LEE'S SUMMIT
MISSOURI

DESIGN & CONSTRUCTION MANUAL
DESIGN CRITERIA MODIFICATION REQUEST

PROJECT NAME: 705 SE High Street Duplexes

ADDRESS: 705 SE High Street

PERMIT NUMBER: _____

OWNER'S NAME: Dustin Baxter

TO: Deputy Director of Public Works / City Engineer

In accordance with the City of Lee's Summit's Design and Construction Manual (DCM), I wish to apply for a modification to one or more provisions of the code as I feel that the spirit and intent of the DCM is observed and the public health, welfare and safety are assured. The following articulates my request for your review and action. (NOTE: Cite specific code sections, justification and all appropriate supporting documents.)
Section 5608.4C(1)- Comprehensive Control Strategy- Waiver of the detention requirements for the project are justified because:

- It is a redevelopment project in an area where the housing densities and storm drainage patterns are well established

-The site physically can't detain within the property boundary

-This is a remedial situation where the storm improvements off-site will improve drainage for the adjacent commercial property as well as convey the storm drainage from the proposed project.

-The site improvements closely meet the exception for the impervious/pervious increase in peak flow percentage

SUBMITTED BY:
NAME: Kevin Sterrett ( ) OWNER (X) OWNER'S AGENT
ADDRESS: 1411 NE Todd George Road PHONE #: 816-703-7098
CITY, STATE, ZIP: Lee's Summit, MO 64086
Email: Ksterrett@hgcons.com
SIGNATURE: _____

KENT MONTER, P.E.
DEVELOPMENT ENGINEERING MANAGER ( ) APPROVAL ( ) DENIAL
SIGNATURE: _____ DATE: _____

JEFF THORN, P.E.
WATER UTILITIES ASSITANT DIRECTOR OF ENGINEERING SERVICES ( ) APPROVED ( ) DENIAL
SIGNATURE: _____ DATE: _____

GEORGE M. BINGER III, P.E.
DEPUTY DIRECTOR OF PUBLIC WORKS/CITY ENGINEER ( ) APPROVED ( ) DENIAL
SIGNATURE: _____ DATE: _____

COMMENTS: _____
_____
_____
_____
_____

A COPY MUST BE ATTACHED TO THE APPROVED PLANS ON THE JOB SITE

7733 Wallace Avenue | Kansas City, MO 64158 | 816.912.4720 | www.HgCons.com

July 17,2022

Waiver of Stormwater Detention Requirements Summary

A waiver to the stormwater detention requirements of the Design and Construction Manual are requested for the following reasons:

The existing drainage in the vacated alley area is poor with several ponding areas. With the underground storm improvements proposed and improved grading above it, less flow will be surface routed and slopes can be improved to handle the flow that will still flow in that area. The downspouts from the roof of the commercial building to the south will be tied into the underground system, further reducing the surface flow of the swale.

