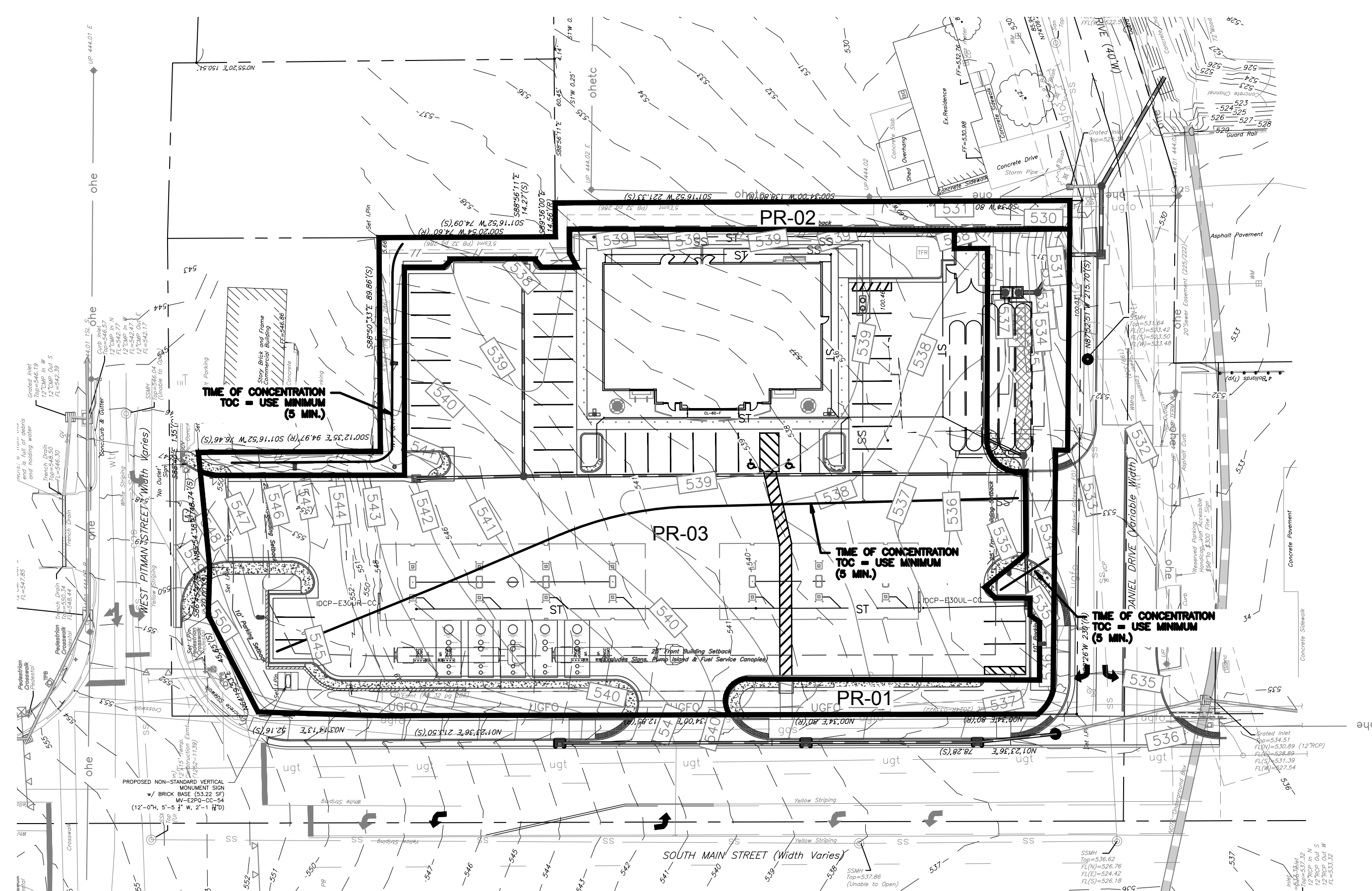




Design storm data:		MSD PI FACTORS:	
Rainfall frequency:	15 year storm	*Roof=	4.20
Time of concentration:	20 minute	Roof=	3.54
		Pavement=	3.54
		Gravel=	3.24
		Lawn=	1.70

Existing Site Drainage Areas:						
Drainage Area Title:	EX-01	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Q=P*IA	Discharge to Main St. & Daniel Dr. Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00	x 4.20	= 0.00
		Roof=	0	0.00	x 3.54	= 0.00
		Pavement=	0	0.00	x 3.54	= 0.00
		Gravel=	3230	0.07	x 3.24	= 0.24
		Lawn=	17636	0.40	x 1.70	= 0.69
		DA Totals=	20866	0.48		0.93

Drainage Area Title:	EX-02	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Description:	Discharge to East	*Roof=	0	0.00	x 4.20	= 0.00
		*Roof=	1176	0.03	x 3.54	= 0.10
Q=PI*A	Q= flow (cfs)	Pavement=	3065	0.07	x 3.54	= 0.25
	PI= PI factor (MSD)	Gravel=	0	0.00	x 3.24	= 0.00
	A=area (acres)	Lawn=	40865	0.94	x 1.70	= 1.59
		DA Totals=	45106	1.04		1.94

