

ST. TAMMANY PARISH COUNCIL

ORDINANCE

ORDINANCE CALENDAR NO: 5097 ORDINANCE COUNCIL SERIES NO: _____

COUNCIL SPONSOR: BINDER/BRISTER PROVIDED BY: LEGAL COUNSEL

INTRODUCED BY: _____ SECONDED BY: _____

ON THE 7 DAY OF NOVEMBER , 2013

PLEASE SEE ATTACHED FOR COMPLETE DOCUMENT.
ORDINANCE TO AMEND ST. TAMMANY PARISH CODE OF ORDINANCES, APPENDIX B, CHAPTER 40 SUBDIVISION REGULATORY ORDINANCE NO. 499, RELATIVE TO ROADWAY TESTING AND INSPECTION STANDARDS AND RELATED MATTERS FOR RESIDENTIAL AND COMMERCIAL SUBDIVISIONS, AND TO PROVIDE FOR THE MODIFICATION AND/OR DELETION OF OTHER RELEVANT SECTIONS IN CONNECTION THEREWITH.

WHEREAS,

SEE ATTACHED

THE PARISH OF ST. TAMMANY HEREBY ORDAINS

SEE ATTACHED

REPEAL: All ordinances or parts of Ordinances in conflict herewith are hereby repealed.

SEVERABILITY: If any provision of this Ordinance shall be held to be invalid, such invalidity shall not affect other provisions herein which can be given effect without the invalid provision and to this end the provisions of this Ordinance are hereby declared to be severable.

EFFECTIVE DATE: This Ordinance shall become effective fifteen (15) days after adoption.

MOVED FOR ADOPTION BY: _____ SECONDED BY: _____

WHEREUPON THIS ORDINANCE WAS SUBMITTED TO A VOTE AND RESULTED IN THE FOLLOWING:

YEAS: _____

NAYS: _____

ABSTAIN: _____

ABSENT: _____

THIS ORDINANCE WAS DECLARED DULY ADOPTED AT A REGULAR MEETING OF THE PARISH COUNCIL ON THE 5 DAY OF DECEMBER , 2013 ; AND BECOMES ORDINANCE COUNCIL SERIES NO _____.

JERRY BINDER, COUNCIL CHAIRMAN

ATTEST:

THERESA L. FORD, COUNCIL CLERK

PATRICIA P. BRISTER, PARISH PRESIDENT

Published Introduction: October 31 , 2013

Published Adoption: _____, 2013

Delivered to Parish President: _____, 2013 at _____

Returned to Council Clerk: _____, 2013 at _____

ST. TAMMANY PARISH COUNCIL

ORDINANCE

ORDINANCE CALENDAR NO: 5097 ORDINANCE COUNCIL SERIES NO: _____

COUNCIL SPONSOR: BINDER/BRISTER PROVIDED BY: COUNCIL ATTORNEY

INTRODUCED BY: _____ SECONDED BY: _____

ON THE 7TH DAY OF NOVEMBER, 2013

ORDINANCE TO AMEND ST. TAMMANY PARISH CODE OF ORDINANCES, APPENDIX B, CHAPTER 40 SUBDIVISION REGULATORY ORDINANCE NO. 499, RELATIVE TO ROADWAY TESTING AND INSPECTION STANDARDS AND RELATED MATTERS FOR RESIDENTIAL AND COMMERCIAL SUBDIVISIONS, AND TO PROVIDE FOR THE MODIFICATION AND/OR DELETION OF OTHER RELEVANT SECTIONS IN CONNECTION THEREWITH.

WHEREAS, the Parish of St. Tammany has reviewed the existing standards relative to construction, testing, and inspection of Parish roadways; and

WHEREAS, it has been determined after considerable review that for the health, safety, and welfare of the public that these standards be revised and updated.

THE PARISH OF ST. TAMMANY HEREBY ORDAINS that the St. Tammany Parish Code of Ordinances, Appendix B, Chapter 40 Subdivision Regulatory Ordinance No. 499 be amended as follows:

SECTION 40-032.0 STREETS

1. The arrangement of streets shall be structured to enable the continuation of the existing streets in adjoining areas. All street intersections shall be safe for traffic. Offset streets shall be avoided. Minimum offsets shall be at least one-hundred and twenty-five feet (125') between the center lines of two opposing offset streets.

(a.) All lots within new subdivisions must have either a public or private street or road frontage constructed for the full lot frontage in accordance with the provisions as established within this section.

2. In special cases, where in the opinion of the Planning Commission, the requirements of safety demand, especially where subdivisions front on heavily traveled thoroughfares; such thoroughfares may be designated as limited access roads, and in such cases, local traffic roads shall be required adjoining and paralleling the thoroughfares, with access thereto at specified intervals only. In no case will lots be positioned with direct access onto a Class A state highway.

3. In the interest of public health and safety, to provide for efficient traffic flow at subdivision entrances, and to promote aesthetic qualities, all proposed subdivisions where only one (1) entrance is provided shall be required to build the entrance to the following minimum standards:

(a.) Right-of-way: An eighty by one hundred foot right-of-way (80' x 100') shall be reserved at the entrance of subdivisions with only one (1) access.

(b.) Street: The developer shall design one (1) 14' wide ingress travel lane on one side of the median and a minimum of two (2) 10' wide each egress travel lanes on the other side of the median.

Note: The street width requirements shall apply only to the first one hundred feet (100') in depth from the entrance.

(c.) Median: For subdivisions that have over forty (40) lots, the developer shall design and construct a median at the entrance to segregate traffic flow.

1. The minimum width of the median shall be six feet by a depth of one hundred feet (6' x 100') with a minimum radius at both ends of three feet (3').

2. The median shall be of a curb and crowned design with a turf cover.

a. The curbing shall have a minimum of five inches (5") in height and eight inches (8") in width. Materials used to construct the curbing shall be compatible with that of the street.

b. The turf cover shall be made up of grass and/or any other combination of living landscape materials such as trees, bushes, shrubs and flower beds.

