LEGEN	D:		
A/E -	ACCESS EASEMENT		
BC -	BACK OF CURB		
B/B -	BACK TO BACK		
BM -	BENCHMARK		
BL or B.L	BUILDING LINE	NW1/4 NE1/4	
CO -	CLEANOUT		
TJB -	TELEPHONE JUNCTION BOX		
C&G -	CURB AND GUTTER		
D/E -	DRAINAGE EASEMENT		
E/E -	ELECTRICAL EASEMENT		
EL -	ELEVATION	SW1/4 SE1/4	
FL -	FLOW LINE		
G/E -	GAS LINE EASEMENT		JACKSUN CU
HDPE -	HIGH-DENSITY POLYETHYLENE	VAY -	
L/E -	LANDSCAPE EASEMENT	WOODS CHAPEL ROAD	
MSFE -	MINIMUM SERVICEABLE FLOOR		
PVC -			
P/I -		<u>SECTION 9-48-31</u>	
PUB/F -			
RCP -	REINFORCED CONCRETE PIPE		
ROW or R/W -	RIGHT-OF-WAY	SCALE 1" = 2000"	
S/E -	SANITARY SEWER EASEMENT		GENERAL NUTES:
SL -	SERVICE LINE		1 ALL CONSTRUCTION TO FOULOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS
S/W -	SIDEWALK		ADOPTED BY ORDINANCE 5813.
TE -	TOP ELEVATION		2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE
U/E -	UTILITY EASEMENT		ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
WSE -	WATER SURFACE ELEVATION	UTILITY CONTACTS:	3. LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS, ALL DAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS
W/E -	WATERLINE EASEMENT		4. NO GEOLOGICAL INVESTIGATION HAS BEEN PERFORMED ON THE SITE.
	ASPHALT PAVEMENT - EXISTING	MISSOURI DEPARTMENT OF	5. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND
			APPARENT FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIE
	ASPHALT PAVEMENT - PROPOSED	Steve Holloway	PRIOR TO CONSTRUCTION.
۵. ۵. 		Lee's Summit, MO 64086	ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING
·	CONCRETE PAVEMENT - EXISTING	(816) 607-2186	EXCAVATION ON PUBLIC RIGHT OF WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING
	ASPHALT PAVEMENT - EXISTING		INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. THE
		MISSOURI GAS ENERGY (MGE)	CALL SYSTEM, INC.": 1-800-DIG-RITE, THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE O
	CONCRETE SIDEWALK - EXISTING	3025 SE Clover Drive	MISSOURI. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES
	CONCRETE SIDEWALK - PROPOSED	Lee's Summit, MO 64082	WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
		(816) 399-9633	7. PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL
	CURB & GUTTER	brent.jones@spireenergy.com	8. THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED
	CURB & GUTTER - EXISTING	EVERGY (formerly KCP&L)	WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
		Gary Jones	9. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED
$\sim$		Gary.Jones@evergy.com	BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
	EXISTING LOT AND R/W LINES		CONTRACTOR, OR AS DIRECTED BY THE OWNER.
		CITY OF LEES SUIVIVITI PUBLIC WORKS	11. ALL EXCAVATIONS SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK
		220 SF Green Street	EXCAVATION.
ROW		Lee's Summit, MO 64063	12. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASED OF CONSTRUCTION
	SANITARY SEWER MAIN - EXIST	(816) 969-1800	13. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE
STO	STORM SEWER	ΛΤΩΤ	AS REQUIRED.
	STORM SEWER - EXISTING	A I & I Mark Manion or Marty Loner	14. SUBGRADE SOIL FOR ALL CONCRETE STRUCTURES, REGARDLESS OF THE TYPE OR LOCATION, SHALL BE
CATV <sub>¥</sub>	CABLE TV - EXISTING	500 E. 8th Street, Room 370	FIRM, DENSE AND THOROUGHLY COMPACTED AND CONSOLIDATED; SHALL BE FREE FROM MUCK AND MUD; AND SHALL BE SUFFICIENTLY STABLE TO REMAIN FIRM AND INTACT UNDER THE FEFT OF THE WORKMEN OF
	FIBER OPTIC CABLE - EXISTING	Kansas City, MO 64106	MACHINERY ENGAGED IN SUBGRADE SURFACING, LAYING REINFORCING STEEL, AND DEPOSITING
—— T <sub>x</sub> ——	TELEPHONE LINE - EXIST.	(816) 275-2341 or (816) 275-1550	CONCRETE THEREON. IN ALL CASES WHERE SUBSOIL IS MUCKY OR WORKS INTO MUD OR MUCK DURING
—— E <sub>x</sub> ——	ELECTRIC LINE - EXISTING	COMCAST CABLE	SUCH OPERATIONS, A SEAL COURSE OF EITHER CONCRETE OR ROCK SHALL BE PLACED BELOW SUBGRADI
OHP <sub>x</sub>	OVERHEAD POWER LINE - EXIST.	Barbara Brown	15 THE CONTRACTOR SHALL CONTACT PUBLIC WORKS INSPECTIONS AT: 816-969-1800 TO OBTAIN A PUBLIC
—— UGE <sub>X</sub> ——	UNDERGROUND ELECTRIC - EX.	3400 W. Duncan Road	WORKS CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO PERMIT ISSUANCE
G <sub>x</sub>	GAS LINE - EXISTING	Blue Springs, MO 64015	16. THE CONTRACTOR SHALL CONTACT THE CITY'S EROSION CONTROL SPECIALIST AT: 816-969-1800 PRIOR TO
W_x	WATERLINE - EXISTING	(816) 795-2255	ANY LAND DISTURBANCE.
*		PUBLIC WATER SUPPLY DISTRICT	DISTURBANCE ACTIVITIES WITHIN THE RIGHT OF WAT INSPECTOR AT \$10-909-1800 PRIOR TO ANY LAND
		Mark Schaufler	18. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO
(0)		220 SE Green Street	ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO
$\bigcirc$		Lee's Summit, MO 64063	THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD-LATEST EDITION).
		(010) 909-1900	INSTALLED DURING CONSTRUCTION. TRENCH CHECK SHALL EXTEND TO BOTTOM OF TRENCH TO WIDTH OF
			TRENCH, TO 12 INCHES ABOVE PIPE, FOR A MINIMUM LENGTH OF 12 INCHES. TRENCH CHECK SHALL BE
GI			LOCATED AT LEAST 5 FEET FROM SANITARY MAIN.
JB	EXISTING JUNCTION BOX		
D	EXISTING STORM MANHOLE		

