



INTEROFFICE MEMO
From The
UTILITIES DEPARTMENT
ENGINEERING DIVISION

*Working Together for a
Better Tomorrow, Today.*

September 15, 2020

RE: Special Provisions on Water Main Project 2021-W-3

On the Division 1-A Special Provisions Water Main Project 2021-W-3 one line is deleted in section 100.04 and section 100.07.2 will be deleted in its entirety. Attached is the special provisions with the indicated areas red lined out.

See attached.

**DIVISION 1-A
SPECIAL PROVISIONS**

WATER MAIN PROJECT 2021-W-3

DIVISION IA – SPECIAL PROVISIONS
WATER MAIN PROJECTS 2021-W-3
FOR
CITY OF GRAND ISLAND, NEBRASKA

SECTION 100 – GENERAL

100.01 Description of Work. The work to be performed under the provisions of these Contract documents includes, but is not limited to: furnishing all materials, equipment, labor, and appurtenances involved with the complete installation of Water Main Project 2021-W-3, FOB the City of Grand Island, Nebraska.

The work to be performed under this Contract involves the installation of approximately 470 l.f. of ductile iron water main by horizontal direction drilling, water service connections, pavement removal and restoration, and is located along Sycamore Street from 22nd Street to Capital Avenue.

Refer to the plans for exact location and alignment.

100.02 Time Frame. No work shall commence until the Certificate of Insurance and bonds (when required) are approved by the City, the Contract is executed, and a Notice to Proceed is issued. The Contractor shall coordinate with the City of Grand Island relative to scheduling work. **All work, including restoration, shall be completed by the date stated in the Contract Agreement.**

100.03 Specifications and Standard Plan Drawings. All Divisions of the City of Grand Island Specifications and Standard Plan Drawings shall be considered a part of this Contract, whether or not attached into these contract documents, and it shall be the Contractor's responsibility to comply with all requirements thereof.

No attempt has been made in these specifications to segregate work to be performed by any trade or subcontractor. Any segregation between the trades or crafts will be solely a matter for agreement between the Contractor and their employees or their subcontractors. The specifications as a whole will govern construction of the entire work. The applicable provisions whereof will govern work to be performed under each section.

100.04 Pre-Construction Conference. As soon as practical after the Contract is awarded, a pre-construction conference shall be scheduled with the Contractor. The purpose of the conference is to discuss: the project plans and specifications; any unusual conditions; erosion controls; the Contractor's plan and schedule of operation; material; maintenance of traffic and access; and other items that will result in a complete job.

A minimum of five (5) business days in advance of the scheduled pre-construction conference, the Contractor shall be required to submit for review by the Utilities Department:

- A written construction schedule. The Contractor shall be responsible for notifying the property owners and area residents of the impending scheduled activities. If the schedule fails to reflect actual work progress, a revised schedule shall be promptly submitted to the Utilities Department;
- A list of Contractor's key personnel, including any subcontractors, and their qualifications, experience, and cell phone contact numbers;
- Material manufacturer's standard data sheets;
- ~~A support detail for the existing storm sewer in the 2020-W-2 project area;~~
- An environmental protection plan;
- An emergency procedure plan, including a list of the appropriate governmental agencies to be notified.

No materials shall be furnished, nor any work started, before the required submittals have been reviewed and accepted by the Utilities Department.

100.05 Sufficient People and Equipment. It is the intent of these specifications that the Contractor has sufficient people and equipment on the job site capable of completing the job as specified. The Contractor must demonstrate this capability to the satisfaction of the Utilities Department. If at any time during the performance of the work, the Contractor's progress on any phase of the work shall fall behind that necessary to enable the Contractor to complete it in accordance with the date or calendar days set out in the bid, the Contractor, at no extra expense to the City, shall take such action as necessary to meet those completion dates including, but not limited to, working additional or longer shifts and employing more labor and equipment and/or to increase the efficiency of, improve the character of, augment the number of, or to substitute new tools, plant or equipment of the Contractor as the case might be so as to secure the quality of work required.

100.06 Relations with Other Contractors. The Contractor shall cooperate with other contractors and City crews performing work in the vicinity of this Contract; and shall conduct their operations to minimize interference with the work of such contractors.

Any difference or conflict, which may arise between the Contractor and other contractors or crews, shall be resolved as determined by the City. If the work is delayed because of any acts or omissions of any other contractor, the Contractor shall have no claim against the City.

100.06.1 Coordination with City of Grand Island Street Department. The City of Grand Island Street Department has traffic signal work to be performed in the intersection of State Street and Webb Road. The work will be performed by the Street Department. The contractor shall coordinate the scheduling of this work with the Street Department.

