Mylar plat map will not be signed by the city engineer for recordation until the following items have also been completed:
  - 1. The performance agreement has been completed and executed.
  - 2. All required water shares have been transferred to the city.
  - 3. The City escrow deposits have been paid in full.
  - 4. Three (3) sets of blue line construction plans, printed from the signed mylars have been provided to the City.
- C. The signed construction drawings will be valid for two (2) years from the date of City approval. If construction has not begun within two (2) years from the approval date, the drawings shall become null and void. Expired drawings will require rechecking by the City.

- 2.02 CUT SHEETS: Two (2) sets of cut sheets and profiles shall be submitted for sewer, storm water, culinary water, auxiliary lines, and curb & gutter. Allow 7 days for City Engineer review.

### PART 3 REQUIREMENTS

- 3.01 STANDARDS FOR CONSTRUCTION DRAWINGS: The following instructions are for the purpose of standardizing the preparation of drawings to obtain uniformity in appearance, clarity, size and style.

- A. Three (3) sets of the approved construction drawings shall be submitted to the City Engineer.
- B. One approved set shall be kept available at the construction site.
- C. The plans and designs shall meet the standards defined in the Specifications and Drawings. The minimum information required on drawings for improvements are as follows:
  - 1. All drawings and/or prints shall be clear and legible and conform to good engineering and drafting room practice.
  - 2. Size of drawings shall be 24" x 36" and 11" x 17" (trim line) with minimum borders of ½" on top, bottom, and right sides, left side 1 ½".
  - 3. North arrow (plan).
  - 4. Scale and elevations referenced to U.S.G.S. datum.
  - 5. Stationing and elevations for profiles.
  - 6. Title block, located in lower right corner of sheet to include:
    - a. Name of City.
    - b. Project title (subdivision, etc.).
    - c. Specific type and location of work.
    - d. Space for approval signature of City Engineer and date.
    - e. Name of engineer or firm preparing drawings with license number.

- 3.02 CURB AND GUTTER, DRAINS AND DRAINAGE STRUCTURES, SIDEWALKS, AND STREET SURFACING DRAWING REQUIREMENTS

- A. Scale: 1"=50' horizontal; 1"=5' or 10' vertical.
- B. Plans and profiles for each side of the street whether existing or proposed with elevations clearly indicated. Centerline profile may be eliminated.
- C. Stationing and top of curb elevations with curve data for all curb returns.
- D. Flow direction and type of cross drainage structures at intersections with adequate flow line elevations.
- E. B.M. location and elevation (use U.S.G.S. datum).
- F. Type of curb and gutter and distance from front to back of curb.
- G. Cross slopes to gutter as shown on the standard cross section drawings.
- H. Vertical curves for grade breaks equal to or greater than 1%.

- I. Typical street cross- section for all street sizes and variations.
- J. Street survey monument locations.
- K. Plan and profile of existing ground and purposed profiles extending 200' beyond the proposed project.
- L. Requirement to install reference pins in curb identifying location of property lines.
- M. Street address and regulatory signs at each intersection.
- N. Sleeves for all utility crossings i.e. phone, power, gas, and cable.
- O. Street Lights

### 3.03 SEWER DRAWING REQUIREMENTS

- A. Scale: 1"=50' horizontal; 1"=5' or 1"=10' vertical.
- B. Location, size and grade of mains.
- C. Manhole size, location and flowline elevation.
- D. Type of pipe.
- E. B.M. location and elevation (use U.S.G.S. datum).
- F. Profile Drawing

### 3.04 CULINARY WATER DRAWING REQUIREMENTS

- A. Scale: 1"=50' horizontal; 1"=5' or 1"=10' vertical.
- B. Size and location of water mains, valves, hydrants, and related appurtenances.
- C. Type of pipe.
- D. Minimum cover.
- E. Details of all utility conflicts.