GRADING/EARTHWORK NOTES:

- RECOMMENDATIONS IN GEOTECHNICAL REPORT ARE FOLLOWED.





# FINAL DEVELOPMENT PLANS FOR **LAKEWOOD BUSINESS PARK - LOT 35**

# IN THE CITY OF LEE'S SUMMIT JACKSON COUNTY, MISSOURI

1. REFER TO GEOTECHNICAL REPORT FOR ALL COMPACTION REQUIREMENTS AND ASPHALT AND CONCRETE RECOMMENDED THICKNESS AND SUBGRADE TREATMENTS.

2. RECOMMEND A GEOTECHNICAL ENGINEER REVIEW ALL EARTHWORK ACTIVITY TO MAKE SURE

3. PRIOR TO PLACEMENT OF PAVEMENT, GEOTECHNICAL ENGINEER MUST APPROVE SUBGRADE IN WRITTEN FORM TO THE OWNER AND PROJECT ENGINEER. 4. ALL UTILITY INSTALLATIONS UNDER PAVED AREAS MUST BE COMPACTED AS PER THE RECOMMENDATIONS

OF THE GEOTECHNICAL ENGINEER AND THE GEOTECHNICAL REPORT. ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF LENEXA TECHNICAL SPECIFICATIONS.

6. EXISTING TOPOGRAPHY SHOWN AS ESTABLISHED FROM AERIAL PHOTOGRAMMETRY AND FIELD, SPOT CHECKED BY SCHLAGEL AND ASSOICATES, P.A.,. CONTRACTOR TO FIELD VERIFY ELEVATIONS. NO ADDITIONAL MONEY WILL BE PAID FOR HAUL-IN OR HAUL-OFF MATERIAL.