100.07 Protection of Property and Utility Lines. All property and structures shall be protected unless their removal is shown on the Contract drawings or authorized by the City.

Existing utility installations (such as water mains, gas mains, sewers, communication lines and cables, power lines, fiber optic cables, and buried structures) in the vicinity of the work are to be checked by the Contractor. The Contractor shall be solely responsible for locating all existing utility installations.

The Contractor shall proceed with caution in the excavation and preparation of the work so that the exact location of all such utilities, both known and unknown may be determined, and the Contractor shall be held responsible for the repair of such utilities when broken or otherwise damaged. All such utilities shall be accurately located, including hand excavating by the Contractor as required, as incidental to the Contract and performed prior to machine excavation in the vicinity.

Any delay, additional work, or extra cost to the Contractor caused by existing installations shall not constitute a claim for extra work, additional payment or damages.

100.07.1 Power Lines. There are existing energized high-voltage electric power lines in the work area for this Contract. The Contractor shall use extreme caution such that personal safety is not jeopardized, and electric continuity is maintained. Due to soil conditions and proximity, all poles and underground cables shall be supported during excavation, properly backfilled and compacted to protect from damage.

Any time the Contractor, sub-contractor, or their employees, are working near overhead or underground power line, they will be required to comply with the Grand Island Electric Utility Department's "Recloser Policy." The policy statement and inspection forms are attached in the Appendix.

~~100.07.2 Water Main Project 2020-W-2 Storm Sewer Support. There are existing storm sewer box culverts in the Water Main Project 2020-W-2, Greenwich Street, work area for this Contract. The storm sewer shall be adequately supported during excavation, properly backfilled and compacted to protect from damage. A support detail shall be submitted in advance of the pre-construction conference as referenced in Section 100.4.~~

100.08 Emergency Response. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs for their employees in order to respond rapidly and successfully to an emergency situation. The Contractor's personnel must know the steps that need to be followed before, during, and after they occur. This includes the roles and responsibilities of the different responding agencies, the location and availability of response resources, the process for conducting the response, and other actions as necessary.

If a hazardous situation is detected, the Contractor shall notify the appropriate police, fire, and/or other first response team as necessary to mitigate the hazard. Additionally, all such incidents shall be reported immediately to the Phelps Control Center, (308) 385-5465. The Contractor shall document such incidents and provide a written report to the Utilities' Project Inspector.

100.09 Partial Payments. Partial payments will be made upon request from the Contractor. Requests may be submitted once a month. Payments will be made after approval at regularly scheduled City Council meetings.

Request will be based on amount of work executed in an approved manner. No materials-on-hand payment will be made for any items on this project.

100.10 Project Bacteriological Analysis. Two sets of consecutive samples shall be taken for bacteriological analysis twenty-four (24) hours apart. Heterotrophic Plate Count samples will no longer be collected. Refer to City of Grand Island Specifications, Division VI, Sec. 32.10

100.11 Revised Project Charges. There will be no charge to the contractor for tapping the main. Contractor shall provide the necessary materials to complete the work as shown on the plans. There will be no charge to the contractor for the first chlorination and first round of bacteriological sampling of each individual phase of piping. Any subsequent chlorination and sampling shall be at the contractor's expense as per Division VI of the City of Grand Island Specifications.

SECTION 200 -- TRAFFIC AND ACCESS

200.01 General. The contractor shall provide the means for safe vehicular traffic on existing roads, streets, or highway during the Contractor's performance of work. The Contractor shall keep such roads, streets, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall furnish traffic control; erect, and maintain barricades, warning signs, flag persons, and other traffic control devices in conformity with the Manual of Uniform Traffic Control Devices.

200.02 Notice of Street Closing. When it becomes necessary to close any portion of a street during the execution of this work, the Contractor shall notify the Engineering Division of the Grand Island Public Works Department (308) 385-5444, ext. 260, at least seventy-two (72) hours in advance.

When it becomes necessary to close any private driveway or parking area during the execution of this work, the Contractor shall make arrangements with the affected property management, at least five (5) business days in advance.

200.03 Temporary Traffic Control. Part VI of the Manual of Uniform Traffic Control Devices (MUTCD) is the national standard for work zone traffic control (WZTC). Any

crews, contractors, utility companies, or any other person, firm or corporation performing work, shall install and maintain temporary traffic control (TTC) in accordance with the current version adopted by the City of Grand Island.

