Major Subdivision - Engineering Plans Transmittal

General Information			Version # _____
Developer/Owner		Surveyor	
Subdivision Name		Engineer	
Location Address		Number of Lots	
Ward, Section, Township, Range		Avg. Lot Acreage	
Total Acreage		Sewer Disposal Type	Individual / Community
Water Supply Type	Private / Individual / Public	Sewer Ownership	Private / Public

All items are required to be answered. If marked N/A, provide a comment. Use additional sheets for comments as needed.

Planning Requirements	Yes	No	N/A	Comments
1. Preliminary Plat approval				
2. Runoff Management Plan (RMP) approval				
3. Traffic Impact Analysis (TIA) approval				
4. 4 hard copies of documents				
5. 2 electronic copies of documents following CPPJ naming convention				
a. Development name (Phase#) - submittal v# - document type				
1. Subdivision (Phase 1) - Eng Plans v1 - Transmittal Letter				
b. Include CAD drawings or other files necessary for review				
Resubmittal Requirements:				
6. Submittal version number				
7. Comment response letter				
8. Revision(s) clearly marked on all documents				
Submittal Contents				
9. Document standards				
a. Sheet sizes - scales				
1. 11"x17" - Max 1"=50'				
2. 22"x34" – Max 1'=100'				
3. 24"x36" – Max 1'=100'				
b. Minimum text size shall be 0.07 times the printed scale				
10. Cover Page				
a. Name of:				
1. Subdivision (w/ Phase number)				
2. Owner/Applicant/Developer				
b. Signed and stamped by individual who prepared plans				
11. Preliminary Plat				
a. Revisions based on previous comments				
12. Typical Sections				
a. Utility Allocation Plan (UAP)				
1. Drawing				
2. Note on plans stating:				
a. "All utilities shall follow the UAP."				
b. Variances highlighted				
b. Roadway typical				
1. Specify CPPJ Type 90 WCP asphalt wearing course				

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Latest Revision
11/04/2022

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13. Road Design				
	Yes	No	N/A	Comments
a. Plan and profile sheets				
1. Scaled				
2. Existing grades				
3. Proposed grades				
4. Horizontal curve data				
5. Vertical curve data				
6. Right of way labeled and dimensioned				
b. Minimum 25' turnout radius				
c. Street jogs not less than 125'				
d. Cul-de-sacs shall provide a minimum turning radius of 50'				
e. Special details				
14. Drainage				
a. Watershed boundary map				
1. Overall hydraulic length				
2. Sub basins				
3. Slopes of all watercourses				
b. Pre-grading topographic plan				
c. Post- grading topographic plan				
1. 5' major contours				
2. 1' minor contours				
3. Delineation of all fill placed on site				
4. Fill above natural ground shall not be planced any closer than 5' from the property line.				
d. Site plan				
1. "Lot owner shall provide the proper grading of lots to match the lot flow arrows identifying the grading requirements shown on the drainage plan."				
2. "All ditches are designed as permanently opened ditch and shall not be piped in."				
e. Drainage structure tables				
1. Velocity				
a. Min 3 fps				
b. Max 10fps				
2. Flow				
3. Pipes				
a. Material				
1. Pipes follow EDSM ii.2.1.1				
b. Size				
c. Cover (min. 1' from top of base)				
d. Grade				
e. minimum pipe size 18"				
4. Catch basins/yard drains/trash racks				
a. Type				
b. Depth (min. 6" from top of pavement)				
c. CB's at lot lines with no more than 300' spacing				
1. Minimum 24" opening				