## EARTHWORK:

- IT IS RECOMMENDED THAT A GEOTECHNICAL ENGINEER OBSERVE AND DOCUMENT ALL EARTHWORK ACTIVITIES.
- CONTOURS HAVE BEEN SHOWN AT 1-FOOT OR 2-FOOT INTERVALS. AS INDICATED. GRADING SHALL CONSIST OF COMPLETING THE EARTHWORK REQUIRED TO BRING THE PHYSICAL GROUND ELEVATIONS OF THE EXISTING SITE TO THE FINISHED GRADE (OR SUB-GRADE) ELEVATIONS PROVIDED ON THE PLANS AS SPOT GRADES. CONTOURS OR OTHERS MEANS AS INDICATED ON THE PLANS.
- THE EXISTING SITE TOPOGRAPHY DEPICTED ON THE PLANS BY CONTOURING HAS BEEN ESTABLISHED BY AERIAL PHOTOGRAPHY AND FIELD VERIFIED BY G.P.S. OBSERVATION NEAR JULY 18TH, 2016. THE CONTOUR ELEVATIONS PROVIDED MAY NOT BE EXACT GROUND ELEVATIONS. BUT RATHER INTERPRETATIONS OF SUCH. ACCURACY SHALL BE CONSIDERED TO BE SUCH THAT NOT MORE THAN 10 PERCENT OF SPOT ELEVATION CHECKS SHALL BE IN ERROR BY MORE THAN ONE-HALF THE CONTOUR INTERVAL PROVIDED, AS DEFINED BY THE NATIONAL MAP ACCURACY STANDARDS. ANY QUANTITIES PROVIDED FOR EARTHWORK VOLUMES ARE ESTABLISHED USING THIS TOPOGRAPHY CONTOUR ACCURACY, AND THEREFORE THE INHERENT ACCURACY OF ANY EARTHWORK QUANTITY IS ASSUMED FROM THE TOPOGRAPHY ACCURACY. PROPOSED CONTOURS ARE TO APPROXIMATE FINISHED GRADE
- UNLESS OTHERWISE NOTED, PAYMENT FOR EARTHWORK SHALL INCLUDE BACKFILLING OF THE CURB AND GUTTER, SIDEWALK AND FURTHER MANIPULATION OF UTILITY TRENCH SPOILS. THE SITE SHALL BE LEFT IN A MOWABLE CONDITION AND POSITIVE DRAINAGE MAINTAINED THROUGHOUT.
- UNLESS OTHERWISE NOTED, ALL EARTHWORK IS CONSIDERED UNCLASSIFIED. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ROCK OR SHALE EXCAVATION, UNLESS SPECIFICALLY STATED OTHERWISE
- PRIOR TO EARTHWORK ACTIVITIES, PRE-DISTURBANCE EROSION AND SEDIMENT CONTROL DEVICES SHALL BE IN PLACE PER THE STORM WATER POLLUTION PREVENTION PLAN AND/OR THE EROSION AND SEDIMENT CONTROL PLAN PREPARED FOR THIS SITE.
- ALL TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED AND STOCKPILED ADJACENT TO THE SITE AT AN AREA SPECIFIED BY THE PROJECT OWNER OR HIS APPOINTED REPRESENTATIVE、VEGETATION TRASH, TREES, BRUSH, TREE ROOTS AND LIMBS, ROCK FRAGMENTS GREATER THEN 6-INCHES AND OTHER DELETERIOUS MATERIALS SHALL BE REMOVED AND PROPERLY DISPOSED OF OFFSITE OR AS DIRECTED B THE OWNER OR HIS APPOINTED REPRESENTATIVE.
- UNLESS OTHERWISE SPECIFIED IN THE GEOTECHNICAL REPORT, ALL FILLS SHALL BE PLACED IN MAXIMUM 6-INCH LIFTS AND COMPACTED TO 95-PERCENT OF MAXIMUM DENSITY AS DEFINED USING A STANDARD PROCTOR TEST (AASHTO T99/ASTM 698)
- 10. SUBGRADE FOR PAVEMENTS SHALL BE PROOF-ROLLED PRIOR TO PAVING OPERATIONS UTILIZING A FULLY LOADED TANDEM AXLE DUMP TRUCK. ALL AREAS EXHIBITING EXCESSIVE PUMPING AND HEAVING SHALL BE REMOVED, FILLED AND COMPACTED WITH SUITABLE MATERIALS AND RETESTED UNTIL ACCEPTABLE RESULTS ARE ACHIEVED AND FINAL APPROVAL HAS BEEN OBTAINED FROM THE GEOTECHNICAL ENGINEER.
- SUBGRADE FOR BUILDING PAD SHALL INCLUDE A MINIMUM OF 18-INCHES OF LOW VOLUME CHANGE (LVC) 11 MATERIAL, OR AS IDENTIFIED IN THE SITE SPECIFIC GEOTECHNICAL REPORT. 12. FILL MATERIALS SHALL BE PER GEOTECHNICAL REPORT AND SHALL NOT INCLUDE ORGANIC MATTER, DEBRIS
- OR TOPSOIL. ALL FILLS PLACED ON SLOPES GREATER THAN 6:1 SHALL BE BENCHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REDISTRIBUTING THE TOPSOIL OVER PROPOSED TURF AND
- LANDSCAPED AREAS TO A MINIMUM DEPTH OF 6-INCHES BELOW FINAL GRADE 14. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. UNLESS NOTED OTHERWISE THE FOLLOWING GRADES SHALL APPLY:
- A. TURF AREAS 2.5% MINIMUM, 4H:1V MAXIMUM
- B. PAVED AREAS 1.2% MINIMUM, 5% MAXIMUM 15. A.D.A. PARKING STALLS SHALL NOT BE SLOPED GREATER THEN 2% IN ANY DIRECTION AND CONSTRUCTED PER A.D.A. REQUIREMENTS.
- 16. ALL DISTURBED AREAS SHALL BE FERTILIZED, SEEDED AND MULCHED IMMEDIATELY AFTER EARTHWORK ACTIVITIES HAVE CEASED. SEEDING SHALL BE PER THE EROSION AND SEDIMENT CONTROL PLAN AND/OR LANDSCAPE PLAN. IF NOT SPECIFIED SEEDING SHALL BE PER APWA SECTION 2400, LATEST EDITION. UNLESS OTHERWISE NOTED, SEEDING SHALL BE SUBSIDIARY TO THE CONTRACT PRICE FOR EARTHWORK AND GRADING ACTIVITIES.
- 17. ALL DISTURBED AREAS IN THE RIGHT-OF-WAY SHALL BE SODDED. 18. UNDERDRAINS ARE RECOMMENDED FOR ALL PAVED AREAS ADJACENT TO IRRIGATED TURF AND LANDSCAPED BEDS.
- 19. CONTRACTOR SHALL ADHERE TO THE REPORTING REQUIREMENTS OUTLINED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PROPERLY MAINTAINED AND KEPT CLEAN OF SILT AND DEBRIS AND IN GOOD WORKING ORDER. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS REQUIRED.