The Director of Public Works or their authorized representative shall have the authority to direct corrective actions not in compliance with the MUTCD and these provisions. Approval of permits to occupy public right-of-way may be contingent upon evidence of capability to provide, install, and maintain traffic control devices in accordance with the MUTCD and these provisions.

The individual responsible for installing and maintaining the TTC shall provide telephone numbers of personnel who will be available 24 hours per day, seven days per week. These individuals shall be responsible for repair, correction, replacement, and maintenance of the traffic control devices. These individuals shall perform inspections of the TTC at the site a minimum of twice during the day and once during the night every day until the work is completed and the right-of-way is cleared.

200.03.1 Barricades and Warning Signs. The Contractor shall be responsible for all barricades, warning signs, flares or flashing lights adjacent to all work areas and/or coordination of any required detours. Placement and use of reflectorized materials, etc. shall be according to the Manual of Uniform Traffic Control Devices (MUTCD) and all revisions thereto published under the direction of the Federal Highway Administration.

In situations where sight distance is limited, or where other safety conditions dictate, the Contractor shall provide additional means of controlling traffic, including but not limited to furnishing flaggers. Flaggers shall be properly attired with vest, head gear and stop/slow paddles, and used according to MUTCD flagging procedures. No separate payment shall be made for the use of flaggers and they shall be considered inclusive for traffic control.

200.04 Site Access. The Contractor shall fully cooperate with residential property owners, emergency departments, agencies or parties involved with delivery of mail or packages, and the collection and removal of trash and garbage. The Contractor shall coordinate construction operations so existing schedules for such activities shall be maintained.

SECTION 300 -- WORK SITE PROTECTION

300.01 Work Area. The Contractor shall be responsible for furnishing and maintaining all necessary safety equipment (such as temporary fences, barricades barriers, signs, warning light and guards) and to provide adequate protection of persons property, supplies, materials, and equipment. All excavations shall be properly enclosed and protected.

Good housekeeping is essential and shall be practiced throughout the construction period. The Contractor and their employees shall maintain a clean and safe work site

free from trash and debris. The Contractor shall abate dust nuisance by sweeping, or other means as necessary, to keep paved areas acceptably cleaned until such time as restoration is completed. Construction activities which result in mud on hard surfaced areas will not be permitted.

Due care shall be taken in placing construction tools, equipment, materials and supplies so as to cause the least possible damage to the property. Pedestrian and vehicular traffic shall be protected from work activities, equipment, and material stockpiles.

Following completion of the project, all materials, trash, and debris shall be removed by the Contractor. No additional compensation shall be allowed for site cleanup.

300.02 Personal Protective Equipment. During all phases of the project, all personnel working within the construction limits shall be suitably dressed to perform their duties safely and in such a manner that will not interfere with their vision, hearing, and use of hands and feet. As a minimum, all workers shall be required to wear:

- Hard hats that meet the American National Standard Institute (ANSI) Z89.1- latest revision;
- High-visibility and reflective personal protective safety clothing. Such clothing shall be suitable during both daytime and nighttime usage and meet the performance Class 2 or Class 3 requirements if ANSI/ISEA 107-2004 publication entitled "American National Standards for High-Visibility Safety Apparel and Headwear".

300.03 Staging Area. The Contractor will be restricted to an area for material storage and staging of construction activities for the duration of this project. When not in use, all construction material, equipment, etc. shall be stored in this area.

All supplies, materials and/or equipment shall be properly protected and enclosed by fences or barricades and not limit nor interfere with access and safety.

Upon completion of the project, the Contractor shall restore the area to equal or better than original condition. Restoration shall be subsidiary to the project.

300.03.1 Temporary Site Fencing. All storage and staging areas shall be enclosed with temporary fencing. As a minimum, all temporary site fencing material shall be a commercial grade, heavy-duty plastic mesh design, and highly visible orange in color. The fence shall be a minimum of four (4) feet in height with a smooth top and bottom for safety and aesthetic appeal. The fence shall be installed plumb for the entire length, strung taut between posts, and properly maintained during the entire project.

300.04 Sanitation. The Contractor shall provide and maintain enclosed toilets for the use of personnel engaged in the work area. These accommodations shall be maintained in a neat and sanitary condition. They shall also comply with all applicable laws, ordinances, and regulations pertaining to public health and sanitation of dwellings and camps.

300.05 Storage of Equipment and Materials in Right-of-Way. Construction materials shall not be stored within the public right-of-way. However, materials waiting to be installed during the construction work day may be placed within the right-of-way, provided they do not limit nor interfere with public access and safety. All materials not installed by the end of the work day shall be removed and stored in the designated location by the Contractor at their expense.