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	Yes	No	N/A	Comments
2. Meet HS-20 loading				
d. Yard drain diameters				
1. Pipes <18", 12" dia drain				
2. Pipes >18", 15" dia drain				
3. Shall be at lot lines or every 75'				
4. Meets HS-20 loading				
e. 12" clearance above or below utilities or a conflict box				
f. Trash racks				
1. Sloped				
2. Area of the trash rack shall be a minimum of 10 times the area of the orifice				
3. Shall extend away from the outlet				
4. 6"x6" openings				
5. Anti-corrosive material				
f. Plan/profile sheets				
1. Scaled				
2. Existing grades				
3. Proposed grades				
4. Horizontal curve data				
5. Vertical curve data				
6. Right of way labeled and dimensioned				
7. Hydraulic grade line's plotted on plan/profile sheets				
8. Hydraulic grade line shall not exceed edge of pavement				
9. Open channels				
10. Pond outfalls				
11. Any other structures not in the road right of way				
g. Typical pond cross sections				
1. Normal water surface elevation				
2. Peak water surface elevation				
3. Minimum 1' of freeboard				
h. Bridge designs				
15. Open Channel				
a. Design Criteria				
1. Minimum freeboard of 1' for depths less than/equal to 8'				
2. Minimum freeboard of 2' for depths greater than 8'				
3. Min. radius curvature of 3x top width for earthen channels				
a. Min. width of 30' measured from top of the proj. bank				
b. Min. width may be reduced to 1.2x for erosion protected				
c. For earthen channels not meeting rec. radius of curvature, erosion protection shall be req'd along the outer channel bank, extending to a minimum of 100' upstream and downstream of the bend.				
4. Max. intersection angle 90 degrees. Erosion protected req' at all intersections not req'd to be enclosed				
5. Utility lines that pass under channel, top of line min. 10'				

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	below channel flow line and 20' horizontally from side slope				
6.	Channel blocks installed at confluence of existing/proposed open channels.				
a.	Outfall pipe properly protected against scour/erosion at both ends of pipe				
7.	Lateral ditches from street to outfall channel that traverse lots enclosed with storm drain pipe.				
8.	Open ditches for roadside drainage designed according to LADOTD Hydraulics Manual unless otherwise noted.				
9.	Channel velocities >5fps, adequate erosion protection req'd at all bends, confluences and outfalls of laterals.				
16.	Drainage Easements (provided where watercourse traverse dev.)				
a.	Not subject to RMP waivers, shall be dedicated for all new dev.				
b.	3:1 slope from toe existing bank to existing natural ground level				
c.	Major Watercourse				
1.	Min. width of 30' measured from top of the proj. bank				
2.	Provided on each side for exist./prop. "major" watercourses				
d.	Minor Watercourse				
1.	Min. width of 10' measured from top of the proj. bank				
2.	Provided on each side for exist./prop. "minor" watercourses				
e.	Enclosed Watercourse				
1.	Min. width of 20' centered along the centerline				
2.	Should be dedicated so as not to be centered on lot lines				
3.	36" - 54" : minimum 20' additional easement				
4.	60" - 120" : minimum 25' additional easement				
5.	Above 120" : as specified by the parish engineer				
a.	In all cases, easement widths above to be min. guidelines				
b.	Subject to be changed by jurisdictional gravity drainage board or parish engineer				
f.	Maintenance Easement Standards				
1.	Major watercourse easments min. 50' maintenance easement				
2.	Not subject to RMP waivers, shall be dedicated for new dev.				
3.	Shall remain on same side of lateral for entire length				
g.	Additional Requirements				
1.	When prop. drainage system will carry water across private land outside boundaries of the development, developer must obtain the appropriate draininage/maintenance easements across said abutting properties from the boundary of the development to the nearest public maintained outfall prior to the final approval.				
h.	Dedication of Drainage and Maintenance Easements				
1.	For more than 1 lot, enclosed with drop pipe				
2.	Parish eng/gravity drainage to approve drainage structure crossing gravity drainage easements				
3.	Utility/drainage eastements for major/intermediated/minor drainage laterals/watercourses may cross, not overlap				
17.	Detention Pond Design				

