

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

Y N N/A

Rural Residential

- 1. Name of proposed development *24.5.4.7.1*
- 2. Name of developer *24.5.4.7.2*
- 3. Signature of Civil Engineer, *Seal 24.5.4.8; R.S.37:696-LAC19-3:(10.2, 10.3,10.4)*
 - a. Plat required *24.5.4.6.5*
 - b. Specifications received *24.5.3.3*
- 4. Vicinity map *24.5.4.7.4*
- 5. Located by Township, Range and Section *24.5.4.3.7.E*
 - a. Section, Township, Range, City Limits, and/or Parish Boundaries which abut or cross the proposed subdivision *24.5.4.7.8*
- 6. Date, scale (1" = 200' minimum suggested) and north arrow *24.5.4.7.5*
- 7. Preliminary approval granted and written staff comments submitted *24.5.3.3*
- 8. Development Improvements Residential
 - a. Proposed street names *24.5.4.7.6*
 - b. Lot and block numbers *24.5.4.7.6*
 - c. Alignment of existing streets, rights-of-ways, easements, and servitudes which join or cross the proposed subdivision shown *24.5.4.7.7*
 - 1. Right-of-way
 - a. 40' for subsurface 50' for open ditch *24.7.6.1.3*
 - 1. Blocks $\leq 1500'$ in length *24.7.6.3*
 - 2. Roadway
 - a. Street jogs with centerline offsets of less than 125' avoided *24.7.6.1.5*
 - b. Test cylinders (2,750 psi @ 7 days or 4,000 psi @ 28 days) 2 per 500' of pavement *24.7.6.1.9, 24.7.6.1.10*
 - 1. Open Ditch - 6" thick, 20' wide PCC pavement or equivalent asphaltic concrete design. *24.7.1.2.1*
 - a. Shoulder
 - 1. 4' wide 4" thick compacted aggregate *24.7.1.2.1*
 - 2. 3' paved *24.7.1.2.1*
 - 2. Curb and Gutter - 6" thick, 27' wide from back-to-back of curb PCC pavement or equivalent asphaltic concrete design. Curb must be roll-over not less than 12" in width and 4" in height and/or barrier type curb not less than 6" in width and 6" in height *24.7.1.2.1*
 - d. Cul-de-sacs & Turnarounds

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- 1. Cul-de-sacs as per A.A.S.H.T.O. specifications (1984) inside radius $\geq 35'$
24.7.6.1.6
- 2. Turnarounds 80' wide by 40' each side of centerline *24.7.6.1.6*
- e. Plans use current LADOTD construction standards *24.7.6.1.10*
- f. Street and Traffic signs as per "Louisiana Manual on Uniform Traffic Control Devices" *24.7.6.1.7*
- g. Profiles of all streets *24.5.4.8.3*
- h. No more than one lot created at the end of a stubout cross street *24.7.6.3.1*
- i. Lots
 - 1. Lot size shall be sufficient to provide front setback lines of 20' *24.7.1.2.2*
 - 2. Lot size shall be sufficient to provide space for residence and off-street parking in single-family and multi-family residential areas consisting of two (2) parking spaces per dwelling unit *24.7.1.2.3*
 - 3. Minimum residential lot size shall be 6000 sq. ft. if connected to a sewerage disposal system (public or private) that is approved by the state department of health and hospitals *24.7.1.2.4*
 - 4. All lots must front along a public roadway or servitude of passage *24.7.1.2.4*
 - 5. All lots shall contain adequate footage and depth to enclose a 50' square, none of which may encroach upon a public road right-of-way or access servitude to adjacent property *24.7.1.2.4*
 - 6. Minimum frontage width of a lot or servitude of passage is 25' *24.7.1.2.4*
 - 7. Primary means of access is a publicly dedicated street, alley, or on a non-publicly dedicated passageway for vehicular traffic *24.7.1.5*
 - 8. If subdivision involves new street construction: No primary access is an arterial, major or collector street *24.7.1.5*
- 9. Drainage
 - a. Flood hazard area *24.5.5.9.H*
 - b. Existing contours at one (1) foot intervals or less shown on final drainage plan *24.5.4.8*
 - c. All lots graded to drain to the street or to major drainage arteries as defined by the SDDM *24.7.1.2.6*
 - d. Rights-of-way
 - 1. Definition *22-186*
 - 2. Construction in right-of-way without consent *22-189*
 - 3. Storm drainage pipe shall be located within street right-of-way, special