## UTILITIES:

- EXISTING UTILITIES HAVE BEEN SHOWN TO THE GREATEST EXTENT POSSIBLE BASED UPON INFORMATION PROVIDED TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES AND FIELD LOCATING UTILITIES PRIOR TO CONSTRUCTION AND IDENTIFYING ANY POTENTIAL CONFLICTS. ALL CONFLICTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY REQUIRED UTILITY RELOCATIONS. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 3. CONTRACTOR SHALL VERIFY FLOW-LINES AND STRUCTURE TOPS PRIOR TO CONSTRUCTION, AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES. PROVIDE SHOP DRAWINGS FOR ALL PRECAST AND MANUFACTURED UTILITY STRUCTURES FOR REVIEW BY THE ENGINEER PRIOR TO CONSTRUCTION OF THE STRUCTURES.
- UTILITY SEPARATION: WATERLINES SHALL HAVE A MINIMUM OF 10 FEET HORIZONTAL AND 2 FEET VERTICAL 4. SEPARATION FROM ALL SANITARY AND STORM SEWER LINES. IF MINIMUM SEPARATIONS CAN NOT BE OBTAINED, CONCRETE ENCASEMENT OF THE SANITARY OR STORM SEWER LINE SHALL BE REQUIRED 10 FEET IN EACH DIRECTION OF THE CONFLICT.
- 5. PAYMENT FOR TRENCHING, BACKFILLING, PIPE EMBEDMENT, FLOWABLE FILL, BACKFILL MATERIALS, CLEAN UP, SEEDING, SODDING AND ANY OTHER ITEMS NECESSARY FOR THE CONSTRUCTION OF THE UTILITY LINE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE UTILITY INSTALLATION.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING RESPECTIVE UTILITY COMPANIES 48-HOURS IN ADVANCE FOR THE INSPECTION OF ANY PROPOSED UTILITY MAIN EXTENSION OR SERVICE LINE OR SERVICE CONNECTION TO ANY EXISTING MAIN.
- TRENCH SPOILS SHALL BE NEATLY PLACED ONSITE ADJACENT TO THE TRENCH, AND COMPACTED TO 7. PREVENT SATURATION AND EXCESS SEDIMENT RUNOFF. UNSUITABLE MATERIALS, EXCESS ROCK AND SHALE, ASPHALT, CONCRETE, TREES, BRUSH ETC. SHALL BE PROPERLY DISPOSED OF OFFSITE. MATERIALS MAY BE WASTED ONSITE AT THE DIRECTION OF THE OWNER OR HIS APPOINTED REPRESENTATIVE.

