



# Jefferson Parish

# SUBDIVISION PUBLIC IMPROVEMENTS STANDARDS

# MANUAL

**GUIDELINES FOR**  
**SUBMITTAL AND APPROVAL OF**  
**SUBDIVISION ENGINEERING PLANS**

September 16, 2016

# JEFFERSON PARISH SUBDIVISION PUBLIC IMPROVEMENTS STANDARDS MANUAL

## SUBMITTAL AND APPROVAL OF SUBDIVISION ENGINEERING PLANS

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# 1. PURPOSE

In order to establish a uniform procedure for submittal and approval of “Subdivision Engineering Plans” the Jefferson Parish Office of Public Works (herein referred to as “this office”) has established the following procedure, consisting of the following phases:

## 2. Phase I : “Preliminary Plans” Phase:

### 2.1 Submittals’ identification and date stamp.

Preliminary plans must clearly be identified as “Preliminary Plans” or “Preliminary Plans, 1<sup>st</sup> Submittal”. Preliminary plans must include a submittal date. If, depending on the type and number of comments, it becomes necessary to submit a second set of preliminary plans, these plans must be identified as “Preliminary Plans, 2<sup>nd</sup> Submittal” etc.

### 2.2 Typical Plan Sheets:

	Sheet No.
Title Sheet (including a vicinity map and a location map).....	1
Subdivision Layout.....	2
Typical Section* .....	3
Notes & General Legend of Symbols.....	4
Master Drainage and Paving Plan** .....	5
Master Water Plan** .....	6
Master Sewer Plan** .....	7
Master Street Lighting Plan** .....	8
Plan and Profile Sheets.....	9 –
Construction Phasing.	
Miscellaneous Detail Sheets.	
Lift Station Plans, if applicable	
Jefferson Parish Standard Plans.	
.	

\* Typical sections shall include all proposed utilities (public and private), servitude widths (public and private), right-of-way width, pavement section, curbs, gutters, etc.

\*\* Master “Drainage and Paving”, “Water”, “Sewer”, and “Street Lighting” Plans will require the signature of the Director of the Department of Engineering however; the “Street Lighting” plan will require approvals (signature) from Entergy, the Developer, and the Department of Lighting Regulatory Inspection prior to the Director of the Department of Engineering’s signature. All plan

sheets, which require the signature of the Director of the Department of Engineering shall include the following notes:

### **2.3 Signature block notes:**

1. APPROVAL OF THESE PLANS BY THE DIRECTOR OF ENGINEERING IS VALID FOR EIGHTEEN (18) MONTHS AFTER DATE OF SIGNATURE. IF CONSTRUCTION HAS NOT STARTED WITHIN THIS PERIOD, IT WILL BE NECESSARY TO RE-SUBMIT THESE PLANS TO THE DEPARTMENT OF ENGINEERING TO BE REVIEWED AND APPROVED AGAIN.
2. REVISIONS MADE TO THIS PLAN AFTER THE DIRECTOR OF THE DEPARTMENT OF ENGINEERING HAS APPROVED IT WILL VOID THE DIRECTOR'S APPROVAL AND REQUIRE THE REVISED PLAN TO BE RE-SUBMITTED FOR REVIEW AND APPROVAL ONCE AGAIN.
3. IF FACILITIES ARE NOT INSTALLED IN ACCORDANCE WITH THE PLAN, THE DIRECTOR'S APPROVAL WILL BE VOIDED, REQUIRING THE PLAN TO BE REVISED AND RE-SUBMITTED FOR REVIEW AND APPROVAL ONCE AGAIN.
4. APPROVAL OF THIS PLAN IS BASED ON THE UNDERSTANDING THAT ALL SERVITUDES SHOWN, EITHER HAVE BEEN RECORDED OR WILL BE INCLUDED ON THE FINAL PLAT.
5. ALL OR PART OF THIS PROJECT MAY BE LOCATED IN WETLANDS. APPROVAL OF THIS PROJECT BY THE PARISH OF JEFFERSON GRANTS NO PROPERTY RIGHTS AND DOES NOT ELIMINATE THE NEED TO OBTAIN APPROVALS FROM STATE AND FEDERAL AGENCIES PRIOR TO BEGINNING THE PROJECT.

Note No. 5, above, shall be included only when the development is located within wetland area.

In addition, if Jefferson Parish approval only applies to certain sections of overall Subdivision Submittals, this fact shall be made clear on all plan sheets, which require approval. An example of this situation would be proposed subdivisions in the City of Kenner. Our concerns and jurisdictions in Kenner are limited to the Water Distribution System and the Major Drainage Canal System. When approval would only apply to a certain utility and / or section, additional notes shall be added (i.e.):

6. APPROVAL OF THESE PLANS BY THE JEFFERSON PARISH DIRECTOR OF ENGINEERING IS LIMITED TO THE **WATER DISTRIBUTION SYSTEM ONLY.**

Plans will be signed in Phase III, "Plan Approval" Phase.

## 2.4 Submittals and reviews

The A/E shall submit three (3) complete sets of preliminary blue or black line plans and electronic copy of the complete (all sheets) subdivision on CD-ROM in “PDF” and “ACAD 2002” format for review. This office will review plans and specifications contained thereon and provide comments necessary for plans to comply with the most current Jefferson Parish standards.

Comments may be relayed to the A/E in forms of “written comments”, “marked-up plans”, and/or may be discussed during scheduled meetings or combination of all.

“Written comments” must be responded to in writing, “marked-up plans” must be returned to this office, and minutes of scheduled meetings shall be composed by the A/E and must be submitted in writing along with the next plan submittal as one package.

The A/E shall verify that all comments from different sections of the Engineering Department (streets, street drainage, major drainage, traffic, water distribution system, sanitary sewer system, street lighting, etc.) have been received and the A/E shall revise the plans accordingly.

