

**EXLEY TRACT NORTH & SOUTH****PD–MU DEVELOPMENT TEXT****09-07-23****PREPARED FOR:****T&T EXLEY PROPERTIES, LLC****SLC ACQUISITIONS, LLC****CHESTERFIELD, LLC****PREPARED BY:****THOMAS & HUTTON ENGINEERING CO.**

EXCEPT FOR THE INCREASE IN INDUSTRIAL GROSS DENSITY AND REMOVAL OF BUFFERS AND SETBACKS BETWEEN EXLEY TRACT NORTH AND EXLEY TRACT SOUTH, APPROVAL OF THE CHANGES REQUESTED IN THIS TEXT AMENDMENT SHALL ONLY CHANGE CONDITIONS AFFECTING THE PROPERTY IN EXLEY TRACT NORTH

Documents submitted for Approval:

1. Development Text – Initially Approved June 11, 2008, Modified May 8, 2018 and further Modified July 20, 2021, the only change being the Removal from the PDMU of future Old Augusta Road connector to Effingham Parkway as a condition, "...releasing the developer from the proposed right of way reservation; map and parcel 466-multiple, located in the 2<sup>nd</sup> commissioner district...". Approval of this Document dated 09-07-23 with Exhibits is requested.
2. Exley Tract North & South Planned Development District– Mixed Use District Exhibit, (formerly Exhibit II dated June 11, 2008, Modified as Exhibit I May 8, 2018, Modified July 20, 2021), further modified August 23, 2023, and attached as Exhibit A hereto and further described in Paragraph 7a below.
3. Industrial Building Square Feet Plan Exhibit B dated August 23, 2023 attached hereto and further described in Paragraph 7b below.
4. Industrial Setback & Berm Exhibit C dated August 23, 2023, attached hereto and further described in Paragraph 7c below.
5. The Stormwater Management Local Design Manual for Exley Tract North & South, (formerly Exhibit III) Exhibit D attached hereto and further described in Paragraph 7d below.

6. Exley Tract North & South Land Disturbing Activity Restriction Exhibit E dated August 23, 2023 attached hereto and further described in Paragraph 7e below.
7. Description of Exhibits:
  - a) Exhibit A is described in Paragraph 2 above.
  - b) Exhibit B is an illustration of the location of proposed warehouse buildings north of the Exley Property Line and the actual location of the existing warehouse buildings south of the Exley Property Line which, when combined, may be a maximum of 9,500,000 square feet of warehouses plus 630,000 square feet of commercial. Provided a change does not result in an encroachment into the 150 feet Buffer, the location, orientation, size and shape of each building and stormwater detention facilities may be altered by the Developer.
  - c) Exhibit C is an illustration of where sections of Berms A, B & C will be built in relation to the warehouses, plus a diagram and a profile of the Berms; and
  - d) Exhibit D is the Stormwater Management Local Design Manual for Exley Tract North & South previously approved in 2008, 2018 and 2021 and still applicable to the Exley Tract North & South PD-MU.
  - e) Exhibit E shows the 450 feet wide area, “conditional buffer”, in which no land disturbing activity may occur unless the applicable Berm A, Berm B or Berm C is also being constructed simultaneously.

The provisions of this PD-MU Development Text describing Maximum Industrial Building square feet, Buffers, Setbacks and Berms are submitted jointly and inseparably for Approval by the Effingham County Board of Commissioners, in accordance with the Effingham County Zoning Ordinance. The Exhibits described in Paragraph 7b and Paragraph 7c above shall establish the maximum development and building setbacks with respect to Exley Tract North and South, and the building location, orientation, size and shape on Exley Tract North are for illustration purposes only. Development Plans will be submitted for Approval as required by the Effingham County Development ordinances.

This project is being developed in phases according to the schedule included in Section K of this document. The Exhibits are submitted at a

scale of one-inch equals 300 feet to provide for a comprehensive view of the project on a manageable paper size.

### **A. General Description**

Project Name: Exley Tract North & South  
 PIN #: 466D-1, 466D-6, 466D-9, 466D-11, 466D-10, 466D-4, 466D-16, 466D-15, 466D-5, 466D-17, 466D-1B, 466D-3, 466D-14, 466D-7, 466D-8, 466D-12, 466D-13, 466D-1C  
 Size: ±1,051 Acres  
 Location: Highway 21  
 Current Zoning: PD – MU  
 Proposed Zoning: PD - MU  
 Developer: T & T Exley Properties LLC, SFG CH Master Devco LLC, SFG CH GITC Master Devco LLC, Effingham County Industrial Development Authority, SFG CH GITC 1A LLC, DE Well Group LLC, LEX Savannah 1004 TCP LLC, BBK GA Trade Center LLC, Savannah Trade Center Ind II LLC, SFG CH GITC 3A LLC, SFG CH GITC 3B LLC

Exley Tract North & South is a PD–MU consisting of Industrial, and Commercial developments and associated infrastructure. The property consists of approximately 1,051 acres, located on Highway 21 at the Effingham/Chatham County line.

### **B. Present Ownership and Property Location**

The undeveloped property in the PDMU is currently owned by T&T Exley Properties, LLC, SFG CH Master Devco LLC, SFG CH GITC 1A LLC and the Effingham County Industrial Development Authority.

The above said tract or parcel of land known as Exley Tract North & South is bounded on the north by the following names and/or their successors: Goshen Villa Subdivision (American Homes 4 Rent Properties Eight, L.D. II & S. J. Costilow, J. A. Stuart, Matthew Palefsky, J. J. Moore, Jr, Ashley & A. X. Jones, T. J. & B. N. Areson, Chatham Water Utility, LLC, Michael S. Fields, J. D. Aids, L. A. Danielewicz, J. T. & H. S. Waller, Kristopher D. Moutray & Robin M Cisco, Greg & Christina Thayer, P. K. & Joice Varghese, Jessica & Matthew Pimentel, John Julian & Julie & Townsend Duncan, Nicole M. Kaunath, S. M. Scardina, Jr., Garrett Morgan Charles & Tara Paddock, AH4R Properties, LLC, Terry Tuttle & Megan J. Burns, Ann Jordan, William K. & Cindy

J. Jervis, David M. Screen, Schyler Bankston, R. D. Brookshire, Brian Christopher & Christina Rewis, Goshen Properties, Inc.), Westwood Farms Subdivision (Irvin & Rebecca Stroud, Troy W. & Donna W. McCreery, Mary Ann & Michael D. Gillespie, Michael D. Gillespie, Carlos J. & Edelgard Rodriguez, Justin & Amanda Brown), David Howes, Elizabeth R Huger, Alice Hurst, on the south by lands of SFG CH Chatham Tract, LLC, SFG CH Chatham Tract II, LLC, Rice Creek Investors No. 7, LLC, Rice Creek Investors No 2, LLC, R.C. Land Associates, LLC, Rice Creek Homeowners Association of Port Wentworth, Inc, and Sam L. Varnedoe, et.al.; on the east by lands of Verizon Wireless, and Highway 21, and on the west by CSX rail road, said tract or parcel of land containing 1,051 acres more or less.

### **C. Proposed Land Uses and Development Standards**

The following are the districts and permitted uses that are included within this project. These districts are established to control the uses allowed within this development.

#### **Industrial Districts**

Industrial uses shall be consistent with the uses outlined in this document identified in the Effingham County Zoning Ordinance I-1 District with the exception of an increased square footage allowed for warehousing.

1. Assembly or fabrication of **previously manufactured** parts, including but not limited to the following:
  - a) Apparel and other textiles products;
  - b) Electronic and other electric equipment, electric generator, and distribution equipment;
  - c) Fabric samples;
  - d) Furniture and fixtures;
  - e) Industrial machinery and equipment;
  - f) Instruments and related products;
  - g) Lumber and wood products, **excluding** the processing of material for the production of paper and allied products;
  - h) Metal products;
  - i) Plastic and rubber products;
  - j) Transportation equipment.
2. Boat sales.
3. Duplicated
4. Automotive sales and repairs.