(d.) Maintenance of the median shall be the responsibility of the developer and/or homeowners association when and if established.

4. Dead end streets are prohibited, however cul-de-sacs may be used by developers provided that the following minimum standards are utilized:

(a.) The radius of a cul-de-sac shall be sixty (60') feet when the design employs open swale ditches and fifty-five (55') feet when subsurface drainage is used. In addition, the inside turning radius shall be a minimum of twenty-six (26') feet.

(b.) A street terminated by a cul-de-sac shall be no greater than seven-hundred (700) feet in length. However, some exceptions may apply due to extenuating circumstances. In such cases, the Planning Commission shall reserve the right to waive the length standards.

(c.) The entrance to a street terminated by a cul-de-sac shall be posted with a sign stating "no outlet".

(d.) The Planning Commission has the authority to waive the minimum design standards for streets terminated by a cul-de-sac only when it is deemed reasonable and compatible with topography, aesthetics, planning, development or need.

5. Minimum width of right-of-way of public or private streets in any subdivision shall be sixty feet (60') except where concrete curb and gutter streets with subsurface drainage are provided. Streets having these features may be fifty feet (50') in width. However, in the case of a Planned Unit Development (PUD), if a developer wishes to maintain the streets privately, the developer may request a reduction of established right-of-way width requirement for streets if the developer can justify such a reduction in accordance with the standards and practices of the Departments of Public Works and Engineering.

6. Boulevards or avenues in any subdivision shall have a minimum width of eighty (80') feet.

7. Streets that are obviously in alignment with others already existing shall bear the names of the existing streets.

8. Duplication of street names shall be avoided. In no case shall there be a duplication of a street or road name within a fire protection district or of new street names within any of the municipalities of St. Tammany Parish.

9. A uniform street sign system marking each street intersection will be installed by the developer prior to obtaining final approval, in accordance with the specifications referenced to within this ordinance.

10. Traffic-control signs will be installed by the developer, prior to obtaining final approval, in accordance with the specifications listed within this ordinance. The developer shall be responsible for the maintenance of all streets and drainage ditches until all improvements have been completed and the streets and drainage ditches have been accepted for maintenance by the St. Tammany Parish Council.

SECTION 40-032.01 DEFINITIONS RELATING TO STREETS

1. Apron(s) as herein used is defined as the access or egress roadbed and road-wearing surface leading to and from a subdivision hereafter approved.

2. Subdivision (see master definition Section 40-010.23).

3. Main street or thoroughfare includes any road, roadbed and road-wearing surface, situated in any subdivision as "subdivision" is herein above defined, which constitutes the main road or roads or traffic arteries situated therein for the purpose of ingress or egress of vehicular traffic into and out of the subdivision and within the subdivision; same shall also automatically include roads which are separated by a median or other separation and also four-lane roads providing for two lanes (2) each for opposing traffic; whether or not so divided by a median or other device situated therein.

4. The Department of Engineering as is herein used is that department as defined in the Code of Ordinances for St. Tammany Parish Louisiana, or any successor agency thereto; should that department be hereafter divided in function, the Parish department herein with jurisdiction over streets and roads shall be the department referred to herein.

5. Reinforcement as used herein shall include mesh, rods and/or a mixture of materials so as to provide the per square-inch strength imposed and required by the Louisiana Department of Transportation and Development for the installation and construction of highway traffic arteries.

6. Testing as used herein shall mean the sampling of a roadbed material for composition, compaction, depth and such other requirements applicable thereto, and of the road surface (all at such intervals as standard testing procedures provide) to determine through state of the art methodology, proper compliance with the specifications imposed.

~~7. Responsibility for on-site inspections shall be the responsibility of the developer to retain a registered civil engineer, to provide for on-site inspections and observation during all construction activities, including those contingent herein and drainage. Said engineer shall provide periodic inspection reports to the Engineering Department for review and filing.~~

SECTION 40-032.02 APPROVAL (Street Construction Plans Mandatory)

Preliminary or final subdivision approval shall not be approved until the design details and specifications of the construction of the road base and wearing surfaces have been submitted and approved by the Department of Engineering. This includes the detail of the ingress and egress roads therein, with and to the approach road to the subdivision, any and all main streets or thoroughfares situated within said subdivision shall have been approved by the Parish Department of Engineering.

SECTION 40-032.03 ~~DOTD~~ STANDARDS

~~The traffic arteries specified in Section 40-032.2 hereof shall be so designed and have sufficient road base material and shall provide for roadway wearing surface with or without reinforcement of such strength, as to comply with the requirements imposed for the installation and construction of roadways by the Louisiana Department of Transportation and Development (La. DOTD).~~

ST. TAMMANY PARISH ROADWAY TESTING & INSPECTION STANDARDS FOR RESIDENTIAL AND COMMERCIAL SUBDIVISIONS

GENERAL:

- Louisiana Standard Specifications for Roads and Bridges (LSSRB), as amended, and special provisions in the St. Tammany Parish Roadway Design and Construction Standards shall apply to Roadway Testing and Inspection Requirements.
- Testing of all materials and construction shall be in accordance with ASTM, AASHTO or LA DOTD standards.
- The developer/contractor must retain and pay a qualified testing laboratory to perform all required testing in accordance with St. Tammany standards.
- The Materials Testing Laboratory shall be approved by St. Tammany Parish Engineering Department. The testing and inspection firm must have a minimum of 5 years of experience and operate under the direct supervision of a Louisiana Registered Professional Engineer.
- All testing and inspection reports performed by the independent testing laboratory employed by the developer/contractor shall be submitted to the Parish Engineering Department within 10 working days after the tests are conducted.
- Notwithstanding the foregoing, St. Tammany Parish Department of Engineering retains the right to require additional requirements for roads to address public safety hazards, to be determined on a case by case basis, including but not limited to, lighting and signage.