The A/E will have the opportunity to appeal, on behalf of his/her client, any standards and/or request any special consideration due to justifiable conditions. It is recommended that any such appeals by the A/E be undertaken during the Preliminary Phase 1<sup>st</sup> or 2<sup>nd</sup> Submittal.

Additionally, one complete set of preliminary blue or black line plans must be submitted (Separate Cover Sheet) to the “Jefferson Parish Department of Sewerage, 1221 Elmwood Park Blvd. Suite 803, Jefferson, La. 70123” Attn. Mr. Christopher Fernandez.

Occasionally extra copies of the “Master Drainage and Paving Plan”, “Master Water Plan”, and Master Street Lighting Plans may be necessary for respective Department’s review and comments. These extra Master Plans will be reproduced in this office.

## 3. Phase II : “Final Plans” Phase:

By definition, plans are final when it is believed that all comments have been received and have been incorporated in plans. Depending on the degree of completeness of the preliminary plans, this “Final Plan Phase” Formal Submittals may not be necessary. Minor comments and revisions may be handled by phone, fax, e-mail, etc.

### **3.1 Formal Submittals and Reviews**

The A/E shall submit three (3) complete sets of preliminary blue or black line plans and electronic copy of the complete (all sheets) subdivision on CD-ROM in "PDF" and "ACAD 2002" format for review.

Additionally, one complete set of final blue or black line plans must be submitted (Separate Cover Sheet) to the "Jefferson Parish Department of Sewerage, 1221 Elmwood Park Blvd. Suite 803, Jefferson, La. 70123" Attn. Mr. Christopher Fernandez.

Final *comments* and *changes*, if any, will be made during this "Final Plan" Phase.

### **3.2 Sanitary sewer Lift Station / Collection Line Impact Fee**

The Lift Station/Collection Line Impact Fee is based on the estimated additional sewerage discharge from the proposed development. The impact fee will be determined by the Department of Sewerage according to the effect of the proposed subdivision on the existing sewer system.

The Impact Fee will be due from the developer prior to final approval of the Engineering Plans. Checks or Money Orders shall be made to Jefferson Parish Department of Sewerage (736-6674).

## **4. Phase III : "Plan Approval" Phase:**

### **4.1 Submittals**

The following must be provided to this office by the A/E at the time subdivision plans are submitted for the Director of Engineering Signature:

One (1) complete set of reproducible plans, including all standard plans required for the project, which will become the property of this office.

One (1) extra reproducible copy of each of the three master plans (**Paving and Drainage**, **Water**, and **Sewer**) sheets to be signed, which will become the property of the A/E. [Street Lighting plan will be handled similarly but at a later date].

Three (3) complete sets of blue or black line prints, including all Jefferson Parish standard plans are required for the project.

Electronic copy of the complete (all sheets) subdivision plans on CD-ROM in "PDF" and "ACAD 2002" format.

The director will sign two sets of the reproducible master plans (**Paving and Drainage**, **Water**, and **Sewer**). One set will be returned to the A/E. The other signed set will be kept for Jefferson Parish records. [Street Lighting plan will be handled similarly but at a later date]

The unsigned master plan sheets in the three sets of blue or black line prints will be replaced with signed blue or black line sheets made in this office.

## **5. PLAN PREPARATION GUIDELINES:**

### **5.1 General:**

#### **5.1.1 Phasing (Construction Phasing)**

Phasing shall generally refer to Construction Stage Phasing and shall be limited to construction related items. All other Stages of projects including Planning, Design, Approval, etc., shall not be limited to Phasing.

Construction Phasing shall be introduced and included in “Preliminary Plans” phase. Modifications to “Construction Phasing” will most likely delay the entire “Plan Approval” process.

#### **5.1.2 ...[Left Blank]**

### **5.2 Paving and Drainage:**

#### **5.2.1 Jefferson Parish Contacts**

Add the following note to the “GENERAL NOTES” which are placed on the Notes & General Legend of Symbols Plan Sheet:

Contractor must contact Jefferson Parish Departments of:

- 1) Engineering, Chuong Pham, 736-6823.
- 2) Engineering Inspection, Errol Martin, 349-5843.

#### **5.2.2 Jefferson Parish Standard Drawings**

Any applicable Jefferson Parish Standards shall be included in the drawings and shall be referenced to as applicable throughout the plans and the specifications. Following is a list of current Jefferson Parish Standard drawings:

You must have [Adobe Acrobat Reader](#) to view documents (drawings) on the Parish Website that are listed on this page.

If you use AutoCAD, a DWG file containing these drawings can be forwarded directly to you. Please e-mail your request to [VVonhassel@JeffParish.net](mailto:VVonhassel@JeffParish.net) or call our office at 736-6500 to provide your e-mail address. Originals of these drawings are available from the Jefferson Parish Engineering Department.

- [Typical Bird Bath Drain and Cleanout Structure Layout Plan](#) (size 162KB)
- [Brick Sidewalk Details](#) (size 89KB)
- [Conflict Boxes Standard Details](#) (size 302KB)
- [Curb and Curb & Gutter Details](#) (size 351KB)
- [Curb Ramp for the Handicapped](#) (size 310KB)
- [Drainage Standard Details - Sheet No. 1 or 3](#) (size 446KB)
- [Drainage Standard Details - Sheet No. 2 or 3](#) (size 448KB)
- [Drainage Standard Details - Sheet No. 3 or 3](#) (size 299KB)
- [Parking Lot Storm Runoff Detention Guidelines](#) (size 407KB)
- [Plan Detail SPR-1 - Design Details and General Notes](#) (size 1MB)
- [Typical Roadway Details - Sheet No. 1 of 2](#) (size 264KB)
- [Typical Roadway Details - Sheet No. 2 of 2](#) (size 288KB)
- [Typical Roadway Restoration Details](#) (size 258KB)
- [Storm Drainage Design Manual](#) (size 5.78MB)
- [Typical Sidewalk Details](#) (size 284KB)

### **5.2.3 Master Paving and Drainage Plan**

The Master Paving and Drainage Plan shall show the general configuration of proposed subdivision, including all streets, lots, sidewalks, connections to existing roadways, etc., along with all pertinent drainage information, including catch basins, drainage manholes, drainage pipes, connections to existing drainage pipes, outfall pipes, etc.