5. Automotive storage, **excluding** junk yards.
6. Florist – retail and wholesale.
7. Manufacturing (**light**) of, including but not limited to the following:
  - a) Bakery products;
  - b) Beverages, including alcoholic beverages;
  - c) Communication equipment;
  - d) Computer and office equipment;
  - e) Electrical lighting and wiring equipment;
  - f) Electronic equipment;
  - g) Fabricated metals, **excluding** use of blast furnaces and drop forges;
  - h) Grain mill products;
  - i) Audio and visual equipment;
  - j) Appliances;
  - k) Ice;
  - l) Meat products, **excluding** slaughtering, dressing, and rendering;
  - m) Medical instruments and supplies;
  - n) Pharmaceutical products.
8. Offices.
9. Printing and publishing.
10. Provided the recycling process is conducted inside a building, except for unprocessed material which may be stored outside not more than 25 feet high, Recycling centers are allowed in Exley Tract North.
11. Repair of any goods, equipment, and vehicles of which the manufacture, assembly or sales are permitted in this district.
12. Research facilities.
13. Vocational schools.
14. Utility operations centers.
15. Warehousing less than 2,000,000 square feet per building.
16. Ready-mix concrete facilities **shall not be allowed in Exley Tract North except when supplying concrete for construction in Exley Tract North.**
17. Railroad sidetracks, spurs and appurtenance **shall not be allowed in Exley Tract North.**

18. Rail Spur – a sidetrack off of a mainline accessing industrial buildings for the purpose of loading and unloading goods **shall not be allowed in Exley Tract North.**
19. Trailer storage.
20. **Container stacking is not permitted in Exley Tract North.**

### **Highway Commercial**

Commercial uses shall be consistent with the uses identified in the Effingham County Zoning Ordinance Highway Commercial District (B-3), as amended in this document as Land Use Highway Commercial.

### **Common Space**

Common Space shall include stormwater control measures (including, but not limited to, lagoons, swales, dry detention, infiltration areas, etc.), natural areas, lands to be donated, project buffers and/or setbacks, Public and private easements, and rights-of-way (excluding internal vehicular road rights-of-way). Common space shall be required to be a minimum of 10 percent of the Gross Acreage within land uses.

### **Green Space**

Green Space shall include wetlands and Common Space as defined above. The percentage of property in Green Space may be reduced based on permits to fill wetlands, however the percentage of Common Space cannot be reduced lower than the percentages described under the Common Space definition above.

Property owner's association and covenants shall be created for the Industrial park or a management company shall be designated to maintain common areas.

Site Development within this project will also be governed by the Effingham County Subdivision Regulations, as amended by this document and by restrictive covenants developed by T&T Exley Properties, LLC, SLG Acquisitions, and Chesterfield LLC and/or Successors for the Industrial and

Commercial areas in Exley Tract South. The restrictive covenants for Exley Tract North shall be exclusively developed by T&T Exley Properties and/or Successors.

Provisions for the development standards are summarized in Table C-1.

	<b>Multi-Family</b>	<b>Community Recreational</b>	<b>Industrial</b>	<b>Highway Commercial</b>
Lot Size				
Width**	N/A	N/A	N/A	N/A
Depth (Minimum)	N/A	N/A	N/A	N/A
Height (Maximum)	N/A	N/A	75'*** 56'****	75'***
Setbacks (Minimum)				
Front	N/A	N/A	25'	35'
Side	N/A	N/A	See note below*	See note below*
Rear	N/A	N/A	10'	10'
Gross Density	N/A	N/A	9,500,000 square feet	630,000 square feet

- \* Distance between buildings shall be as required by Effingham County adopted building codes and available fire flow.
- \*\* Lot Widths are measured at the front setback line.
- \*\*\* Building height shall be allowed to be a maximum of 75 feet if adequate fire flows and fire equipment are available to the site. This stipulation only applies to the Exley Tract South.
- \*\*\*\* Building height shall be allowed to be a maximum of 56 feet if adequate fire flows and fire equipment are available to the site; this stipulation only applies to the Exley Tract North.

**Additional Conditions:**

- 1- Buildings and other impervious areas in this project shall not be held to maximum lot coverage on a lot-by-lot basis. The project will be held to the open space and setback standards as outlined in this document.

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- 2- The industrial portion of the Exley Tract South property shall not be used for a short line railroad switchyard without at least a 300-foot vegetated buffer to the nearest residential developed property.
- 3- No railroad spur loading area shall be closer than 200 feet to a residential property line.
- 4- During construction and prior to the applicable section of Berm A, Berm B or Berm C being completed, construction activity shall be allowed Monday through Saturday provided it does not begin earlier than 7:00am nor end later than the earlier to occur of sundown or 7:30pm each day.
- 5- As shown on Exhibit E, no land disturbing activity may be conducted and no building, driveway, parking area, or other impervious surface may be installed in the “conditional buffer” closer than 450 feet of the Exley Tract North northern property line unless the applicable section of the 25 feet tall Berm is **constructed simultaneously with the land disturbing activity and building or other construction**. The applicable Berm shall be completed prior to Effingham County issuing a Certificate of Occupancy for a building or Effingham County allowing for any other disturbed areas to be used for non-construction activities within the 450 feet. Prior to building any berms, the use of existing dirt roads, that are more than 150 feet away from the Exley Tract North northern property line, is permitted but they shall remain dirt.

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#### 4-Buffers:

Based on the anticipated use of the land along the existing power and gas easements that bisect this project Effingham County shall impose no buffers to those easement boundaries. Effingham County shall impose a 50 foot buffer adjacent to highway 21 (to be landscaped in compliance with the Chamber of Commerce Gateway Program or approved by the zoning administrator if the program is not yet in place), a 10 foot buffer between the Industrial and commercial use and the communication tower property, and a 20 foot buffer between the Highway and Industrial Uses within this project.

In addition, Effingham County shall impose a 150 feet Buffer adjacent to Goshen Villa, Goshen Hills and Westwood Farms Subdivisions and property owned by David Howes and/or successors and Elizabeth R. Huger and/or successors, which shall be used for:

- A. a 35 feet wide **UNDISTURBED Buffer** section along the Exley Tract North northern property line adjacent to Goshen Villa, Goshen Hills and Westwood Farms Subdivisions and property owned by David Howes and/or successors and Elizabeth R. Huger and/or successors, which shall be left in its current condition and hereafter undisturbed and free of all utilities;
- B. a 115 feet wide section along the southern line of the 35 feet **UNDISTURBED Buffer** where the Buffer is adjacent to Goshen Villa, Goshen Hills and Westwood Farms Subdivisions and property owned by David Howes and/or successors and Elizabeth R. Huger and/or successors that may be cleared and used for each of the following; (1) a 25 feet tall (minimum height) Berm which will be landscaped and irrigated (see Exhibit C dated August 23, 2023 berm design plus description in Section D 1 below) in order to sustain the vegetation installed thereon, (2) drainage, including installation of drainage structures, ponds and ditches, (3) installation of security fencing and (4) providing such limited access as may be necessary to construct and maintain the Berm, drainage and fencing; and
- C. a 30 feet wide **Buffer** section along the Exley Tract North northern property line where highway commercial is adjacent to Alice Huger Hurst and/or successors, which shall be left in its current condition and hereafter undisturbed except for drainage;

- D. Except for the four (4) conditions listed in B above, no vertical building, concrete, asphalt or other impervious paving may be placed inside the 150 feet Buffer.
- E. There shall be no **Buffer** along the CSX railroad property.
- F. Except for the 35 feet **UNDISTURBED Buffer section described above**, the perimeter buffers may include the use of berms, fencing, plantings or a combination of these methods as determined by the Developer, subject to approval by County Manager or designee.
- G. In the event a railroad sidetrack is installed in Exley Tract South within the 25-foot buffer adjacent to the Railroad the 25-foot buffer shall be placed east of the new sideline. Railroad and road crossings across this buffer to access sidelines shall be considered an allowed use within the buffer.
- H. All tree plantings shall be in accordance with the Effingham County buffer ordinance.
- I. There shall be a “conditional buffer” of 450 feet as shown on Exhibit E and as described above.