1. Roadway Subgrade Preparation

The roadway alignment shall be stripped of all topsoil with organics and other deleterious materials. The topsoil in St. Tammany Parish is generally underlain by moisture sensitive silty soils. These near surface silty deposits shall be examined at the time of construction since they tend to lose their support capabilities if they become wet. Consequently, depending on the site condition at the time of construction, the moisture sensitive soils may have to be undercut and replaced with compacted structural fill.

Once the roadway alignment is stripped and undercut to the required subgrade elevation, the roadway subgrade shall be proofrolled using a single or a tandem axle dump truck or similar heavily loaded rubber tired vehicle weighing about 20 tons. Soils which are observed to rut or deflect under the moving load shall be undercut and replaced with compacted structural fill, disked open to dry or treated to form a stable non-yielding subgrade prior to fill placement. Proofrolling the roadway subgrade shall be witnessed by St. Tammany Parish Inspection personnel or their representative prior to proceeding with fill placement. The approval of the subgrade is valid for 24 hours. Therefore, the subgrade shall be protected and covered with fill as soon as possible. Should the subgrade be exposed to excessive amount of precipitation, re-approval of the subgrade will be required.

2. Roadway Fill

Fill placed along the roadway alignment shall consist of sandy clays, clayey or silty sands free of organics and other deleterious materials. The fill shall have a maximum liquid limit of 40 and a plasticity index less than 18 percent. The structural fill shall be placed in maximum lifts of 8 inches of loose materials and shall be compacted within 1 percentage point below to 3 percentage points above the optimum moisture content. The fill shall be compacted to at least 95 percent of the fill's maximum dry density as determined by ASTM D698 (AASHTO T99). Each lift of fill shall be tested by the parish approved testing laboratory and approved prior to placement of subsequent lifts. The edge of the fill shall extend at least 2 feet beyond the edge of the road or face of curb. Field density tests shall be conducted in accordance with ASTM D2922 at 100 foot intervals along the roadway alignment.

3. Aggregate Base Course

The roadway aggregate base shall consist of Class II Base including 610 limestone or crushed concrete meeting the requirements of the latest edition of Louisiana Standard Specifications for Roads and Bridges (LSSRB), Section 1003.3D. The aggregate base shall be compacted to at least 95 percent of the aggregate’s maximum dry density determined by ASTM D698 (AASHTO T99). Field density tests shall be conducted on the base material in accordance with ASTM D2922 at 100 foot intervals along the roadway alignment. In addition, depth checks shall be conducted at the density test locations to verify compliance with the pavement design and parish requirements.

4. Lime Treated Subgrade

Lime treatment may be used to stabilize the clay subgrade or to dry the in situ soil. It is not intended for use as a pavement base. Lime treatment shall be conducted after the soil has been classified and the plasticity index of the soil is determined to optimize the quantity of lime needed to treat the soil. The following percent of hydrated lime, by weight, is a guide to treat the cohesive soil. The actual amount shall be verified by the approved testing laboratory prior to field application.

<u>% of Hydrated Lime by Weight</u>	<u>Clay Soil Plasticity Index, %</u>
<u>2</u>	<u>18 to 30</u>
<u>4</u>	<u>31 to 45</u>

The percent of lime required to stabilize clays with plasticity indices over 45 percent shall be determined by the independent testing laboratory. Lime treatment of silty soils shall be conducted for drying purposes only.

Lime treatment shall be designated by type in accordance with LSSRB, Section 304. When lime is used to treat the clay sub-base or to prepare for cement treatment, Type B and Type C shall be used, respectively. For Type B and Type C treatments, the pulverized treated soil shall yield 95 percent passing the ¾ inch sieve and 50 percent passing the No. 4 sieve, by weight. The mixture shall be compacted to at least 95 percent of the maximum dry density as determined by ASTM D698 (AASHTO T-99). Field density tests shall be conducted at intervals of 200 linear feet of roadway. The mixture shall be protected against drying in accordance with LA DOTD specifications.

5. Cement Treated Base

Cement treatment of roadways shall be conducted in general accordance with LSSRB, Section 303. Cement treated base generally involves treatment of the existing subgrade soils or treatment of imported embankment fill to be used as a base course in flexible or rigid pavement sections.

The in situ or embankment fill considered for cement treatment shall have a plasticity index of less than 15 percent. Soils with higher plasticity indices shall be lime treated prior to cement treatment. Cement treated bases for roadways shall be designed to yield a minimum compressive strength of 300 psi at 7 days as determined by a mix design in accordance with DOTD TR 432 Standard Procedure. The mix design shall be conducted on representative samples of the subgrade soil by an independent testing laboratory. Unless the results of the mix design indicate otherwise, the silty soils encountered generally in St. Tammany Parish shall be treated with at least 10 percent of Portland Cement, by volume. The roadway shall be prepared in general accordance with LSSRB, Section 303-04. The moisture content of the mixture shall be within 2 percent of the optimum moisture at the time of treatment. Pulverization of the treated soils shall yield a mixture with at least 60 percent passing the No. 4 sieve.

Compaction and finishing of a treated roadway section shall be completed within 3 hours of the initial cement application to the base course materials. The treated base shall be compacted to at least 95 percent of the mixture’s maximum dry density as determined by ASTM D698

(AASHTO T-99). Field density tests shall be conducted on the cement treated base at a frequency of not less than 1 test per 100 linear feet of road.

Thickness of the cement treated base shall be verified for compliance with the roadway design. The depth of treatment shall be checked during placement at a frequency of not less than 1 test per 100 linear feet of road. The cement treated base shall be immediately protected against rapid drying by applying an asphalt curing membrane. The treated section shall be allowed to cure for a period of at least 7 days prior to exposure to construction traffic. The contractor shall protect the treated base from damage until the surface course is placed. Damaged base course shall be repaired by the contractor and approved by St. Tammany Parish Engineering Department prior to application of the surface course.