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Y N N/A

Rural Residential

outfall or interconnection right-of-way may be required 24.7.1.2.6

4. Servitudes not adjacent to roadway:

a. 15' on both sides of ditch that is less than 4' in depth and less than 18' in width plus width of ditch. 24.7.6.2.2.i

b. 15' on one side and 20' on the other side of a ditch greater than 4' in depth or greater than 18' in width plus width of ditch. 24.7.6.2.2.ii

c. Can right-of-way be accessed.

e. Complies with the T.P.C.G. Storm Drainage Design Manual as per 24.7.6.2.6

IV. HYDROLOGY

A. Rainfall

Designed for 25-year, 24-hour duration as defined by TP40 (Exhibit 3)

Discharge limited to 10-year, 24-hour pre-development unless downstream improvements are made as to not cause adverse impacts (Exhibit 4)

B. Hydrologic Data: Preliminary Plan

Vicinity Map

Topographic Map

Aerial photographs

Stream flow records

Historical high water elevations

FEMA 100 year flood elevation

Soil types

Land use

Slope

Surface infiltration

Storage

C. Coordination: Maximum stage elevation furnished or approved by Terrebonne Parish Engineering Division

D. Runoff Computation, Hydrograph Development and Modeling:

1. Rational Method

Drainage area no greater than 150 acres

c value taken from Exhibit 5

DOTD HYDR6020 and HYDR6000 used for storm drain and inlet spacing

2. Soil Conservation Service (SCS) Method (NRCS) (TR-55)

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Y N N/A

Rural Residential

Curve Number (CN) taken from Exhibit 5

Type III, 24-hour rainfall distribution

Shape factor 256

3. Unit Hydrograph Method (HEC-1, SWMM, TR-20)

E. Flood Routing:

1. Stream Flow Routing

2. Reservoir Routing

F. Land Use

G. Datum: Elevation referenced to the latest Parish adopted Vertical Datum

H. Gage Reading (Historic Data) at major drainage artery

V. HYDRAULIC DESIGN

A. Storm Design Requirements:

1. Existing site plan:

Minimum scale 1"=100'

Drainage features

1 foot contours

Utilities

Roads

Structures

Impervious areas

Flood encroachment areas

2. Proposed site plan:

Minimum scale 1"=100'

Streets

Utilities

Drainage features

Lot lines

Lot grading

Discharge canals

Location of major drainage artery

3. Plan/Profile Sheets

Drainage

Horizontal Scale 1"=50' minimum

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Y	N	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rural Residential
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vertical Scale 1"=5' minimum
			Roads
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Horizontal Scale 1"=40' minimum
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vertical Scale 1"=4' minimum
			Geometric layout
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Centerline
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Roadway stations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Finished centerline slopes (0.35% minimum curb and gutter)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Points of vertical intersection
			Drainpipes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Invert elevation
			Structures & Utility lines
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Invert elevation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Top elevation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Finished grade at right-of-way
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hydraulic gradient
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tailwater elevation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ditch flow lines
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Utility lines
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dimension of all servitudes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	North arrow
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Legend
			4. Drainage Map/Hydraulic Computations
			Drainage Map
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All drainage features
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Right-of-ways and servitudes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tributary areas
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Watershed boundaries
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Structure reference numbers

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

Y N N/A

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Rural Residential

- Discharge points
- North arrow
- Legend

Hydraulic Computations

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- Design criteria
- Rounded to nearest 0.10 foot
- Maximum stages at all nodes
- Tailwater elevation
- Graphic representation of surface and subsurface flow
- Statement of no adverse impact
- Maximum flows (pre vs. post)
- Volume runoff (pre vs. post)
- Hydrographs at discharge points (pre vs. post) (Exhibit 6)
- Runoff factors
- Time of concentration
- Land slope
- Onsite elevation determined by routing flows from downstream tailwater elevation

5. Typical roadway section

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- Roadway width
- Roadway thickness
- Shoulder width
- Ditch dimensions
- Ditch side slopes
- Location of all utilities
- Subsurface drainage location
- Right-of-way width
- Transverse road slopes