#### **5-Setbacks:**

- A. Except as described in paragraph 4-Buffers, Setbacks will apply to the perimeter of the property based on Table C-1 above and the use approved for this project.
- B. The setback line for buildings and impervious surfaces adjacent to Goshen Villa, Goshen Hills and Westwood Farms Subdivisions and property owned by David Howes and/or successors and Elizabeth R. Huger and/or successors shall be 150 feet subject to the conditions described in paragraph 4-Buffers.

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## 6-Berms:

T&T Exley Properties, LLC or their successors in title acknowledge and agree that each party shall construct a **berm**, as required by the Terms of this Text, having a minimum height of 25' in the areas indicated on the Industrial Setback & Berm Exhibit C dated August 23, 2023. Each party shall be responsible for constructing and maintaining the required berms in accordance with the Industrial Building Square Feet Plan Exhibit B and the Industrial Setback and Berm Exhibit C, dated August 23, 2023, as it corresponds to its respective property. Without limiting the foregoing, Berm A shall be installed and completed in connection with any Buildings constructed in the area of Buildings 2 or 3, Berm B shall be installed and completed in connection with any Buildings constructed in the area of Building 4 and Berm C shall be installed and completed in connection with any Buildings constructed in the area of Buildings 5 or 6. **Said Berms shall be constructed simultaneously with the land disturbing activity and building or other construction.** Prior to building any berms, the use of existing dirt roads, that are more than 150 feet away from the Exley Tract North northern property line, is permitted but they shall remain dirt. No berm shall be installed for any building, driveway, parking area, or other impervious surface that is not closer than 450 feet to the Exley Tract North northern property line. The berms, when constructed, shall be compacted to a minimum of 25' in height with a minimum 2:1 side slope, stabilized with vegetative cover and irrigation, and otherwise completed in accordance with the berm specifications as shown in Exhibit C dated August 23, 2023. The berm, landscaping and irrigation shall be completed in phases, substantially depicted as Berm A, Berm B and Berm C on the Industrial Setback and Berm Exhibit C, in each case on or before the issuance by Effingham County of the certificate of occupancy with respect to the corresponding building, so that each completed building is screened from the neighboring residential properties to the north that share a common property line with the Exley Tract North and South northern property line adjacent to Goshen Villa, Goshen Hills and Westwood Farms Subdivisions and property owned by David Howes and/or successors and Elizabeth R. Huger and/or successors. No Berm shall be required along the Northern Property Line on Property approved for Highway Commercial Use.

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**D. Except for Sections E and F below which are included for Approval in the amended text described in Paragraph 1 above, each of the Sections below are Exceptions that were Requested and Previously Approved by the Effingham County Commission in 2008, 2018 and 2021**

The information included in this Development Text shall govern the Zoning and Subdivision regulations for this project. In the event of any conflict this document shall govern. (See Section C for additional conditions)

Due to the nature of this development, the applicant shall reserve the right to negotiate shared parking facilities between similar uses. The benefits of reducing parking areas include:

- minimizing stormwater runoff from parking areas, thus reducing potential water quality impacts;
- Varying time periods of use;

Provided changes to the street layout, individual building location, size and shape as shown on Exhibit C do not encroach into the 150 feet Buffer, they shall be made at the sole choice of the Developer.

Article VII. Section 7.1.13 – Street right-of-way widths.

The table shown below replaces the requirements of section 7.1.13:

**Curb & Gutter Streets:**

	Street Classification	Pavement Width	Right-of-Way Width
(a)	Local Street		
	2-lane	22'	50'
	2-lane with parking (1-side)	31'	50'
	2-lane with parking (2-sides)	40'	60'
(b)	Collector Street		
	2-lane	24'	60'
	2-lane with left turn	36'	60'
	2-lane Blvd. Section	12' lanes 8' median	60'
	4-lane Blvd. Section	24' of lanes (2 @ 12' each) 8' median	80'
(c)	Arterial Street	N/A	N/A

**Roadside Swale:**

	<b>Street Classification</b>	<b>Pavement Width</b>	<b>Shoulder Width</b>	<b>Ditch</b>	<b>Right-of-Way Width</b>
(a)	Local Street				
	2-lane	22'	4'	12'	60'
(b)	Collector Street				
	2-lane	24'	6'	16'	80'
	4-lane	48'			104'
(c)	Arterial Street	N/A			N/A

**Restatement of approved PD–MU Waiver of the Water Resources Protection Ordinance****Section 3. Waivers to Stormwater Management Requirements:**

All of the conditions listed in section 3 of the Water Resource Protection Ordinance are waived on the sole basis of section 3.1b. This section allows for the County or its Agent to waive the requirements of the Water Resource Protection Ordinance and the Stormwater Management Local Design Manual and replace them with alternative minimum requirements for on-site management of stormwater discharges.

The Stormwater Management Local Design Management Design Manual for Exley Tract North and South (formerly approved in 2008, 2018 and 2021 as Exhibit III) is included as Exhibit D in this PD Zoning application package as the alternate minimum requirements for on-site management of stormwater discharges. This document takes precedent over Effingham County's current Water Resource Protection Ordinance and Stormwater Management Local Design Management Design Manual. In event of a conflict between any of the documents the governing document shall be in the following order: governing – Stormwater Management Local Design Management Design Manual for Exley Tract North and South, 2<sup>nd</sup> – Water Resource Protection Ordinance and 3<sup>rd</sup> – Stormwater Management Local Design Manual.

### E. Percentage of Land Uses

Table E-1 indicates acreages of land uses planned for Exley Tract North and South.

<b>TABLE E-1: LAND USES</b>					
	<b>TOTAL ACRES (+/-)</b>	<b>UPLAND ACRES (+/-) Wetland Impacts</b>	<b>COMMON SPACE ACRES (+/-)</b>	<b>TOTAL GREEN SPACE ACRES (+/-)</b>	<b>PERCENT OF TOTAL ACRES IN GREEN SPACE (+/-) *</b>
Industrial	989	718	99 (10%)	370	37%
Multi-family	N/A	N/A	N/A	N/A	N/A
Highway Commercial	62	55	6** (10%)	13**	21%**
Future Highway 21 Connector	N/A	N/A	N/A	N/A	N/A
Total	1,051	773	105	383	36%

\* Values are based on current planning and may vary based on Green Space definition as outlined in Section C.

\*\* Common space and green space is currently assumed to be 10% of total acreage until site development plans for these areas are proposed. The 10% assumption is to anticipate appropriate detention and/or drainage infrastructure areas.

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**F. Proposed Maximum Units and Building Square Footage**

Table F-1 summarizes the maximum building square footage and project gross density are listed at the bottom of the table.

<b>TABLE F-1: Maximum Units and Building Square Footage</b>	
<b>Land Use</b>	<b>Units or Building Square Footage</b>
Multi-family	N/A
Highway Commercial	630,000 sf
Industrial	9,500,000 sf

**G. Proposed Dedication of Public Use**

Streets and Utility Easements:

All streets and utility easements will be presented to the Effingham County Board of Commissioners for acceptance as public streets and easements or dedicated to the Property Owners Association. Acceptance of street dedications shall be at the discretion of the Effingham County Board of Commissioners.