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a. Designed to full spectrum of storm frequencies				
b. Check 100 yr storm w/ spillway				
c. Detention shall be offline/not incorp. into existing watercourse				
d. Basins shall be designed minimum 5:1 side slopes.				
e. Embankment slopes shall be stablilized to prevent erosion				
f. Minimum embankments of 6' around top width				
g. Wet basins, a minimum permanent pool depth of 5'				
1. Sewer effluent discharge shall not route through				
2. Individual treatment plans will not be permitted unless appropriate water quality has been addressed.				
h. Dry basins				
1. A low-flow drainage channel directed to structure				
a. .15 cfs per acre drained				
b. .1% slope towards outlet structure				
c. Sewer discharge shall not route through dry pond unless				
1. Concrete lined low flow				
2. Enclosed low flow				
i. Outlet struct. shall be designed maintenance free concrete weirs				
j. Must re-establish full storage capacity in no longer than 30 hours				
k. Design calculations must include:				
1. Stage storage/stage discharge relationships				
2. Development inflow hydrographs for full spectrum				
3. Routing calculations & outflow hydrographs for full spectrum				
4. Outlet structure details				
a. Construction drawings				
b. Specification				
l. Bridge designs				
18. Private Alleys				
a. Secondary access				
b. Right of ways, intersections, curves				
1. Two-way alley				
a. ROW not less than 20'				
b. Minimum paving width 18'				
2. One-way alley				
a. ROW not less than 14'				
b. Minimum paving width 12'				
3. Intersections at right angles				
4. At least 30' angular cutback at corners of intersections				
b. Dead end alleys				
1. No longer than 1000' from nearest ROW intersection				
2. Over 150', must have cul-de-sac				
a. 50' ROW radius minimum				
b. 35' minimum pavement radius				
19. Sewer				
a. Collection system (These design guidelines supplement requirements by La DEQ, La DHH, EPA, 10 States Standards and ASTM. Where conflicts may exist, the more stringent requirement shall apply. These guidelines are intended to apply to private developments intended for Parish acceptance for ownership,				

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	Yes	No	N/A	Comments
operation and maintenance. Gravity line size will typically be twelve inches or less.)				
1. Minimum collection pipe size is 8"				
2. Service line size				
a. 4" for single resident				
b. 6" for multi-resident				
3. Gravity sewer pipe stone backfill encapsulated with geotextile fabric				
4. Manholes at all				
a. Alignment changes				
b. Upstream terminal points				
c. Changes in pipe				
d. Force main connections				
e. At intervals not to exceed 400'				
5. Minimum 48" inside diameter of manhole				
a. 60" if pipe diameter is 24-less than 30"				
b. 72" if pipe is 30-less than 36"				
c. 36" or greater pipe requires a junction box				
6. Manhole risers contain joint gaskets and exterior waterproof wraps				
7. Interior of select manholes sealed/treated for corrosion protection by an approved system.				
8. Elevations of manhole lids at or above finished grade.				
9. Flow rates based on 4.0 persons per household, average daily flow of 100 gallons per capita plus other known discharges with peaking factor formula				
10. Maximum invert depth of 10'				
a. Greater depths are permitted with design justification				
11. Drawings indicate pipe				
a. Size				
b. Material				
c. Grade				
12. Drawing indicate sewer and manhole				
a. Locations				
b. Structural features				
13. No conflict between sewer collection and service lines with other utilities and drainage structures.				
14. Critical, controlling, or limiting service elevations identified				
15. Graphical scales included for reduced size prints.				
16. For phased projects, each phase of development represented				
17. Sewer lines designed to service the estimated future service area of all phases				
18. Maximum design flow depths				
a. Pipes 15" in dia. or smaller are 50% of inside pipe dia.				
b. All others are 75"				
19. Sensitive crossings (pipelines, railroads, state routes, etc.)				

