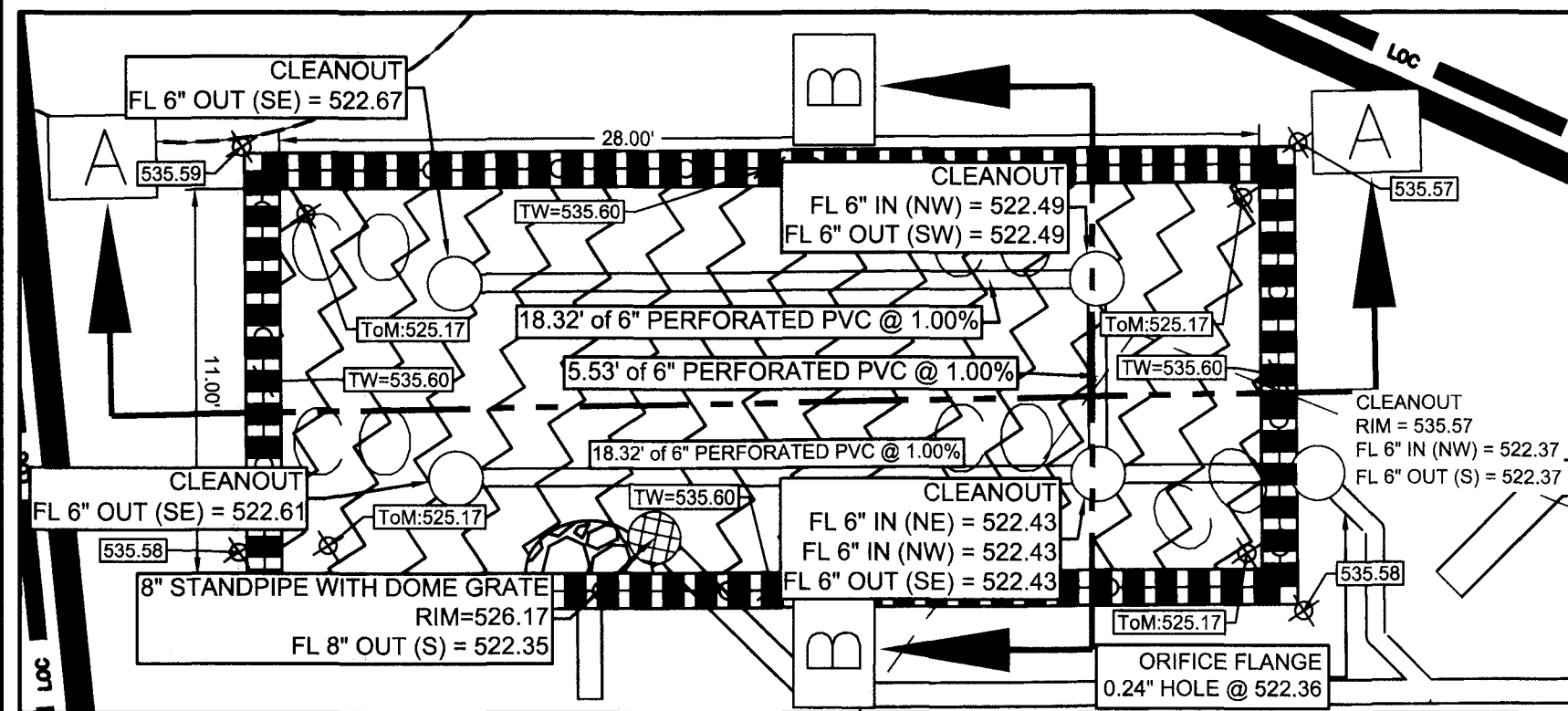
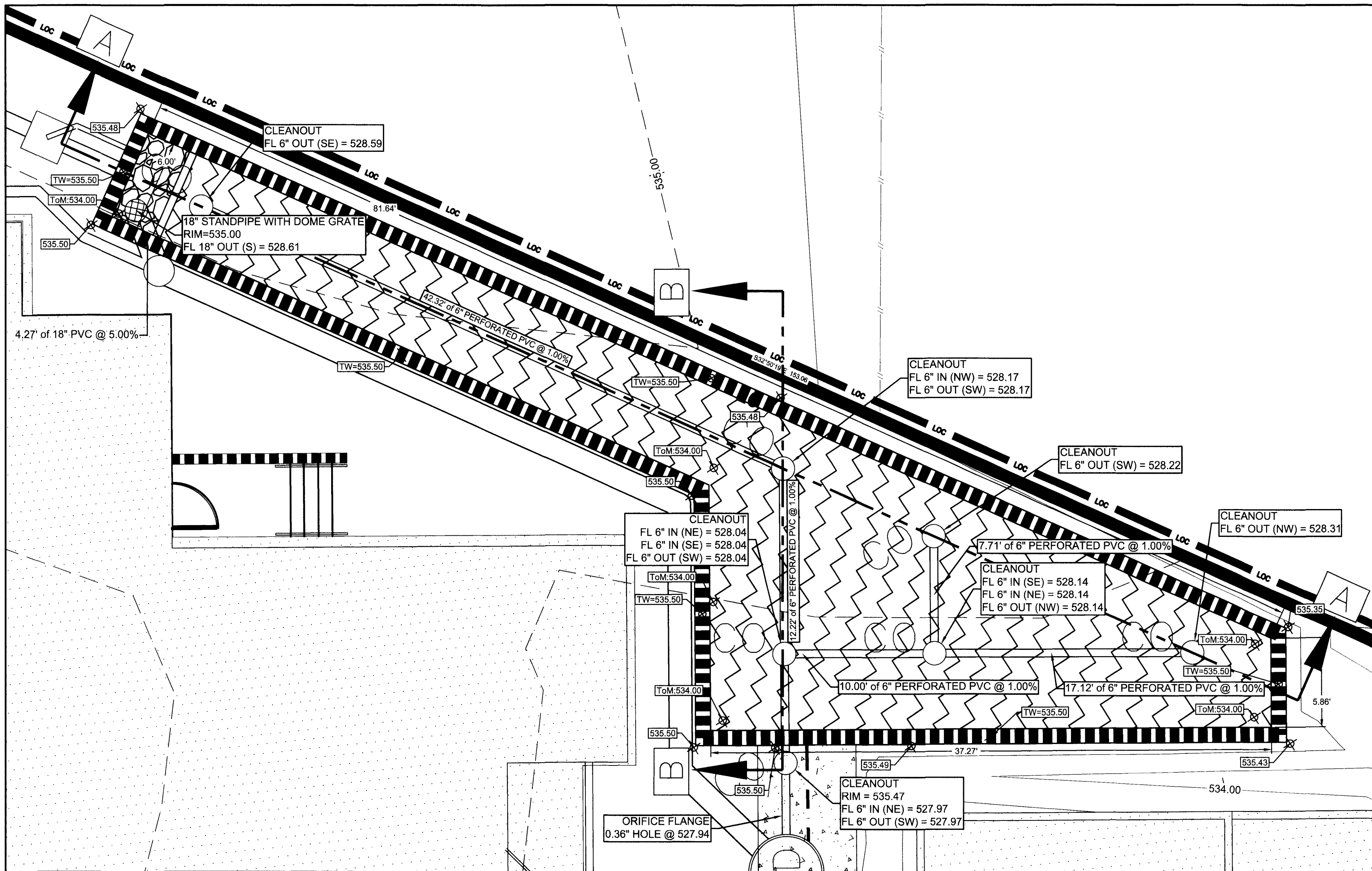