6. Portland Cement Concrete

Portland Cement Concrete for St. Tammany Parish roadways shall be placed on approved roadway bases. The concrete mix design shall be reviewed in accordance with ACI 301 for compliance with the strength requirements. All materials used in the concrete mix shall be from DOTD approved sources. The materials shall be proportioned, batched, cured and placed in accordance with LSSRB, Section 901.

Prior to placement of concrete, depth checks shall be conducted by string lines trained across the forms to verify the pavement thickness at a frequency of not less than 50 feet and shall be witnessed by St. Tammany Parish Inspector or his representative. Deficiencies noted shall be corrected and approved prior to concrete placement.

During placement of Portland Cement Concrete pavement, observation and testing shall be done on a full-time basis. At a minimum, slump, air content and mix temperature test shall be conducted every 50 yards of placed concrete. Four (4) compressive strength cylinders shall be cast every 100 cubic yards placed. Cylinders shall be tested as follows: 1 Cylinder at 7 days, 2 cylinders at 28 days and 1 cylinder shall be placed on hold. Additional cylinders shall be cast when high/early mix is used and early concrete strength is required to open the road to traffic with the approval of St. Tammany Parish Engineering Department. The placed concrete shall be finished, cured and protected in accordance with LSSRB requirements. At the discretion of St. Tammany Parish Engineering Department, cores may be obtained for verification of pavement thickness.

7. Asphaltic Concrete

All materials used in the mixture shall be from DOTD approved sources. The materials shall be proportioned to produce a pavement mix meeting LSSRB requirements. The proposed mix design shall be submitted for approval to St. Tammany Parish Engineering Department. The asphaltic concrete mixture shall be placed on a stable and approved base.

During placement of asphaltic concrete, observation and testing shall be on a full-time basis. For each 1,000 tons of materials placed, or a fraction thereof in one day, a sample shall be tested at the plant for percent void, Void Mineral Aggregate (VMA), asphalt content and gradation. The results will be used to control the mixture and form a basis for acceptance of the pavement.

Mix temperature shall be checked on each truck load in the field. Loads with low temperatures not meeting specifications shall not be placed.

The final pavement thickness and density of the mixture shall be verified by obtaining 4 inch diameter cores at a minimum frequency of 1 core per 400 linear feet of road and not less than 3 cores per roadway section. The density of the pavement core shall not be less than 92 percent of the maximum theoretical density. The thickness of the cores shall be within 1/4 inch of the design thickness. The Parish reserves the right to accept or reject the pavement based on the test results.

8. Utility Trench Backfill

Backfill material for culverts and storm drains shall be placed and compacted in general accordance with LSSRB, Section 701, as modified in this section.

Cross drains and side drains in paved areas shall be backfilled with granular fill A-3 material or better. The backfill shall be placed near optimum moisture and shall be compacted in lifts not exceeding 12 inches. Field density tests shall be performed during the backfill operation from 1 foot above the pipe up to the finished grade. Each layer shall be compacted to 95 percent of the fill's maximum dry density as determined by ASTM D698 (AASHTO T-99). The field density tests shall be conducted at a minimum frequency of 1 test per 100 linear feet.

Bedding material shall be provided under the utility lines with a minimum of 6 inches placed under the pipe and extending one half of the pipe diameter beyond the edge of either side of the pipe or minimum of 12 inches, whichever is greater. The pipe shall be side bedded to the mid-height of the pipe or to the pipe spring line, if arch pipe is used. The bedding material shall consist of free draining granular material meeting the requirements of #57 limestone or crushed concrete. Other bedding materials may be considered by St. Tammany Parish Engineering Department. A geotextile fabric shall also be placed around the pipe at each joint to reduce potential migration of the fill into the joints of the pipe.

Utility trench backfill in non paved areas shall be either granular material or selected soils as defined by LSSRB, Section 701.08. The fill shall be compacted in lifts to the density of the surrounding soil but not less than 90 percent of the fill's maximum dry density as determined by ASTM D698 (AASHTO T-99).

SECTION 40-032.04 MINIMAL STREET PAVING DESIGN & CONSTRUCTION CRITERIA

~~1. All Parish wide streets or roads within new subdivision developments shall be constructed according to the following minimal specifications:~~

- ~~—— a. Roadway design and materials shall be in accordance with the requirements of the Louisiana Department of Transportation and Development, specifically both the Silver Book and Hydraulics Manuals as amended, unless otherwise noted herein.~~
- ~~—— b. Roadway minimum section for lightly traveled subdivision streets shall consist of 6" inch thickness of cement concrete over a minimum of 12" inches of A4 or better non-plastic sub-grade or base material, or 4" inches thick of asphaltic concrete over an 8" inch thick compacted base over a minimum of 12" inches of A4 or better non-plastic sub-grade material.~~
- ~~—— c. Roadway minimum section for a collector or major arterial shall consist of an 8" inch thickness of cement concrete over a minimum of 12" inches of A4 or better non-plastic sub-grade or base material, or 5" inches thick of asphaltic concrete over a 12" inch compacted base over a minimum of 12" inches of A4 or better non-plastic sub-grade material.~~
- ~~—— d. The Parish engineer can waive any of these requirements or approve alternative sections, whenever calculations by a Louisiana licensed civil engineer, based upon existing soils information supplied by a soils testing laboratory, justify such a change.~~
- ~~—— e. It shall be prohibited to place any subsurface drainage or utilities longitudinally under any new street or roadway course. The placement of said improvements must be located within those areas specifically designed as per the "Typical Street Cross Section Standards" as illustrated in the "Supplemental Section" of this ordinance.~~

~~2. It shall be the responsibility of the Department of Engineering to enforce these provisions and to monitor all phases of construction. In addition, the developer shall employ an independent testing laboratory to test the roads and/or wearing surfaces composition, compaction, sub-base,~~

~~suitability and the surfacing thereof for the purposes of determining compliance with the approved specifications.~~

~~3. The independent laboratory selected by the developer must be approved for use by the Department of Engineering, and the costs incurred for providing the necessary lab testing shall be the responsibility of said developer.~~

ST. TAMMANY PARISH ROADWAY DESIGN STANDARDS FOR RESIDENTIAL SUBDIVISIONS:

The purpose of this section is to provide for roadway design and construction standards to serve as a guide for acceptance of new private roadways that will be dedicated to the public and placed into the Parish Roadway System for maintenance. It also provides guidelines for acceptance of existing roadways under consideration into the Roadway System.