NOTE:

TRENCH CHECKS TO BE INSTALL ON ALL SANITARY SEWER SERVICE LINES IN ACCORDANCE WITH CITY OF LEE'S SUMMIT STANDARDS

	Sheet List Table
Sheet Number	Sheet Title
C0.0	COVER SHEET
C1.0	SITE PLAN
C2.0	GRADING PLAN
C3.0	EROSION CONTROL PLAN
C3.1	EROSION CONTOL DETAILS
C4.0	STORM SEWER PLAN & PROFILE
C5.0	DETENTION BASIN PLAN & PROFILE
C6.0	UTILITY PLAN
C7.0	SITE DETAILS
C7.1	SITE DETAILS
C7.2	SITE DETAILS
C7.3	SITE DETAILS
L.1.0	LANDSCAPING PLAN
L2.0	LANDSCAPE DETAILS
L2.1	LANDSCAPE DETAILS

## PREPARED AND SUBMITTED BY:

SCHLAGEL & ASSOCIATES, P.A.

## OWNER/DEVELOPER

LAKEWOOD SELF-STORAGE, LLC JUSTIN BEAL OR MICHAEL VANBURSKIRK 1220 WASHINGTON, SUITE 300 KANSAS CITY, MO 64105 P: (816) 268-4241 E: JBEAL@NGZIMMER.COM









GRADING	LEGEND:

EXX.XX XX.XX	EXTG. SPOT ELEVATION PROPOSED TOP OF CURB ELEV.
• XX.XX	TOE OF CURB OR SPOT ELEVATION
• XX.XX XX.XX	PROPOSED TOP OF CURB ELEVATION W/ TOE OF CURB ELEVATION
F.F.E.	FINISHED FLOOR ELEVATION
— —1023— — —	EXISTING CONTOUR
1023	PROPOSED CONTOUR

G	BOTTOM OF WALL FINISH GRADE ELEVATION
V	BOTTOM OF WALL
V	TOP OF WALL ELEVATION
	PAVEMENT ELEVATION
;	TOP OF CURB ELEVATION
	2



1-800-344-7483 or 811 mo1call.com

TYPE CG-1 CURB & GUTTER - DRY **EXISTING CURB & GUTTER** REMOVE EXISTING PAVEMENT

-X-X-X-X- REMOVE EXISTING CONC. CURB AND GUTTER

14. IFC 503.2.3 -FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES. 15. IFC 506.1 -WHERE ACCESS TO OR WITHIN A STRUCTURE OR AN AREA IS RESTRICTED BECAUSE OF SECURED OPENINGS OR WHERE IMMEDIATE ACCESS IS NECESSARY FOR LIFE-SAVING OR FIRE-FIGHTING PURPOSES, THE FIRE CODE OFFICIAL IS AUTHORIZED TO REQUIRE A KEY BOX TO BE INSTALLED IN AN APPROVED LOCATION. THE KEY BOX SHALL BE OF AN APPROVED TYPE LISTED IN ACCORDANCE WITH UL

16. 1037, AND SHALL CONTAIN KEYS TO GAIN NECESSARY ACCESS AS REQUIRED BY THE FIRE CODE OFFICIAL.506.1.1 LOCKS.AN APPROVED LOCK SHALL BE INSTALLED ON GATES OR SIMILAR BARRIERS WHEN REQUIRED BY THE FIRE CODE OFFICIAL. A KNOX PADLOCK WILL BE PROVIDED ON THE GATE AND A KNOX BOX ON THE BUILDING. 17. PLEASE NOTE THAT PARKING LOT DESIGN MUST MEET THE UDO ARTICLE 12 REQUIREMENTS AND THE PRIVATE DRIVE MUST MEET PUBLIC STREET DESIGN STANDARDS PER THE DESIGN AND CONSTRUCTION MANUAL SECTION 5200. 18. SANITARY SEWER MAIN AND EASEMENTS FOR LOT 35 WILL BE PROVIDED IN THE FUTURE WHEN THE LOT IS DEVELOPED.