### **5.2.4 Plan/Profile sheets**

Plan/Profile sheets shall include a longitudinal profile grade line with a minimum slope of 0.4%. Vertical curves with a minimum length of sixty (60) feet shall be required when the change in grade is greater than 1%.

All horizontal and vertical geometry for local streets shall meet the American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets," latest edition, criteria for 25 mph design.

All horizontal and vertical geometry for collector streets shall meet the AASHTO “A Policy On Geometric Design of Highways and Streets,” latest edition, criteria for a design speed within the range of 30 mph to 45 mph as determined by the Jefferson Parish Engineering Department. Collector Streets shall also be designed in accordance with all criteria of the Jefferson Parish Thoroughfare plan.

### **5.2.5 Catch basin spacing**

Catch basin spacing should be designed so that runoff from no more than one acre of drainage area shall drain into each catch basin.

### **5.2.6 Bird Bath**

Bird Bath piping shall be included in the design to address possible future differential settlement that may cause Bird Baths.

### **5.2.7 Rear Yard Drainage and Grading**

Rear Yard Drainage shall be included in the design to address “turtle back” situations where new subdivisions back-up to older existing subdivisions.

“Turtle back” lot configurations will not be permitted within a new subdivision. All lots shall be sloped from the back to the front as per Jefferson Parish Ordinance, and all Jefferson Parish Department of Inspection and Code Enforcement requirements.

The grading is to be extended from the established curb height and shall slope upwards toward the property line, one-half ( $\frac{1}{2}$ ) inch for each foot of width of sidewalk area (sidewalk area means that portion of ground between the roadway and the property line of the adjacent landowner) and then beginning at the property line shall slope upwards one (1) inch in twenty (20) feet toward the rear property line

Where a residential lot depth is two hundred (200) feet or more, grade sloping from back to front may not be reasonable (feasible). In such cases, a detailed drainage plan will be required, demonstrating how the lots will be drained. This drainage plan will require the approval of the Jefferson Parish Drainage, Inspection and Code Enforcement, and Engineering Departments.

Under no circumstances runoff from any property shall be allowed to flow on to another property without proper design and proper required servitudes. { All servitudes must be recorded and must be included in the final Plat. }

### **5.2.8 Longitudinal Profile**

Longitudinal Profile shall be in a range in elevation between 1.5 feet and 2.5 feet below Base Flood Elevation.

### **5.2.9 Maximum size and Minimum cover for PVC Drain Pipe**

Maximum allowable size for PVC pipe shall be 36". Minimum cover for PVC Drain Pipe shall be two (2') feet with the exception of pipes under concrete roadways which minimum cover would be 12 inches below the bottom of the concrete pavement.

### **5.2.10 Subdivision that back-up to drainage canals or bayous**

Subdivision backyards that back-up to drainage canals or bayous shall have a 12" non-granular blanket to prevent erosion.

### **5.2.11 Handicapped Ramps**

Required Handicapped Ramps shall be shown on the Street Lighting Plan to avoid conflicts with Street Lights.

### **5.2.12 Outfall Pipes**

Outfall Pipes shall be CMP in accordance with Jefferson Parish Standard Plans.

### **5.2.13 Base Course Thickness**

Base Course thickness shall be determined from Jefferson Parish's Soils Map.

### **5.2.14 Typical Section**

Typical Section shall be Parabolic Crown in accordance with Jefferson Parish's Standard Plans. Double tangent crown shall be allowed only with prior written permission from the Department of Engineering.

Roadway thickness shall be 7" minimum Portland Cement Concrete or structurally equivalent thickness of asphalt, 26 feet wide, and placed within a 50 foot Right-of-Way. Curbs or curb and gutters shall be 5" high mountable curbs,

except at intersections curbs shall be 6" high barrier, with 5 foot transition as per Jefferson Parish Standard Details.

### **5.2.15 Turning radius**

Turning radius shall be 12 foot minimum on local subdivision streets, and 25 foot minimum at intersection with collector streets.

### **5.2.16 Horizontal Curves**

Horizontal Curves shall have a minimum radius of 200 feet. Tangent distance between reverse curves shall be 100 feet minimum.

### **5.2.17 Paving Notes**

#### **5.2.17.1 Pavement**

Unless otherwise noted, Roadway thickness shall be 7" minimum Portland Cement Concrete or structurally equivalent thickness of asphalt, 26 feet wide, and placed within a 50 foot Right-of-Way. Curbs or curb and gutters shall be 5" high mountable curbs, except at intersections curbs shall be 6" high barrier, with 5 foot transition as per Jefferson Parish Standard Details.

#### **5.2.17.2 Minimum Compressive Strength**

Portland Cement Concrete Pavement shall attain a minimum compressive strength of 4,000 psi at 28 days.

#### **5.2.17.3 Opening to Traffic**

Pavement shall not be opened to traffic until 28 days after placement without the approval of the engineer.

#### **5.2.17.4 Boxed Outs**

All drainage and sewer structures in pavement shall be boxed out.

### **5.2.17.5 Base Course**

Base course shall consist of AASHTO A4 or better soils limited to a maximum liquid limit of 25 and a maximum plasticity index of 6, "Pumped" River Sand generally meets this requirement. Base course thickness shall be determined from Jefferson Parish soils map and compacted to 97 (standard) proctor density. Density tests will be required at 200 foot intervals.

### **5.2.17.6 Replacements of Concrete at Utility Crossings and Tie-ins**

Concrete pavement removed for tie-ins and for utility crossings shall be removed joint to joint and replaced with concrete which shall attain 4,000 psi at 72 hours. Concrete shall be in accordance with Jefferson Parish Standard Plan for Roadway Restoration.