1. New roadways built by developers and accepted into the Parish Roadway System.

Upon approval of preliminary plans by the St. Tammany Parish Planning Commission, a geotechnical investigation, including a pavement design, shall be conducted by a Louisiana licensed geotechnical engineering firm retained by the developer. The geotechnical report shall be submitted to the St. Tammany Parish Department of Engineering for review and approval.

The subsurface soil investigation shall have an adequate scope to sufficiently design the roadway embankment. The scope of the subsurface soil survey shall include, but not be limited to the following:

- a. Soil borings shall be drilled to a depth of 6 feet at 500 foot intervals and not less than 3 borings per roadway section. At a minimum, the borings shall indicate the various soil stratifications and groundwater elevation.
- b. Laboratory testing shall be conducted on selected samples including, but not limited to, moisture content, unconfined compressive strength, Atterberg Limits determination and percent fines. Other laboratory testing and analysis, such as consolidation tests and embankment stability analysis for high fill areas, shall be performed, if necessary, at the discretion of the Geotechnical Engineer and St. Tammany Parish Department of Engineering.
- c. The pavement design shall be based on the geotechnical investigation field data and laboratory test results, as well as a projected average daily traffic which includes the traffic resulting from the complete development of all land to be served by the subject roadway, including traffic forecast to be generated by the development, both internal and external to the development under consideration.

The average daily traffic shall include heavy truck traffic as a percent of the average daily traffic for a minimum design life of 20 years. Design of a single 32-kip axle load shall be used to define a heavy axle load. An estimate of the average daily traffic, including an estimate of the number and weight of heavy axle loads expected during the design life of the pavement, shall be furnished to the Department of Engineering. In the absence of a detailed traffic analysis report furnished by a traffic engineer, the information provided below shall be an estimate of heavy truck traffic for various types of streets or highways.

<u>Type of Street</u>	<u>Approximate Number of Heavy Trucks Per Design Period</u>
<u>Residential streets, rural farm and residential roads</u>	<u>25,000 – 50,000</u>
<u>Urban minor collector streets, rural minor collector roads</u>	<u>70,000 – 150,000</u>

Urban minor arterial and light industrial streets, rural major collector and minor arterial highways	700,000 – 1,500,000
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2. **Existing or recently constructed private roadways considered by St. Tammany Parish to be accepted into the Parish Roadway System.**

Should an existing or recently built private roadway be considered for inclusion in the Parish Roadway System, the following geotechnical investigation shall be conducted by the developer's consultant to verify compliance with the Parish Roadway Design Standards. This includes, but is not limited to, verification of pavement thickness as well as type and thickness of roadway base and sub-base.

- a. Roadway cores shall be obtained at 500 foot intervals.
1. For rigid pavement, the thickness shall be recorded and the compressive strength of the concrete shall be tested on the pavement cores for compliance with the Parish Roadway Design requirements.

2. For flexible pavement, the thickness and density of the pavement cores shall be verified for compliance with the roadway design requirements.
- b. At the core locations, soil borings shall be conducted to a depth of at least 3 feet below the bottom of the pavement to verify the type and thickness of the pavement base and sub-base.
- c. Laboratory testing shall be conducted on selected samples from the roadway borings to classify the fill used for compliance with the roadway design and St. Tammany Parish requirements.
- d. Available reports of testing and inspection, conducted during construction by the developer or contractor, shall be provided to St. Tammany Parish Engineering Department for review. This shall include testing and inspection reports of Portland Cement Concrete or asphaltic concrete, reports of field density tests conducted on the roadway base material and any underlying fill.
- e. Analysis of the pavement design for the existing roadway shall be based on the findings from the geotechnical investigation as well as the anticipated average daily traffic in the area.
- f. Acceptance of the roadway will be decided by the St. Tammany Parish Engineering Department based on the results of the pavement analysis. Furthermore, the Parish may require funded certification of conformance through the establishment of performance and/or warranty letters of credit, to ensure that the developer's obligation to construct the roads to the required standards is accomplished.

Should the roadway be found not to be in compliance with the Parish Standards, the roadway may be rejected or recommendations may be provided by the Department of Engineering to bring it up to the Parish Roadway Standards. Furthermore, the Parish may require a minimum of 2 years and a maximum of 5 years funded warranty letters of credit to ensure the integrity and durability of the street. The Parish reserves the right to accept or reject streets that are deemed not up to the Parish Standards.

3. **Minimum Street Pavement Sections**

All parish wide streets or roadways within new subdivision developments shall be designed based on the results of a soil investigation conducted on the roadway. However, the following section provides minimum pavement sections for public roadways which may be used for

preliminary planning purposes or for estimating requirements for subdivision development. The minimum roadway section shall be in accordance with the following minimum specifications:

1. Roadway materials shall be from approved sources in accordance with the Louisiana Standard Specifications for Roads and Bridges (LSSRB), latest Edition.
2. Minimum roadway sections for lightly traveled subdivision streets shall consist of the following:

Rigid Pavement: Six (6) inches of Portland Cement Concrete underlain by either 12 inches of A-3 or better base material over a proofrolled stable subgrade.