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	Yes	No	N/A	Comments
are encased.				
b. Lift Stations (These design guidelines supplement requirements by La DEQ, La DHH, EPA, NFPA, NEC, and 10 States Standards. Design shall fully comply with NFPA 820, "Fire Protection in Wastewater Treatment and Collection Facilities". Where conflicts may exist, the more stringent requirement shall apply. These guidelines are intended to apply to lift stations rated at 300 GPM or less for private developments intended for Parish acceptance for ownership, operation and maintenance. Guidelines for lift stations in excess of 300 GPM will incorporate the applicable portions herein and address other specifics as determined at a pre-design conference with Parish Engineering.)				
1. Minimum site size of 25'x25'				
2. Sites with public street frontage have paved driveway connection				
a. 16' wide				
b. 6" of concrete, asphalt, or structural equivalent				
3. Sites without public street frontage				
a. 18' minimum access drive				
b. 20' minimum dedicated permanent easement				
4. Lift station influent flows through onsite manhole located within the security fence.				
5. 6' minimum metal security fence with 14' gate				
6. ¾" potable water connection, reduced pressure principle backflow assembly, self-draining freeze resistant hose bib.				
7. Site lighting 15' tall with manual control switch in the pump control panel.				
8. Geotechnical investigation				
9. Top of wet well is located at least 1' above 100yr flood elevation and protected from storm water runoff				
10. Transition grades from top of wet well to natural ground not to exceed 6:1				
11. Pump cycle times equal to or greater than manufacturer's recommendation.				
12. "Pump Off" control is set six inches higher than the manufacturer's requirement for the most restrictive pump proposed in any phase.				
13. "Lead Pump On" is set twelve inches below the lowest effluent flow line.				
14. High water alarm levels set at lowest influent line elevation.				
15. Grout fill for bottom hopper construction does not encroach on effective volumes used in calculating min. cycle times.				
16. Wet well structure cast in place or precast concrete sections par ASTM C478.				
17. Wet well is water tight.				
18. Above ground, self-priming pumps or engineering justification for submersible pumps.				
19. Electrical design conforms to NEC, NFPA, and other applicable codes, based on hazardous conditions. UL rating based on an				

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	Yes	No	N/A	Comments
environment no less hazardous than a Class 1, Division 1, Group C and D service.				
20. Electrical panel and controls are located beneath weather cover.				
21. Panel area has overhead lighting.				
22. A double throw switch (manual transfer switch) with a generator quick-connect plug is provided at each lift station.				
23. Lift stations with a service area of 200 residential lots of more or an average daily flow rate of 100,000 gallons per day or more have permanently connected auxiliary power provided (diesel generator)				
24. Design provides for remote monitoring in a manner compatible with the Parish monitoring equipment and operating procedures (SCADA).				

	Yes	No	N/A	Comments
c. Wastewater treatment facility (These design guidelines supplement requirements by La DEQ, La DHH, EPA, NFPA, NEC, and 10 States Standards. Design shall fully comply with NFPA 820, "Fire Protection in Wastewater Treatment and Collection Facilities". Where conflicts may exist, the more stringent requirement shall apply. These guidelines are intended to apply to wastewater treatment facilities rated for less than 100,000 gallons per day for private developments intended for Parish acceptance for ownership, operation and maintenance. Guidelines for wastewater treatment facilities of 100,000 GPD or more will incorporate the applicable portions herein and address other specifics as determined at a pre-design conference with Parish Engineering and Public Works. Facilities with food service operations in its service area or other such uses not typical of residential, design loadings and operational features will require appropriate adjustments to be determined in pre-design conferencing. Regardless of guidelines provided, the design shall result in a treatment facility fully capable of reliability meeting regulatory discharge requirements.)				
1. Treatment facilities, including trash tanks, flow splitters, aeration units, clarifiers, filtration vaults, chlorine contact chambers, metering vaults, sampling stations, etc. are constructed of reinforced Portland cement concrete.				
2. Access drive meets Parish requirements.				
3. Sites with public street frontage have paved driveway connection. (6" concrete, asphalt, or structural equivalent) (16' wide excluding turnouts)				
4. Exterior surfaces below grade, up to a point 6 inches above grade are sealed against water infiltration.				
5. 6' minimum metal security fence with 14' gate.				
6. 6' wide stone/concrete perimeter around all sides of treatment plant with 15' on one side.				
7. Wall penetrations in concrete structures are with ductile iron wall pipe.				
8. Above grade waterlines are insulated and strapped.				
9. Above ground self-priming pumps or submersible are provided (providing engineering justification).				
10. All pumps have independent check valve and isolation valve.				
11. Security lighting provided.				
12. Electrical design conforms to NEC, NFPA, and other applicable				