### **5.2.17.7 Testing Laboratories**

An approved testing laboratory, selected by the engineer, shall be retained by the contractor and shall provide all required testing. Test reports must be furnished to the Jefferson Parish Department of Engineering (Attention: Errol Martin FAX 349-5175) upon the completion of each individual report.

No concrete shall be poured without the services of the testing lab technician to witness the pour, make slump tests and make test cylinders.

Any concrete poured without the services of the testing lab technician shall be subject to discretionary testing ordered by the Department of Engineering at the expense of the contractor. Subdivision streets will not be accepted for maintenance if the contractor has not paid testing laboratory for the discretionary testing.

### **5.2.17.8 Notification**

Contractor must notify the testing lab and the Department of Engineering Inspection Section (736-6793 or 736-6799) at least 48 hours prior to pouring concrete.

### **5.2.17.9 Test Cylinders**

A set of four (4) test cylinders will be required for each 100 cubic yards of concrete poured. At the point of 25 C.Y. above 100 C.Y., a second set of test cylinders will be required.

#### **5.2.17.10 Coring**

Any test cylinder that does not attain a minimum of 4,000 psi at 28 days will necessitate the immediate notification of the Department of Engineering. Coring for compressive strength will be required within seven (7) days with results furnished to the Department of Engineering within ten (10) days.

#### **5.2.17.11 Curing Compound**

Immediately after completion of finishing operations and as soon as marring of concrete will not occur, the pavement surface shall be cured by covering with a white pigmented curing compound in conformance with DOTD Standard Specifications for Roads and Bridges latest edition. All curb dowel bars shall be protected prior to application of curing compound.

#### **5.2.17.12 Base Adjustments**

Contractor shall use the necessary sand base to bring the roadway to the grades shown on the plans. This may require more than the minimum sand base.

#### **5.2.17.13 Joint Sealer**

Joint Sealer shall be in accordance with Section 1005.02 of DOTD Standard Specifications for Roads and Bridges, 2006 Edition. The sealant and backer material shall be approved products listed in DOTD's Qualified Product List 67.

#### **5.2.17.14 Settlement Factors**

Contractor must add a settlement factor (provided by Department of Engineering) to street grades shown on these plans to compensate for settlement during construction.

#### **5.2.17.15 Depressed Curbs**

The contractor is required to provide depressed curbs (as per Jefferson Parish Standard Plans) at location of H.C. ramps shown on the plans.

## **5.2.18 General Notes**

### **5.2.18.1 Pre-Construction Conference**

Pre-construction Conference: Prior to start of construction, the engineer shall schedule a pre-construction conference. The contractor shall be represented at the conference by his project superintendent or any other concerned personnel. Representatives from the Department of Public Works (Mr. Pete Blaha, 736-6791 and Mr. Errol Martin Phone 349-5843), from the testing lab and from other Jefferson Parish Departments will be invited as well as representatives of utility companies, when necessary.

### **5.2.18.2 Final Inspection Notifications**

Prior to final inspection, contractor shall coordinate with all concerned parties listed below to have their representatives present at the site: Mr. Pete Blaha, 736-6791 and Mr. Errol Martin, 349-5843, Department of Engineering Inspection Division who will notify their inspectors (Streets & Utilities) to be present at the inspection. Mr. Alfie Tonguis, Department of Engineering, Surveying Division (838-4230) who will send a team for the verification of street grades, drainage and sanitary sewer structures, and inverts, and to make sure they are constructed properly in conformance with approved plans. Contractor shall have sufficient work force to assist all inspectors in the performance of their tasks.

### **5.2.18.3 LPDES Permits**

The developer is responsible to file for a LPDES permit for storm water discharges associated with construction activities for projects of five (5) acres or more. Additionally, developer is responsible to develop a storm water pollution prevention plan to be kept on job site at all times.

### **5.2.18.4 As-Built Plans**

Prior to Final Acceptance of subdivisions, As-Built Plans (one set of mylars, three sets of blue or black line plans, and Auto Cad Version 14 on CD) shall be delivered to Jefferson Parish Department of Engineering. As-Built Plans must include Master Paving and Drainage Plan, Master Sewer Plan, Master Water Plan, and Plan/Profile Sheets.

### **5.2.18.5 Wrapping the Pipe Joints**

All pipe joints shall be wrapped with a 36" wide piece of filter cloth (DOTD specifications for Roads and Bridges 2006 Edition) centered on the joint and lapped 36".

### **5.2.18.6 Plastic Drain Lines**

All Plastic Drain Lines shall be in accordance with DOTD Standard Specifications for Roads and Bridges, 2006 Edition.

Plastic Drain Pipe used as main drain line or within the road right of way shall conform to Section 1006.07 of the DOTD Standard Specifications for Roads and Bridges, 2006 Edition and shall be listed on DOTD's QPL 66 and shall have type 3 joints.

73 and Plastic drain Lines outside of road right of way and used for rear yard drainage shall conform to section 1006.09 of the DOTD Standard Specifications for Roads and Bridges, 2006 Edition and shall be listed on DOTD's QPL 73 and shall have type 2 joints.

### **5.2.18.7 Minimum Depth of Cover during Construction**

PVC drain pipes beneath proposed roadways shall have a minimum depth of cover of two (2) feet during construction. Material shall be added as required to maintain the minimum 2 feet of cover prior to placement of concrete.

### **5.2.18.8 Backfill**

Backfill material shall be thoroughly compacted under haunches and then compacted in layers not exceeding 12" compacted thickness. Each layer shall be compacted by approved methods to at least 97 percent of maximum density (Standard Proctor) prior to placement of a subsequent layer. Exposed slopes at the conduit ends shall be covered by at least 12" compacted thickness of plastic soil blanket.