6. Lot drainage

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-

- Storm drain pipe located within street right-of-way
- Special servitude for interconnection or outfall purposes within subdivision

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Rural Residential

All lots inside the Urban Services District and Urban Planning Area graded to drain to the street or to a Major Drainage Artery (Exhibit 1)

All lots inside Rural Subdivisions graded to drain to the street or to a Major Drainage Artery (Exhibit 1)

Outside the Urban Services District and Urban Planning Area the HTRPC can allow a portion to drain to the rear if:

Drainage is to be perpetually privately maintained, or

i. Drainage to the rear already exists or is to be dedicated; however, the percentage may not exceed 60% of the total depth of lots up to 225' deep, or that portion greater than 135' on lots greater than 225' deep unless a greater percentage is required to comply with items ii or iii below.

ii. Where the size limitation of the roadside ditches will be exceeded

iii. Where the size of the curb and gutter drainage pipe exceeds 36" in diameter

7. Reference standard plan details of all drainage structures

8. Existing cross sections at maximum 100' intervals showing:

Roadway

Ditch

Lot grades

9. Time of concentration

a. Rational method

b. SCS LAG method

10. South of the South Terrebonne Development Zone

Minimum roadway elevation +3.5'

Minimum lot elevation +2.0'

B. Closed Storm Drainage System

1. Minimum sizes

15" minimum diameter

8" minimum diameter for restrictor pipe

2. Minimum Service Life

Diameter less than 48" 50 year service life

Diameter greater than or equal to 48" 70 years

Side drain 30 years

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3. Sized to operate full with a minimum self cleansing velocity

4. Slopes

Maximum slope 10 ft/sec

Outlet protection for velocity above 10 ft/sec

5. Manholes or catch basins

Located at all changed in vertical and horizontal direction

Maximum Spacing (LaDOTD Hydraulics Manual), but shall not exceed 250'

Pipe Diameter	3-7 ft/sec	8-12 ft/sec	13-20 ft/sec
15"	150'	250'	300'
18"	300'	350'	400'
24" – 36"	400'	450'	500'
42" and larger	600'	650'	700'

6. n value taken from Exhibit 8

7. Minimum vertical distance of 6" from bottom of pavement to top of drain pipe

8. All drainpipes under roadway joined in conformance with LaDOTD Type 3 joints

9. Catch basins, manholes and grate inlets in conformance with LaDOTD standard plans

10. Minimum servitude for drain pipe

Diameter less than 42" = 15'

Diameter 42" and greater = 20'

11. Inlet spacing

LaDOTD HYDR6000 used

Gutter flow less than 10 cfs

Width of flooding less than 8'

Spacing less than 250'

12. Pipe size and hydraulic grade line

LaDOTD HYDR6020 used

Maximum hydraulic clearance at gutter line of 0.2' above gutter grade

Design sketches of numbered structures & drainage areas provided

13. Other model with prior approval

C. Open Storm Drainage System

1. Minimum sizes

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Y	N	N/A	Rural Residential
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15" minimum diameter
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8" minimum diameter for restrictor pipe
			2. Minimum Service Life
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cross drains 50 year service life
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All Storm drain pipe 70 years
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Side drain 30 years
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Pipes installed in major drainage arteries shall be sized for a maximum allowable headwater of 0.5' or 1.0' below the edge of roadway whichever is less
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Outlet protection for velocity above 10 ft/sec
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. n value taken from Exhibit 8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Entrance loss coefficients in conformance with LaDOTD Hydraulics Manual
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. Minimum vertical distance of 6" from bottom of pavement to top of drain pipe
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. All drainpipes under roadway joined in conformance with LaDOTD Type 3 joints
			9. Minimum servitude for drain pipe
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Diameter less than 42" = 15'
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Diameter 42" and greater = 20'
			10. Roadside ditches
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3:1 side slope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Maximum depth of 3'-6"
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. Ditch centerline not less than 12' from edge of roadway
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. Minimum longitudinal ditch invert slope = 0.001 ft/ft
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. Minimum road right-of-way with open ditch = 60'
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14. LaDOTD HYDR1140 used to determine normal depth of flow in channel
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15. Minimum width of ditch bottom 2'
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16. n for channels taken from Exhibit 8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17. Water surface profile computed and shown on final drawings
			18. Culvert sizes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Future driveway sizes shown on plat
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Culverts sized as though entire subdivision was subsurface