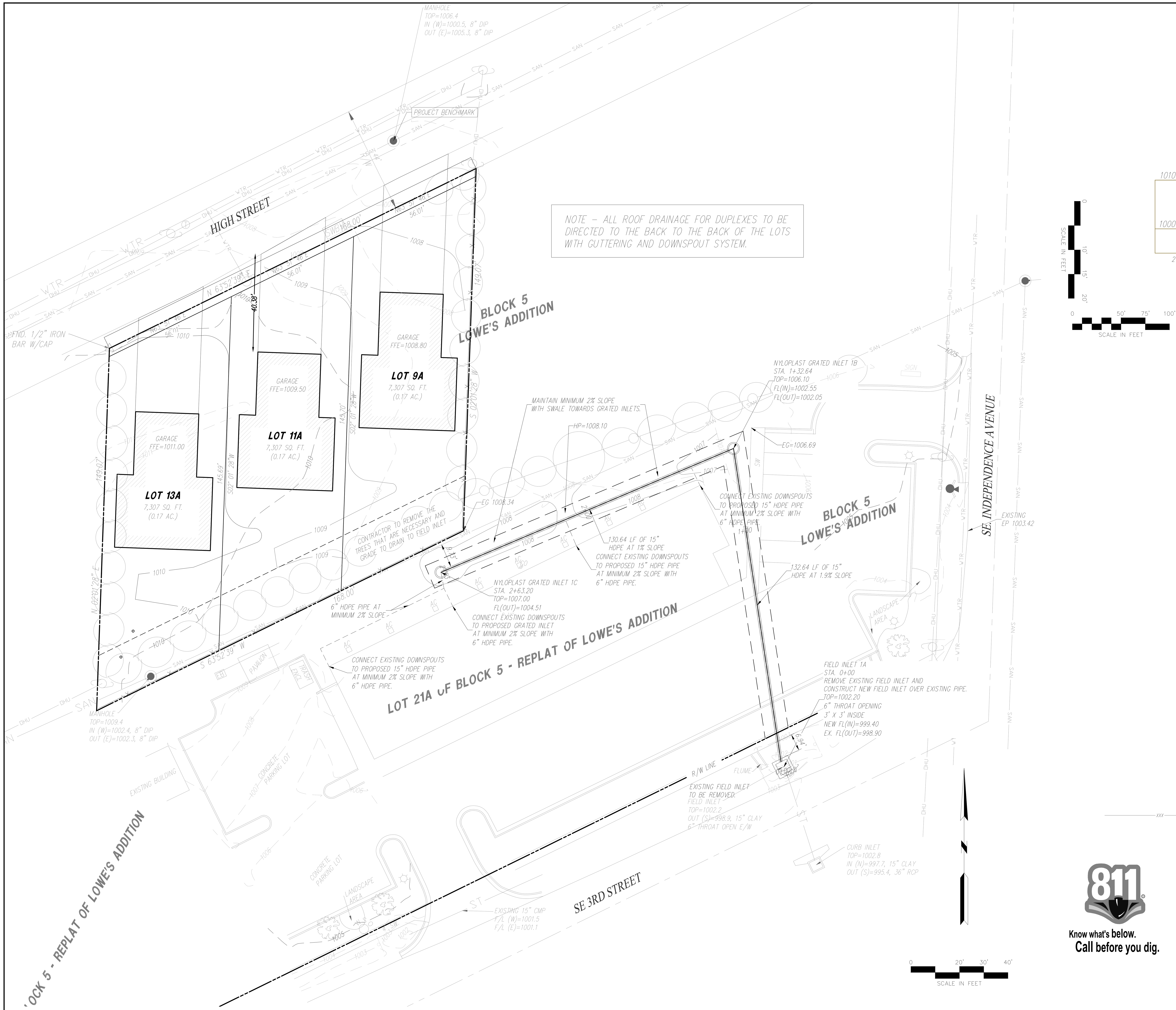
The installation of a detention pond on site is not physically possible due to the small area of the site at the low end of the site, grade, lack of suitable outfall based on gravity flow and required freeboard (2' at the 100 year WSE) constraints.