Excavated materials not required for immediate backfill operations shall not be stored within the public right-of-way. All excavations shall be properly backfilled and barricaded at the end of each work day and excess materials shall be removed from the site.

Construction equipment shall not be stored within the public right-of-way before its actual use or after it is no longer needed. Additional time for assembly, disassembly, or repair of equipment may be authorized by the Utilities Department.

SECTION 400 – EXCAVATION, REMOVALS, AND BACKFILL

400.01 Soils investigation. The Contractor is responsible for designing any excavation slopes or temporary shoring. The design should comply with all federal, Nebraska and local regulations, including OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926.

400.02 Site Investigation. The Contractor shall determine the types and locations of surface and subsurface utilities and materials, soil types, groundwater, and other environmental factors and shall determine their effect on the pipe installation. All site investigations required shall be the responsibility of the Contractor. If utilities of unknown depth or other obstructions will require grade or alignment deviations from the plans, the grade or alignment may be adjusted with the prior approval of the Utilities Department.

400.03 Topsoil. Topsoil shall be salvaged from areas requiring excavations and replaced after construction. Topsoil shall consist of friable surface soil up to one (1) foot in depth, reasonably free of grass, roots, weeds, sticks, stones, and other foreign materials.

400.04 Salvage and Stockpile. After the site has been cleared and grubbed, the topsoil shall be removed to the depth of one (1) foot from the designated areas and shall be stockpiled. Objectionable materials encountered during excavation shall be removed from the construction site. Additional materials required to re-establish grade shall be supplied by the Contractor.

400.05 Spreading. Spreading shall not be done when the ground or topsoil is frozen, excessively wet or otherwise in the condition detrimental to the work. Surfaces designated to be covered shall be lightly scarified just prior to the spreading operation.

Where compacted fills are designated to be covered by topsoil, the topsoil shall be placed concurrently with the fill and shall be bonded to the compacted fill with the compacting equipment.

After placement is completed, the surface of the topsoil shall be restored to the grade prior to construction

400.06 Excavations. All excavations should be sloped back, shored, or shielded for protection of workers. The Contractor is responsible for designing any excavation slopes or temporary shoring. The design should comply with all federal, Nebraska and local regulations, including OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926.

400.07 Excavation of Poor Soils. Where wet, soft, or frozen materials; asphalt, concrete or bricks; cinders, ashes, refuse, trash, organic material or other deleterious excavated substances are encountered, the material shall be rejected, hauled away, and disposed of by the Contractor. All such excavated materials shall be removed from the job site and disposed of properly. If the material is disposed of on private property, prior written permission shall be obtained from the owner of the property, and a copy submitted to the City's designated representative. All materials must be removed in a timely manner.

The Contractor shall over excavate the unsuitable material and remove it to a minimum depth of one (1) foot below the plan sub-grade. The over excavated volume shall be replaced with clean compacted sand, free from clay and organics, to re-establish the sub-grade.

400.07.1 Backfill in Poor Soils. The following section shall be used in addition to Division VI – Water Mains, Section 32.13. Where additional bedding and backfill materials are required to replace poor soils, clean sand, free from clay and organics, shall be compacted around and under the pipe. Backfill materials shall be deposited in the trench for its full width on each side of the pipe fittings and appurtenances simultaneously.

From the top of the pipe, to a depth of twelve (12) inches above the top of the pipe, the trench shall be backfilled and compacted. Special care shall be used in placing this portion of backfill so as to avoid disturbing the pipe. The remainder of the trench shall be backfilled and compacted per Section 36.13 and Section 36.13.1.

400.07.2 Basis of Payment. When authorized by the Utilities Department, removal and replacement of unsuitable excavated and backfill materials shall be measured and added to the established quantities as an Extra Work item, in conjunction with General Specifications, Section 9.04, titled "Payment for Extra Work."

400.08 Compaction Testing. Density tests will be required for each twelve (12) inch vertical lift of compacted material placed at a frequency of not greater than 300 lineal feet of trench, or as directed by the Utilities Department. The Contractor shall be

required to hire an independent soil testing laboratory to test separately each lift for density and certify that each and every lift was properly compacted: Turf areas – 88%; Roadways and driveways – 95%.

Density test results shall be submitted to the City before acceptance of the project. The Contractor shall maintain the trench backfill for one (1) year from the date of acceptance of the project by the City.

400.09 Protection of Property and Surface Structures. All property and structures shall be protected unless their removal is shown on the Contract drawings or authorized by the City engineer.

