CITY OF LUFKIN

SSPWC Modifications
SPECIAL PROVISIONS

I. Technical Specifications and Miscellaneous Details.

The technical specifications and miscellaneous details are provided in the document produced by the North Central Texas Council of Governments, called “Standard Specifications for Public Works Construction (SSPWC)”.

II. Supplemental Conditions.

1. All payment shall be made in accordance with the bid schedule for work completed meeting the technical specifications.
2. Requirements of the City of Lufkin as specified in the Special Provisions and the attached COL details shall supersede the requirements of the SSPWC.
3. The construction plans as approved by the City of Lufkin shall supersede the specifications.

III City of Lufkin Amendments to the SSPWC.

Section 1.

Item 1.0 Definitions. Abbreviations shall be modified as follows:

TxDOT (in lieu of Texas SDHPT) - Texas Department of Transportation.
TXU (in lieu of Texas Power & Light Company) TXU Electric & Gas, TXU Communications
COL - City of Lufkin
Entex - Reliant Energy/Centerpoint Energy
Add abbreviations as follows:
ACI - American Concrete Institute
AISC - American Institute of Steel Construction
A&NR - Angelina Neches River Railroad
EA - Each (quantity)
FL - Flowline or invert elevation
NEC - National Electric Code
NFPA - National Fire Protection Association
OSHA - Occupational Safety & Health Administration
SSPC - Steel Structures Painting Council
SBCCI - Standard Building Code Congress International
TCEQ - Texas Commission on Environmental Quality
TNS - Tons (quantity)
UL - Underwriter’s Laboratories

UBC - Uniform Building Code
UP - Union Pacific Railroad
VF - Vertical foot or feet (quantity)

Item 1.20.4 Existing Structures. Add: Any utility encountered which interferes with lines or grades will be adjusted by the appropriate utility company or agency. It is mutually agreed that such adjustments or delays caused by utility interference shall not be considered sufficient basis for claims or damages for additional compensation.

Item 1.26.5 Policy Endorsements and Special Conditions. (a)(1). Add Engineer as an additional insured to all applicable coverage.

Item 1.26.5 Policy Endorsements and Special Conditions. (c)(1). Add Engineer on waiver of subrogation.

Item 1.51.1 Monthly Estimate. Add; For projects where funding is provided by or partially by State of Federal grants, payment will be made within ten (10) days of the receipt of funds by the Owner. Allow 45-days minimum for the Owner to receive payment for ORCA grant funds.

Section 2.

Item 2.1.7 Pipe Bedding Material For Storm Sewers. (b) Earth Bedding. Delete the last two sentences. Add: Bedding shall be as required on the plans and the COL Bedding Details for Storm Sewers.

Item 2.1.7 Pipe Bedding Material For Storm Sewers. (c) Trench. Delete all sentences. Add: Unless otherwise shown on the plans, all sewer pipe structures shall be constructed in an open cut with vertical sides to a point one (1) foot above the pipe. When site conditions or the plans do not prohibit the sloping of the cut, the excavation one (1) foot above the pipe may be stepped and/or the side laid back to a stable slope. Required vertical sides shall be sheeted and braced when necessary to maintain the required vertical excavation throughout the construction period. Unstable material shall be removed from the bottom of the trench to a depth not less than two (2) feet below the pipe. All soil removed shall be replaced with stable material in uniform layers not to exceed eight (8) inches in depth.

Item 2.2.5 Dowel Bars. (a). Modify second sentence to read as follows: Dowel bar coating shall be as specified on the plans if required.

Item 2.2.9 Joint Filler (b) Material. Only redwood and premolded asphalt board materials will be allowed.

Item 2.2.10 Joint Sealing. Delete entire section. Add: Joint sealing material shall be as shown on plans and approved by Owner. Joint sealing material shall be installed

according to the manufacturer's recommendations. Joint sealing material must seal entire depth and width of opening from expansion material to the pavement surface. No backer-rod will be allowed.

