





**WATER**

**General Notes**

- All materials and practices shall be as specified in the North Central Texas Council of Governments Standard Specifications for public works construction (with most recent amendments).
- All cast iron and ductile iron fittings shall be mechanical joint or slip joint for cast iron pipe and double flange pipe joints, slip joint, or bell and gasket for PVC water pipe. All mechanical joint fitting shall require gaskets.
- All water mains shall have the following minimum cover or sufficient cover to clear other utilities:
  - 6" and smaller - 48" cover
  - 8" - 54" cover
  - 10" and 12" pipe - 54" to 60" cover
- Remove all bleeder lines upon completion of testing.
- All ductile iron or cast iron pipe and/or fitting shall be polywrapped.
- Where conflicts occur, wrap water line around inlets to obtain 1' minimum clearance.
- Double wrapped bronze saddles shall be used for making 2" or smaller taps.
- Adhere to most recent version of TNRCC requirements regarding water/sewer separation. These include requirements pertaining to new pipe being installed near existing pipe.
- Contractors shall coordinate the operation of all existing valves with the City of Glen Heights - Public Works Department. Contact Larry Pennington @ (972) 223-2107.
- All residential water services shall be as follows:
  - a. Water meter shall be installed on the lot. A water meter box, as approved by the City, shall be installed two (2) feet back of curb line.
  - b. The water service shall be a minimum of 1/2" diameter continuous type "K" soft copper pipe. Sand embedment shall be used around the pipe and corporation stop.
  - c. The Utility shall use a 1" wide piece of blue plastic flagging to the water service meter meter and shall have a minimum of 20" of flagging depth to the meter. The flagging shall be marked with the word "WATER" in 12 inch letters. The meter box shall be furnished and installed by the Utility Contractor after the completion of the final grading in back of the curb. Each service location will be marked on the curb with a single vertical saw mark by the Utility Contractor and tied to property corners or the "As-Built" record plans.
- For non-residential water services, the meter box shall be furnished and installed by the Utility Contractor after the completion of the final grading in back of the curb. Meter box results shall be located inside of the meter box. Each service location will be marked on the curb or pavement with a single vertical saw mark by the Utility Contractor and tied to property corners on the "As-Built" record plans.

**SANITARY SEWER**

**General Notes**

- All materials and practices shall be as specified in the North Central Texas Council of Governments Standard Specifications for public works construction (with most recent amendments).
- All sanitary sewer pipes up to 18" shall be PVC SDR-35 pipe. Alternate pipe materials and materials for all larger pipe shall be approved by the City.
- Sanitary sewer laterals shall include 4" tee wye bend, pipe, and one-way cleanout as per City detail, installed 10 feet downstream from the water main service on each lot, unless otherwise indicated on the plans. 6" laterals require manhole at main sewer pipe.
- Sanitary sewer pipe joints shall conform to ASTM designations for PVC pipe.
- Drop manhole required for grade differences of 18" or greater.
- Adhere to most recent version of TNRCC requirements regarding water/sewer separation. These include requirements pertaining to new pipe being installed near existing pipe.
- Sanitary sewer service locations shall be marked on the curb with a double vertical saw mark by the Utility Contractor and tied to property corners on the "As-Built" record plans.

**STORM DRAINAGE**

**General Notes**

- All materials and practices shall be as specified in the North Central Texas Council of Governments Standard Specifications for public works construction (with most recent amendments).
- All storm sewer pipes shall be reinforced concrete pipe.
- Storm sewer pipes shall be minimum 18" diameter.

**PAVING**

**General Notes**

- All materials and practices shall be as specified in the North Central Texas Council of Governments Standard Specifications for public works construction (with most recent amendments).
- Pavement thickness for straight crown streets shall be as specified below in Special Notes. Subgrade design shall conform to City requirements, and shall extend 12" minimum behind curb.
- Reinforced Concrete Pavements
  - a. All curbs may be placed integral with, or separate from, pavement.
  - b. Reinforcement shall be as specified for the concrete pavement.
  - c. Detail and arrangement of joints, all types, shall be as shown on accompanying details.
  - d. Bar laps shall be 30 diameters.
- Subgrade
  - a. Subgrade under all concrete pavements shall be 7" thick and shall be stabilized with at least 21 lbs. per cu. yd. of cement. The cement shall be placed in a 12" depth and the cement content shall be as specified in the City for approval to determine amount of lime required. Laboratory test may be waived provided at least 30 lbs. of lime per square yard is used. See Item 4.6.4. Subgrade shall extend minimum 12" behind curb.
- Bar chairs or an approved supporting device shall be furnished.
- Cross slope for straight crown streets shall be 1/2" per foot unless approved by City.
- All barricading shall meet Texas Manual of Uniform Traffic Control Devices (latest edition). Refer to this manual for other situations.
- The City shall have the option to weigh time trucks before and after they are emptied at the project site.
- Pavement minimum thickness and strengths shall be as follows unless otherwise shown on the plans (street classifications as defined in the adopted thoroughfare plan):
  - Class V - 6"-3000 PSI comp.
  - Class I, II, III, IV - 8"-3000 PSI comp.
  - Esate Subdivision - 6"-3000 PSI comp.
- All medians and parkways shall be provided with grassed, fertilized groundcover.
11. Fire lane requirements - Thickness 6", 3000 PSI, with #3 rebar on 18" centers. Expansion joints as per City detail.
- All flat work pavements shall have a minimum strength of 3000 PSI comp. (28 day) and reinforcing is specified on plans or City details.