400.10 Miscellaneous Removal Items. It shall be the Contractor's responsibility to notify the property owners within the project area, a minimum of five (5) days ahead of construction, so the property owners may remove small trees, bushes, shrubs, fences, sod, sprinkler systems, etc., from the construction limits if they wish to save them.

SECTION 500 – WATERWORKS INSTALLATION

500.01 Baselines, Benchmarks, and Control Points. All water main work shall be laid out from existing section corners, benchmarks, and control points established by the Utilities Department. The Contractor shall be responsible for executing the work to the lines and grades established. It shall be the Contractor's responsibility to maintain and preserve all baselines and control points. If such marks are destroyed by the Contractor without authorization by the Utilities Department, all such lines, points, monuments and stakes shall be re-established by the Utilities Department, and the expense charged to the Contractor.

500.02 Property Corners. It shall be the Contractor's responsibility to protect existing property corners and government surveying monuments. If property corners are disturbed or destroyed during construction, it shall be the Contractor's obligation to employ a licensed land surveyor to replace those damaged or destroyed corners. No extra or additional payment will be made for restoration of property corners.

500.03 Limits of Construction. The Contractor shall confine all work activities to the public street right-of-way, utility easements and project staging area. Failure to restrict construction activities to the project limits may result in damage to private property and bad public relations. Any property damage done by the Contractor beyond these limits shall be immediately repaired at the Contractor's expense.

500.04 Pipe Installation. It is intended that the water main be installed by trenchless installation methods. Any standard method of trenchless pipe installation that provides the best overall system, while providing the least disruption to the area, shall be considered for approval by the City. Refer to Grand Island Specifications Division VI Water Mains, Section 37 - Trenchless Installation of Water Main.

The contractor shall be required to use relief pits (“frac-holes”) along the proposed bore alignment to prevent hydraulic locking of the pipe during pull-back.

The contractor shall be required to keep an accurate Bore Log including stations, distances, depths, etc. The Bore Log may be in handwritten or digital format and will be submitted to the Utilities Department at the end of the project.

500.04.1 Backfill and Clean-Up. Disposal and clean-up of excess drilling fluid and pits shall be the responsibility of the Contractor. Disposal shall not be allowed on the project site. All work shall be done in accordance with environmental regulations, right-of-way limits, and permit requirements.

The Contractor shall backfill all excavations with suitable compacted materials as required. Earth spoiled by drilling mud or where other deleterious backfill substances are encountered, the material shall be rejected, hauled away, and disposed of by the Contractor and the site refilled with clean material. The area shall be restored to a condition equal to or better than its original condition. Removal and replacement of unsuitable backfill material shall be incidental to the project and not a basis for extra payment.

Materials to be removed from the job site shall be disposed of properly. If materials are to be disposed of on private property, prior written permission shall be obtained from the owner of the property and submitted to the City’s designated representative.

All materials, trash, and debris shall be removed by the Contractor from the construction limits in a timely manner.

500.05 Water Main Pipe. Water main pipe shall be as specified in Grand Island Specifications Division VI Water Mains, Section 37.02.1 - Restrained Joint Pipe.

500.05.1 Water Main Gaskets. All pipe and fitting gaskets shall be vulcanized styrene butadiene rubber (SBR) and shall conform to the “American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings, ANSI/AWWA C111 /A21.11 and subsequent revisions. All necessary gaskets and gasket lubricants shall be the type recommended and supplied by the pipe manufacturer.

500.06 Water Main Pipe Cover. The following section shall be used in addition to Grand Island Specifications Division VI Water Mains, Section 32.01. It is intended that all water main pipe fittings, service lines, and appurtenances shall be installed to the alignment and grade shown on plans. The elevation of the piping may vary depending upon existing obstructions and proposed improvements encountered during construction. Any deviations shall have the approval of the Utilities Department. Where additional depth is required to clear encountered or proposed grade interference, the additional excavation and backfill shall be incidental to the project and not claim for extra work.

500.07 Location of City Supplied Hydrants. All fire hydrants will be supplied by the City and installed by the Contractor. Hydrants will be available to the Contractor for pick up at the Water Department warehouse located at 370 N. Pine Street. The Contractor shall notify the Water Department (308-385-5436) at least twenty-four (24) hours in advance to make arrangements for material pick up.

500.08 Fire Hydrant Testing. During such times when fire hydrants have been installed, yet not accepted and approved for use, they shall be covered, except during testing, indicating they are not in service. Hydrant bags shall be made of a minimum 4 Mil. Polypropylene material, orange in color, printed with the words "Not in Service" and supplied with tie-down straps. Bags shall be furnished by the City and installed and maintained by the Contractor.