Item 2.3.2 Drain Title (a) Clay Drain Tile. Clay drain tile is not allowed. Drain tile shall be PVC or HDPE as specified by the Engineer.

Item 2.4.11 Catalytically-Blown Asphalt Joint and Crack Sealer. Delete. Not allowed.

Item 2.4.14 Asphaltic Stabilized Base. (B) Tack Coat. Delete. Add: Tack coat shall be an emulsified asphalt, CR-S2, unless otherwise specified on the plans and approved by the Owner.

Item 2.5.1 Lime. (a) General. Add: Pelletized lime may be used as approved by the Engineer and Owner.

Item 2.12 Underground Conduit and Related Material. The following sections are deleted:

Item 2.12.1 Clay Sewer Pipe
Item 2.12.2 Concrete Sewer Pipe, Nonreinforced with Rubber Gasket Joints
Item 2.12.4 Reinforced Concrete Sewer Pipe with Rubber Gasket Joints
Item 2.12.5 Concrete Pressure Pipe and Fittings
Item 2.12.6 Thermoplastic or Thermosetting Coated Concrete Pipe and Fittings
Item 2.12.7 Gray Iron Pressure Pipe and Fittings
Item 2.12.23 Fiberglass (Glass-Fiber Reinforced Thermosetting-Resin) Sewer Pipe

Item 2.12 Underground Conduit and Related Material. Add: Underground conduit material shall be as specified on plans and approved by Owner.

Item 2.13.1 Gate Valves for Ordinary Waterworks Service. (2). Tapping Sleeves. All tapping sleeves shall be stainless steel. See COL of standard detail.

Item 2.15.2 Fertilizer. (b) Initial Planting Application. Change percentage of nutrients to read 15-5-10 (N-P-K)

Section 3.

3.1.2 Construction Methods. Third paragraph. Add to first sentence: or removed as specified on plans and approved by Owner.

3.3.5 Excess Excavation. Add: Excess excavation shall be removed and disposed of by Contractor unless otherwise indicated on plans. Payment shall be subsidiary to the appropriate bid item.

3.10.4 Broadcast Seeding. Sowing of seeds shall be completed by mechanical methods only. Hand broadcasting is not allowed.

Section 4.

Item 4.2.5 Vibratory Rollers. Add: Vibratory Rollers shall have a double drum tandem vibratory compactor with a minimum weight of seven (7) tons.

Item 4.5 Flexible Base (Crushed Stone). Item 4.5.2 Construction Methods. (d). Density shall be 95% Standard Proctor.

Item 4.6.4 Construction Methods. (b). Add: (3) Pelletized lime shall place as approved by the Engineer.

Item 4.8 Asphalt Treatment. Delete entire section.

Section 5.

Item 5.7.5 Measurement and Payment. Payment shall be made based area (S.Y.) only. Payment will not be made by weight.

Item 5.8.2 Construction Methods. (b). Change 92 percent to 95 percent standard proctor.

Item 5.8.6 Pavement Testing. Proportional pricing for pavement thickness is not allowed. Pavement must meet or exceed specified thickness.

Section 6.

Item 6.1.10 Grades. Water main minimum cover from finish grade to top of pipe shall be as follows:

Main Size	Minimum Cover (ft.)
4" through 12"	3 feet
14" through 18"	4 feet
20" and larger	5 feet

Engineer shall provide additional cover as required to protect water main from roadway or grading construction.

Item 6.4 Jacking, Boring, or Tunneling. Item 6.4.3 Construction Methods. (a). Casing spacers shall be provided as required by the COL standard Bore & Case Detail.

Item 6.5 Street Cut Excavation and Repair Standards. 6.5.1 General Requirements. All payment shall be on a per square yard basis for the complete repair including all appurtenances. Payment shall not be made on a breakdown of components of the repair.

Item 6.6.4 Railroad Crossings. Change to read as follows: All railroad crossings shall conform to the requirements of Union Pacific and Angelina-Neches Railroad as appropriate. All railroad crossings shall be permitted by the appropriate railroad company.