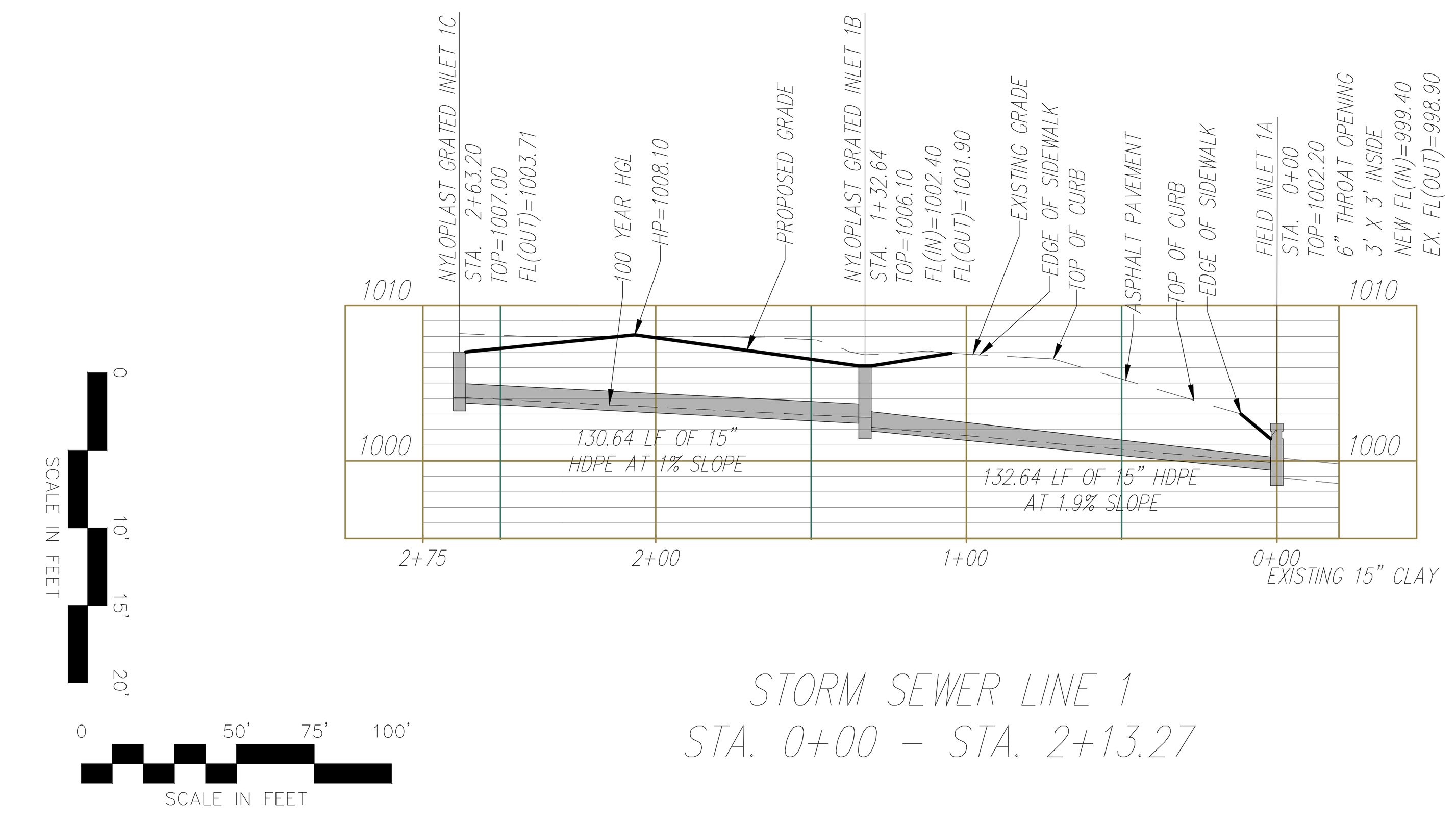
The minimum 20 foot setback requirement from property lines cannot be met.

Required rear landscaping required for screening encroaches the area that would be needed for detention.

STATE OF MISSOURI
RICHARD KEVIN STORER
NUMBER E-2644
REGISTERED PROFESSIONAL ENGINEER

7/17/22





STORM SEWER LINE 1
STA. 0+00 – STA. 2+13.27

TC	Top of Curb
FG	Finish Grade
G	Gutter Elevation
HP	High Point
LP	Low Point
FFE	Finish Floor Elevation
TG	Top of Grade (Retaining Wall)
BG	Bottom of Grade (Retaining Wall)
—xxx—	1' Finish Grade Contours

Know what's below.
Call before you dig.

