

November 25, 2024

City of Lee's Summit, Missouri
Development Services
Attn: Daniel Fernandez
Project Manager
202 SE Green Street
Lee's Summit, Missouri 64063

Re: QuikTrip No. 0183 Storm Drainage Letter
1001 SW Blue Parkway

Mr. Fernandez,

The purpose of this Storm Drainage Letter is to confirm that the proposed improvements for the QuikTrip No. 0183 project will not exceed the allowable impervious surface area and will not require stormwater detention or treatment facilities.

It is our understanding, as this project is a redevelopment of an existing QuikTrip site, if the proposed improvements do not increase the total impervious surface area from the existing conditions, then stormwater detention and treatment facilities will not be required.

The existing QuikTrip site contains 73,616 sf of impervious surface area, while the proposed improvements will consist of 64,406 sf of impervious surface area. This is a reduction in impervious surface area of 9,210 sf in the proposed conditions. The stormwater runoff volume generated in the proposed conditions will be less than that of the existing conditions, thus no stormwater detention or treatment facilities will be required.

An Existing Conditions Impervious Surface Plan exhibit and *Proposed Conditions Impervious Surface Plan* exhibit has been provided with this letter as supporting documentation.

Additionally, it should be noted if the surplus area on the QuikTrip property is sold and/or developed at a later date, the developer will be required to provide detention for the future improvements if the future improvements increase total impervious surface area by greater than 9,210 sf.

In summary, the proposed conditions will reduce the impervious surface area from the existing conditions, which will also result in a reduction of stormwater runoff volume generated from the site. The proposed improvements are unlikely to have adverse impacts to the downstream system and thus will not require stormwater detention or treatment facilities. We request your approval of this QuikTrip No. 0183 Storm Drainage Letter to signify your concurrence of the provided information and conclusions.

P.O. Box 860015
Shawnee, KS 66286
Tel: 913-248-9385
www.mdg-kc.com

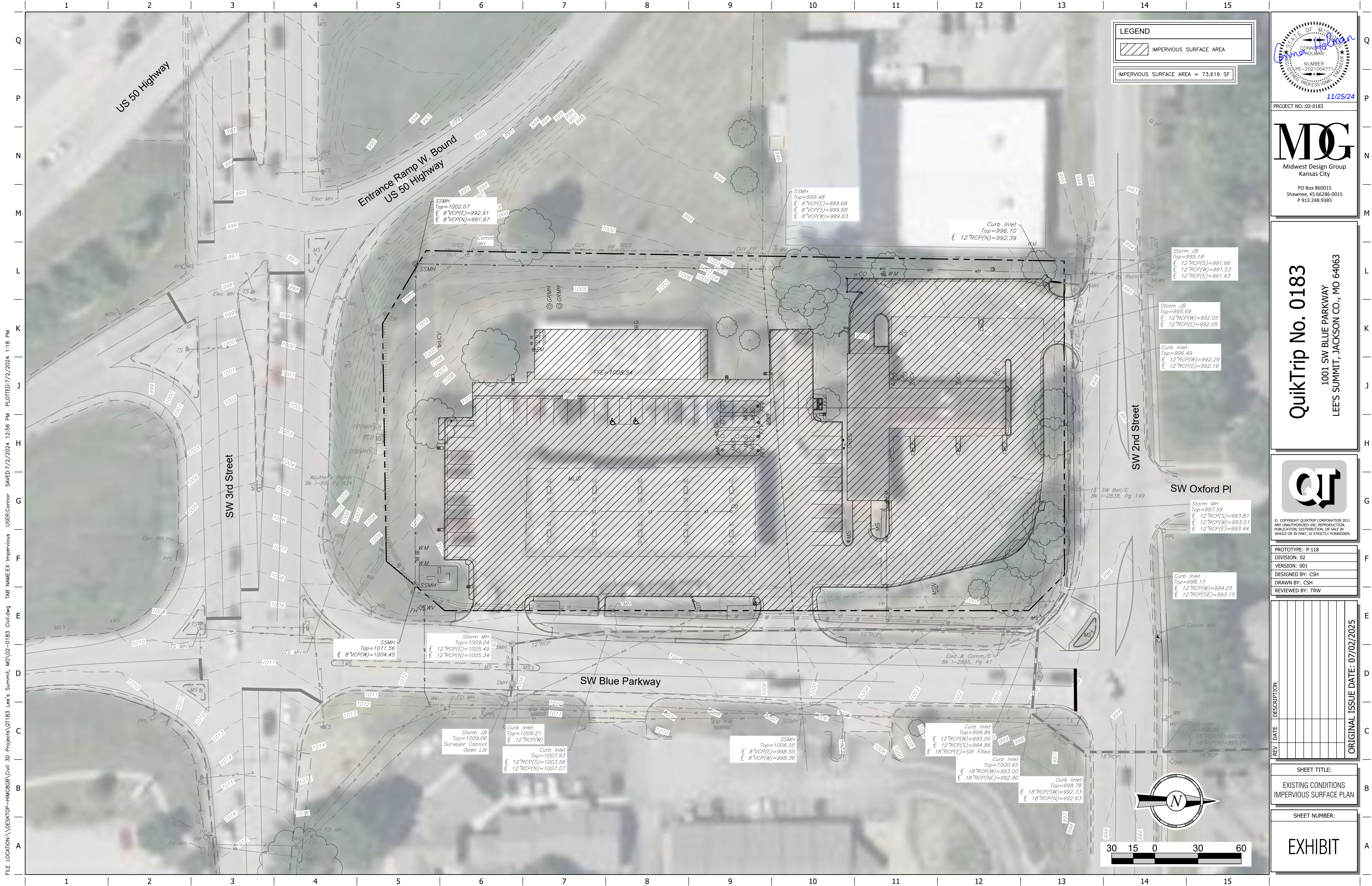
If you have any additional questions or need additional information, please contact jonathon@mdg-kc.com or 469-525-1891.

