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Job Number: 2021-0553

## BRIDGE PARK - BLOCK F

Stormwater Management Plan (SWMP)

Prepared For: Crawford Hoying

November 15, 2021





## **BRIDGE PARK BLOCK F – WATER QUALITY MEMO**

The following Memo provides a detailed analysis of the water quality design for Bridge Park Block F. Detention is not required so this memo is focusing on the water quality requirements.

The redevelopment site is required to treat 20% of the existing impervious area and 100% of new impervious area. The site has an increase in impervious area of 0.90 acres. The post-impervious area is 2.30 acres. The resulting water quality requirement is 20% of 1.40 acres plus 0.90 acres or a total of 1.18 acres of water quality treatment.

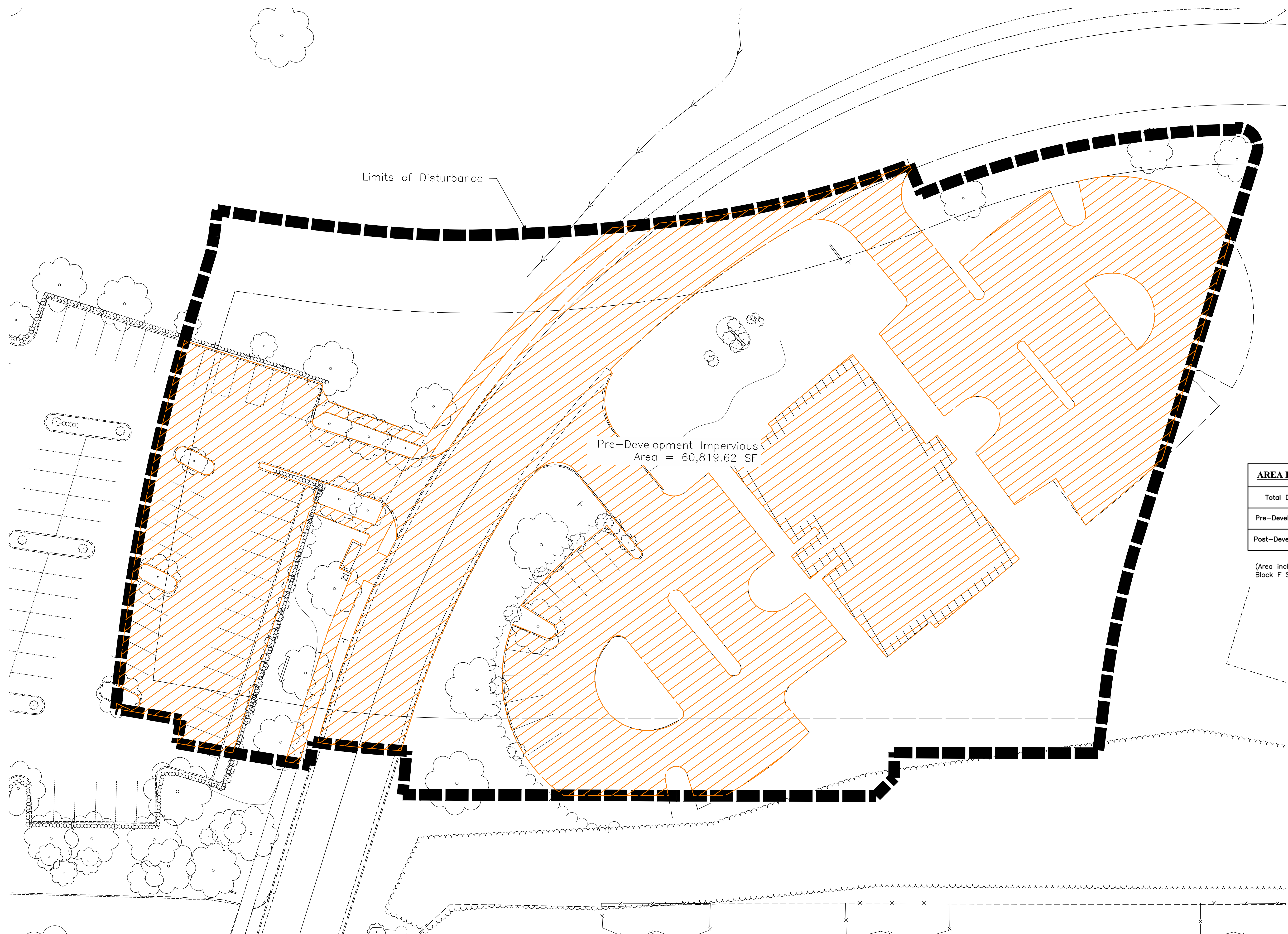
To meet water quality requirements, the site utilizes an existing Aquaswirl AS-7 Hydrodynamic Device to treat approximately 2.59 acres of runoff area, which is the roof of the hotel, the runoff from the Block F garage and office building, and runoff from Winder Drive and Dale Drive. The flow rate for the device is approximately 4.46 cubic-feet per second.