PROJECT BENCHMARK:
#1 Top of Sanitary Manhole lid in street on north side of project.
N: 1000974.6290
E: 2826739.8680
TOP ELEV. 1006.44

GRADING AND DRAINAGE NOTES:

Information pertaining to under ground utilities was obtained from available records and field locations when possible, but the contractor must determine the exact location and elevation of all existing utilities by digging test pits by hand at all utility crossings in advance of machine trenching. If clearances are less than specified on these plans or 24", which ever is less, contact the Engineer and the Owner/ Developer prior to proceeding with construction.
All structures located within Right Of Way or otherwise noted on the these plans shall be constructed per City Standards If structure(s) are not prototypical or construction cannot be achieved contractor shall submit shop drawing to HG Consult, for review and approval.
Contractor shall be responsible for relocation or removal of existing underground utilities shown or not shown at no additional cost to the owner.
Contractor shall coordinate with utility companies on adjusting existing utility line as required by cut and fill at no additional cost to the owner.
Contractor shall be held responsible for the design and implementation of sheeting, shoring, bracing and special excavation measures required to meet OSHA, Federal, State and Local regulations pursuant to the installation of the work indicated on these drawings.
All disturbed areas and slopes shall be graded smooth and (4") of top soil applied. The area shall be seeded and watered until hardy grass growth has been established.
Storm drain pipe bedding shall be installed per APWA, section 2100.
See Erosion Control Plan for rip rap pad sizes.
Elevations are called out to top of curb, top of pavement, or top of structure, unless otherwise noted.
Parking lot grading shall be performed to route storm water as directed to the storm collection system.
All curb shall be CG-1.
Clear and grub areas to be filled, remove trees, vegetation, roots, or other debris, and other materials that would affect the stability of the fill.
Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.
Do not incorporate frozen material or soft, muck, or highly compressible materials into fill slopes.
Permanently stabilize all graded areas after final grading is completed on each area of the grading plan. apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed (see Erosion Control Plan.
Contractor shall match top of proposed drainage structures with proposed grades. If a discrepancy occurs between proposed grades and proposed structure tops, the grading shall govern. If the discrepancy is more than 4 inches the contractor shall contact the Engineer of Record.
All utilities, including storm sewer, shown within public easements or right of ways shall be constructed to the governing agency's specifications. All other utilities shall be constructed to the client's or the governing agency's specifications, whichever is more stringent, if there is a question as to which specifications should apply the contractor shall contact the Engineer of Record.
All existing structures, unless otherwise noted to remain. All fencing, trees, & etc., within construction area shall be removed & disposed of off site. unless otherwise noted. Any burning on site shall be subject to local ordinances and/or the owner/developers standards and specifications.
All drainage structures shall be pre-cast.
All drainage structures and storm sewer pipes shall meet heavy duty traffic (H20) loading and be installed accordingly.
Contractor shall notify all utility companies having underground utilities on site or in Right-Of-Way prior to excavation. Contractor shall contact utility locating company (STATE ONE CALL system) and locate all utilities prior to grading start.
Site grading shall not proceed until Erosion Control measures have been installed.
After permits have been obtained and Erosion Control measures installed, the contractor shall grade building pad & aprons to 0" to - 1/2" of subgrade.

DATE	REVISION	NO.	BY	CK/APP
11/19/21	Staff Comments from 7/29/21	1	EDH	RKS
5/26/22	MOVED STORM PIPE AWAY FROM INDEPENDENCE	2	EDH	RKS
10/12/22	CHANGED PIPE SIZE TO 15" AND REFERENCE COMMENTS FROM GENE WILLIAMS	3	EDH	RKS

IF THIS IS NOT A BLUE INK SEAL AND THE SIGNATURE IN BLUE INK, THE PLAN IS A COPY AND MAY CONTAIN UNAUTHORIZED ALTERATIONS. THE CERTIFICATION CONTAINED ON THIS DOCUMENT SHALL NOT APPLY TO ANY COPIES