PROPOSED RAIN GARDEN NORTH A
SCALE: 1"=5'



PROPOSED RAIN GARDEN NORTH B
SCALE: 1"=5'

LEGEND	
	BOUNDARY / RIGHT OF WAY
	EASEMENT / SETBACK
	CURB / EDGE OF PAVEMENT
	OVERHEAD UTILITY LINE
	RETAINING / SCREEN WALL
	EXIST. GRADE ELEVATIONS
	PROP. GRADE ELEVATIONS
	EXIST. STORM DRAIN LINE
	PROP. STORM DRAIN LINE
	WATER LINE
	WASTEWATER LINE
	DRAINAGE SWALE FLOW LINE
	DIRECTION OF FLOW
	TREE W/ TAG (TO REMAIN)
	PROPOSED FINISHED GRADE
	PROPOSED FINISHED GRADE
TC	TOP OF CURB ELEVATION
G	GUTTER ELEVATION
FL	FLOW LINE ELEVATION
HP	HIGH POINT ELEVATION
LP	LOW POINT ELEVATION
ME	MATCH EXISTING ELEVATION
PE	PAD ELEVATION
FF	FINISHED FLOOR ELEVATION
TW	TOP OF WALL ELEVATION
GW	FINISHED GRADE AT WALL
TOM	TOP OF MEDIA
2%	2% MAXIMUM CROSS SLOPE FOR ACCESSIBLE ROUTE IN THIS AREA