**GRADING PLAN** 







mo1call.com

N AND SEDIMENT CONT	ROI ST			
BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:		: 66215 0 M 8859-F
CONSTRUCTION ENTRANCE & STAGING AREA	D	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY	A	a, Kansas ) 492-840 ATES.CO <sup>Authority</sup> #LS200200
SILT FENCE (PRIOR TO LAND DISTURBANCE)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED		Fax: (913 Fax: (913 ASSOCI ertificates of 001005237
EXISTING INLET PROTECTION (GRAVEL CURB INLET SEDIMENT TRAP)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED		07th Stree 07th Stree 2-5158 • CHLAGEI ouri State C 00-F #LAC2
SILT FENCE (DURING CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED		0 West 1 (913) 49 WWW.So Miss
TEMP. SEDIMENT TRAP (REF. DETAIL ON SHEET C3.1)	E	TO BE INSTALLED PRIOR TO DISTURBING ENTIRE SITE.		1492 #E
CONCRETE WASHOUT AREA	E	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY		
INLET PROTECTION (SILT FENCE)	D/E	PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES PRIOR TO TOPS BEING PLACED SILT FENCE REMOVED & REPLACE WITH #7 BELOW WITH PLACEMENT OF TOPS AND/OR STABLIZATION OF DRAINAGE AREAS.	PREPA	RED BY:
INLET PROTECTION (GRAVEL FILTER BAGS)	E	BOARDS SHALL BE PLACED IN FRONT OF INLET OPENING FROM THE TIME SILT FENCE IS REMOVED UNTIL SUCH TIME THAT THE CURB / THROAT IS POURED. PLACE GRAVEL FILTER BAGS AT THE OPENING OF ALL CURB INLETS IMMEDIATELY AFTER THE INLET THROATS ARE POURED		
SILT FENCE (AFTER CURB CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED		
SEEDING AND MULCHING	E	ALL DISTURBED AREAS AFTER 14 DAYS OF CONSTRUCTION INACTIVITY	SCHLAGEL & A	SSOCIATES, P.A.
		ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE.		
SPONSIBLE FOR VERIFYING ALL ONS PRIOR TO EXCAVATION. DS, NATURAL OR ARTIFICIAL TION AREAS IN THE PROJECT CT LIES WITHIN THE 100 YEAR FLOOD INSURANCE RATE MAP ATED JANUARY 20, 2017. MENTATION CONTROL MEASURES ACCORDING TO THE BMP ONTROL MAY BE REQUIRED BY THE TIME EXISTING MEASURES ARE IVE OR PROBLEMATIC AREAS ARE	6. 7. 8. 9.	STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPS. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE. ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN. SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR. AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.	DEVELOPMENT PLANS	NE PORT DRIVE LEE'S SUMMIT, MISSOURI
	BMP DESCRIPTION     CONSTRUCTION ENTRANCE & STAGING AREA     SILT FENCE (PRIOR TO LAND DISTURBANCE)     EXISTING INLET PROTECTION (GRAVEL CURB INLET SEDIMENT TRAP)     SILT FENCE (DURING CONSTRUCTION)     TEMP. SEDIMENT TRAP (REF. DETAIL ON SHEET C3.1)     CONCRETE WASHOUT AREA     INLET PROTECTION (SILT FENCE)     INLET PROTECTION (SILT FENCE)     SILT FENCE (AFTER CURB CONSTRUCTION)     SEEDING AND MULCHING     SEEDING AND MULCHING     LC.     SPONSIBLE FOR VERIFYING ALL IONS PRIOR TO EXCAVATION.     DS, NATURAL OR ARTIFICIAL ITION AREAS IN THE PROJECT     CT LIES WITHIN THE 100 YEAR FLOOD INSURANCE RATE MAPA ATED JANUARY 20, 2017.     