### 3.05 IRRIGATION PIPE

- A. Scale: 1"=50' horizontal; 1"=10' vertical.
- B. Location, size and grade of mains. The mains shall be sloped to drain.
- C. Elevations of main shall provide minimum 3 feet of cover on transmission lines and 2 feet of cover on distribution lines.
- D. Type of pipe
- E. B.M. location and elevation (use U.S.G.S. datum)

### 3.06 STRUCTURES

- A. Each set of plans shall be accompanied by a separate sheet of details for structures which are to be constructed.
- B. All structures shall be designed in accordance with minimum requirements established by the Heber City Standard Specifications.
- C. All structural drawings shall contain the following:
  - 1. Scale of each detail.
  - 2. Title block, lower right hand corner on all sheets, include name of subdivision.
  - 3. Completely dimensioned and described.

## PART 4 EXECUTION

### 4.01 GENERAL

- A. All construction work involving the installation of improvements in subdivisions shall be subject to inspection by the City.
- B. Certain types of construction require approval prior to proceeding with the work while other types only require periodic inspection while the work is occurring.
  - 1. Approval is required prior to proceeding with the following types of work:
    - a. Placing concrete for curb, gutter, sidewalks, thrust blocks, collars and other structures.
    - b. Connections or tie-in's to existing water, sewer, storm drain, and irrigation systems
    - c. Pipe line flushing, pressure testing, and videoing of water, sewer, storm drain, and irrigation lines.
    - d. Street subgrade proof roll, placing subbase, and laying street asphalt.
  - 2. Periodic inspections shall be required on the following:
    - a. Street grading and gravel base.
    - b. Excavations for curb and gutter and sidewalks.
    - c. Excavations for structures.
    - d. Trenches for laying pipe.
    - e. Forms for curb and gutter, sidewalks and structures.
    - f. Laying of street surfacing.
- C. On construction requiring approval prior to proceeding with the work, any work done in the absence of an inspector's approval shall be subject to rejection.

### 4.02 PRECONSTRUCTION CONFERENCE

- A. A preconstruction conference shall be held before any excavation or other work is begun in the subdivision or project. The meeting will be held in the City Public Works Office and will include: (a) City Engineer; (b) Developer or Project Manager; (c) Subdivision or Project Engineer; (d) all Contractors and Subcontractors involved with installing the subdivision or project improvements; (e) a representative of Heber City Inspection Department; (f) representatives of local utility companies as may be required by Heber City. Items pertaining to the construction and inspection

of the subdivision or Project Improvements will be discussed. One (1) copy of the Heber City Standard Specification and Drawings will be issued to the contractor during this meeting. Additional copies may be obtained for \$20.00 each.

#### 4.03 REQUESTS FOR INSPECTION

- A. Requests for inspections shall be made to the City, in writing or by personal contact with the inspector assigned to the project, by the person responsible for construction.
- B. Requests for inspection on work requiring continuous inspection shall be made three (3) days prior to the commencing of the work.
- C. Notice for all other inspections shall be given one (1) working day in advance of the required inspection (subsequent inspections and reinspection shall require the same notification period).
- D. After hour and/or weekend inspections are available under extreme conditions for \$75 per hour.
- E. The Contractor/Developer shall GPS surface features (i.e. valves, meter cans, hydrants, cleanouts, manholes, irrigation boxes, etc.) for the Record Drawings. The Contractor/Developer shall coordinate with the Heber City Public Works Department to expose and GPS all underground features (i.e. corp. stops, transitions and/or fittings, etc.) for City Mapping of the utilities.

#### 4.04 REQUESTS FOR WATER SHUT DOWN

- A. Request for water shut down shall be made a minimum of 24 hours prior to the desired shut down.
- B. Requests shall be made to the Public Works Superintendent and include, date, time and location.
- C. Valves are to be opened and closed by City personnel only.
- D. Contractor is to provide a minimum of 24 hour notification to all customers affected by the shut down including but not limited to door to door contact and a flyer or handout describing the estimated date, time, location of the shut down, and emergency phone number.