R. KEVIN STERRETT, MO E-26440
10/12/22

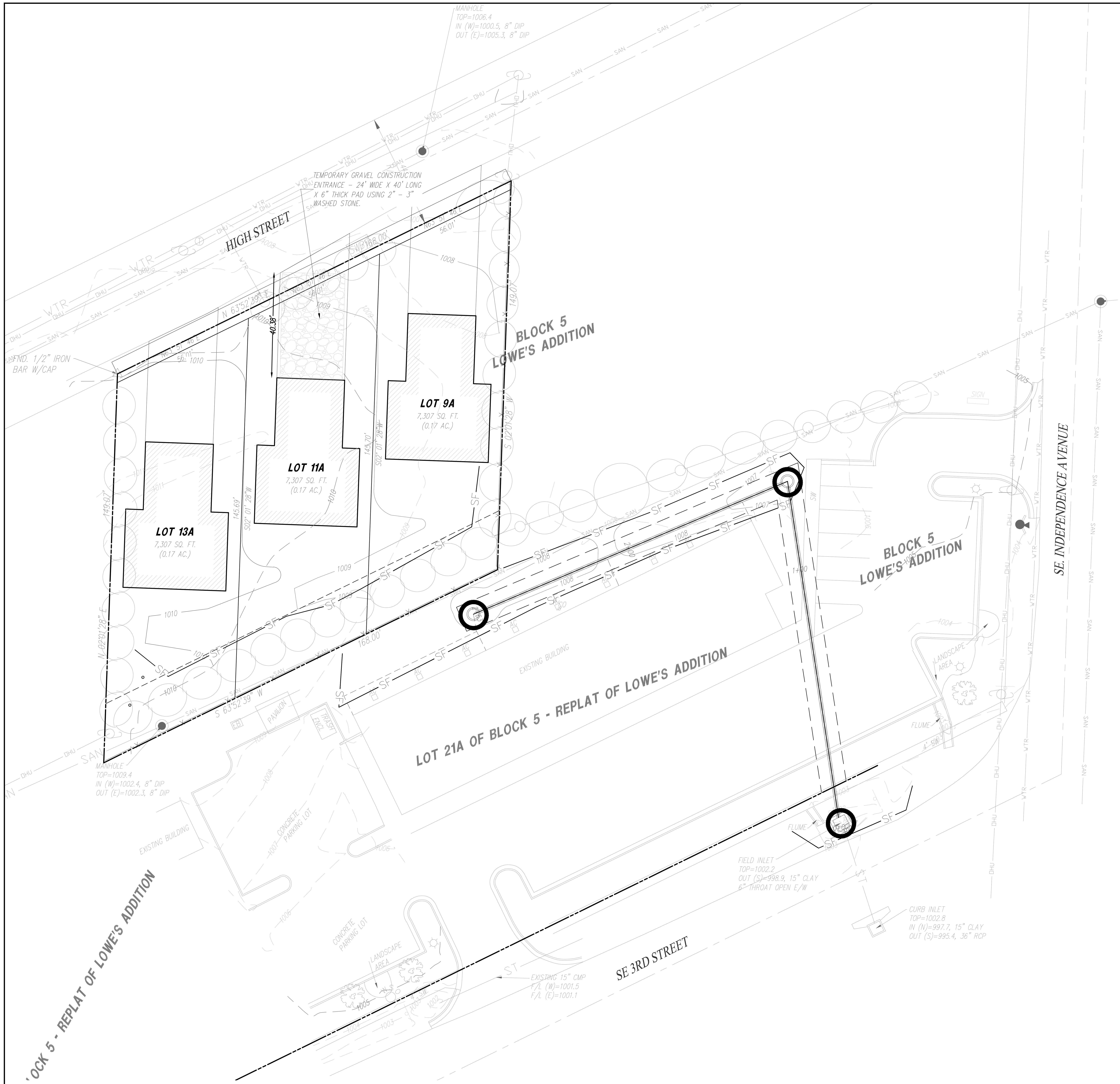
HG Consult Inc
engineers planners
CORPORATE LICENSE No. E2010005873