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Rural Residential

19. Other model with prior approval

VI. SYSTEM STORAGE

A. Detention Facilities:

1. Greater than 1 acre

2. Compensatory storage

3. Type

Open basin or pond

Roof top storage

Parking lot ponding

Underground storage

Uninhabited areas

Designated as raw land

4. Drainage Plan

Plan

Profile

Cross Section

Pipes & Structures

Size

Length

Invert

Design volume

Grades

Bottom Elevation

Maximum stage elevation

5. Onsite system designed to handle both on-site runoff and conveyance through the site of off-site runoff

6. Designed to anticipate, enable and minimize future maintenance needs

7. Multiple uses encouraged

8. Visual impacts considered

9. Adequate access for maintenance personnel

10. Maximum depth of parking lot detention 8"

11. Slopes for parking lot detention no less than 1% no more than 3%

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

Y N N/A

Rural Residential

- | | | |
|--|--|--|
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 12. Flood surface elevation of parking lot detention at least 1' below the lowest habitable floor elevation of building within 50' of the detention area |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 13. Detention pond slopes
Interior slope does not exceed 2:1
Exterior slope does not exceed 3:1 |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 14. Private benefit = private ownership
Methods, procedures and guarantees, including appropriate documentation, that the facilities will be perpetually maintained so as to function as designed and not result in nuisances or health hazards |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 15. Pond dimensions
If depth is less than 3' deep minimum width = 6'
If depth is 3' or deeper minimum width = 15' |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 16. Landscaped for aesthetic purposes and to stabilize banks
Seeding and sodding
No floatable or erodible material (bark mulch) in interior |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 17. Failure of owner to maintain will be cause for Parish to perform work and bill owner |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 18. Parish maintained pond control structures that do not abut a public right-of-way should be accessible by a 15' minimum right-of-way to allow vehicle access |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 19. Control structures designed and constructed to operate automatically as much as possible |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 20. Designed with 1' of freeboard above the elevation of the design flood (except parking lot ponds) |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 21. Pond design
Dry - Sloped no flatter than 0.3% toward drainage outlet
Wet - "low flow" channel installed with lining at minimum 0.3% slope |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 22. Wet pond bottom elevation 1.5 ft below normal low water elevation if constructed flat |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 23. "Flow through" pond has well defined low flow channel |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 24. Ponds greater than 4' in depth have fence and locked gate |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 25. Design Volume
Shown on plans |

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

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Rural Residential

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Storage measured from the on-site 25 year stage elevation to a maximum depth of the pump drawdown elevation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Wet and dry basins designed so that the portion of their bottom area, which is intended to be dry, shall have standing water no longer than 48 hours for all runoff events equal to or less than the 25-year event |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 26. Hydraulic losses and structural integrity considered in closed systems on private property |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 27. Written restriction on final plat stating that no structure, fill or obstructions shall be located within any drainage easement or delineated flood plain |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 28. All publicly maintained facilities located in a recorded drainage servitude including any necessary for access |

VII. EROSION AND SEDIMENT CONTROL

A. Design:

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Required on all proposed developed sites of one acre or greater |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Incorporated into excavation, construction and post-construction |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Provisions for interception of all potential silt-laden runoff made before initial clearing and grading |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Erosion control and storm water pollution plan provided |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. Erosion protection provided for all disturbed areas |

B. Maintenance agreement provided before building permit is obtained

C. Best Management Practices:

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Existing vegetation preserved where feasible and disturbed portions stabilized as soon as practicable |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Structural practices to divert flows from exposed soil, store flows, or otherwise limit runoff and the discharge of pollutants from the site to the extent feasible |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Prevention of the discharge of building materials into the Parish storm sewers or waters of the United States |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Provide general good housekeeping measures to prevent and contain spills |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. Implementation of proper waste disposal and waste management techniques |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Timely maintenance of vegetation, erosion and sediment control measures |