Item 6.7.2 Sanitary Sewer. All sanitary sewer mains and appurtenances shall be tested as required by the TCEQ or appropriate State Agency. The COL shall investigate all newly constructed sanitary sewer mains, utilizing TV cameras, for improper construction. Any improper joints, sags, or excess deflection shall be repaired by the Contractor as required for acceptance by the COL.

Item 6.7.2(g) Sanitary Sewer. Deflection Testing. Add as follows: Mandrel Testing: 1. Use a mandrel with its diameter set to 5% less than the nominal interior diameter (ID) of the pipe being tested. Calibrate the mandrel's diameter by a true circular ring prior to testing, and obtain the Engineer's approval. Clear the invert of the pipe of any debris prior to testing. 2. Shoot, blow, or float a line through the pipe. Attach the tow line and a trailing line to the mandrel for testing. Depending on the mandrel, it may be necessary to keep tension on the trailing line to keep the mandrel from tipping. Pull the mandrel, from the outlet end through the test segment by hand. Do not apply excessive force in pulling the mandrel that may damage the pipe or that may erroneously indicate that deflection was within acceptable limits by temporarily expanding the pipe. The line shall be termed "acceptable" if, during final deflection testing, the mandrel passes completely through the line without restriction. If the mandrel fails to pass a segment of line due to over defection then the contractor shall dig up that portion of line and repair the pipe in accordance with City of Lufkin requirements.

Item 6.7.3 Water Conduit Installation. (e)(2). Change to as follows: mechanical type used for gray or ductile iron and plastic pipe. Asbestos-cement pipe is not allowed.

Item 6.7.3 Water Conduit Installation. (f). Remove references to asbestos-cement pipe for hydrostatic testing.

Item 6.7.3 Water Conduit Installation. (j)(1)(A)(1). Direct tapping of water main is not allowed. A tapping saddle is required for all taps.

Item 6.7.3 Water Conduit Installation. (r)(2). Concrete blocking cost shall be subsidiary to the linear foot cost of pipe and installation.

Item 6.7.3 Water Conduit Installation. (s)(1). Testing and sterilization shall be completed by the Contractor. Costs for testing/disinfection shall be subsidiary to the linear foot cost of pipe and installation.

SECTION 8.

Item 8.2.3 Construction Methods. (d). Modify: Expansion joints shall be placed in the

curb and gutter at 60 feet intervals or as approved by the Owner.

Item 8.2.3 Construction Methods. (d). Modify: The dowel shall be a minimum of 18 inches in length. One-half of the dowel shall have a plastic sleeve or as approved by Owner.

Item 8.3.3 Construction Methods. (c). Change 90 percent to read “95 percent standard proctor”.

IV. SSPWC Section II. Standard Drawings.

City of Lufkin details as attached Plans supercede appropriate standard drawings as illustrated in the SSPWC.

V. Miscellaneous Items

A. **Disinfection of Waterlines** - Disinfection and sampling to follow TCEQ criteria and AWWA C651. Costs for testing are to be included in pipe prices.

B. **Existing Utilities** - Existing abandoned utilities are to be left in place.

C. **Neighborhood Meeting** - The Contractor awarded the project may be required to attend a neighborhood meeting with City personnel and the project engineer prior to construction. The purpose of the meeting is to inform the public on the related issues of the project. Specific items to be discussed will included, but not be limited to:

1. Purpose of project
2. Specific project locations
3. Inform public what to expect during construction, such as R.O.W. excavations, easements, roadways, clean-up and site restoration, etc.

D. **Global Positioning System (GPS)** - Coordinates will be taken by City personnel on ***EVERY*** valve, tap, tee, etc. Contractor will be required to provide access to these locations during construction. General locations on top of ground located by the Contractor will not be acceptable.