GRADING AND STORM SEWER PLAN

705 SE HIGH STREET DUPLEXES
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 21118B
DRAWING NO. 21085
DATE OCTOBER 7, 2021
JOB NO. 21085

3 SHEET OF 7



KEY

PROPOSED		EXISTING
979	Grades	960
SF	Proposed Silt Fence	
(circle)	Inlet protection	

PROJECT BENCHMARK:

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TOP ELEV. 1006.44

Area of Disturbance: 0.70 AC

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STATE OF MISSOURI
RICHARD KEVIN STERRETT
E-26440
REGISTERED PROFESSIONAL ENGINEER
10/12/22
R. KEVIN STERRETT, MO E-26440

H&G Consult Inc engineers planners
CORPORATE LICENSE No. E2010005873

EROSION CONTROL PLAN

705 SE HIGH STREET DUPLEXES
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

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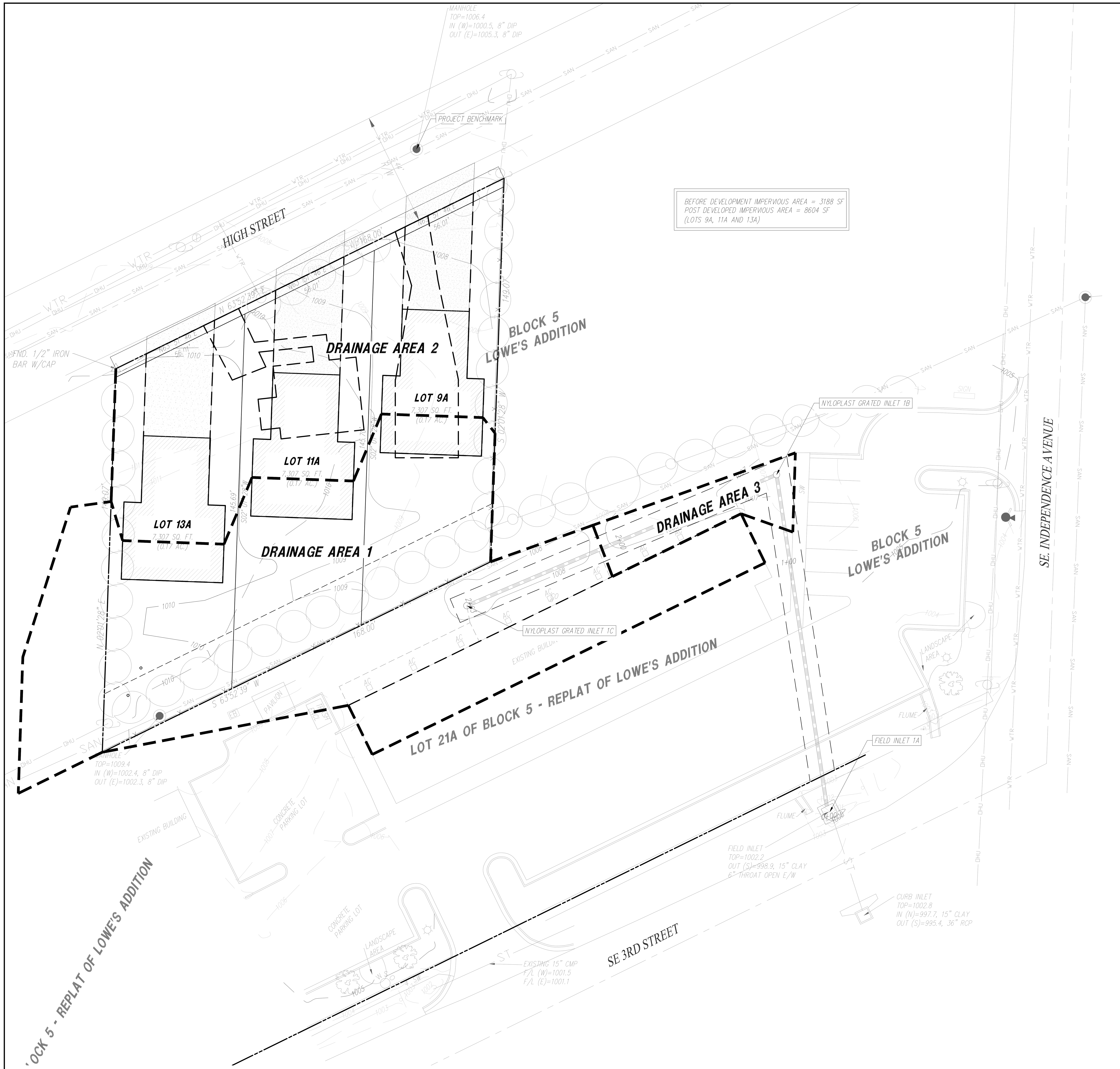