VIII. SERVITUDE REQUIREMENTS AND DEDICATION

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

Y N N/A

Rural Residential

A. Ditches not adjacent to a roadway

- 1. Ditch less than or equal to 4' deep or 18' wide 15' on both sides
- 2. Ditch greater than 4' deep and/or 18' wide 15' on one side and 20' on the other
- 3. Parallel ditches minimum 20' crown between
- 4. Ditch adjacent to roadway not greater than 3.5' and 23' wide
- 5. Minimum servitude for drain pipe
Diameter less than 42" = 15'
- Diameter 42" and greater = 20'

B. Letter Of No Objection required for work in parish right-of-way or parish property

- C. Developer's responsibility to record any necessary servitude that are needed to connect a development site with an approved point of discharge

- f. Minimum size and grade of culverts denoted and profiles of all ditches submitted 24.5.4.8.2,3

- Proposed culverts fit within ditch

- g. Roadside ditch less than 4' deep and less than 18' wide. 24.7.6.2.4

- h. Building of bulkheads on Bayou Black (permit) 6-6

10. Utilities

a. Water

- 1. Fire hydrants – spacing $\leq 500'$ 24.7.6.1.8
- 2. Approval letter from Waterworks 24.5.4.6.7, 24.7.5.6

b. Gas

- 1. Gas mains 2" I.D. 3' deep 24.7.5.4.1
- 2. Servitude for gas main provided 24.7.5.4.2
- 3. Approval letter from Gas Utility 24.5.4.6.7

c. Electricity

- 1. Light Standards 22-51
 - a. Standards, "cobra head" or decorative type of appropriate height style and lamping 24.7.5.2
 - b. Easements 24.7.5.2
 - c. Location, spacing (spacing $300' > x > 150'$ and one at each intersection within street right of way) 24.7.5.2
- 3. Approval Letter from Electric Utility 24.5.4.6.7

d. Sewerage

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

Y N N/A

Rural Residential

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|--|-----|---|
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 1. Sewerage collection system provided <i>24.7.5.5</i> |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 2. Approval letter from Department of Health and Hospitals <i>24.5.4.6.7</i> |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 3. Approval letter from TPCG Pollution Control <i>24.5.4.6.7</i> |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | 4. Easements <i>24.7.5.1</i> |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | e. | General servitudes <i>24.7.5.1</i> |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 11. | Benchmarks: brass or aluminum disk located in the street near the centerline of each road intersection shown on engineering plan <i>24.7.6.4</i> |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | a. | Location |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | b. | Description |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | c. | Elevation msl |
| <hr style="width: 50px; margin-left: 0;"/> | | Datum used |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 12. | Miscellaneous compliance |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | a. | Drawings showing final alignment of streets and sewerage, method of sewerage disposal and/or tie-in with existing collective systems, lagoons, lift stations, force mains, etc. <i>24.5.4.8</i> |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | b. | Sidewalks <i>24.7.6.5</i> |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 1. | Within street right-of-way |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 2. | Parallel to the street |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 3. | Placement |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | a. | Abut the curb – 5’ in width |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | b. | Separated from curb – 4’ in width |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 4. | Thickness |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | a. | 4” thick typical |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | b. | 6” thick at points of vehicle crossings with welded wire fabric |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5. | PCC concrete with compressive strength of 4000 psi |

Recommended Runoff Coefficients For Subdivisions

Description of Area	Runoff Coefficients
Business	
Downtown	0.80
Neighborhood	0.50
Residential	
Single-family	0.50
Multi-units, detached	0.50
Multi-units, attached	0.65
Residential (suburban)	0.50
Apartment	0.60
Industrial	
Light	0.65
Heavy	0.75
Parks, cemeteries	0.40
Playgrounds	0.25
Railroad yard	0.30
Unimproved	0.20

Period of Recurrence in Years to
Determine the Design Discharge

TRIBUTARY AREA IN ACRES	UNIMPROVED	OPEN SPACE FOR PUBLIC AND INDUSTRIAL USE	RESIDENTIAL	INDUSTRIAL	COMMERCIAL AREAS
UP TO 150	10	10	10	25	25
150 TO 3,000	25	25	25	50	50
OVER 3,000	100	100	100	100	100

Use TPR 40 and HDR 35 published by the U.S.N.O.A.A.