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	Yes	No	N/A	Comments
codes, based of hazardous conditions. UL rating is based on an environment no less hazardous than a Class 1, Division 1, Group C and D service				
13. Electrical panel and controls located beneath weather cover with sufficient lighting.				
14. Double throw (manual transfer) switch with a portable generator quick connect plug provided at each facility.				
15. Treatment facilities with service area of 250 residential lots or more, or an average daily flow rate of 100,000 gallons/day has a permanently connected auxiliary power source.				
16. Air blowers control provides for Hand/Off Automatic (HOA) operation.				
17. Design provides for remote monitoring in a manner that is compatible with the Parish monitoring equipment and operation procedures. Includes motor status (on/off/fail) and power status.				
18. Minimum BOD_5 loading is 200 ppm				
19. Minimum TSS loading is 200 ppm				
20. Flow rates based on 4.0 persons per household, average daily flow of 100 gallons per capita plus other known discharges and a peak factor calculated in accordance with the formula: $PF=(18+\sqrt{P})/(4+\sqrt{P})$ PF= Peaking Factor P=Population				
21. Maximum blower noise is 70db at five feet.				
22. Trash trap provided preceding treatment unitsand sized appropriately.				
23. Electromagnetic flow meters or weirs provided.				
24. Flow splitting structures provided.				
25. Equalization to prevent weir overflow provided.				
26. Aeriation basin provides minimum 24 hour detention time, minimum 2.0 mg/l dissolved oxygen concentration, and peak flow freeboard of 18 inches.				
27. Minimum reactor volume no less than 80 cf/lb of BOD_5/day.				
28. Aeration system supplies sufficient oxygen to the reactor contents to maintain the specified minimum dissolved oxygen concentration.				
29. Aeration compartments each equipped with isolation valves with dewatering and bypass capabilities for maintenance. Dual aeration tanks required for design flows in excess of 50,000 GPD.				
30. Flow velocity in sludge pipe is greater than 2. ft/s.				
31. Side water depths, used in design calculations are based on the water depth from the top of the cone (in cone bottom tanks) or from a point 2 feet above the bottom (in flat bottom tanks) to the water surface.				

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32. Clarifier has a minimum freeboard of 12 inches at peak flow.				
33. Sludge return, sludge wasting and surface scum removal by air lift pumping.				
34. Provisions made for future filtration units (if necessary).				
35. Disinfection facilities made readily accessible and operational in all seasons.				
36. Retention time minimum of 15 minutes at peak flow.				
37. Chamber baffled to prevent short circuiting.				
38. Scum baffles provided at discharge.				
39. Units have grated, open top.				
40. Aerated sludge digest provided.				
41. Waste sludge removal rate at least 25% of design average wastewater flow rate, but not less than 10 GPM.				

	Yes	No	N/A	Comments
42. Digester volume at least 3.0 cubic feet per capita with minimum volume of 1,000 gallons.				
43. Aeration maintains minimum dissolved oxygen level of 1.5 mg/L but not less than 30 cfm of air supply per 1,000 cf of tank volume.				
44. Sludge removal facilities accommodate removal and transport to off-site disposal areas (disposal line, quick connect fitting and plug line).				
20. Other utilities				
a. Water				
1. Horizontal alignment				
2. Vertical alignment				
3. Fire hydrants				
a. 1000' maximum spacing				
b. No area more than 500' away				
b. Electrical				
1. Horizontal alignment				
2. Vertical alignment				
3. Lighting plan				
c. Telecommunication				
1. Horizontal alignment				
2. Vertical alignment				
21 Other typicals				
a. Standard typicals for catch basins, fire hydrants, etc.				
22. Temporary erosion control plan				
23. Drainage Calculations binder				
a. Orifice				
b. Low flow channel				
c. Curb inlets				
24. Materials specifications binder				
a. Materials				

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	b. Shop drawings				
25.	Schedule for construction and milestones for inspection				
26.	HOA agreements				

I, _____, certify this submittal includes all required information per this checklist. I understand that incomplete or incorrect submittals may be rejected. I understand this submittal is the minimum necessary for review and additional documentation may be requested by Police Jury staff. As per the Calcasieu Parish Code of Ordinances, the Director's recommendation will be issued within twenty (20) working days of each submittal, excluding legal holidays, after determination of submittal completeness.

Signature/Date: _____