**H. Open Space, Courts, Walks, and Common Areas**

Wetlands

US Army Corps of Engineers Jurisdictional Wetlands will be owned by the developer until presented to Effingham County for dedication or dedicated to the Property Owners Association. If presented to Effingham County, acceptance of these dedications shall be at the discretion of the Effingham County Board of Commissioners. No machine clearing, or logging shall be allowed in the preserved wetland portion of the property without the expressed written approval of the zoning administrator.

Lakes

Lakes will be located throughout Exley Tract to manage stormwater runoff for both quantity and quality. The lakes will be designed to aid in attenuating the design storm events to pre-development flow rates. Lakes shall be owned and maintained by the developer until such time as these facilities are dedicated to the Property Owners Association or Effingham

County. Acceptance of these dedications shall be at the discretion of the Effingham County Board of Commissioners.

#### **I. Utilities**

Water and sewer will be provided by Effingham County. These utilities within this development will be installed by the developer and dedicated to Effingham County upon acceptance by the Board of Commissioners or designee.

Stormwater management will be handled through a series of detention ponds. These ponds shall be designed based on the Stormwater Management Local Design Manual included as Exhibit D to this application. All plans will be reviewed and approved by the Effingham County Engineer prior to construction.

#### **J. Access, Parking, Signs and Buffers**

Access to the site will be from Highway 21. Improvements required to provide access to the project will be designed, permitted, and constructed by the Developer.

A tenant/property owner identification sign shall be located at the entrance of the industrial park. The sign shall be in place no later than the occupancy of the last available parcel.

As mentioned in section D, shared parking is anticipated among the uses in order to decrease the amount of unproductive surface parking needed. These shared parking arrangements will be presented in conjunction with subsequent development plans.

Any lighting used for this development will be designed in a manner to avoid any negative impacts to adjacent properties. All pole lighting shall be shielded, downward facing, no taller than the nearest building and maximum height of 35 feet.

Buffers for the project are shown on Exhibit B, Exhibit C, Exhibit E and further described in Section C of this document.

#### **K. Development Schedule**

Based on historical sales in surrounding areas, it is anticipated this project will be built out in approximately 8 years for Industrial and 10 years for



commercial. This schedule is based on current market conditions and may vary over time.

**L. Installation of Improvements**

The developer of any parcel within this PD–MU shall be responsible for improvements (excluding any utilities specifically agreed to be installed by Effingham County) required to develop the parcel consistent with this application. This requirement shall be met as market conditions warrant and are not set to a specific timetable.

THIS REVISED PLANNED DEVELOPMENT TEXT INCLUDING EXHIBITS is hereby Approved this \_\_\_ day of \_\_\_\_\_, 202\_\_\_ by the Board of Commissioners, Effingham County, Georgia.

\_\_\_\_\_  
Wesley Corbitt  
Chairman,  
Effingham County Commission

\_\_\_\_\_  
Stephanie D. Johnson  
Clerk  
Effingham County

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commercial. This schedule is based on current market conditions and may vary over time.

**L. Installation of Improvements**

The developer of any parcel within this PD–MU shall be responsible for improvements (excluding any utilities specifically agreed to be installed by Effingham County) required to develop the parcel consistent with this application. This requirement shall be met as market conditions warrant and are not set to a specific timetable.

THIS REVISED PLANNED DEVELOPMENT TEXT INCLUDING EXHIBITS is hereby Approved this \_\_\_ day of \_\_\_\_\_, 202\_\_\_\_ by the Board of Commissioners, Effingham County, Georgia.

\_\_\_\_\_  
Wesley Corbitt  
Chairman,  
Effingham County Commission

\_\_\_\_\_  
Stephanie D. Johnson  
Clerk  
Effingham County

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EXHIBIT D (19 pgs)

~~EXHIBIT #~~

STORMWATER MANAGEMENT  
LOCAL DESIGN MANUAL

**EXLEY TRACT NORTH & SOUTH**  
EFFINGHAM COUNTY, GEORGIA



PREPARED FOR:

**NEW SAVANNAH, LLC**

PREPARED BY:

THOMAS & HUTTON ENGINEERING CO.

A REVISION OF A DOCUMENT PREPARED BY:  
INTEGRATED SCIENCE & ENGINEERING DATED NOVEMBER 23, 2004

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## 1. FORWARD

This manual is meant to serve as a comprehensive guide to implementing stormwater management systems within Exley Tract PD - I. Additionally, the manual is designed to supplement the Georgia Stormwater Management Manual (GSMM) First Edition which shall serve as the technical manual for design and specification of individual components within the system.

## 2. GENERAL LEVEL OF SERVICE STANDARDS

### 2.1. Detention Requirements

#### 2.1.1. Discharge Rates from New Development Projects

Development plans including site grading and drainage plans should be developed to minimize disruption of natural drainage patterns on properties. Additionally, no increases in stormwater runoff rates shall be allowed at any discharge point on the site. The baseline conditions shall be a wooded undisturbed site regardless of whether any clearing has occurred in the past and shall model any depression storage and/or detention storage. The development shall be analyzed for the following storm events:

- 2-year 24-hour Design Storm
- 10-year 24-hour Design Storm
- 25-year 24-hour Design Storm
- 50-year 24-hour Design Storm (Collector Road and Associated Lagoons Only)
- 100-year 24-hour Design Storm (Habitable Structures Only)

If the total area of the site (i.e. total property area) and the drainage area to each stormwater management facility is less than one acre, then a rainfall intensity based analysis (i.e. rational method) may be performed. If detention facilities are to be designed and constructed in series, the 24-hour storm criteria will apply regardless of the drainage area.

#### 2.1.2. Discharge Rates from Redevelopment Projects

Development plans including site grading and drainage plans should be developed to minimize disruption of natural drainage patterns on properties. Additionally, no increases in stormwater runoff rates shall be allowed at any discharge point on the site. The baseline conditions shall be based on an analysis of the stormwater discharge rates from the site in its existing condition and shall model any depression storage and/or detention storage. The development shall be analyzed for the following storm events:

- 2-year 24-hour Design Storm
- 10-year 24-hour Design Storm
- 25-year 24-hour Design Storm

50-year 24-hour Design Storm (Collector Road and Lagoon Design Only);  
 100-year 24-hour Design Storm (Habitable Structures Only)

If the total area of the site (i.e., total property area) and the drainage area to each stormwater management facility is less than one acre, then a rainfall intensity based analysis (i.e., rational method) may be performed. If detention facilities are to be designed and constructed in series, the 24-hour storm criteria will apply regardless of the drainage area.

## 2.2. Conveyance Systems

### 2.2.1. Bridges

All bridges shall be designed to accommodate the 100-year 24-hour design storm with no overtopping.

### 2.2.2. Culverts & Pipe Systems

Roadway Classification / Use	Design Storm
Collector Roads	50-Year
Neighborhood Roads	25-Year
Parking Lots / Material Storage Areas / Landscape Areas	10-Year

Culverts with contributing drainage areas greater than 10 acres shall be designed to the 24-hour storm. For example, if a cross drain is to be designed to convey stormwater runoff from a 20-acre drainage basin under a neighborhood road, then the design storm shall be a 25-year 24-hour storm.

If a culvert is designed to connect to an existing system of a differing design level of service, then the system with the greater design requirement will be used to size the proposed system.