### **5.2.18.9 Minimum Depth of Cover**

The minimum depth of cover for RCP and PVC beneath pavement shall be one (1) foot at completion of construction. Cover for pipe beneath pavement shall be

one (1) foot at completion of construction. Cover for pipe beneath pavement will be measured from top of pipe to bottom of concrete. The minimum depth of cover for RCP and PVC located behind back of curb shall be 18 inches for RCP and 24 inches for PVC.

#### **5.2.18.10 Pipe Construction Compliance Monitoring**

The Parish reserves the right at any time during construction to excavate, at the Parish's expense, any section of pipe to monitor compliance with manufacturers bedding requirements. Should the exposed pipe reveal improper bedding, the entire job or a portion thereof at the director's discretion shall be excavated at the contractor's expense and any differences corrected.

#### **5.2.18.11 Deflection testing**

No sooner than 30 days after installation of PVC pipe, a five percent deflection test will be required before accepting this material. The developer must pay the testing fee for laboratories selected by the Parish. Any pipe section that fails the test will have to be excavated and reinstalled with proper bedding.

Copies of all test reports shall be forwarded to the Jefferson Parish Department of Engineering.

#### **5.2.18.12 Water Stop**

Proposed plastic pipe for drain tie-in shall use one standard double gasket, positioned on the pipe in the center of the manhole wall with the leading (lower) edge of gasket closest to the inside of the manhole.

#### **5.2.18.13 Precast Drainage Structures**

Precast Drainage Structures located within streets shall be certified to be in compliance with ASTM C-857-92. Reinforcing Steel shall be per ASTM A-615, Grade 60 and meet AASHTO HS 20-44 loading. Concrete shall be 4,000 psi at 28 days.

#### **5.2.19 J. P. Concrete Core Policy**

- 1) Cores shall attain a minimum thickness of seven (7) inches. There will be no tolerance with regard to the minimum pavement thickness. Any ore

certified to be less than 7 inches thick shall be deemed to have failed. (Example: 6.99 inches shall constitute a failed core).

- 2) For each pour, cores will be staggered, side to side to represent all panels.
- 3) Within the limits of each pour, cores shall be equally spaced, and the number of cores shall be determined by dividing the pour length (in feet) by 200 and rounding up. Example: 825 foot pour length  $> 825/200 = 4.13.5$  cores.
- 4) The contractor has the option of pouring the street full width (26 feet) or using split slab construction with two pours (13 feet each). It should be noted that split slab construction will require twice as many cores.
- 5) An additional core shall be required at each intersection.
- 6) When a core of less than required thickness is found, two additional cores will be allowed within a 5 foot radius from the failed core (within the same failed slab). If both cores meet the minimum required thickness, that section will be acceptable. If one of the additional cores fails, contractor shall have to remove and replace the defective slab.

Slab shall be defined as a section of concrete pavement bounded by joints.

Testing will be carried on the abutting slabs where only one additional core will be allowed in each abutting slab. This procedure of testing will be repeated until satisfactory core lengths are obtained.

- 7) All replaced pavement shall require base density, concrete compressive strength and core thickness testing.

## 5.3 Utilities:

### 5.3.1 General

#### 5.3.1.1 Existing utilities

All existing utilities shall be shown on the **plan** and the **profile** views within the drawing limits. This will include **Storm Drainage System, Sanitary Sewerage System, and Water Distribution System**. All of the following sources are suggested to be examined to compile information about the location, size, type, function, etc. of any existing drainage, water and sewer system components:

- Jefferson Parish Water Unit Sheets.
- Jefferson Parish Sewer Unit Sheets.
- Jefferson Parish Drainage Unit Sheets.
- Jefferson Parish Geo-Media mapping system.
- Any available As-Built drawings, which may provide useable information.
- Survey.

***The task of depicting the existing Jefferson Parish Owned Utilities on the construction drawings, correctly, is solely the responsibility of the A/E and the fact that Jefferson Parish provides review and comments during the design stages will not relieve the A/E from this very crucial responsibility whatsoever.***

### **5.3.1.2 Proposed utilities**

All proposed utilities shall be shown on the **plan** and the **profile** views within the drawing limits. This will include **Storm Drainage System, Sanitary Sewerage System, and Water Distribution System**.

### **5.3.1.3 Jefferson Parish Standard Drawings**

Any applicable Jefferson Parish Standards shall be included in the drawings and shall be referenced to as applicable throughout the plans and the specifications. Following is a list of current Jefferson Parish Standard drawings:

You must have [Adobe Acrobat Reader](#) to view documents (drawings) on the Parish Website that are listed on this page.

If you use AutoCAD, a DWG file containing these drawings can be forwarded directly to you. Please e-mail your request to [VVonhassel@JeffParish.net](mailto:VVonhassel@JeffParish.net) or call our office at 736-6500 to provide your e-mail address. Originals of these drawings are available from the Jefferson Parish Engineering Department.

- [Sewer Standard Details](#) (size 621KB)
- [Water Standard Details](#) (size 414KB)
- [Appendix A \(Gravity Sanitary Sewer System General Standard Notes\)](#)
- [Appendix B \(Sanitary Sewer "Force Main System" General Standard Notes\)](#)
- [Appendix C \(Water Distribution System General Standard Notes\)](#)

### **5.3.1.4 Jefferson Parish Contacts**

Add the following note to the “GENERAL NOTES”: Contractor must contact Jefferson Parish Departments of:

- 1) Engineering, Pete Blaha, Inspection Supervisor, 736-6791 (Primary Contact).
- 2) Engineering, Leo Lay, Chief Engineer, 736-6817 (Secondary Contact).
- 3) East Bank Water, Tyrell Chatman, General Superintendent, 838-4334, 838-4315
- 4) West Bank Water, Tyrell Chatman, General Superintendent, 838-4334, 838-4315
- 5) Sewerage Lift Station, Glenn Miller, General Superintendent, 736-6678
- 6) Sewerage Lines, Adolph Grimes, General Superintendent, 437-4815
- 7) Sewerage Engineering Inspector III, Bruce Cook, 736-6544.
- 8) East Bank Sewerage Line Repair, Craig Bradley, Superintendent II, 736-6683
- 9) West Bank Sewerage Line Repair, Donald Jackson, Superintendent II, 437-4816
- 10) East Bank Drainage, Richard Davis, Superintendent III, 736-8764
- 11) West Bank Drainage, Dominick Ditcharo, Superintendent III, 437-4941

## **5.3.2 Storm Drainage system**

### **5.3.2.1 Design Guidelines**

#### **5.3.2.1.1 General**

The design of storm water drainage systems shall insure adequate control of storm water runoff through the use of properly sized and positioned drainage structures including, but not limited to, curb and gutter, curb and grate inlets, storm sewer pipe, box culverts, intersectional drains, open ditches, detention system, and bridges.

#### **5.3.2.1.2 Master Drainage Plans**

The design of storm water drainage systems shall be compatible with master drainage plans developed for and approved by Jefferson Parish. [Jefferson Parish Engineering Department Contact: Mr. Leo Lay, 736-6817.]

#### **5.3.2.1.3 Parish Drainage Design Manual**

The design of storm water drainage systems shall be in accordance with the requirements and recommendations of the “Jefferson Parish Drainage Design Manual” and the following notes:

#### **5.3.2.1.4 General Drainage Design Guidelines Notes**

#### **5.3.2.1.4.1 Effect of Runoff on Adjacent Properties**

- 1) Drainage facilities shall be designed to prevent runoff onto adjacent properties.

#### **5.3.2.1.4.2 Storm Drainage Pipe and Culverts**

- 1) Pipe and culvert sizes shall be selected by use of a computed hydrological and hydraulic data. Design flows shall be based on climatic factors such as rainfall intensity, duration, frequency and distribution and physiographic factors such as size, shape and slope, and roughness characteristics as well as its tendency to become choked and the ability to clean and remove obstructions.
- 2) The minimum storm drainage pipe size shall be 15 inches.
- 3) Cross drains shall be provided to accommodate all natural water flow and shall be of sufficient length to permit construction of a full width roadway including side slopes. Headwalls or flared end section aprons as well as channel bottom and slope protection shall be provided at the upstream and discharge end of the cross drain as required by Jefferson Parish.

#### **5.3.2.1.4.3 Streets, Curb and Gutter, and Inlets**

- 1) The horizontal and vertical alignment of streets shall be compatible with the storm water runoff system and drainage design.
- 2) Street grades shall be coordinated with lot drainage as proposed in the grading plan. Slab elevations in residential areas and commercial areas shall be 18" and 6" above the street curb elevation respectively or above 100 yr. flood level whichever is higher.
- 3) The hydraulic capacity of the curb and gutter shall be determined by generally accepted engineering procedures taking into consideration roughness, street cross-slope, and street gradient, and allowable spread of water over the travel lane.
- 4) The hydraulic capacity of curb inlets shall be determined by generally accepted engineering procedure taking into consideration inlet geometry and characteristics of the gutter flow. Curb inlets shall be spaced so as to limit the spread of water to not more than one quarter of the street width during a design storm of ten (10) year return period and 15 minute inlet time. Inlets shall also be placed at all low points in the gutter grade, at intersections where necessary to prevent gutter flow from crossing traffic lanes of an intersecting street, or at points of special concern as designated by the Parish.
- 5) The structural design of all box culverts or bridges shall conform to the standard plans of the Louisiana State Highway Department and Jefferson Parish Department of Public Works for a load capacity of 20 tons minimum. Bridges, where required, shall be designed and constructed for minimum impedance to the drainage flows. Velocity of flows in the drainage canals shall be limited to; for earthen sections 2-3 ft. / sec. and for concrete sections 3-8 ft. /sec.

### **5.3.3 Sanitary Sewer System:**

#### **5.3.3.1 General**

##### **5.3.3.1.1 Sanitary sewer Lift Station / Collection Line Impact Fee:**

The Lift Station/Collection Line Impact Fee is based on the estimated additional sewerage discharge from the proposed development. The Impact Fee will be determined by the Department of Sewerage according to the effect of the proposed subdivision on the existing sewer system.

The Impact Fee will be due from the developer prior to final approval of the Engineering Plans. Checks or Money Orders shall be made to Jefferson Parish Department of Sewerage (736-6674).

The Impact Fee will be calculated by the Department of Sewerage. [Jefferson Parish Engineering Department Contact: Mr. Ray Mowla, 736-6818]

#### **5.3.3.2 Gravity System:**

##### **5.3.3.2.1 Design Criteria:**

The minimum design standards of the Gravity Sanitary Sewer System for each subdivision shall conform to Jefferson Parish Standard Details and Notes and shall generally conform to the following:

- 1) Pipe size – Minimum 8 inches.
- 2) Pipe slope – Minimum 0.33%, (Preferred 0.40% whenever possible especially when low flow is anticipated) for 8-inch pipe.
- 3) Velocity – Minimum 2 feet per second, Maximum 8 feet per second.
- 4) Waste per person – 100 gallons per day.
- 5) People per dwelling unit – 4 (four).
- 6) Peak factor – 3.5 minimum.
- 7) Maximum manhole separation – 350 feet with manholes required at each grade change and alignment change.
- 8) Minimum cover – 3 feet.
- 9) Top manhole elevation – ground elevation, minimum.

##### **5.3.3.2.2 Gravity System Plan Preparation Notes:**

See Appendix “A”.

### **5.3.3.3 Force Main System:**

See Appendix “B”.

### **5.3.3.4 Low pressure sanitary sewer system**

Jefferson Parish Department of Sewerage will not maintain any Low Pressure Sanitary Sewer System. Private Sewer Grinder Pumps and Low Pressure Sanitary Sewer Systems will be allowed only with the approval of the “Louisiana State Department of Health and Hospitals” and the Director of Jefferson Parish Sewerage Department.