Sincerely,

Jonathon Smith

Jonathon Smith, P.E.
Project Manager
Midwest Design Group





FILE LOCATION: \\DESKTOP-HM2608\\Civi 3D Projects\\QT183 Lee's Summit, MO\\02-0183 Civi.dwg TAB NAME: EX Impervious USER: Connor SAV: 07/2/2024 12:56 PM PLOTTED: 7/2/2024 1:18 PM

ST. LOUIS, MO
ENGINEERING
NUMBER
PE-2022-1004771
11/25/24

PROJECT NO.: 02-0183

MDG
Midwest Design Group
Kansas City
PO Box 860015
Shawnee, KS 66286-0015
P 913.246.9385

QuikTrip No. 0183
1001 SW BLUE PARKWAY
LEE'S SUMMIT, JACKSON CO., MO 64063

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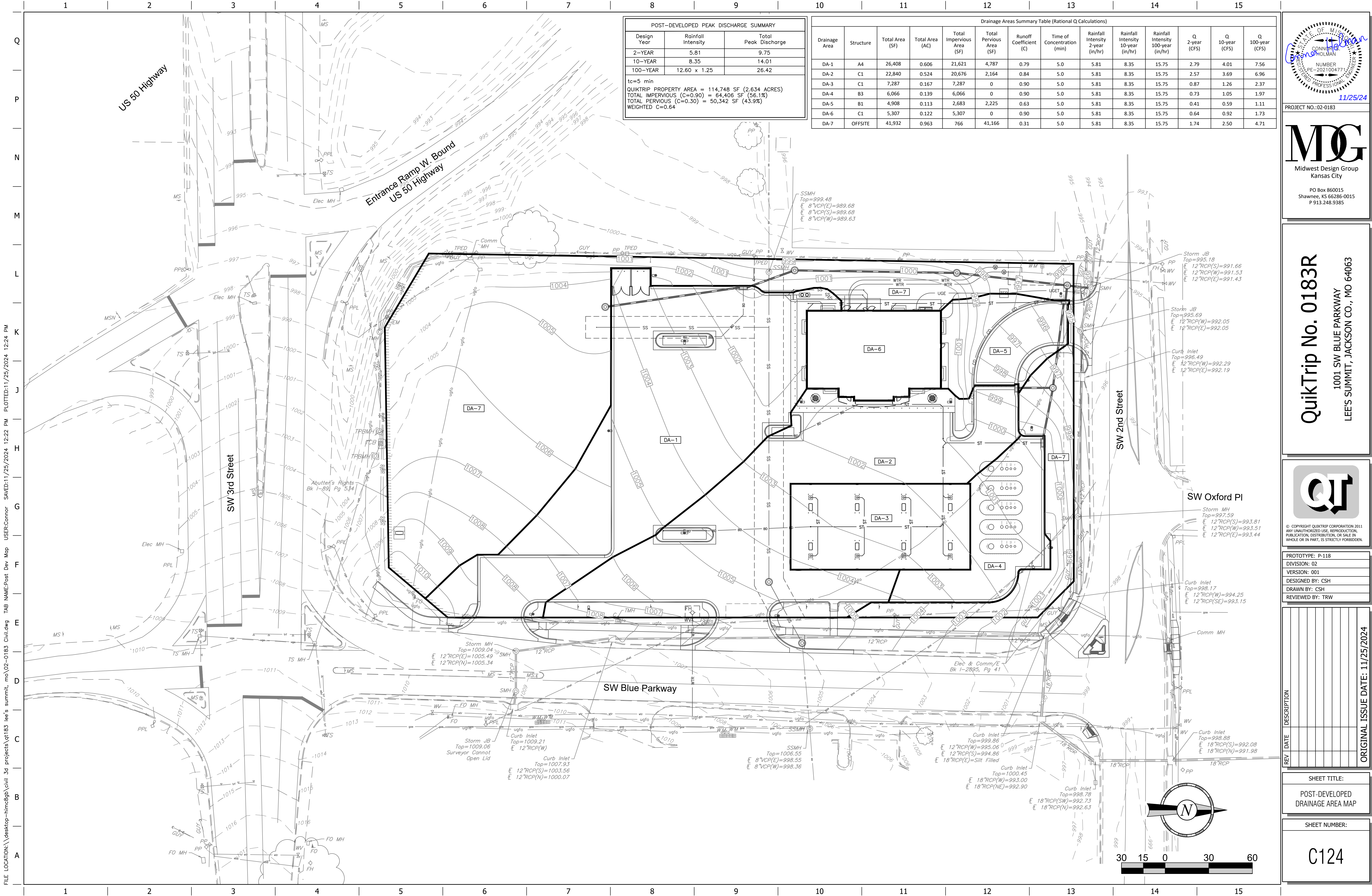
REV	DATE	DESCRIPTION

SHEET TITLE:
EXISTING CONDITIONS
IMPERVIOUS SURFACE PLAN

SHEET NUMBER:

EXHIBIT

ORIGINAL ISSUE DATE: 07/02/2025



POST-DEVELOPED PEAK DISCHARGE SUMMARY		
Design Year	Rainfall Intensity	Total Peak Discharge
2-YEAR	5.81	9.75
10-YEAR	8.35	14.01
100-YEAR	12.60 x 1.25	26.42
tc=5 min		
QUICKTRIP PROPERTY AREA = 114,748 SF (2.634 ACRES)		
TOTAL IMPERVIOUS (C=0.90) = 64,406 SF (56.1%)		
TOTAL PERVIOUS (C=0.30) = 50,342 SF (43.9%)		