E. **Field Changes** - By the request of the City Engineer, no changes are to be made in the field without ***PRIOR*** approval from the City Engineer. Personnel unauthorized to make field changes include City Inspectors and Surveyors. The design engineer may be contacted about possible changes. There are **NO EXCEPTIONS** to this requirement. If changes are made in the field without direct written approval from the City Engineer, the Contractor will have to redo the work at his expense.

F. It is suggested the project area be videotaped by Contractor prior to beginning construction for documentation. City may videotape project area for documentation.

G. Pipe and culvert materials shall be as follows:

Water Distribution System:
- Less than 4" - SDR 21 (PR-200) PVC
- 4" - 12" - AWWA C900 (DR18) PVC
- 12" - Greater - AWWA C905 (DR25) PVC
- Service Lines:
  - 1" - SDR-9 PE Service Tubing CPS Size

Sewer Collection System:
- ASTM D-3034 SDR-26
- Service Lines:
  - Less than 6' - ASTM D-3034 SDR-35
  - 6' and Greater - ASTM D-3034 SDR-26

Storm Sewer:
- 12-“48" HDPE AASHTO M294, Type S, Watertight Joint ASTM D3212 or Concrete Pipe Class III, ASTM C76

ACCESS MANAGEMENT

A. Design Standards

1. Traffic Impact Analysis (TIA)

   The City may require trip estimates for proposed development. The trip estimates shall be based on the latest version of the Institute of Transportation Engineer's "Trip Generation Manual". If the trip estimates are significant, the City may require a traffic impact analysis to determine necessary traffic mitigation measures to maintain the required street level of service as dictated by City regulations, the Development Code or other City requirements. The TIA shall be in completed in accordance with the Texas Department of Transportation, Access Management Manual, December 2003.

2. Intersections:

   a. Curb radius, measured from the face of curb, shall be twenty-five feet (25') minimum on local residential streets and thirty feet (30') minimum on residential major thoroughfares. The minimum curb radius shall be fifty feet (50') or more, depending on an evaluation of vehicular types and volumes, in commercial or industrial areas. Minimums should be increased at skewed intersections.

   b. Streets and traffic lanes shall be properly aligned across an intersection. Proposed streets shall be aligned with existing streets.

   c. Offset intersections are not permitted on any arterial if the offset distance (or clearance between streets) is less than three hundred feet (300'). The minimal allowable offset shall be two hundred and fifty feet (250') on collector streets and eighty feet (80') on local streets.

   d. The City may require that the specified minimum bay storage lengths be increased based on traffic analysis. Middle block median openings to serve private driveways shall include left

turn lanes in accordance with attached details 01 and 02. Right turn lanes are required at arterial and collector intersections.

3. Driveways

   a. The location and the width of all non-residential driveways that will connect to a public street must be reviewed and approved by the City prior to construction. All driveways, residential and non-residential, must be installed in compliance with the City of Technical Construction Standards & Specifications (TCSS) manual.

   b. Driveways serving non-residential and multi-family tracts that connect to a street classified as an arterial, highway, or freeway shall be no wider than 40 feet. Single-family residential driveways shall be a minimum of ten feet (10') wide at the right-of-way line. Maximum residential driveway width shall be twenty four feet (24').

      It is the City's policy to minimize whenever practicable the number of non-single family residential driveways on all arterial and collector streets in order to reduce the number of conflict points and facilitate traffic flow. To facilitate that policy, driveways shall be placed in accordance with the Texas Department of Transportation, Access Management Manual, December 2003.

   c. If the separation requirements for non-single family residential driveways cannot be met because of the location of existing driveways on adjoining tracts, joint access driveways or access easements across adjoining tracts should be used. When a joint access agreement cannot be obtained, the developer may appeal to City Council or the Texas Department of Transportation which ever is applicable.

   d. On streets classified as collectors, arterials, and highways that do not contain medians, non-residential driveways must align with driveways on the opposite side of the street or meet the minimum separation requirements.