### 2.2.3. Inlets (Catch Basins, Yard Inlets, Drop Inlets, Hooded Grate Inlets or a Flumes)

Inlets collecting stormwater runoff from street surfaces and area inlets shall be sized to capture the storm event specified for the pipe system to which it drains and a maximum flooding depth as determined by the following table:

Roadway Classification / Use	Flooding Depth
Collector Roads	Maximum 0.1 Depth at Crown
Neighborhood Roads	Maximum 0.1 ft Depth at Crown
Parking Lots (if not used for Detention)	Maximum 0.5 ft Depth
Detention Areas utilized for other purposes (i.e., parking or detention, etc.) with flood warning	Maximum 1.5 ft Depth

sign	
Material Storage Areas / Landscape Areas	Maximum 2.0 ft Depth

inlets and grading adjacent to habitable structures shall be designed to prevent stormwater runoff from entering the structure during the 100-year design storm.

#### 2.2.4. Inlets (Headwalls, Floored End Sections, etc.)

inlets that utilize the opening of the pipe as the inlet (i.e. headwalls, floored end sections, etc.) shall be sized to capture the storm event specified for the pipe system to which it drains and a maximum flooding depth that will not result in bypass of the inlet or cause structural / nuisance flooding.

#### 2.2.5. Roadside Ditches

Roads constructed without curb and gutter shall incorporate ditches that are designed to the specific design storms as shown in the following table: 2.2.6. Drainage Channels

Roadway Classification / Use	Design Storm
Collector Roads	50-Year
Neighborhood Roads	25-Year

For drainage channels designed to convey stormwater runoff either from or to a culvert, the channel should be sized to accommodate the same storm event specified for the pipe system. Channels designed to convey stormwater runoff to detention ponds shall be sized to accommodate the 25-year design storm.

### 2.3. Water Quality Treatment

#### 2.3.1. Water Quality in New Development

All stormwater runoff generated from a site shall be adequately treated before discharge. Stormwater management systems must be designed to remove 80% of the average annual post-development total suspended solids (TSS) load and be able to meet any other additional watershed or site-specific water quality requirements. It is presumed that a stormwater management system complies with this performance standard if:

- it is sized to capture and treat the prescribed water quality treatment volume, which is defined as the runoff volume resulting from the first 1.2 inches of rainfall from a site;
- Appropriate structural controls are selected, designed, constructed, and maintained according to the specific criteria in this manual and the CSMM.

Additional water quality requirements may be specified for hotspot land uses and activities.

#### 2.3.2 Water Quality in Redevelopment

All stormwater runoff generated from the disturbed area of the site shall be adequately treated before discharge. Stormwater management systems must be designed to remove 80% of the average annual post-development total suspended solids (TSS) load and be able to meet any other additional watershed or site-specific water quality requirements. It is presumed that a stormwater management system complies with this performance standard if:

- It is sized to capture and treat the prescribed water quality treatment volume, which is defined as the runoff volume resulting from the first 1.2 inches of rainfall from a site.
- Appropriate structural controls are selected, designed, constructed, and maintained according to the specific criteria in this manual and the GSMM.

Additional water quality requirements may be specified for hotspot land uses and activities.

### 2.4. Channel Protection

#### 2.4.1 Channel Protection for New Development Projects

Channel protection shall be provided for each site by providing extended detention of the 1-year storm event released over a period of 24-hours to reduce bankfull.

#### 2.4.2 Channel Protection for Redevelopment Projects

Channel protection shall be provided for the disturbed portion of each site by providing extended detention of the 1-year storm event released over a period of 24-hours to reduce bankfull.

### 2.5. Energy Dissipation

Energy dissipation shall be employed whenever the velocity of flows leaving a new stormwater facility exceeds the erosion velocity of the downstream area channel area or five feet per second (ft/s) whichever is less.



### 3. APPROVED CONSTRUCTION MATERIALS & BMPs

#### 3.1. Conveyance Structures

##### 3.1.1. Pipes Under Roads and Pavement

All pipes under roadways, parking lots and other surfaces designed for vehicular traffic shall be constructed of reinforced concrete pipe (RCP) meeting Georgia Department of Transportation Standards. Any pipe that originates or terminates within or immediately adjacent (twice the depth of the pipe section adjacent to the roadway) to a pavement surface as defined above shall be continued to the next structure (i.e. manhole, inlet, headwall, etc.). Longitudinal pipes with diameters of 30-inches or smaller may utilize High Density Polyethylene (HDPE) Pipe if the depth of the pipe is four feet or less. Bedding standards for HDPE pipe shall be such that stone bedding, or equivalent, shall be placed to half of the pipe diameter for all depths greater than four feet and/or in accordance with manufacturers specifications whichever are greater. HDPE pipes must have a minimum of 24-inches of cover from the crown of the pipe unless prior approval of the County or its Agent has been obtained.

##### 3.1.2. Pipes Not Under Roads and Pavement

Pipes not under roadways, parking lots and other surfaces meant for vehicular traffic shall be constructed of RCP or HDPE meeting Georgia Department of Transportation Standards and approved by the County or its Agent. Bedding standards for HDPE pipe shall be such that stone bedding, or equivalent, shall be placed to half of the pipe diameter for all depths greater than four feet and/or in accordance with manufacturers specifications whichever are greater. HDPE pipes must have a minimum of 24 inches of cover from the crown of the pipe unless prior approval of the County or its Agent has been obtained.

##### 3.1.3. Channels

All channels must be protected from erosion through the use of coir-mat, concrete erosion control matting or similar method acceptable to the County or its Agent. All channel side slopes shall have a 3-foot horizontal to 1-foot vertical (3:1) slope or less.

##### 3.1.4. Inlets

All inlets shall be constructed of materials and methods approved by the Georgia Department of Transportation unless approved by the County or its Agent.

### 3.2. Detention Ponds

#### 3.2.1. Dry Earthen Detention Ponds

Dry detention ponds shall be designed to provide for positive drainage on the pond floor to the outlet of the pond. Side slopes shall be designed to have a maximum of 3 feet horizontal to 1 foot vertical (3:1) slopes. If the 100-year maximum water surface depth is equal to or greater than four feet, then a standard four-foot chain-link fence shall be constructed around the detention pond with a 20-foot gate provided to allow access.

#### 3.2.2. Dry Underground Detention Pond

No underground detention pond shall be constructed on residential development projects. Underground detention ponds may be considered on non-residential development projects after the Engineer has shown that construction of an aboveground detention pond is infeasible.

#### 3.2.3. Wet Detention Ponds

Wet detention ponds may be constructed if the facilities are designed to the criteria outlined in Section 3.2.4.5 of the GSMM (Volume 2).

### 3.3. Water Quality Best Management Practices

#### 3.3.1. General Application Structural Stormwater Controls

The following general application structural stormwater controls shall be acceptable to meet the water quality requirements for the contributing drainage areas. For design, construction and maintenance specifications for each control, the reader is directed to Section 3.2 of the GSMM (Volume 2).

- Stormwater Ponds
- Stormwater Wetlands
- Bioretention Areas
- Sand Filters (hotspot/commercial developments only)
- Enhanced Swales

#### 3.3.2. Limited Application Structural Controls

The following limited application structural stormwater controls shall be acceptable to meet the water quality requirements for the contributing drainage areas. For design, construction and maintenance specifications for each control, the reader is directed to Section 3.3 of the GSMM (Volume 2).

- Filter Strip

- Grass Channel
- Organic Filter (hotspot/commercial developments only)
- Underground Sand Filter (hotspot/commercial developments only)
- Submerged Gravel Wetland (hotspot/commercial developments only)

### 3.3.3 Proprietary Structural Controls

The County or its Agent may at their discretion allow proprietary structural controls. Prior to specification of such a device, the designer shall consult the County or its Agent to determine if the control will be acceptable.

## 3.4 Channel Protection Design

Outlets to provide for meeting channel protection criteria shall be designed to meet the standards outlined in Section 2.3.3 and Section 2.3.5 of the GSMM (Volume 2).