MAJOR DRAINAGE ARTERIES
TERREBONNE PARISH, LOUISIANA

Bayou Black
Bayou Blue
Bayou Cane
Bayou Chauvin
Bayou Dularge
Bayou Grand Caillou
Bayou LaCache
Bayou Petit Caillou
Bayou Point Au Chien
CCC Ditch
Chacahoula Bayou
Company Canal
Donner Canal
Falgout Canal
Gulf Intracoastal Waterway
Hanson Canal
Little Bayou Black
Marmande Canal
Minors Canal
Ouiski Bayou
Ringo-Cocke Canal
Six Foot Ditch
St. Louis Bayou
St. Louis Canal
Terrebonne-Lafourche Drainage Canal
Also include any forced drainage pumping station feeder channel.

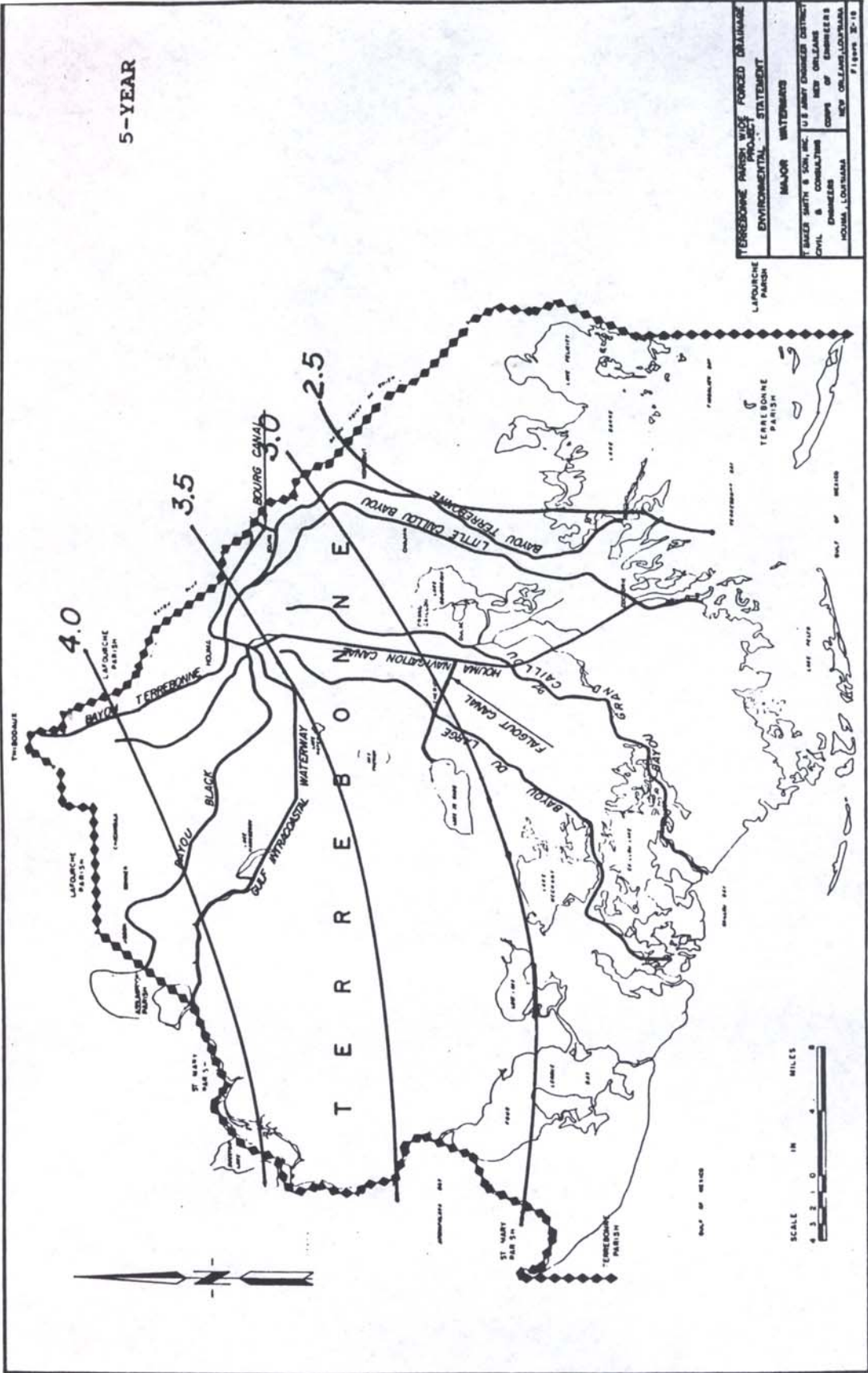
FLOOD ELEVATIONS RESULTING FROM EXTRA-TROPICAL DESIGN STORM

PROJECT NAME	LEVEE MIN EL	100YR MAX EL	25 YR MAX EL	10 YR MAX EL	5 YR MAX EL	2 YR MAX EL
1-1A (Bonanza)	4.30	4.21	3.31	2.47	1.76	0.15
1-2 (Ashland)	6.00	3.84	3.59	3.29	3.14	2.74
1-3 (Industrial Blvd)	4.92	3.47	2.50	1.33	0.33	-4.00
1-5 (Bayou Chauvin)	5.00	4.48	3.62	3.02	2.10	0.00
1-7 (Baroid)	6.00	6.45	6.20	5.97	5.64	5.13
1-8 (M&L)	5.10	6.80	6.00	5.22	4.69	3.26
2-1A (Schriever)	1.24	2.92	2.05	1.34	1.22	1.15