$$Q = 0.93 \times 1.85 \times 2.59 = 4.46 \text{ ft}^3/\text{s}$$

The Hydrodynamic Device is providing treatment for a flow of 4.46 cubic-feet per second for 2.59 acres of runoff area, therefore providing the requirements for a minimum water quality flow of 2.25 cubic-feet per second for 1.32 acres.



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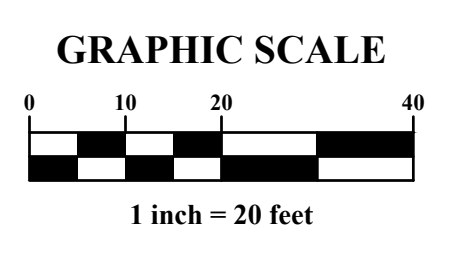


Limits of Disturbance

Pre-Development Impervious  
Area = 60,819.62 SF

AREA BREAKDOWN TABLE	
Total Disturbed Area:	2.696 ac
Pre-Developed Impervious:	1.396 ac
Post-Developed Impervious:	2.297 ac

(Area includes Winder Drive and Block F Spring Hill Suites properties)



MARK	DATE	DESCRIPTION	REVISIONS

CLIENT NAME

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
 IMPERVIOUS AREA EXHIBIT  
 FOR  
**BRIDGE PARK BLOCK F HOTEL  
 PRE DEVELOPMENT  
 IMPERVIOUS AREA**

**EMHT**  
 Evans, Meecham, Henderson & Thra, Inc.  
 5300 New Albany Road, Columbus, OH 43254  
 Phone: 614.775.6500 Fax: 614.775.3448  
 emht.com