#### 4. APPROVED HYDROLOGIC & HYDRAULIC METHODS

##### 4.1. Hydrologic Methods

###### 4.1.1. Rational Method

The rational method may be used with the approval of the County or its Agent to develop peak runoff flows for culverts and/or detention ponds with contributing drainage areas less than 10 acres in size. All computations shall be in accordance with section 2.1.4 of the GSMM (Volume 2). Rainfall intensities shall be derived from Table A-13 (Savannah) of Appendix A of the GSMM (Volume 2).

As specified above, the rational method may be used to size detention facilities. If the rational method is utilized, the DeKalb Method, Baumgardner / Morris Method (Feramoda) or Advanced Interconnected Channel and Pond Routing (AdICPR) Software must be utilized to develop runoff hydrographs. Triangular rational method runoff hydrographs may not be utilized in the design of detention facilities.

###### 4.1.2. SCS Method

In most cases, the Soil Conservation Service (SCS) method must be utilized to size detention ponds and culverts with contributing drainage areas greater than 10 acres. All computations shall be in accordance with Section 2.1.5 of the GSMM (Volume 2). Rainfall depths shall be derived from Table A-13 (Savannah Rainfall Data) of Appendix A of the GSMM (Volume 2).

The following table provides the rainfall depths for use in Ellingham County:

Design Storm	Rainfall Depth
1-Year 24-Hour	3.60"
2-Year 24-Hour	4.80"
5-Year 24-Hour	6.00"
10-Year 24-Hour	6.72"
25-Year 24-Hour	7.92"
50-Year 24-Hour	8.88"
100-Year 24-Hour	9.84"

##### 4.2. Hydraulic Methods

All hydraulic calculations shall be made in accordance with Chapter 4 of the GSMM (Volume 2).

## 5. SPECIAL DISTRICTS

This project is not located within a special District.

## 6. HYDROLOGIC & HYDRAULIC REPORT REQUIREMENTS

All development projects must submit a hydrologic and hydraulic report or Site Specific Stormwater Management Plan outlining the impacts of the site on the stormwater system and drainage basin.

At a minimum, this report must include the following sections:

- Statement by Registered Professional
- Existing Conditions Hydrologic Analysis
- Post-Development Hydrologic Analysis
- Stormwater Management System Design
- Downstream Analysis
- Erosion & Sedimentation Control Plan
- Operations & Maintenance Plan
- Reference to Any Existing County Developed Drainage Master Plans\*

- \* The designer should consult with the County or its Agent regarding the existence and/or applicability of any existing County developed drainage master plans prior to initiating work on the Site Specific Stormwater Management Plan.

The following subsections outline the requirements for each of the elements outlined above.

### 6.1. Professional Certification

Each report should begin with the following statement and be signed and sealed by the professional who prepared the report and analysis:

"To the Best of my information, knowledge and belief I, (Name of Professional), a Registered (Professional Engineer / Land Surveyor) in the State of Georgia, hereby agree that the grading and drainage plans for the project known as (Project Name), lying in Land Lot (XXX), of the (XX) District, Ettingham County, Georgia, have been prepared under my supervision, and, state that in my opinion, the construction of said project will not produce storm drainage conditions that will cause damage or adversely affect the surrounding properties for the required design storms, this (day) day of (Month), (Year)."

### 6.2. Existing Conditions Hydrologic Analysis

The existing conditions hydrologic analysis should provide the reader with a comprehensive evaluation of the site conditions prior to development of the project. The designer should provide the following information with this element of the report.

#### 6.2.1. Existing Conditions Map

Topography (2-ft or less contour interval) of existing site conditions  
Perennial / intermittent streams, wetlands, lakes and other surface water features  
Drainage basin delineations showing the location of each drainage sub-basin  
Drainage basin delineations for the basin upstream of the project site on an appropriate map (USGS Quadrangle, County IDAR, etc.)  
Existing stormwater conveyances and structural control facilities  
Direction of flow and discharge points from the site including sheet flow areas  
Reference any existing County developed drainage master plans  
Any area of significant depression storage

#### 6.2.2. Existing Conditions Tables

A table listing the acreage, soil types and land cover characteristics for each sub-basin  
A table listing the peak runoff rates from each outfall location  
A table listing the peak runoff rates and total runoff volumes for the drainage area upstream of the project site  
A table listing the peak runoff rates and maximum water surface elevations for all detention facilities studied as part of the existing conditions analysis

#### 6.2.3. Narratives

Written description of the existing conditions found on the site  
Analysis of runoff provided by off-site areas upstream of the project site  
Methodologies, assumptions, site parameters and supporting design calculations used in the analyzing the existing conditions site hydrology

### 6.3. **Post-Development Hydrologic Analysis**

The post-development hydrologic analysis should provide the reader with a comprehensive evaluation of the anticipated site conditions following development of the project. The designer should provide the following information with this element of the report:

#### 6.3.1. Post-Development Conditions Map

Topography (2-ft or less contour interval) of proposed site conditions  
Perennial/intermittent streams, wetlands, lakes and other surface water features  
Drainage basin delineations showing the location of each drainage sub-basin  
Proposed stormwater conveyances and structural control facilities  
Direction of flow and discharge points from the site including sheet flow areas  
Reference any existing County developed drainage master plans  
Location and boundaries of proposed natural feature protection areas

### 6.3.2. Post-Development Conditions Tables

A table listing the acreage, soil types, impervious surface area and land cover characteristics for each sub-basin.

A table listing the peak runoff rates from each Outfall.

A table listing the peak runoff rates for the drainage area upstream of the project site.

A table listing the peak discharge rates and peak elevations for all detention ponds studied.

### 6.3.3. Narratives

Written description of the existing conditions found on the site.

Stormwater calculations for water quality, channel protection and post-construction detention for each sub-basin affected by the project.

Documentation and calculations for any applicable site design credits that are being utilized.

Methodologies, assumptions, site parameters and supporting design calculations used in the analyzing the post-development conditions site hydrology.

## 6.4. Stormwater Management System Design

The stormwater management system design should provide the reader with a comprehensive description of the proposed stormwater management system components on site. The designer should provide the following information with this element of the report:

### 6.4.1. Stormwater Management System Map

Location of all non-structural stormwater controls.

Location of all existing stormwater controls to remain after development.

Location of all proposed stormwater controls.

Location of all proposed impoundment type controls (i.e., detention ponds, stormwater ponds, regional detention ponds, stormwater wetlands, etc.)

Location of all conveyance structures.

All impoundment type controls should be labeled with the following information: maximum water surface elevation for the 50 and 25 year storm event, top of bank elevation, normal water elevation and bottom elevation.

All inlets to conveyance structures should be labeled with the following information: maximum design water surface and maximum potential water surface.

All pipes should be labeled with length, material and slope.

Calculations shall be provided to show the hydraulic grade line for the storm drainage pipes and structures for the required storm event.

### 6.4.2. Narratives

Narrative describing that appropriate and effective structural stormwater controls have been selected.

Design calculations and elevations for all existing and proposed stormwater conveyance elements including stormwater drains, pipes, culverts, catch basins.

channels, swales and areas of overland flow.

Design calculations and elevations for all structural water quality BMPs to be utilized for water quality improvement.

Design calculations showing that the design meets the requirements of the water quality improvements as outlined in the ordinance and local design manual.

## 6.5. Downstream Analysis

The downstream analysis should provide the reader with a comprehensive picture of the downstream areas and their capacity to accommodate stormwater runoff from the proposed development.

### 6.5.1. Maps

Drainage basin delineations showing the point at which the contributing area of the project represents 10% of the total drainage basin area as defined in Section 2.1.9.2 of the GSMMA.

Identify culverts, channels and other structural stormwater controls that the stormwater runoff must pass through prior to the 10% point identified previously.

### 6.5.2. Narratives

- Supporting calculations for a downstream peak flow analysis using the 10% rule necessary to show safe passage of the post-development design flows downstream.