DRAINAGE AREA 1 (20811 SF)

PRIOR TO DEVELOPMENT:
- 6943 SF PERVIOUS OFFSITE
- 3602 SF IMPERVIOUS OFFSITE
- 10266 SF PERVIOUS ONSITE

AFTER DEVELOPMENT:
- 6943 SF PERVIOUS OFFSITE
- 3602 SF IMPERVIOUS OFFSITE
- 8493 SF PERVIOUS ONSITE
- 1773 SF IMPERVIOUS ONSITE

DRAINAGE AREA 2 (11817 SF)

PRIOR TO DEVELOPMENT:
- 8630 SF PERVIOUS ONSITE
- 3187 SF IMPERVIOUS OFFSITE

AFTER DEVELOPMENT:
- 4979 SF PERVIOUS ONSITE
- 6838 SF IMPERVIOUS ONSITE

DRAINAGE AREA 3 (1536 SF)

PRIOR TO DEVELOPMENT:
- 1536 SF PERVIOUS OFFSITE

AFTER DEVELOPMENT:
- 1536 SF PERVIOUS OFFSITE

Rational method of calculating storm water flow:

$Q = kCIA$ $C = 0.66$

Area 1 Calculation

$Q_{10} = (1.00)(0.66)(7.35)(0.48) = 2.32$ cfs

$Q_{100} = (1.25)(0.66)(10.32)(0.48) = 4.08$ cfs

Area 2 Calculation

$Q_{10} = (1.00)(0.66)(7.35)(0.27) = 1.31$ cfs

$Q_{100} = (1.25)(0.66)(10.32)(0.27) = 2.30$ cfs

Area 3 Calculation

$Q_{10} = (1.00)(0.66)(7.35)(0.04) = 0.19$ cfs

$Q_{100} = (1.25)(0.66)(10.32)(0.04) = 0.34$ cfs

KEY

PROPOSED		EXISTING
979	Grades	960
— — — —	Drainage Area	

PROPOSED DRAINAGE AREA 3 (1536 SF)
PRIOR TO DEVELOPMENT:
- 1536 SF PERVIOUS OFFSITE

AFTER DEVELOPMENT:
- 1536 SF PERVIOUS OFFSITE

**All storm sewer piping is designed to carry the 100 year storm event. Storm events that are not carried by storm sewer piping is routed overland in parking lot until the overland flow reaches the south curb line then into flumes.

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STATE OF MISSOURI — RICHARD KEVIN STERRETT — PROFESSIONAL ENGINEER

10/12/22

R. KEVIN STERRETT, MO E-26440

H&8 Consult Inc engineers planners
CORPORATE LICENSE No. E2010005873

DRAINAGE AREA MAP

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