**General Notes**

- The existence and locations of all underground utilities shown (mark lines, laterals or services) on the plans shall be verified by the Contractor. The Contractor shall be responsible for the accuracy of the information shown on the plans. The Contractor shall assume any responsibility for utilities not shown or not in the location shown. The Contractor shall determine the depth and location of existing underground utilities prior to trenching and shall be required to take any precautionary measures to protect all lines shown and / or any other underground utilities not of record or not shown on the plans. Contractor shall be responsible for contacting all franchise and city utilities prior to construction.
- Any Contractor / Subcontractor performing work on this project shall familiarize himself with the site and shall be solely responsible for any damage to existing facilities resulting directly or indirectly from his operations. Said existing improvements shall include but not be limited to beams, ditches, fences, and plants. Any removal or damage to existing improvements shall be replaced or repaired by the Contractor at his expense and shall be approved by the City of Glen Heights.
- All construction, testing, and materials shall meet or exceed all requirements of the City of Glen Heights.
- An approved laboratory at the expense of the Contractor with the exception of earthwork density testing shall do all testing.
- The Contractor shall be responsible for furnishing and installing all temporary and permanent traffic control in accordance with the minimum requirements of the latest revision of the Texas Manual on Uniform Traffic Control Handbook.
- The Contractor shall make every effort not to impede traffic on existing streets, alleys, or fire lanes or open to the public. In the event the construction work requires the closure of an existing street, alley, or fire lane, the Contractor shall request the road closure through the City. If the closure eliminates the second point of access to existing buildings with a certificate of occupancy, the Contractor shall be responsible for providing alternate access to all affected buildings and other users. Unless otherwise specified by the City, all other streets or alleys may not be closed for more than 72 hours.

**SCREENING WALL NOTES**

- Concrete - Minimum strength, 3000 PSI at 28 days.
- Reinforcement - ASTM A 36.
- Masonry - Compressive strength shall be as prescribed in Item 23.6, Special Provisions.
- Wind Load - 20 psf.
- Per bearing stresses - See Brick Screening Wall Notes.
- Mortar - Type "S".
- Provide controller joints at 50 feet.
- Provide expansion joints at 200 feet on center maximum.
- Where there is no alley pavement, provide minimum 9 feet in clay or 6'-0" minimum with 3'-0" minimum into rock.
- All exposed concrete shall have a rubbed finish surface.
- Sidewalks adjacent to walls must be 5'-0" minimum width from all portions of the wall (including pilasters, columns, etc.).
- Maximum pilaster spacing 40 feet.
- Walls on the line of site easement at corners, will not have a top elevation greater than 30" above the nearest gutter elevation.
- The wall shall be a minimum of 6 feet in height as measured from the nearest alley edge or sidewalk grade, whichever is higher. The color of the wall shall be limited to earth-tone colors, excluding gray, green, and white. The color of the wall shall be uniform on each side of a thoroughfare for the entire length between two intersecting thoroughfares, unless otherwise approved by the engineering department. The finish of the wall shall be consistent on all surfaces.
- Design of screening walls shall be signed and sealed by a professional engineer registered within the State of Texas.

**PIER AND COLUMN NOTES**

- Concrete shall have a minimum compressive strength of 4000 PSI at 28 days.
- Reinforcing steel shall be new billet steel conforming to the requirements of ASTM A-615-GR-60.
- Concrete for drilled piers shall be placed within eight hours of drilling pier holes.
- Brick masonry shall be as specified in Item 23.6 of the Special Provisions.
- Mortar shall be Type "S".
- Construction shall be in accordance with the requirements of the "Recommended Practice for Engineered Brick Masonry" - Brick Institute of America.
- Use #9 gauge, 1-3/4" wide galvanized ladder wire to extend horizontal in wall panel Durawal, Corp. every course.
- #9 gauge wire fabricated as shown between each course of column brick.
- The wall shall be a minimum of six feet in height as measured from the nearest alley edge or sidewalk grade, whichever is higher. The color of the wall shall be limited to earth-tone colors, excluding gray, green, and white. The color of the wall shall be uniform on each side of a thoroughfare for the entire length between two intersecting Type A, B, or C thoroughfares, unless otherwise approved by the Engineering Department. The finish of the wall shall be consistent on all surfaces.

REVISIONS	DATE	BY	FOR
1/2/24	10/7/24	JDJ	REV. PER CITY REVIEW
2/2/24	12/7/24	JDJ	REV. PER TNA REVIEW
3/2/24	12/2/24	JDJ	REV. PER TNA REVIEW
4/2/24	12/2/24	JDJ	REV. PER TNA REVIEW



**GENERAL NOTES**  
**BEAR CREEK ELEVANCE**  
**GLEN HEIGHTS, TEXAS**

PREPARED BY:  
**JDJR**  
**ENGINEERS & CONSULTANTS, INC.**  
 ENGINEERS - SURVEYORS - LAND PLANNERS  
 1000 W. WILSON ROAD, SUITE 100  
 GLEN HEIGHTS, TEXAS 75043-1000  
 PH: 972-223-2107

DATE: DECEMBER 2023 DRAWN BY: SAS  
 SCALE: 1" = 200'  
 SHEET NO. 3 OF 14  
 DECIDED BY: JDJR  
 12/04/2023