WEIGHTED C=0.64		

Drainage Areas Summary Table (Rational Q Calculations)											
Drainage Area	Structure	Total Area (SF)	Total Area (AC)	Total Impervious Area (SF)	Total Pervious Area (SF)	Runoff Coefficient (C)	Time of Concentration (min)	Rainfall Intensity 2-year (in/hr)	Rainfall Intensity 10-year (in/hr)	Rainfall Intensity 100-year (in/hr)	Q 2-year (CFS)
DA-1	A4	26,408	0.606	21,621	4,787	0.79	5.0	5.81	8.35	15.75	2.79
DA-2	C1	22,840	0.524	20,676	2,164	0.84	5.0	5.81	8.35	15.75	2.57
DA-3	C1	7,287	0.167	7,287	0	0.90	5.0	5.81	8.35	15.75	0.87
DA-4	B3	6,066	0.139	6,066	0	0.90	5.0	5.81	8.35	15.75	0.73
DA-5	B1	4,908	0.113	2,683	2,225	0.63	5.0	5.81	8.35	15.75	0.41
DA-6	C1	5,307	0.122	5,307	0	0.90	5.0	5.81	8.35	15.75	0.64
DA-7	OFFSITE	41,932	0.963	766	41,166	0.31	5.0	5.81	8.35	15.75	1.74

PROJECT NO.: 02-0183

MDG
Midwest Design Group
Kansas City

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QuikTrip No. 0183R

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SHEET TITLE:
POST-DEVELOPED
DRAINAGE AREA MAP

SHEET NUMBER:
C124