### **5.3.3.5 Pump Stations:**

- a. The use of sewer lift stations should be minimized. However, when pump stations cannot be avoided, they should be designed for easy maintenance, maximum operating life, and adequate pumping capacity. The design calculations must show flow rates, estimated Total Discharge Head, and velocities for the pump station and force main. [Consult with the Sewerage Department on all Lift Station Design Parameters, Mr. Christopher Fernandez, 736-6673]
- b. Minimum of two (2) pumps, each of which has capacity to handle the expected load.
- c. Adequate controls with overload and lightning protection and alternators.
- d. Necessary servitudes, access roads, driveways, and security fencing.
- e. Servitudes shall extend a minimum of 7' beyond any components of a sewer lift station in every direction. The parish may require additional servitudes if deemed necessary.
- f. Sewer lift stations shall not be constructed on public right-of-way.
- g. Sewer lift stations shall be constructed on private property and within a sewer servitude given to the parish.

- h. Gravity lines shall not directly enter the wet well. A sewerage collection manhole with adequate stub outs shall be provided. The collection manhole shall be connected to the wet well by an adequately sized conveyance pipe for any future expansion of the station.
- i. Minimum flow rate of 3 feet per second in force main, with a maximum of 8 feet per second with dual pump operation.
- j. Adequately vented wet well.
- k. All bolts, nuts, anchor bolts, guard rails and chains for submersible pumps shall be of 304 stainless steel with aluminum hatch and stainless steel frame and hardware.

## **5.3.4 Water Distribution System**

### **5.3.4.1 Design Criteria and Guidelines**

#### **5.3.4.1.1 General**

The water distribution network shall consist of pipes, fittings, and other appurtenances designed to convey potable water at adequate quality, pressure, and discharge. Water mains shall be designed, constructed and properly connected with the public water supply system in such a manner as to adequately serve all lots shown on the subdivision plat for both domestic and fire prevention purposes, and will adhere to the Parish standard details and notes (Appendix "C") and also to the minimum requirements set forth herein below (if these minimum requirements cannot be achieved, all deficiencies shall be disclosed on plans and on all pertinent legal documents and shall document all authoritative parties approval):

#### **5.3.4.1.2 Hardy Cross Method / Hazen-Williams formula**

Water distribution systems shall be designed using the Hardy Cross Method. The Hazen-Williams formula shall be used in computing head losses.

#### **5.3.4.1.3 Minimum Flow**

Water distribution systems shall be designed for the peak hourly flow or the maximum daily flow plus fire flow, whichever is greater.

Required fire flows shall be determined from the following publication and any future updates:

- Latest Jefferson Parish adopted NFPA publications.
  - The A/E shall contact the local fire departments, in writing (and copy Ray Mowla, Jefferson Parish Engineering Department at: [rmowla@jeffparish.net](mailto:rmowla@jeffparish.net) ), to familiarize himself with any specific requirements.
  - The above communication is most important when the project is in areas such as City of Kenner, Town of grand Isle, Town of Jean Lafitte, etc.
- Jefferson Parish Standards and requirements.

#### **5.3.4.1.4 Fire flow test and flow requirements**

Fire flow tests may be required to determine the existing system's fire flow capacity and adequacy at locations where proposed water mains will connect to the existing water system. The A/E is responsible for determining the availability and adequacy of water by flow testing. The Jefferson Parish Department of Engineering, Water, and the local Fire Department shall be notified of the time and location of any needed flow testing a minimum of 48 hours prior to the test. The following is the current contact list for Jefferson Parish engineering and water Departments:

The following individuals from the Jefferson Parish Engineering Department should be contacted to schedule the test:

Leo J. Lay, Jr., P.E.  
Chief Engineer – Water, Sewerage & Drainage  
Suite 801, Joseph S. Yenni Bldg.  
1221 Elmwood Park Blvd.  
Jefferson, Louisiana 70123  
Phone (504) 736-6817  
FAX (504) 736-6526  
[llay@jeffparish.net](mailto:llay@jeffparish.net)

Peter Blaha  
Project Coordinator  
Jeff. Parish Dept. of Engineering

Utility Inspection  
Phone (504) 736-6791  
FAX (504) 736-6792  
[pblaha@jeffparish.net](mailto:pblaha@jeffparish.net)

**The following individuals from the Jefferson Parish Water Department should be contacted to schedule the test:**

Douglas J. Pertuit, Jr.  
Assistant Director  
Jefferson Parish Department of Water  
4500 West Bank Expressway  
Marrero, LA 70072

Phone (504) 349-5088  
Fax (504) 349-5065  
[dpertuit@jeffparish.net](mailto:dpertuit@jeffparish.net)

Ray Mowla, Jefferson Parish Engineering Department ( [rmowla@jeffparish.net](mailto:rmowla@jeffparish.net) ) shall be copied on all correspondences.

The Jefferson Parish Engineering, and/or Water Departments will assist the A/E in conducting the actual fire flow tests. As a minimum, the following items shall be ironed out between the A/E and the local fire department prior to scheduling a Fire Flow Test with the Parish (these items shall be submitted to the parish prior or at the time of the request for testing):

- Location of the test.
  - The A/E shall review the Parish's water distribution maps (unit sheets and/or GIS). These maps can be obtained through the Jefferson Parish Engineering Department.
  - All maintained Jefferson Parish water valves and hydrants are numbered for ease of reference.
- Method of the test.
  - This shall consist of a marked up copy of the Jefferson Parish water distribution map, identifying the flowing hydrant and the pressure hydrant. This marked up map shall also identify any special requirements for valve closures, etc.
  - Duration of the test.