## 6.6. Erosion & Sedimentation Control Plan

The erosion and sedimentation control plan should be included in the report demonstrating the plan to effectively mitigate stormwater impacts during construction. The following elements should be included in this section of the report:

All elements specified in the Georgia Erosion and Sediment Control Act and local ordinances and regulations.

Sequence/phasing of construction and temporary stabilization measures.

Temporary structures that will be converted into permanent stormwater controls.

## 6.7. Omitted

## 6.8. Operations & Maintenance Plan

A narrative of what maintenance tasks will be required for the stormwater controls specified for the site as well as the responsible parties. Additionally, the report will need to identify access and safety issues for the site. Maintenance issues for various BMPs and other stormwater controls can be found in the GSMMA.





THOMAS  
&  
HUTTON

STORMWATER MANAGEMENT  
LOCAL DESIGN MANUAL

EXLEY TRACT NORTH & SOUTH  
EFFINGHAM COUNTY, GEORGIA

**APPENDIX A**  
MODEL STORMWATER REPORT CHECKLIST

J – 26838.0002

June 2018

## MODEL STORMWATER REPORT CHECK LIST

### Section 1. REPORT FORMAT

I.1 Does the Hydrologic & Hydraulic Report contain the following information:

Provided \_\_\_\_\_ Missing \_\_\_\_\_

Name of the Development

Name of the Developer

Location Map of the Site referencing the nearest major road

Stormwater Impact Certification

Seal of the Professional having prepared the Report

I.2 Does the Hydrologic & Hydraulic Report contain the following sections:

Provided \_\_\_\_\_ Missing \_\_\_\_\_ N/A \_\_\_\_\_

Existing Conditions Hydrologic Analysis

Post-Development Hydrologic Analysis

Stormwater Management System Design

Downstream Analysis

Erosion & Sedimentation Control Plan

Operations & Maintenance Plan

## Section 2. EXISTING CONDITIONS HYDROLOGIC ANALYSIS

- 2.1 This section should provide the reader with a comprehensive evaluation of the site conditions prior to development of the project.
- 2.2 Narratives – A narrative and supporting calculations of the pre-development conditions of the site as related to stormwater management should be provided to determine the current characteristics of the site:

Written description of the existing conditions found on the site

Name of the receiving waters from which runoff drains to after leaving the site

Analysis of runoff provided by off-site areas upstream of the project site

Methodologies, assumptions, site parameters and supporting design calculations used in the analyzing the existing conditions site hydrology

- 2.3 Existing Conditions Map – A map documenting the following elements should be provided with the following information if applicable:

Topography (2-ft or less contour interval) of existing site conditions

Perennial / intermittent streams, wetlands, lakes and other surface water features

Drainage basin delineations showing the location of each drainage sub-basin

Drainage basin delineation for the basin upstream of the project site on an appropriate map (USGS Quadrangle, etc.)

Existing stormwater conveyances and structural control facilities

Soil types including hydrologic soil groups

Direction of flow and discharge points from the site including sheet flow areas

- 2.4 Existing Conditions Tables – Tables documenting the following information should be provided if applicable:

A table listing the acreage, soil types and land cover characteristics for each sub-basin

A table listing the peak runoff rates from each outlet

A table listing the peak runoff rates for the drainage area upstream of the project site

### Section 3. POST-DEVELOPMENT HYDROLOGIC ANALYSIS

3.1 The post-development hydrologic analysis should provide the reader with a comprehensive evaluation of the anticipated site conditions following development of the project. The designer should provide the following information with this element of the report.

3.2 Narratives - A narrative and supporting calculations of the post-development conditions of the site as related to stormwater management should be provided to determine the future stormwater characteristics of the site.

Written description of the existing conditions found on the site.

Stormwater calculations for water quality, channel protection and post construction detention for each sub-basin affected by the project.

Documentation and calculations for any applicable site design credits that are being utilized.

Methodologies, assumptions, site parameters and supporting design calculations used in the analyzing the post development conditions site hydrology.

3.3 Post Development Conditions Map - A map documenting the following elements should be provided with the following information if applicable.

Topography (2-ft or less contour interval) of proposed site conditions.

Perennial / intermittent streams, wetlands, lakes and other surface water features.

Drainage basin delineations showing the location of each drainage sub-basin.

Proposed stormwater conveyances and structural control facilities.

Direction of flow and discharge points from the site including sheet flow areas.

Location and boundaries of proposed natural feature protection areas.

3.4 Post Development Conditions Tables - Tables documenting the following information should be provided if applicable.

A table listing the acreage, soil types, impervious surface area and land cover characteristics for each sub-basin.

A table listing the peak runoff rates from each outfall.

A table listing the peak runoff rates for the drainage area upstream of the project site.

A table listing the peak discharge rates and peak elevations for all potential ponds studied.

## Section 4. STORMWATER MANAGEMENT SYSTEM

- 4.1 The stormwater management system section should provide the reader with a comprehensive description of the proposed stormwater management system components on site. The designer should provide the following information with this element of the report:
- 4.2 Narratives – A narrative and supporting calculations describing the on-site stormwater management controls to be utilized. This narrative should include appropriate narratives / tables demonstrating compliance with the various stormwater management requirements outlined in the post-development article of the stormwater ordinance and local design manual.

Narrative describing that appropriate and effective structural stormwater controls have been selected.

Design calculations and elevations for all existing and proposed stormwater conveyance elements including stormwater drains, pipes, culverts, catch basins, channels, swales and areas of overland flow.

- 4.3 Stormwater Management System Map(s) – A map(s) illustrating the location, type and specifications of all stormwater management components to provide stormwater management for the proposed site:

Location of all non-structural stormwater controls.

Location of all existing stormwater controls to remain after development.

Location of all proposed stormwater controls.

Location of all proposed impoundment type controls (i.e. detention ponds, stormwater ponds, stormwater wetlands, etc.).

Location of all conveyance structures.

All impoundment type controls should be labeled with the following information: maximum water surface elevation for the 50 and 25 year storm event, top of bank elevation, normal water elevation and bottom elevation.

All inlets to conveyance structures should be labeled with the following information: maximum design water surface and maximum potential water surface.

All pipes should be labeled with length, material and slope.

All pipes should be profiled and labeled with length, material, slope and hydraulic grade line.

## Section 5. DOWNSTREAM ANALYSIS

- 5.1 The downstream analysis should provide the reader with a comprehensive picture of the downstream areas and their capacity to accommodate stormwater runoff from the proposed development.
- 5.2 Narratives - A narrative and supporting calculations for a downstream peak flow analysis using the ten-percent rule necessary to show safe passage of the post-development design flows downstream. This narrative should include appropriate descriptions / tables for points of interest such as culverts and channel constrictions downstream of the project where increases in stormwater runoff rates could be of concern.
- 5.3 A map(s) illustrating the location, type and specifications of all stormwater management components to provide stormwater management for the proposed site.

Drainage basin delineations showing the point at which the contributing area of the project represents 10% of the total drainage basin area

Identify culverts, channels and other structural stormwater controls that the stormwater runoff must pass through prior to the 10% point identified previously

## Section 6. EROSION & SEDIMENTATION CONTROL PLAN

- 6.1 The erosion and sedimentation control plan should be included in the report demonstrating the plan to effectively mitigate stormwater impacts during construction. The following elements should be included in the section of the report:

All elements specified in the Georgia Erosion and Sediment Control Act and local ordinances and regulations

Sequence / phasing of construction and temporary stabilization measures

Temporary structures that will be converted into permanent stormwater controls

## Section 8. Operations & Maintenance Plan

- 8.1 A narrative of what maintenance tasks will be required for the stormwater controls specified for the site as well as the responsible parties. Additionally, the report will need to identify access and safety issues for the site.