   e. At a signalized intersection in which one public street terminates at the intersection of a connecting cross street, a driveway shall not be placed on the cross street as to be in alignment with the terminating street. If the requirements for driveways otherwise allow the placement of a driveway at that

location, the driveway width must match the cross-section of the intersecting public street. Non-residential driveway connections to the public streets shall be approved and inspected by the City of Lufkin or the Texas Department of Transportation when on State Highways.

f. Single access driveway radius shall not extend beyond the projection of a property corner to the back of curb.

g. Driveways shall be located and designed so as to have adequate sight distances along the intersecting street.

h. Non-residential minimum driveway radius accessing a State Highway or greater roadway shall be as required by the Texas Department of Transportation. Radius for driveways on arterial and collector roadways shall be a minimum of 25 feet (25') and a minimum of five feet (5') on local roadways. Refer to attached detail 01 for additional information.

i. When required driveway culverts shall be sized by the City of Lufkin or the Texas Department of Transportation when on State Highways.

4. Turn Lanes

a. Minimum geometric street design standards for number of lanes, lane widths, right-of-way widths, and median widths shall conform to attached details 01 and 02.

b. Right turn lanes at arterial and collector intersections shall be designed and built in accordance with the attached detail 02 and/or the Texas Department of Transportation Roadway Design Manual.

c. Left turn lanes must conform to the Texas Department of Transportation Roadway Design Manual. Middle block median openings to serve private driveways shall include left turn lanes in accordance with attached detail 01.

B. Development Code

1. Traffic Studies.

The applicant of a proposed development must submit to the City Engineer and Director of Planning an internal site vehicle generation report, by time of day, for the development. If the City

Engineer and Director of Planning determine that the development may generate volumes of vehicular traffic that will significantly impact the public street system, the applicant must submit an impact study. The traffic study must encompass that portion of the public street system specified and must be submitted in the form and manner requested. All vehicle trip estimates for the study must be based on the latest edition of the Institute of Transportation Engineers' "Trip Generation Manual". The traffic study shall be in completed in accordance with the Texas Department of Transportation, Access Management Manual, December 2003.

2. Minimum LOS.

Each development must provide sufficient street and traffic improvements, as determined by the City in accordance with this article, to insure that the public street system located within and outside the development, whether existing or proposed, which will receive traffic generated by the development, will substantially comply with the minimum LOS for streets and intersections as follows:

Roadway	Intersection	Min. LOS
Freeway/ Highway	Highway/Highway	E
	Highway/Arterial	E
	Highway/Collector	D
Arterial	Arterial/Arterial	D
	Arterial/Collector	D
Collector	Collector/Collector	D
	Collector/Local	C
Local/Rural	Local/Local	C

Roadway definitions and LOS (level of service) are as defined in the City of Lufkin Comprehensive Plan.

3. Required Modifications or Improvements.

If the traffic generated from a proposed development would result in a public street exceeding the minimum level of service because of the traffic generated from the development, the City may require one or more of the following modifications to maintain the required street service levels:

a. A reduction to the proposed vehicle trips per day from the development;

b. Modifications of the design, location, or arrangement of proposed public or private streets, intersections, driveways, access and egress points, or traffic signals or signs;

c. The installation or modification of existing or proposed traffic signals, signs, turn lanes, or other traffic-related controls or improvements;

d. The dedication of additional right-of-way for the street system;

e. Any other traffic-related remedial measures that comply with the purposes and intent of this article.

4. Turn Lanes

a. Where a platted lot abuts that portion of a street that contains a turn lane that prevents the lot from meeting the same minimum yard requirements of adjacent lots in the same block that do not abut the turn lane, the required yard of the lot shall be measured from a line determined by extending the same lot line that determines the same minimum yards required of the adjacent lots located on the same side of the street and within the same block that do not abut the turn lane.

b. Where a platted lot abuts that portion of a street that contains a turn lane that prevents the lot from meeting the same minimum setback requirements of adjacent lots in the same block that do not abut the turn lane, the required setback of the lot shall be measured from a line determined by extending the same building line that determines the same minimum setback required of the adjacent lots located on the same side of the street and within the same block that do not abut the turn lane.