MENTATION CONTROL MEASURES ACCORDING TO THE BMP     DNTROL MAY BE REQUIRED BY THE TIME EXISTING MEASURES ARE VE OR PROBLEMATIC AREAS ARE	BMP DESCRIPTION AFTER STAGE   CONSTRUCTION ENTRANCE & STAGING AREA D   SILT FENCE (PRIOR TO LAND DISTURBANCE) E   EXISTING INLET PROTECTION (GRAVEL CURB INLET SEDIMENT TRAP) E   SILT FENCE (DURING CONSTRUCTION) E   TEMP. SEDIMENT TRAP (REF. DETAIL ON SHEET C3.1) E   CONCRETE WASHOUT AREA E   INLET PROTECTION (SILT FENCE) D/E   INLET PROTECTION (SILT FENCE) D/E   SILT FENCE (AFTER CURB CONSTRUCTION) E   SILT FENCE (AFTER CURB CONSTRUCTION) E   SEEDING AND MULCHING E   SEEDING AND MULCHING E   SPONSIBLE FOR VERIFYING ALL IONS PRIOR TO EXCAVATION. DS, NATURAL OR ARTIFICIAL ITION AREAS IN THE PROJECT 6.   CT LIES WITHIN THE 100 YEAR FILOD INSURANCE RATE MAP ATED JANUARY 20, 2017. 7.   MENTATION CONTROL MEASURES ACCORDING TO THE BMP 8.   DITROL MAY BE REQUIRED BY THE IME EXISTING MEASURES ARE VE OR PROBLEMATIC AREAS ARE 9.	BMP DESCRIPTION     AFTER STAGE     NOTES:       CONSTRUCTION ENTRANCE & STAGING AREA     D     MAINTAIN. REPAIR. OR REPLACE AS NECESSARY MAINTAIN. REPAIR. OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED       SILT FENCE (URING (GRAVEL CURB INLET REDIMENT TAP)     E     PLACE WHERE INDICATED, REPAIR OR REPLACE AS NACE SUFFICIENT GROUND COVER ESTABLISHED       SILT FENCE (DURING (CONSTRUCTION)     E     NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED       SILT FENCE (DURING CONSTRUCTION)     E     NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED       TEMP SEDMENT TRAP (REF. DETAIL ON SHEET C3.1)     E     TO BE INSTALLED PRIOR TO DISTURBING ENTIRE SITE.       CONCRETE WASHOUT AREA     E     MAINTAIN, REPAIR, OR REPLACE AS NECESSARY HAVE SUFFICIENT GROUND COVER ESTABLISHED       INLET PROTECTION (SILT FENCE)     De     TO DES INSTALLED PRIOR TO DISTURBING ENTIRE SITE.       CONCRETE WASHOUT AREA     E     MAINTAIN, REPAIR, OR REPLACE AS NECESSARY HAVE SUFFICIENT GROUND COVER ESTABLISHED       INLET PROTECTION (SILT FENCE)     DE     TO DES SEND SHALL BE FLACED IN FRONT OF INLET OFENING REPLACE WITH 47 BELOW WITH PLACEMENT OF TOPS ANDORS STALLED TO REPLACE AS NECESSARY HAVE SUFFICIENT GROUND COVER ESTABLISHED       INLET PROTECTION (GRAVEL FILTER BAGS)     E     PLACE WITH 47 BELOW WITH PLACEM	BMP DESCRIPTION     NOTES:       CONSTRUCTION ENTRANCE A STAGE     D     MAINTAIN, REPAIR, OR REPLACE AS NECESSARY       SUE TENCE (PRIOR TO LAND DISTURBANCE)     E     PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED       SUE TENCE (PRIOR TO LAND DISTURBANCE)     E     PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED       SUE TENCE (DURING CONSTRUCTION)     E     PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED       SUE TENCE (DURING CONSTRUCTION)     E     HAVE SUFFICIENT GROUND COVER ESTABLISHED       SUE TENCE (DURING CONSTRUCTION)     E     HAVE SUFFICIENT GROUND COVER ESTABLISHED       SUE TENCE (DURING CONSTRUCTION)     E     TO BE INSTALLED PRIOR TO DISTURBING ENTRES TRUE THES INFORMATION OF TABLISHED       INLET PROTECTION (SLIT FENCE)     DOE     TO DES BEING PLACE AS INFORMATING THE STRUCTURES REPLACE WITH #7 BELOW WITH PLACEMENT OF TO DESINGE TRUE TENCE (REPAIR OR REPLACE AS NEWLEL FLITER BACES AT THE OPENING AND/OR STABLIZED TO DEF TABLISHED     SUE TENCE (STRUE TENCE)       INLET PROTECTION (GRAVEL FILTER BACES)     E     CONSTRUCTION OF ARANGE REAS AND ROCK CONSTRUCTION BEALT THE INCLURES REPORT AND/OR STABLIZED AND ANY OF THE ORDER AND/OR STABLIZED AND ANY OF THE ORADING AND/OR STABLIZED AND ANY OF AR POURED

ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE NOTED IN THE FIELD.