#### 4.05 CONSTRUCTION COMPLETION INSPECTION

- A. An inspection shall be made by the City Engineer after all construction work is completed.
- B. Any faulty or defective work shall be corrected by the persons responsible for the work within a period of thirty (30) days of the date of City Engineers Inspection Report defining the faulty or defective work.
- C. The Developer shall furnish mylar "Record" drawings of all improvements prior to subdivision final approval. Record Drawings shall be the original mylar drawings, signed by the City and engineer of record with corrections of minor changes that occurred during construction noted. Major changes that significantly change a drawing sheet will have a new mylar sheet created during construction and resigned by the City Engineer.

In addition, electronic files of the original mylars shall be submitted in PDF format, along with the corrected AutoCad files, on a CD.

#### 4.06 GUARANTEE OF WORK

- A. The Developer shall warrant and guarantee the improvements by executing Heber City's standard performance agreement and posting a bond, acceptable to the City, for up to 20% of the value of

the improvements constructed. The improvements provided for hereunder, and every part thereof, will be guaranteed to remain in good condition for a period of two (2) years, after the date of Final Acceptance by the City Engineer. Developer agrees to make all repairs to the improvements during the guarantee period at no cost to the City. The guarantee period may be reduced to one (1) year if final acceptance occurs between April 30th and November 1<sup>st</sup> and, if in the opinion of the City, the developer or the contractor's past performance has been excellent.

- B. The determination for necessity of repairs and maintenance of the work rests with the City Engineer. His decision upon the matter shall be final and binding upon the Developer, and the guarantee hereby stipulated shall extend to and include, but shall not be limited to the entire street base, and all pipe, joints, valves, backfill, and compaction as well as the working surface, curbs, gutter, sidewalks, and other accessories that are, or may be affected by the construction operations, and whenever, in the judgment of the City Engineer, said work shall be in need of repair or rebuilding.
- C. If the Developer fails to begin making repairs within ten (10) days from the date of the service of such notice, the City Engineer shall have such repairs made and the cost of such repairs shall be paid by the Developer together with an additional 25 percent for stipulated damages for failure on the part of the Developer to make the repairs.

#### 4.07 SUBDIVISION ORDINANCES

- A. The Developer and his Engineer must familiarize themselves with the existing subdivision ordinances, requirements of which are not included in these standards.

#### 4.08 ROADWAY PERMITS

- A. For construction material and procedures not addressed by the specifications, the most recent revision of the standard specification of the following agencies shall apply:
  - 1. American Association of State Highway & Transportation Officials. (AASHTO).
  - 2. American Society for Testing & Material (ASTM).
  - 3. American Waterworks Association (AWWA).
  - 4. Uniform Building Code of the International Conference of Building Officials (UBC).
  - 5. Utah Department of Transportation (UDOT) Standard Specifications and Standard Plans.
  - 6. Manual on Uniform Traffic Control Devices (MUTCD).

#### 4.09 BUILDING PERMIT AND OCCUPANCY

- A. Subdivisions and other large scale development shall be complete and accepted as defined in Heber City ordinances before a building permit will be issued. Such completion shall be certified in writing by the City Engineer. The certification shall verify that the project has been built as per approved plans.
- B. Occupancy will be allowed within any subdivision or development only upon compliance with Heber City Ordinances.

#### 4.10 UNUSUAL LOADINGS

- A. In unusual circumstances of structural loading, the City Engineer shall have the authority to require measures to strengthen structure and/or foundations as needed to protect the City's interests.

4.11 SNOW REMOVAL FOR ROADS AND FIRE HYDRANTS

- A. The owner of the subdivision or other large scale development shall be responsible to keep the roads and the fire hydrants cleared of snow until the roads are accepted by the City Engineer.
- B. The fire hydrants shall be cleared for at least three (3) feet in all directions.

END OF SECTION