500.09 Water System Shut-Down. It is intended not to have any disruption to the existing City Water system. However, when specific activities are deemed that a section of the existing water main needs to be isolated and shut-down, the Contractor shall notify the Grand Island Water Department (308-385-5436) a minimum of seventy-two (72) hours in advance through the Utilities' Inspector. All related work to accomplish the shut-down shall be scheduled and coordinated with the City's Water Department.

500.10 Polyethylene Encasement. This section shall be used in conjunction with City of Grand Island Specification Division VI Water Mains, Section 34 – Polyethylene Encasement; and Standard Plan 155. The Contractor shall furnish complete all materials and field apply polyethylene encasement to all ductile-iron carrier pipe, fittings, valves, and other appurtenances associated with the piping system.

500.11 Water Service Work. There are water service lines to properties within the project. Where indicated on the plans and as directed by the Utilities Department, the Contractor shall:

- Commence work immediately following completion of all required testing on the new main.
- Verify the location of all existing service lines.
- Notify affected customers of the service interruption at least 24-hours prior to any service work.
- Disconnect the existing water service line from the old main; and reconnect the service to a new corporation stop in the new main **OR** install new piping from new corporation stop to new curb stop location and reconnect existing piping.
- Install service pipe to have no less than five (5) feet of earth cover, and in all cases shall be installed to prevent rupture by freezing.
- Properly abandon the old service line.
- Perform all work as per City Code, Specifications and Standard Plan 152.

500.11.1 Permits and Fees. All service work shall be done under the direction of a licensed plumber, per City Code Chapter 26-Plumbing, and as per the Specifications and Standard Plan 152. It shall be unlawful for any person, firm or corporation to make any installation, alteration or repair any plumbing system regulated by City Code without

first obtaining a permit to do such work from the Grand Island Building Department. A permit is required for the repair, replacement, or installation of a water service. A separate permit shall be obtained for each building or structure.

500.11.2 Basis of Payment for Water Service Work. The new water service installed in accordance with these Specifications and accepted by the Utilities Department shall be measured and paid for at the contract bid unit prices for:

- Tapping Saddle (for services larger than one (1) inch in size)
- Corporation Stop
- Curb Stop
- Curb Stop Box
- Linear Feet of Copper Piping (measured from the center of fitting to center of fitting)
- Service Reconnection (shall include permit fees, plumber fees, and any couplings necessary to re-connect to the existing service piping)

Separate unit prices shall be included for varying service sizes.

SECTION 600 – RESTORATION

600.01 Hard Surfaced Areas. Hard surfaced roadways, driveways or parking areas in conflict with the water main to be installed, shall be removed and replaced by the Contractor. Replacement shall be equal to or better than original. All concrete pavement restoration shall conform to Division II - Portland Cement Concrete Pavement of the City of Grand Island standard specifications. All asphaltic pavement shall conform to Division IV - Asphaltic Concrete Surface Course of the standard specifications for the City of Grand Island.

Within two (2) weeks after starting work in an area, the Contractor shall commence restoration activities to minimize disruptions and inconvenience during construction. Restoration shall include, but not limited to: grading, replacement of sidewalks, driveways and roadways.

600.01.1 Cold Weather Concreting. When average daily temperatures are below 40°F (4.5°C) for more than three consecutive days, the Contractor shall use approved practices and procedures that will assure that placed concrete will be sufficiently strong and durable to fully meet design requirements. The use of insulating coverings, accelerating admixtures, high-early strength cement, or additional cement may be used to develop the level of strength required. All such methods shall fully conform to the American Concrete Institute's "Recommended Practice for Cold Weather Concreting."

There shall be no additional payment if such cold weather techniques are required.

600.02 Restoration – Roadways. This work shall consist of repairing roadways and/or parking areas at the locations shown on the plans or as designated by the City. The

work shall include removal, disposal, preparation of the repair area, and furnishing, placing, finishing and curing for the repairs.

- Concrete surfacing shall be removals shall be along existing joints and removed for the full depth of the slab repair area.
- Asphalt surfacing removals shall be made by cutting a full depth saw joint to provide a straight, smooth edge where the new surfacing adjoins the existing surfacing.