An alternative to the base material, eight (8) inches of the subgrade soil (if suitable) may be treated with cement. Otherwise, structural fill may be placed and treated with cement. The appropriate amount of cement shall be determined by an approved testing laboratory and approved by St. Tammany Parish Department of Engineering.

Flexible Pavement: Four (4) inches of asphaltic concrete underlain by 8 inches of Class II Base over a minimum of 12 inches of A-4 or better sub-base structural fill placed over a proofrolled stable subgrade.

An alternative to the aggregate base and sub-base, ten (10) inches of the subgrade or fill may be treated with cement. Otherwise, structural fill may be placed and treated with cement. The appropriate percent of cement shall be determined by an approved testing laboratory and approved by St. Tammany Parish Department of Engineering.

3. Minimum roadway section for a collector or major arterial shall consist of the following:

Rigid Pavement: Eight (8) inches of Portland Cement Concrete underlain by either 12 inches of A-3 or better sub-base or ten (10) inches of cement treated base placed on top of a proofrolled stable subgrade.

An alternative to the base material, ten (10) inches of the subgrade soil (if suitable) may be treated with cement. Otherwise, structural fill may be placed and treated with cement. The appropriate amount of cement shall be determined by an approved testing laboratory and approved by St. Tammany Parish Department of Engineering.

Flexible Pavement: Five (5) inches of asphaltic concrete underlain by either 12 inches of Class II Base over a minimum of 12 inches of A-4 sub-base structural fill placed on top of a proofrolled stable subgrade.

An alternative to the aggregate base and sub-base, twelve (12) inches of the subgrade (if suitable) or fill may be treated with cement. Otherwise, structural fill may be placed and treated with cement. The appropriate percent of cement shall be determined by an approved testing laboratory and approved by St. Tammany Parish Department of Engineering.

4. The Parish Engineering Department can waive any of these requirements or approve alternative sections whenever a pavement design can be justified by a Louisiana licensed civil engineer and based on a geotechnical investigation conducted for the roadway by an approved Louisiana geotechnical engineering firm.

4. Roadway Widening

The design for a widened roadway shall take into consideration the anticipated new traffic load the road will be subjected to. At a minimum, the widened section of the road shall have a pavement section that is equivalent to the existing road or better if additional traffic load is anticipated. A subsurface investigation shall be conducted along the new section of the road that will be widened. The scope of the subsurface soil investigation shall include, but not be limited to the following:

- a. Soil borings shall be drilled to a depth of 6 feet at 500 foot intervals, but not less than 3 borings per roadway section. Pavement cores shall be obtained from the existing roadway alignment at 1000 foot intervals with a minimum of 2 cores per roadway section. The existing thickness of the pavement and underlying base as well as the sub-base type shall be investigated and considered in the pavement design.
- b. Laboratory testing shall be conducted on selected samples including, but not limited to, moisture content, unconfined compressive strength, Atterberg Limits and percent fines.
- c. The pavement design shall be based on the geotechnical investigation field data and laboratory test results as well as a projected average daily traffic including the anticipated future traffic for the widened road.

~~SECTION 40-032.05 ADDITIONAL REQUIREMENTS FOR STREETS~~

~~It shall be the responsibility of the developer to select the independent laboratory for testing the wearing surfaces, composition, compaction and suitability of the streets within a developer's subdivision. In addition, the developer's engineer shall coordinate with the Department of Engineering the scope of work required and the costs involved.~~

ADDITIONAL REQUIREMENTS TO PRELIMINARY (Sections 40-061.0 – 40-061.08)

~~SECTION 40-061.05 SOIL ANALYSIS REQUIRED~~

~~A geotechnical investigation and soil analysis report is required to be submitted to the Department of Engineering upon approval of preliminary plans by the St. Tammany Parish Planning Commission. Data for soil boring and soil mechanics laboratory tests is to be included. The report will include a summary of findings and recommendations. The work shall be performed by a Louisiana certified testing laboratory and at the expense of the developers.~~

~~SECTION 40-061.06 ROADWAY GRADE AND SOIL INFORMATION REQUIRED~~

~~The proposed roadway grade should be furnished. The sub-grade soil survey should be adequate as determined by the project's engineer, to sufficiently design the roadway embankment. Any deviation therefrom shall require the approval of the Department of Engineering. In general, the information shall consist of a soil survey of the sub-grade showing the classification and characteristics of different layers of soil, elevation of the water table, field moisture, the density of the in-place material along the center line (amuck deposits, rock formations, quicksand, if applicable, shall be identified). Consolidation tests and embankment stability analysis for high fills and organic tests in questionable areas shall be performed if necessary at the discretion of the aforementioned department. (Amended per Ord. No. 88-918, adopted February 18, 1988)~~

~~SECTION 40-061.07 TRAFFIC CONDITIONS~~

~~1. The consulting engineer shall consider traffic conditions and repetitive loads in roadway and paving design. An estimate of the number and weight of heavy axle loads expected during the design life of the pavement shall be furnished to the Department of Engineering. Design of a~~

~~single 32 kip axle load is used to define a heavy axle load. In the absence of a detailed traffic analysis report furnished by a traffic engineer, the information provided below shall be an estimate of such loads and used to design adequate pavement thickness.~~

Type of Street or Highway	Approximate No. of Heavy Trucks per Design Period
Parking lots, driveways, light traffic residential streets, light traffic farm roads	7,000
Residential streets, rural farm and residential roads	7,000 – 15,000
Urban minor collector streets, rural minor collector roads	70,000 – 150,000
Urban minor arterial and light industrial streets, rural major collector and minor arterial highways	700,000 – 1,500,000
Urban freeways, expressways and other principal arterial highways, rural interstate and other principal arterial	2,000,000 – 4,500,000