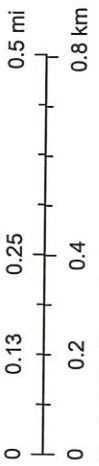
# HWY 21



5/18/2023

- Tax Parcel Labels
- Tax Parcels
- Roads
- Wetlands
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- FEMA Flood Zone
- A

1:18,056



Effingham County BOC, Savannah Area GIS, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA









150' BUFFER  
 35' UNDISTURBED, SHALL BE LEFT IN ITS CURRENT CONDITION  
 115' WHICH MAY BE CLEARED FOR BERM CONSTRUCTION,  
 DRAINAGE, AND ACCESS

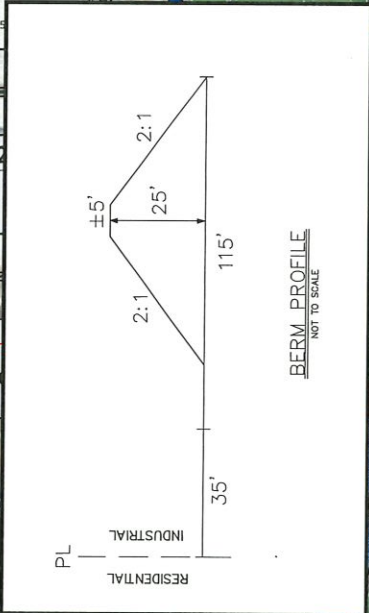
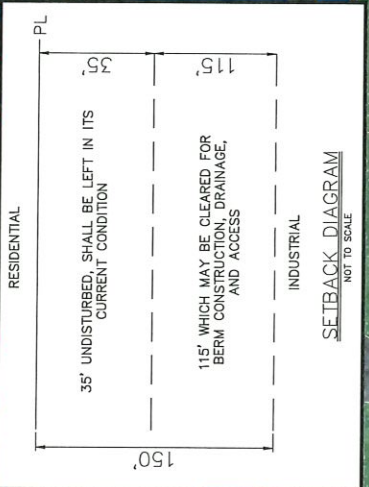
SHARED  
 HWY 21  
 ACCESS

50'  
 Landscape  
 Buffer Along  
 Hwy 21

INSET A  
 SCALE:  
 1" = 70'

**BUILDING AREA BREAKDOWN**

EXLEY NORTH	±2,551,680	TOTAL BUILDING SF
G.I.T.C (SOUTH OF EXLEY PROPERTY LINE)	±6,946,413	TOTAL BUILDING SF
<b>TOTAL:</b>	<b>±9,498,093</b>	<b>TOTAL BUILDING SF</b>

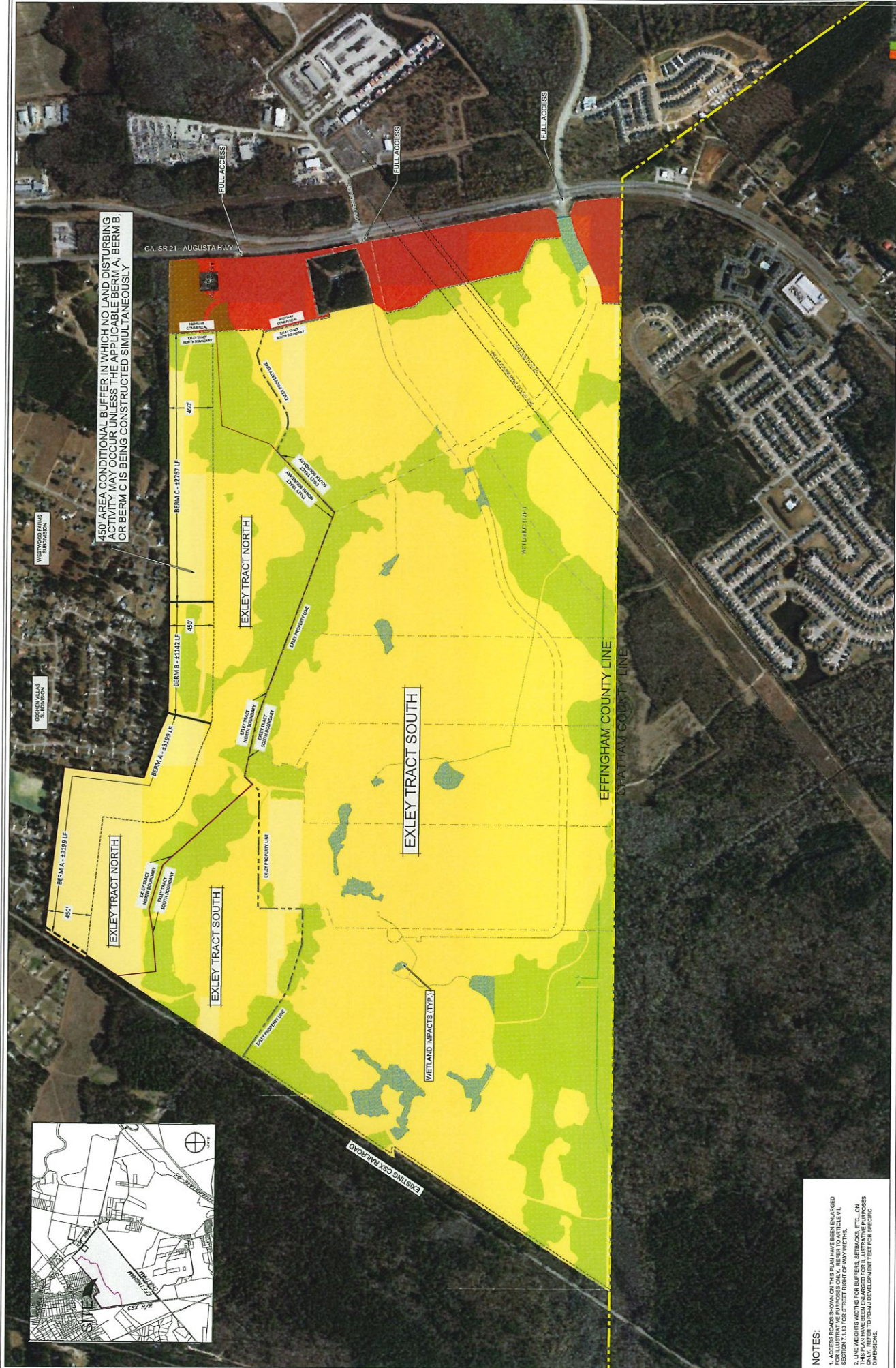


INDUSTRIAL SETBACK & BERM EXHIBIT C  
**EXLEY NORTH**  
 EFFINGHAM COUNTY / GA

August 23, 2023



50 PARK ST. COMMERCE WAY  
 SAVANNAH, GA 31405 • 712.254.5300  
 www.thomasandhutton.com



450' AREA CONDITIONAL BUFFER IN WHICH NO LAND DISTURBING ACTIVITY MAY OCCUR UNLESS THE APPLICATION FOR BERM A, BERM B, OR BERM C IS BEING CONSTRUCTED SIMULTANEOUSLY



**NOTES:**  
 1. ACCESS ROADS SHOWN ON THIS PLAN HAVE BEEN ENLARGED FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO ARTICLE VI, SECTION 1.1 FOR ACCESS ROAD REQUIREMENTS.  
 2. THE WETLANDS MAP IS FOR INFORMATION ONLY. THE PLAN HAS BEEN ENLARGED FOR ILLUSTRATIVE PURPOSES AND IS NOT TO BE USED FOR DEVELOPMENT TEXT FOR SPECIFIC DIMENSIONS.

# EXLEY TRACT NORTH & SOUTH

Highway 21, Effingham County | Chatham County, Georgia  
**LAND DISTURBANCE ACTIVITY RESTRICTION- EXHIBIT E**