The following shall be used in addition to City Specifications, Division II, Section 11.01. The thickness of the new concrete pavement shall match existing adjacent pavement or be a minimum six (6) inches, whichever is greater, or as deemed appropriate by Utilities Department representative. When required by the plans or field conditions warrant and as directed by the Utilities Department representative, pavement repair shall be made with Type 47B-HE-3,500 (high early) Portland Concrete Pavement, as specified in the Nebraska Department of Roads (2007 Version) Standard Specifications Division 600-Portland Cement Concrete Pavements, Section 605- Concrete Pavement Repair.

When it becomes necessary to close any portion of the public roadway during the execution to the project, the Contractor shall notify the Engineering Division of the Grand Island Public Works Department (308)385-5444, ext. 260, at least seventy-two (72) hours in advance.

600.03 Driveway and Sidewalk Restoration. Replacement of concrete driveways and concrete sidewalks shall be as per Division III – Curb and Gutter, Sidewalks, and Driveways of the standard specifications for the City of Grand Island.

600.03.1 Sidewalk Ramps. Sidewalk replacements shall follow the latest Americans with Disabilities Act (ADA) requirements and be constructed using detectable warning plates with a truncated dome design. Plates shall provide a permanent, maintenance free installation that will effectively warn the visually impaired.

600.03.2 Detectable Warning Plates. Sidewalk curb ramps shall incorporate detectable warning plates with a truncated dome design. Plates shall provide a permanent, maintenance free installation, which will effectively warn the visually impaired.

Detectable warning plates shall be pressed (wet-set) into freshly poured concrete and firmly secured by high-strength anchors. Plates shall as a minimum be: Glass fiber polymer concrete panels, powder coat painted brick red; utilizing vent holes to release air for maximum concrete contact and not trap air or water when installed; and incorporate an all-weather non-skid surface and textured tread for slip resistance.

Prior to ordering detector plates, the Contractor shall submit to the Grand Island Utilities Department for approval, the manufacturer's standard data sheets on materials proposed to be furnished.

600.04 Restoration - Non-Hard Surfaces. All non-hard surfaced and turf areas disturbed by excavation, backfill, and construction operations shall be fine graded, and hand dressed as required to restore the terrain to its original shape. The Contractor shall leave the area in such a manner as to allow drainage without ponding, free of debris, and shall protect from erosion.

600.05 Sodding. For established residential lawns, public easements and right-of-way, or as otherwise directed by the City, restoration of turf areas shall comply with the following amended requirements in accordance with the State of Nebraska Department of Roads Standard Specifications.

All materials furnished shall be identified and tagged with the botanical genus, species, and common name or variety.

600.06 Time of Sodding. Sodding shall not be performed when the ground is frozen, or weather conditions are not favorable for growth as determined by the City.

600.07 Sod Requirements. Sod shall be from approved field sources. The sod shall be a first-class representation of normal species or varieties of cool season grasses for low maintenance areas. All materials furnished shall be identified and tagged with the botanical genus, species, and common name or variety.

The sod shall be an approved mixture of tall fescues and perennial ryegrasses and shall have been grown from culturally planted seed specifically for the production of sod and shall have been maintained by acceptable methods for the production of sod. The sod shall be mowed and raked to remove stems, sticks, and clippings prior to cutting. The sod shall be cut to a depth of approximately three-quarters of an inch. Sod shall be free of noxious weeds and relatively free from all other weeds. Extreme care shall be taken in cutting, handling, transporting and laying the sod to avoid unnecessary damage to and loss of earth from the roots of the sod. Sod shall not have dry or dead edges.

600.08 Soil Preparation. Areas that are to be sodded shall be clear of debris and dead vegetation prior to the preparation of the sod bed. The sod shall not have a crusted appearance. All erosion shall be filled prior to laying the sod. All loose earth shall be firmed prior to laying the sod.

600.09 Fertilizer. Fertilizers shall not be applied.

600.10 Laying the Sod. Sod will be transported to the site within 24-hours from the time it is cut. The Contractor shall exercise care at all times to retain the native soil on the sod roots. Dry and/or frozen sod will not be acceptable. The sod bed shall be thoroughly dampened prior to placing sod.

The sod shall be laid over the area in strips edge to edge in a compact mass to produce tight joints. The sod shall be laid approximately one (1) inch below adjoining ground

surfaces and flush with adjoining sod. At the end of walks, drives, and curbs the sod will be laid to the same finish grade as the abutting surfaces.

Sod shall be rolled one time with an approved sod roller immediately after its placement to provide an even surface and eliminate air pockets. The sod shall be watered immediately after it is placed.

600.11 Watering. The Contractor will be responsible for watering sodded areas a minimum of once daily for a period of fourteen (14) days following the initial sodding operation.