DATE  
 January 24, 2019

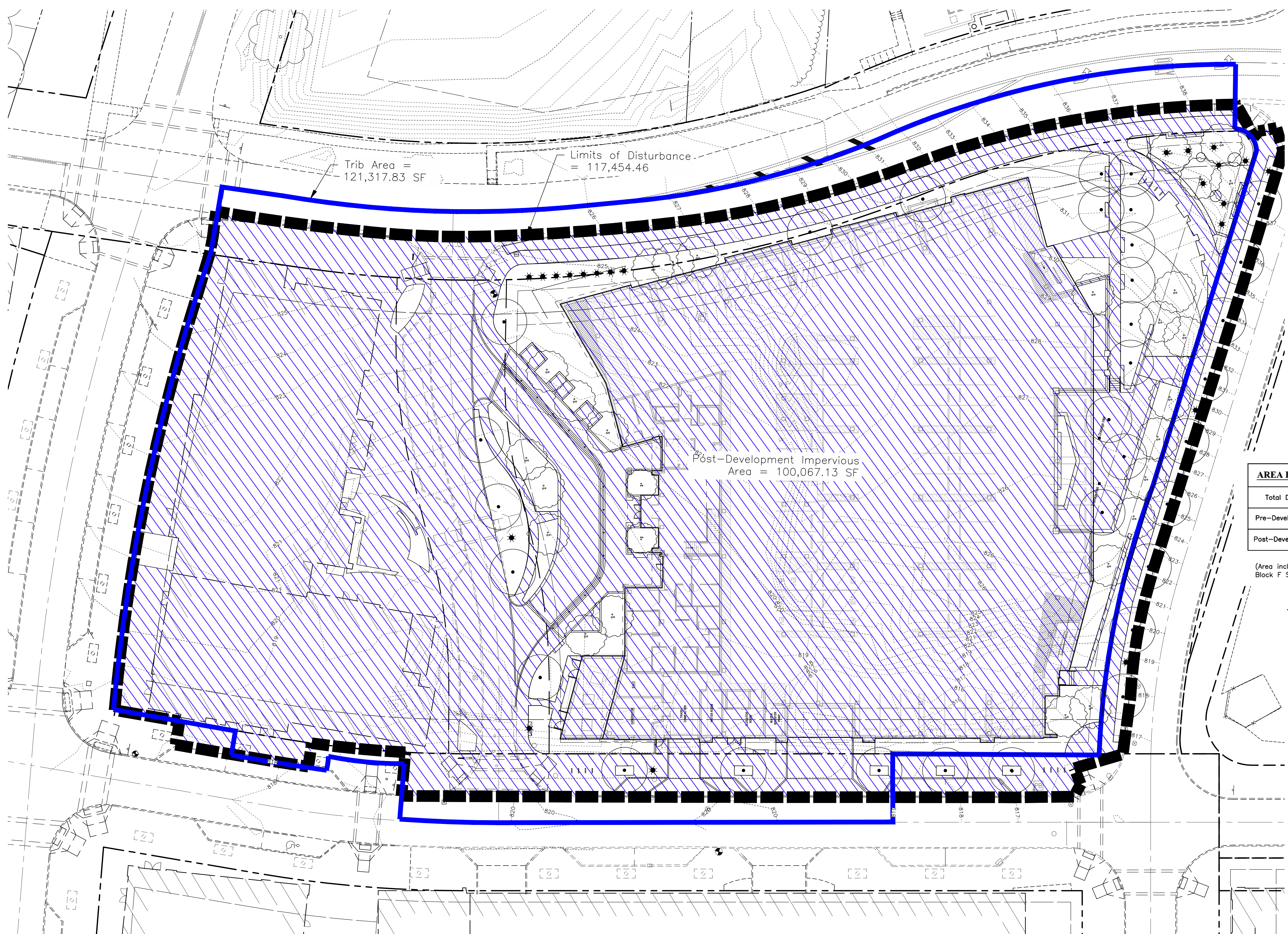
SCALE  
 1" = 20'

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 20170988

SHEET  
 1/2



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Trib Area =  
121,317.83 SF

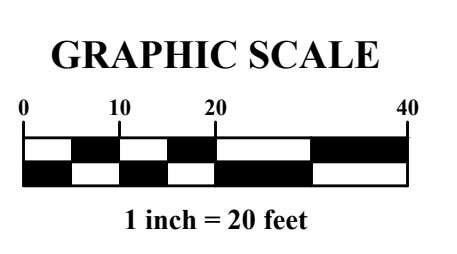
Limits of Disturbance  
= 117,454.46

Post-Development Impervious  
Area = 100,067.13 SF

**AREA BREAKDOWN TABLE**

Total Disturbed Area:	2.696 ac
Pre-Developed Impervious:	1.396 ac
Post-Developed Impervious:	2.297 ac

(Area includes Winder Drive and Block F Spring Hill Suites properties)



MARK	DATE	DESCRIPTION

REVISIONS

Crawford Hoying

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
 IMPERVIOUS AREAS EXHIBIT  
 FOR  
**BRIDGE PARK - BLOCK F HOTEL**  
**POST DEVELOPMENT**  
**IMPERVIOUS AREA**

**EMHT**  
 Survey & Mapping  
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 Phone: 614.757.5500 Fax: 614.757.3658  
 emht.com

DATE  
 January 1, 2019

SCALE  
 1" = 20'

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