APPENDIX R-11 RAIN GARDEN - FULL FILTRATION- CALCULATIONS FOR DEVELOPMENT PERMITS

Project Name: Austin South Lamar Apartments
Address: 1515 South Lamar
Project No.: 0881.40.001
Date: July 18, 2019

DRAINAGE AREA DATA

Drainage Area to Control (Ac.)	0.05	2,144.75
Drainage Area Impervious Cover (IC)	100.00 %	
Capture Depth (CD) = 0.5"*((IC-20)/10)*0.1	1.30 in.	

WATER QUALITY CONTROL CALCULATIONS

	Required	Provided
The Water Quality Control is to be Rain Garden		
25-year Peak Flow Rate to Control (Q25)	0.18 cfs	
100-year Peak Flow Rate to Control (Q100)	0.24 cfs	

Water Quality Volume (WQV = CD*DA*3630)	232 cf	419 cf
Filtration Pond Area [A ₂ ≥WQV/(D+0.24*L)]	171 sf	308 sf
Depth of Ponding (D)	Max. 1.0 ft	1.00 ft
Depth of Filtration Media (L)	Min. 1.5 ft	1.50 ft
Effective Porosity Water Quality Volume (WQV _{eff} =0.24*A ₂ *L)		111 cf
Ponded Water Quality Volume (WQV _{ponded} = A ₂ *D)		308 cf
Total Water Quality Volume (WQV _{ponded} +WQV _{eff})	232 cf	419 cf

Water Quality Elevation	526.17 ft msl
Elevation of Splitter/Overflow Weir	Min WQE ft msl 526.17 ft msl

Length of Weir	2.09 ft
Required Head to Pass Q100	0.11 ft
Pond Freeboard Provided to Pass Q100	Min. 0.25 ft 9.32 ft
Top of Pond	535.60 ft
Drawdown Time	Max. 48 hr 48.00 hr
Underdrain Orifice Size (Dia.)	0.28 in
Underdrain Orifice Size (Area)	0.06 sq in
Pond Plantings (Min. 20% of Filtration Area)	34 plants 34 plants

DRAWDOWN CALCULATION

Surface Area	308.00
Orifice Coefficient	0.6
H ₁ (ft)	527.26
H ₂ (ft)	524.68
t(hr)	48.00
A ₀ (sf)	0.0003
Orifice Diameter (in.)	0.24

APPENDIX R-11 RAIN GARDEN - FULL FILTRATION- CALCULATIONS FOR DEVELOPMENT PERMITS

Project Name: Austin South Lamar Apartments
Address: 1515 South Lamar
Project No.: 0881.40.001
Date: July 18, 2019

DRAINAGE AREA DATA

Drainage Area to Control (Ac.)	0.32	13,735.00
Drainage Area Impervious Cover (IC)	100.00 %	
Capture Depth (CD) = 0.5"*((IC-20)/10)*0.1	1.30 in.	

WATER QUALITY CONTROL CALCULATIONS

	Required	Provided
The Water Quality Control is to be Rain Garden		
25-year Peak Flow Rate to Control (Q25)	2.19 cfs	
100-year Peak Flow Rate to Control (Q100)	2.92 cfs	

Water Quality Volume (WQV = CD*DA*3630)	1,488 cf	1,496 cf
Filtration Pond Area [A ₂ ≥WQV/(D+0.24*L)]	653 sf	656 sf
Depth of Ponding (D)	Max. 1.0 ft	1.00 ft
Depth of Filtration Media (L)	Min. 1.5 ft	5.33 ft
Effective Porosity Water Quality Volume (WQV _{eff} =0.24*A ₂ *L)		839 cf
Ponded Water Quality Volume (WQV _{ponded} = A ₂ *D)		656 cf
Total Water Quality Volume (WQV _{ponded} +WQV _{eff})	1,488 cf	1,496 cf

Water Quality Elevation	535.00 ft msl
Elevation of Splitter/Overflow Weir	Min WQE ft msl 535.00 ft msl