~~2. With the sub-grade soils information, traffic conditions and concrete modules of rupture now known, the design of the pavement section can be determined by:~~

- ~~a. using the approximate range number of heavy trucks expected during the design period, a stress ratio can be obtained~~
- ~~b. the stress ratio is the ratio of maximum allowable stress in the concrete to the modules of rupture of the concrete, and since the rupture factors are known, the maximum allowable stress can be determined.~~

FINAL SUBDIVISION REVIEW

(Sections 40-070.0 – 40-074.01)

SECTION 40-071.01 WARRANTY AND PERFORMANCE OBLIGATIONS

1. **Performance Obligations** are established when the developer has received final subdivision approval and has substantially completed the project and/or due to some extenuating circumstances, has not completed all of the construction, which warrants said performance obligation.
- a. The amount of a performance obligation shall be based upon the following current estimated costs of construction of a street and supporting improvements:
 - Concrete Streets - \$60.00 per linear foot
 - Asphalt Streets - \$40.00 per linear foot
 - Gravel Streets - \$20.00 per linear foot
- b. The Planning Commission shall establish and set forth the amount of the performance obligation as well as the duration. Performance obligations shall be set for six (6) month or one (1) year periods or until the work requiring the establishment of said obligation has been satisfactorily completed and accepted by the Parish engineer.
- c. The Parish Engineer shall determine whether the developer has complied with all applicable requirements of development before any obligation can be released and only after notification is given in writing to the Parish Council Member in whose district the project is located. In the event that a developer requests or the staff recommends an extension or renewal of obligation, the Department of Engineering shall have the sole authority to move on any said request.

d. If a developer defaults and cannot or will not meet the obligation at or on the prescribed date and time that said obligation is due to expire, the Department of Engineering shall have the authority to call any outstanding security on the property in question and instruct the Department of Finance to seize those securities necessary to complete any Performance Obligation germane to the development.

2. **Warranty Obligations** are established upon final acceptance of the subdivision which includes the construction of all street and drainage improvements. Said warranty obligation assures the Parish that all construction work, completed by the developer, is in accordance with the plans and specifications of the development and free from any structural defects.

a. The amount of a warranty obligation shall be based upon the following current estimated repair costs for a street and supporting improvements:

- Concrete Streets - \$25.00 per linear foot
- Asphalt Streets - \$22.00 per linear foot
- Gravel Streets - \$20.00 per linear foot

b. The Planning Commission shall establish and set forth the amount of the warranty obligation as well as the duration. Warranty obligations shall be set for a minimum period of ~~five (5)~~ one (1) years to insure serviceability and structural integrity of the street and drainage infrastructure.

3. All performance and/or warranty obligations must be secured by acceptable securities submitted to and on file with the Department of Finance, and no lots can be sold until such action has been procured.

4. Acceptable security is required to be posted by a developer of a newly constructed subdivision development in order to ensure that monies are available, if needed, to complete all construction requirements and to assure the serviceability and maintenance of all roadways within said development in the event a developer defaults on his obligation.

5. Acceptable security, as set forth by the Department of Finance, to ensure fulfillment of maintenance obligations shall be:

a. Cash, to be held in escrow by the Department of Finance.

b. Letter of Credit from a financial institution with a Scheshunoff Bank Quarterly rating of C+ or above. If the financial institution rating falls below a C+ rating during the term of the obligation, the St. Tammany Parish Council will allow one additional quarter for the rating to rise to an acceptable level. If the rating does not rise to an acceptable level, the developer will have fifteen (15) days to provide acceptable alternative security, or the developer will be considered in default of his obligation, and the letter of credit will be called. If the financial institution's rating falls to a NR (not rated) level, the developer will have fifteen (15) days to provide acceptable alternative security, or the developer will be considered in default on his obligation, and the letter of credit will be called.

c. Certificate of Deposit from a financial institution with a Scheshunoff Bank Quarterly rating of C+ or above. The certificate of deposit must be pledged to the St. Tammany Parish Council, and held with a safekeeping agreement in a safekeeping account. If the financial institution rating falls to a C during the term of the obligation, the St. Tammany Parish Council will allow one additional quarter for the rating to rise to an acceptable level. If the rating does not rise to an acceptable level, the developer will have fifteen (15) days to provide acceptable alternative security, or the developer will be considered in default on his obligation, and the certificate of deposit will be called. If the financial institution's rating falls to a NR (not rated) level, the developer will have fifteen (15) days to provide acceptable alternative security, or the developer will be considered in default on his obligation, and the certificate of deposit will be called.

d. U.S. Treasury Bills or U.S. Treasury Notes, pledged to the St. Tammany Parish Council to be held in a safekeeping account with a safekeeping agreement.

e. Bond issued by a Surety Company listed on the Federal Register, licensed in the State of Louisiana and acceptable to the Parish.

6. The Parish Treasurer is charged with the responsibility to ensure that securities do not lapse or expire. In addition, the Parish Treasurer shall be responsible for notifying the developer and financial institution holding the pledged securities at least ninety (90) days prior to the expiration of the obligation and further informing said parties that a public hearing will be held regarding the disposition of said obligation. (Amended per Ord. No. 99-3077, adopted May 20, 1999)

7. The Parish Engineer shall determine whether the developer has complied with all applicable requirements of development at least one-hundred and twenty (120) days prior to the expiration of the obligation and before any obligation can be released. The Engineer shall furnish the developer and developer's engineer with a punch list of required work. The developer's engineer must certify to the Parish Engineer at least sixty (60) days prior to the expiration of the obligation, that the punch list has been completed. If not, the obligation will be automatically extended for one (1) year or until the work has been satisfactorily completed. The obligation shall not be extended beyond one (1) year and will not be reduced, otherwise the obligation shall be called. The Engineering Department will reinspect for warranty release only after receiving certification from the developer's engineer that the work has been satisfactorily accomplished. If the work is not completed to the satisfaction of the Engineering Department, said department shall impose a \$100.00 inspection fee any subsequent reinspection required. In the event that a developer requests or the staff recommends an extension, the Department of Engineering shall have the sole authority to move on any said request with the exception of releasing warranty obligations, which shall be the duty and function of the Council. (Amended per Ord. No. 99-3077, adopted 05/20/99, amended by Ord. No. 99-3176)

8. If a developer defaults and cannot or will not meet his obligation at or on the prescribed date and time that said obligation is due to expire, the Planning Commission and/or the Council shall have the authority to call any outstanding security on the property in question and instruct the Department of Finance via the Parish treasurer to seize those securities necessary to complete any performance or warranty obligations germane to the development.