600.12 Acceptance. At the end of the fourteen (14) day establishment period, the Contractor shall request a sodding inspection by the City. Any portion of the sodded area deemed by the City to be thin, weak or dead or otherwise not in good growing condition, will be removed and replaced by the Contractor with fresh live sod.

All replaced sod will begin again the fourteen (14) days of watering cycle. No partial acceptance will be made.

600.13 Sprinkler Irrigation Systems. The Contractor shall be responsible for repairing any sprinkler irrigation systems which are damaged during construction of the project. Irrigation system repairs shall be made for any component which is damaged due to construction activities, including, but not limited to: sprinkler heads, piping, valves, control wires, and controllers. Damaged materials shall be replaced with new materials of the same type, make, and model unless otherwise directed by the City. Repairing sprinkler systems will not be paid for separately, but shall be considered subsidiary to the other items in the Bid.

SECTION 700 – DEWATERING

700.01 General. When required, this section will be used in conjunction with Division VI, Section 36, Dewatering. It shall be the Contractor's responsibility for devising and operating a construction dewatering system.

700.02 Discharge Permit. The City of Grand Island has a Construction Dewatering Permit from the State of Nebraska Department of Environmental Control. A copy of permit number NEG671000-2017 is contained in the Appendix.

700.03 Discharge Water. All dewatering discharge water shall be conveyed to locations as previously approved by the City. It will be the Contractor's responsibility to make driveway and street crossings in such a manner as to not interfere with normal use. The Contractor will not be allowed to utilize the street pavement gutter line for open conveyance of discharge water.

SECTION 800 – TEMPORARY EROSION CONTROL

800.01 Storm Water Discharges. When required, the Contractor shall fully comply with all Phase II Construction Requirements.

Phase II of the storm water program applies to all construction activities disturbing one or more acres of land, or if the site is less than one acre but part of a larger common plan of development (such as a large subdivision). These sites must obtain an NPDES permit before any earthmoving activities begin. The NDEQ may require construction sites disturbing less than one acre of land to obtain a storm water discharge permit if such activities would adversely affect water quality.

800.02 Best Management Practices (BMPs). The Contractor shall implement and maintain such BMPs as relevant to conduct the operations and maintain the work so that adequate drainage and erosion control are in place at all times. Techniques will be employed for wind erosion control, sediment control, non-storm water control, and waste management and materials pollution; including preventing petroleum products, chemicals, harmful materials, construction debris, and excessive suspended solids from entering waterways.

The Contractor shall follow guidelines established in City of Grand Island City Code; Chapter 40, Storm Water Management. The utility construction defined in 40.11, A thru D; shall comply with guidelines listed as disturbing LESS than one (1) acre. The Contractor shall exercise every reasonable precaution to protect channels, storm drains, and bodies of water from pollution. It shall conduct and schedule operations so as to minimize or avoid muddying and silting of said channels, drains, and waters. Water pollution control work shall consist of constructing those facilities which may be required to provide prevention, control, and abatement of water pollution.

The Contractor will install and maintain Best Management Practices (BMPs) to include silt fence, construction rock entrances or silt checks if needed. A uniform perennial vegetative cover with a minimum density of 70 percent of the native background vegetative cover is required for final stabilization.

The City may perform periodic drive-by inspections and provide the Contractor any findings, but the contractor will be responsible for the routine/rain fall event inspections. Separate payment will NOT be made for installation of inlet protection as shown on the plans or any other Best Management Practices outlined above. All shall be paid for in the Sediment and Erosion Control pay item.

Curb Inlet Protector shall be SWP-CI "Big Red" by A.S.P. Enterprises or approved equal.

800.03 Drainage and Erosion Controls. The Contractor shall be responsible for evaluating the construction site and determining the need to prevent soil erosion and track-off of material from the project site, control dust, and control the discharge of sediment to the storm sewer system. Such measures may include but not limited to, taking temporary measures and/or installing permanent erosion control structures such

as sediment traps, silt fence, ditch checks, etc. Such features shall be incorporated into the project at the earliest practicable time and shall be properly maintained by the Contractor.

The Contractor shall exercise every reasonable precaution throughout the project to provide adequate drainage and erosion controls on the project site and adjacent properties. Construction of drainage facilities, as well as performance of other Contract work which will contribute to the control of siltation, shall be carried out in conjunction with other project operations, or as soon thereafter as is practicable.

All erosion resulting from the Contractor's operations and the elements must be corrected by the Contractor at no additional cost to the City. The Contractor shall conduct all construction activities so as to avoid soil erosion. Each day, areas shall be protected so that storm runoff will not erode soil.