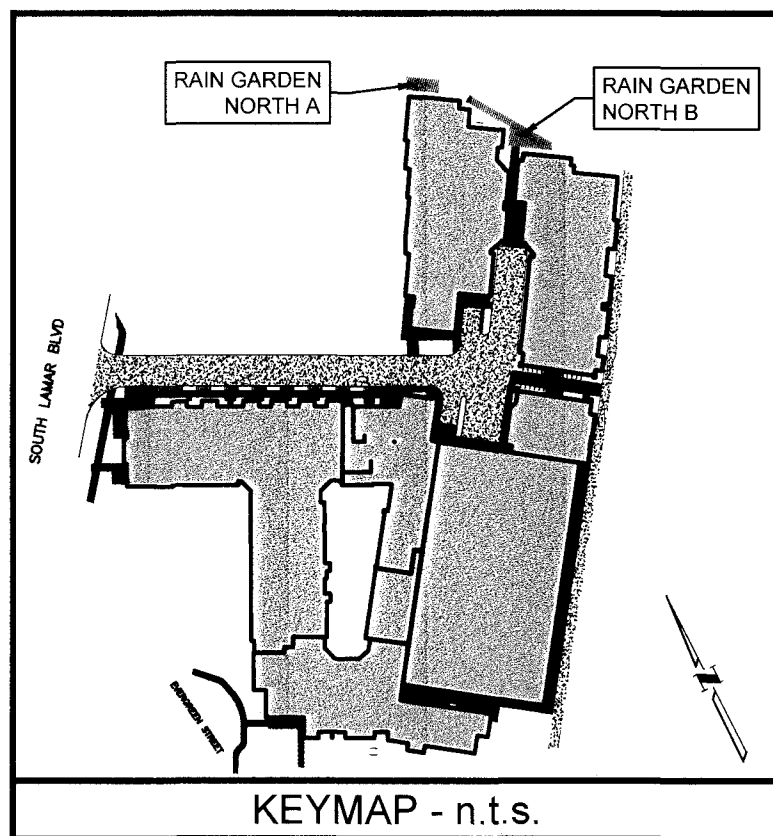
Length of Weir	4.71 ft
Required Head to Pass Q100	0.35 ft
Pond Freeboard Provided to Pass Q100	Min. 0.25 ft 0.25 ft
Top of Pond	535.60 ft
Drawdown Time	Max. 48 hr 48.00 hr
Underdrain Orifice Size (Dia.)	0.35 in
Underdrain Orifice Size (Area)	0.10 sq in
Pond Plantings (Min. 20% of Filtration Area)	131 plants 131 plants

DRAWDOWN CALCULATION

Surface Area	656.21
Orifice Coefficient	0.6
H ₁ (ft)	535.00
H ₂ (ft)	528.02
t(hr)	48.00
A ₀ (sf)	0.0007
Orifice Diameter (in.)	0.35

NOTES:

- REFERENCE "GRADING & DRAINAGE PLAN" SHEET(S) FOR CONTINUATION OF STORM DRAIN SYSTEM.
- ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
- ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
- LIMITS OF CONSTRUCTION ARE SHOWN ON THE "EROSION & SEDIMENTATION CONTROL PLAN" SHEET(S).
- REFERENCE "WATER QUALITY & DETENTION POND DETAILS" SHEET FOR ADDITIONAL INFORMATION.
- ALL POND BOTTOMS, SIDE SLOPES, AND EARTHEN EMBANKMENTS SHALL BE COMPACTED TO NINETY-FIVE (95) PERCENT MAXIMUM DENSITY, IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATIONS.
- THE TOPS OF ALL CLEANOUTS OTHER THAN THE ACCESSIBLE CLEANOUTS MUST BE FLUSH WITH THE TOP OF THE SAND/BIOFILTRATION BED



KEYMAP - n.t.s.

SITE PLAN APPROVAL Sheet 33 of 87
FILE NUMBER SP-2018-0296C APPLICATION DATE JULY 2, 2018
APPROVED BY COMMISSION ON N/A UNDER SECTION 112 OF CHAPTER 25-5 OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE (25-5-81, LDC) 12/4/21 CASE MANAGER ROSEMARY AVILA
Director, Development Services Department
RELEASED FOR GENERAL COMPLIANCE: 12/4/19 ZONING CS-V
Rev. 1 Correction 1
Rev. 2 Correction 2
Rev. 3 Correction 3
Final plot must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

AUSTIN SOUTH LAMAR APARTMENTS
1515 SOUTH LAMAR
AUSTIN, TRAVIS COUNTY, TEXAS
NORTH RAIN GARDENS PLAN (PRIVATE)

SHEET
CG502

33 OF 87
SP-2018-0296C

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AUSTIN, TEXAS 78702