- Time of the day, if critical.
- Acceptable required equipment. The parish can supply the pressure and pitot gauges and hydrant wrenches.
- Required flow (GPM) for the proposed facilities at 20 psi residual pressure.
  - One recommendation suggests that: “To obtain satisfactory test results for theoretical calculation of expected flows at 20 psi residual pressure, sufficient discharge should be achieved to cause a drop in pressure at the pressure hydrant of at least 25 percent”.

#### **5.3.4.1.5 Minimum Pressure**

The water distribution system shall be designed so that the following range of dynamic pressures are provided: 50 psi to 60 psi for average daily flows; 20 psi to 30 psi for peak hour flows; 20 psi to 50 psi for maximum daily flow plus fire flow. The minimum dynamic pressure at any point shall be 20 psi.

#### **5.3.4.1.6 Maximum design velocity**

The maximum design velocity shall not exceed 5 fps.

#### **5.3.4.1.7 Water Valves Location and Spacing**

Valves shall be installed at each intersection or change in pipe size, and shall be placed so that no single case of pipe breakage shall require shutting off from service an artery, or more than 500 feet of pipe in high value districts, or more than 800 feet of pipe in any area.

#### **5.3.4.1.8 Hydrant Spacing**

Fire hydrant spacing shall not be greater than 400 feet in residential areas or 350 feet in commercial areas. Any facility that requires fire protection shall not be farther than 200 feet from a fire hydrant. Exception to these requirements shall be in remote areas with limited water availability and / or limited fire protection needs in which case a letter from the local fire department chief will be required for issuance of any building permit and /or water meter.

#### **5.3.4.1.9 Configuration**

Water distribution systems shall be laid out on a grid system with cross connections at cross streets and shall be looped with more than one source of supply. Dead end pipes shall be avoided whenever possible.

#### **5.3.4.1.10 Minimum Pipe Diameter**

- 1) Mains shall be a minimum 8" in diameter [possible exception to this 8" minimum for mains would be Dead End mains that will not support a Hydrant. This may be necessary to avoid the possibility of stagnation when the main usage is minimal.]
- 2) Larger mains may be required if conditions warrant. Possible conditions that may warrant larger mains are as follows:
  - a. If the main will serve as a transmission line as well as distribution line.
  - b. Permanent or temporary (due to construction phasing) dead end mains which support a hydrants or fire lines.
  - c. If the 8" diameter main would not provide adequate pressure, flow, velocities, etc.
- 3) The requirements for water distribution systems serving commercial and industrial developments shall be determined by the A/E by engineering analysis based upon specific water requirements for the type of use intended or those required by the height and density permitted by the zoning classification of the property, whichever is greater.

#### **5.3.4.1.11 Pressure testing, Chlorination and Sterilization**

All new and/or modified segments of the Water Distribution System shall be tested to 100 P.S.I. This pressure shall be maintained for a period of two (2) hours with no discernible pressure loss. Leaks shall be repaired by removing and replacing faulty sections. The pressure test shall be performed by the contractor under the direct supervision of the Jefferson Parish Engineering Department. Before being placed in service, all new, modified and/or contaminated segments of the water distribution system shall be flushed and disinfected (Chlorinated) either by Jefferson Parish Engineering Department personnel or under their direct supervision [any direct involvement (beside supervision) of Jefferson Parish Engineering Department shall be due to inability of the contractor to perform these tasks. In such case the contractor will be responsible to reimburse the parish for the specific work performed.] Flushing should be done at flow rates sufficient to provide a velocity in the lines of at least 2.5 feet per second. Disinfection should comply with AWWA standard C651, "Disinfecting Water Mains". Only after satisfactory pressure testing and

disinfection (chlorination) is completed can the segment be tied into the existing water distribution system. Under no circumstances will the contractor be allowed to make a tie-in to the existing water distribution system without direct supervision of the Jefferson Parish engineering department. All costs associated with the testing and chlorination procedure shall be the responsibility of the contractor.

#### **5.3.4.1.12 Jefferson Parish “Water Standard Details” and Notes.**

Jefferson Parish “Water Standard Details” (sheet 1 of 1, in ACAD format) shall be included in the plans.

Jefferson Parish Standard Notes (Appendix “C”) shall be attached to the plans.

### **5.4 Servitudes:**

#### **5.4.1 Width**

Utilities and/or drainage servitudes of an appropriate width as required shall be provided, as per relevant Parish requirements.

#### **5.4.2 Sewer lift stations**

Servitudes for sewer lift stations shall extend a minimum of 7' beyond any components of a sewer lift station in every direction. The parish may require additional servitudes if deemed necessary.

#### **5.4.3 Intersecting servitudes**

Where servitudes intersect or sharp changes in alignment are necessary, corners shall be cutoff sufficiently to permit equipment access.

#### **5.4.4 Paving over servitudes**

Servitudes can be dedicated with provisions for paving and use for parking. Any damages to such pavement resulting from utilities failure, repair and maintenance will be at the risk of the property owner.

### **5.5 Private Subdivisions:**

Where a new private subdivision is proposed, the subdivision design, lot layout, street design, utilities, etc., shall meet the Parish minimum standard requirements. Private subdivisions shall require similar procedures as non-private subdivisions through plan approval, construction, inspection, and final acceptance phases.

## **5.6 Subdivisions with Masonry Walls:**

Developers of subdivisions with masonry walls will be required to install sidewalks outside of those sections of wall that abut public streets. These sidewalks are to be constructed after the wall is completed.

## **5.7 Traffic: [ This section is left blank ]**

## **5.8 Appendices (Separate documents, available on Jefferson Parish site):**

### **5.8.1 Appendix “A” (Jefferson Parish Department of Engineering Gravity Sanitary Sewer System General Standard Notes)**

### **5.8.2 Appendix “B” (Jefferson Parish Department of Engineering Sanitary Sewer “Force Main System” General Standard Notes)**

### **5.8.3 Appendix “C” (Jefferson Parish department of Engineering Water Distribution System General Standard Notes)**