2-1B (Summerfield)	10.00	2.59	2.19	1.66	1.33	0.65
3-1B (Boudreaux)	3.00	1.19	1.00	1.00	0.85	0.67
3-1C (Boudreaux)	3.70	2.12	1.67	1.31	1.15	1.02
4-1 (Point Aux Chien)	4.00	1.58	1.24	1.02	0.95	0.00
4-2A (Smithridge)	5.00	4.47	4.09	3.80	3.50	3.02
4-7 (Bourg)	4.20	4.73	3.95	3.34	2.85	1.60
4-MONTE (Montegut)	5.00	2.23	1.71	1.26	1.08	1.01
5-1A (Chauvin)	2.50	1.68	1.33	1.08	1.00	0.92
5-1B (Chauvin)	1.10	1.19	1.00	0.91	0.75	0.50
6-1 (Gibson)	4.30	1.16	1.01	0.88	0.74	0.51
6-2A (Donner)	4.20	4.20	4.20	4.20	3.53	0.00
8-2 (Bayou Dularge)	2.80	2.52	1.65	1.16	1.01	1.00
D-38 (Concord Rd)	3.67	3.33	2.40	1.00	0.42	-0.80
D-39 (Barataria)	10.00	6.83	6.26	5.73	5.36	1.87
D-40 (Cenac St)	3.00	1.74	1.47	1.27	1.18	1.04
D-41 (Williams St)	5.00	4.98	4.21	3.49	-1.20	-3.00
HOUMA LAKE S.A.	-	2.03	1.60	1.20	1.04	0.73
OUISKI BAYOU S.A.	-	0.94	0.74	0.60	0.51	0.38
TIGER BAYOU S.A.	-	1.40	0.81	0.65	0.60	0.41
COTEAU-ST LOUIS S.A.	-	2.34	1.82	1.42	1.20	0.82
BULL RUN S.A.	-	1.44	1.12	0.90	0.70	0.50

TABLE 4-3. Extra-tropical storm peak pump station reservoir flood elevations.