Sec. 40-072.0 MINIMUM STANDARDS FOR STREET CONSTRUCTION AND IMPROVEMENTS

1. The improvements proposed and constructed for all developments under these regulations shall meet the specifications found in the Louisiana Standard Specifications for Roads and Bridges (LSSRB), as amended, and any special provisions in the St. Tammany Parish Roadway Design and Construction Standards, as found in these regulations. ~~the publication entitled "State of Louisiana, Department of Highways, Standard Specifications for Roads and Bridges" (1982 edition), Louisiana Department of Transportation and Development, Office of Highways, Roadway Plan Preparation Manual (November 15, 1982, edition).~~

Any subsequent amendments or editions hereto of said state specifications shall apply when adopted by the State of Louisiana, Department of Transportation. ~~Highways.~~ The improvements must also be constructed in accordance with the approved design of the developer's engineer.

2. All newly constructed streets in subdivisions shall be constructed to the following minimum standards:

- a. Paving width shall be a minimum of twenty (20) feet wide;
- b. shoulders shall be a minimum of four (4) feet wide on each side of the paving consisting of an aggregate surface;
- c. swell ditches, if provided, shall be graded at 3 to 1 slopes; and
- d. the minimum road base design shall include a six (6) inch layer of sand, clay and gravel.

3. If the developer should decide not to dedicate the streets to the Parish, desiring said streets to remain privately owned, the St. Tammany Parish Planning Commission may still grant final approval for the subdivision development. However, construction standards and surety obligations for said private streets will remain the same as required for publicly dedicated streets.

4. In addition, the developer must clearly note within the final subdivision plat and within the deed restrictions of each title of land sold; that the streets are privately owned and maintained and cannot therefore, be accepted into the Parish road maintenance system until said streets can meet the current construction standards established and regulated by St. Tammany Parish.

SECTION 40-073.0 ACCEPTANCE OF STREETS INTO THE PARISH ROAD SYSTEM

1. No streets in a subdivision development shall be accepted into the Parish Road Maintenance System unless they conform to the minimum Louisiana Department of Transportation and Development standards and rules adopted in accordance with LSA R.S. 48:35 and § 35.1, and or in accordance to Parish accepted construction standards. Further, the Parish shall require funded certification of conformance through the establishment of performance and or warranty letters of credit, to ensure that the developers obligation to construct the roads shall be accomplished.

2. Subdivision streets that have been constructed in accordance with (section 1) shall be automatically accepted in the Parish Road Maintenance System, when final approval is granted by the Planning Commission and the plats have been subsequently recorded. In order for a subdivision to receive final approval, the developer shall be required to provide a ~~one-year~~ funded letter of credit for performance and/or warranty purposes in the manner as set forth in Section 40-071.01, or as the same ~~as~~ may be hereafter amended.

3. Streets in existing or dormant subdivisions that may never have been constructed to Parish standards (usually private streets), could be accepted into the Parish Road Maintenance System, but by Parish ordinance only, and subject to the following requirements:

a. the streets must be inspected and certified by the Engineering Department as being in substantial compliance to Parish construction standards;

b. if streets are not in substantial compliance to Parish construction standards, the Engineering Department can require that said streets be improved;

c. provisions made for a minimum two (2) year and maximum of five (5) year funded warranty letter of credit to ensure the integrity and durability of the streets.

4. ~~Between sixty (60) and ninety (90) days~~ Before the expiration date of the warranty letter of credit, the Parish Department of Engineering shall inspect the streets to determine their condition. Upon completion of the inspection, said department shall determine whether the developer has complied with all applicable requirements of development, or whether an extension should be given, a renewal of obligation be required, or enforcement of a performance obligation be instituted. ~~recommend to the governing authority to either extend, release or call said letter.~~

REPEAL: All ordinances or parts of Ordinances in conflict herewith are hereby repealed.

SEVERABILITY: If any provision of this Ordinance shall be held to be invalid, such invalidity shall not affect other provisions herein which can be given effect without the invalid provision and to this end the provisions of this Ordinance are hereby declared to be severable.

EFFECTIVE DATE: This Ordinance shall become effective fifteen (15) days after adoption.

MOVED FOR ADOPTION BY: _____; SECONDED BY _____

WHEREUPON THIS ORDINANCE WAS SUBMITTED TO A VOTE AND RESULTED IN
THE FOLLOWING:

YEAS:

NAYS:

ABSTAIN:

ABSENT:

THIS ORDINANCE WAS DECLARED DULY ADOPTED AT A REGULAR MEETING OF
THE PARISH COUNCIL ON THE 5TH DAY OF DECEMBER, 2013; AND BECOMES
ORDINANCE COUNCIL SERIES NO. _____.

JERRY BINDER, COUNCIL CHAIRMAN

ATTEST:

THERESA L. FORD, COUNCIL CLERK

PATRICIA P. BRISTER, PARISH PRESIDENT

Published Introduction: October 31, 2013

Published Adoption: _____, 2013

Delivered to Parish President: _____, 2013 at _____

Returned to Council Clerk: _____, 2013 at _____