Drainage Area Title:	EX-03	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Description:	Discharge to Pitman St.	*Roof=	0	0.00 x	4.20 =	0.00
		Roof=	0	0.00 x	3.54 =	0.00
Q=PI*A	Q= flow (cfs)	Pavement=	0	0.00 x	3.54 =	0.00
	PI= PI factor (MSD)	Gravel=	0	0.00 x	3.24 =	0.00
	A=area (acres)	Lawn=	2191	0.05 x	1.70 =	0.09
		DA Totale=	2191	0.05		0.09

Existing Site Drainage Summary:				
DA Totals=	2191	0.03		0.09
Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
*Roofs=	0	0.00	x 4.20	= 0.00
Roofs=	1176	0.03	x 3.54	= 0.10
Pavement=	3065	0.07	x 3.54	= 0.25
Gravel=	3230	0.07	x 3.24	= 0.24
Lawn=	60692	1.39	x 1.70	= 2.37
Totals=	68163	1.56		2.95

Design storm data:			MSD PI FACTORS:	
Rainfall frequency:	15	year storm	*Roof=	4.20
Time of concentration:	20	minute	Roof=	3.54
			Pavement=	3.54
			Gravel=	3.38
			Lawn=	1.70

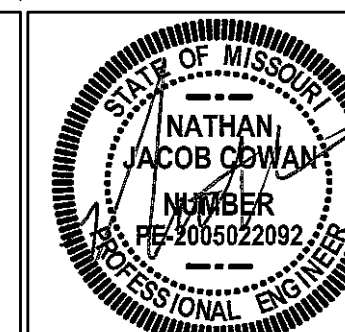
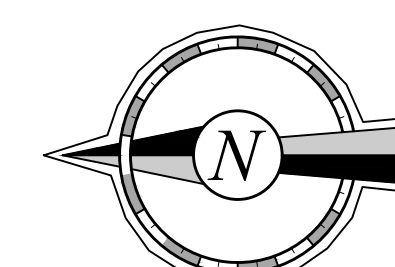
Proposed Site Drainage Areas:							
Drainage Area Title:	PR-01	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	
Q=PTA	Discharge to Main St. & Daniel Dr.	*Roof=	0	0.00	x 4.20	=	0.00
		Roof=	0	0.00	x 3.54	=	0.00
		Q= flow (cfs)	1235	0.03	x 3.54	=	0.00
		PI= PI factor (MSD)	0	0.00	x 3.38	=	0.00
		Lawn=	5311	0.12	x 1.70	=	0.21
		DA Totals=	6546	0.15			0.31

Drainage Area Title:	PR-02	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Description:	Discharge to East	*Roof=	0	0.00 x	4.20 =	0.00
		Roof=	0	0.00 x	3.54 =	0.00
Q=PI*A	Q= flow (cfs)	Pavement=	0	0.00 x	3.54 =	0.00
	PI= PI factor (MSD)	Gravel=	0	0.00 x	3.38 =	0.00
	A=area (acres)	Lawn=	5078	0.12 x	1.70 =	0.20
		DA Totals=	5078	0.12		0.20

Drainage Area Title:	PR-03	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Description:	Discharge to Iso Row/Detention	*Roof=	0	0.00	x 4.20	= 0.00
		*Roof=	11987	0.28	x 3.54	= 0.97
Q=P*IA	Q= flow (cfs)	Pavement=	40952	0.94	x 3.54	= 3.33
	PI= PI factor (MSD)	Gravel=	0	0.00	x 3.38	= 0.00
	A=area (acres)	Lawn=	3600	0.08	x 1.70	= 0.14
		BA-Total=	56539	1.30		4.11

Proposed Site Drainage Summary:						
Description	Area (SF)	Area (AC)	MSD PI			Flow (CFS)
*Roofs=	0	0.00	x	4.20	=	0.00
Roofs=	11987	0.28	x	3.54	=	0.97
Pavement=	42187	0.97	x	3.54	=	3.43
Gravel=	0	0.00	x	3.38	=	0.00
Lawn=	13989	0.32	x	1.70	=	0.55
Totals=	68163	1.56				4.95

Site Differential Summary: Undetained (Proposed Development)				
Existing Drainage	Total Q=	2.95	CFS	
Proposed Drainage	Total Q=	4.95	CFS	
Differential	Total Q=	2.00	CFS	INCREASE



07/18/
Nathan J. Cowan, Civil Engineer
MO PE-2005022092
PROJECT NO.: B2385.28



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Missouri State Certificate
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418 SOUTH MAIN STREET
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DRAWN BY: _____

REVIEWED BY: _____

[illegible][illegible]

ORIGINAL ISSUE DATE:

SHEET TITLE:

PRE AND POST-DEVELOPMENT
DRAINAGE MAP

SHEET NUMBER:

C121