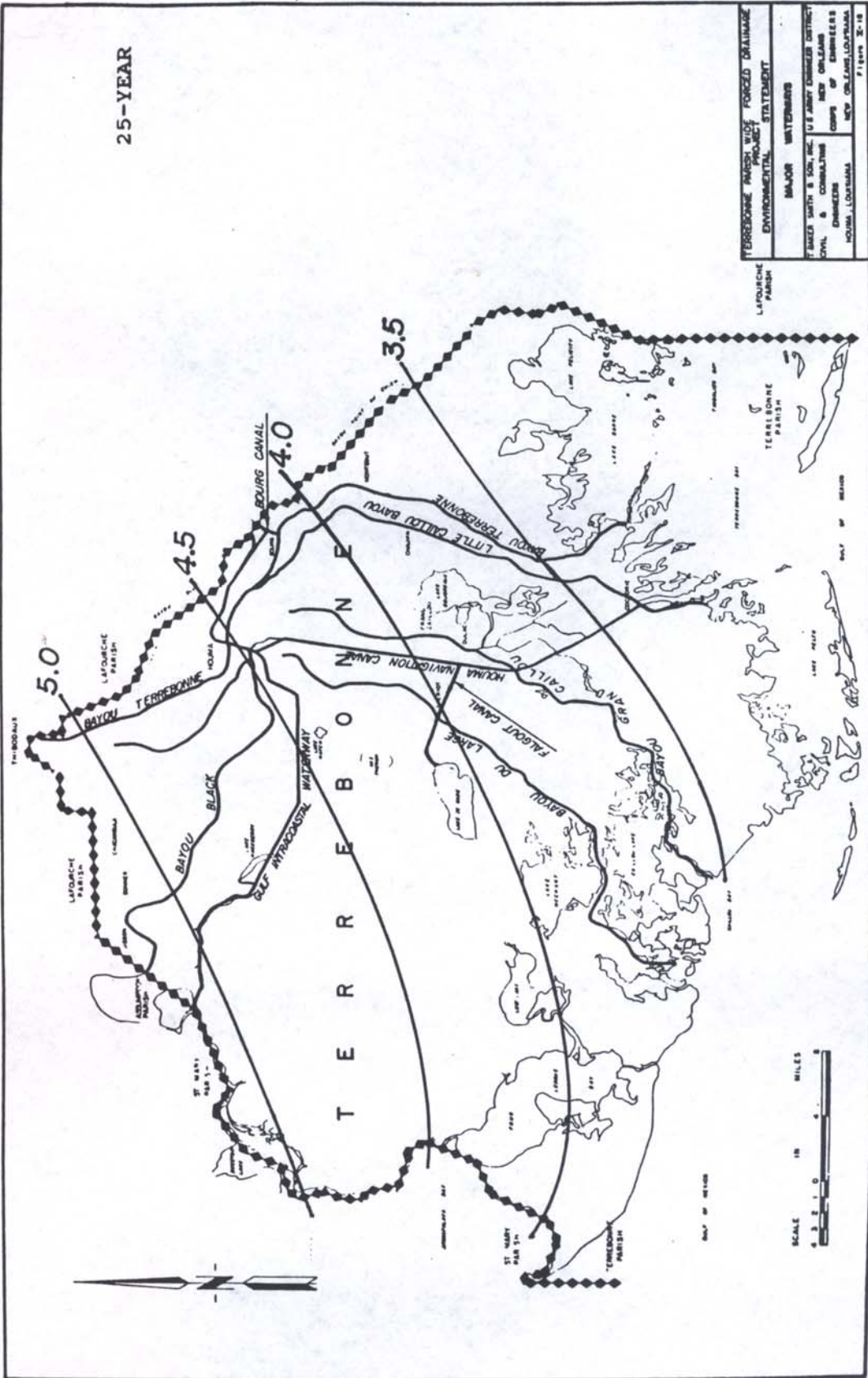
Check with Engineering Division to see if these elevations have changed.

5-YEAR



TERREBONNE PARISH, WYO PROJECT ENVIRONMENTAL STATEMENT	
MAJOR WATERWAYS	
TERREBONNE PARISH, LA.	U.S. ARMY CORP. OF ENGINEERS DISTRICT
TERREBONNE PARISH, LA.	U.S. ARMY CORP. OF ENGINEERS
TERREBONNE PARISH, LA.	U.S. ARMY CORP. OF ENGINEERS
TERREBONNE PARISH, LA.	U.S. ARMY CORP. OF ENGINEERS
TERREBONNE PARISH, LA.	U.S. ARMY CORP. OF ENGINEERS
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TERREBONNE PARISH, LA.	U.S. ARMY CORP. OF ENGINEERS
TERREBONNE PARISH, LA.	U.S. ARMY CORP. OF ENGINEERS
TERREBONNE PARISH, LA.	U.S. ARMY CORP. OF ENGINEERS

Figure 3-10



25-YEAR

TERREBONNE PARISH WIDE FORCED DRAINAGE ENVIRONMENTAL STATEMENT	
MAJOR WATERWAYS	
FEMER SOUTH & SON, INC.	UTILITY AND DRAINAGE DISTRICT
CIVIL & CONSULTING ENGINEERS	CHIEF OF DISTRICT
MOBILE, LOUISIANA	NEW ORLEANS, LOUISIANA
Figure 2-18	