4101

EROSION

CONTROL PLAN

C3.0

SHEET

∖Y BE REQUIR NG MEASURE BLEMATIC AR	ED BY THE S ARE 9. EAS ARE <sup>9</sup> .	CONTRA AREAS V IMMEDIA	ACTOR. WITHIN PUBLIC RIGHT-OF ATELY AFTER CONSTRUC	WAY SHALL BE SODDED CTION IS COMPLETE.			AL DEVELO
		LE	EGEND				Ž
	TEMPORARY STOR AREA FOR EXCESS	AGE	SF1	SILT FENCE (PRIOR TO LAND DISTURBANCE)		Ч Х Г	LL_
			SF2	SILT FENCE (DURING CONSTRUCTION)	-		
	ENTRANCE AND STAGING AREA	ION	X	CONSTRUCTION FENCE			
	CONCRETE WASHO	літ		LIMITS OF DISTURBANCE			
	AREA		965	EXISTING CONTOURS			
$\frown$	SILT FOAM DIKE - S & INSTALL PER MFF	TAKED R'S	<del>965</del>	PROPOSED CONTOURS	PTION		
	RECOMMENDATION	13	····	STRAW BALE DITCH CHECK	DESCRI		
	ROCK DITCH CHECK			GRAVEL FILTER FOR STORM SEWER			
	GRAVEL CURB INLE SEDIMENT TRAP	T		STRUCTURES ONLY	I DATE		
<u>/</u> 1	BMP PLAN REF. NO.			TEMP. SEDIMENT TRAP BERM	REVISION		
					AWN BY	RPM	CKED BY: JTS
							CHE

## **PROJECT BENCHMARK:**

MONUMENT FOUND CHISELED "SQUARE" ON STORM CURB INLET #30 AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148 EASTING: 2803318.5413

ELEV. 1004.09







N02"32'02"E	OWNER: KELLEY PAUL L. TRUSTEE ADDRESS: 1204 NE WOODS CHAPEL RD. LEE'S SUMMIT, MO

Schl	agel &	Ass	ociate	es, P.	Α.																					
Proje	ct Name:		LAKEW	OOD BI	JSINE	SS PARK				Cu	irb Type:	A														
	Project #:		18-222								City:	LEE'S S	UMMIT													
	Time:		6/22/202	1 11:14																						
	<u> </u>																									
Desi	gn Storm:		10																							
	K" Value:		1.00																							
Runoff (	Calculation	าร													Pipe Pr	roperties										
			Cumul.				Runoff				Up	Up	Up									Drop				
Inlet	Area	"C"	Area	Cumul.			То	Cumul.	Pipe	Pipe	Piped	Piped	Area	Up	Up	Down	Pipe	"n"	Pipe		Slope	In			Inlet	HGL
#	(acres)	Value	(acres)	CxA	Tc	Intensity	Inlet	Runoff	Cap.	Vel.	Inlet 1	Inlet 2	(acres)	CxA	Inlet	Inlet	Туре	Value	Size	Length	%	Inlet	FL Up	FL Down	Тор	Elev.
LINE 10	00																								DS TAILWATER @ STR #100	FREE
101	0.00	0.70	2.83	1.98	5.6	7.18	0.00	14.24	25.70	8.18			0.00	0.00	101	100	PEP	0.012	24	28.19	1.10	3.01	926.31	926.00	935.12	927.97
102	1.95	0.70	2.83	1.98	5.6	7.18	9.82	14.24	64.84	20.64	201		0.32	0.22	102	101	PEP	0.012	24	15.10	7.00	0.50	930.38	929.32	935.50	932.04
103	0.28	0.70	0.56	0.39	5.2	7.30	1.44	2.87	24.13	13.65			0.00	0.00	103	102	PEP	0.012	18	314.03	4.50	0.50	945.00	930.88	953.21	945.76
104	0.28	0.70	0.28	0.20	5.0	7.35	1.44	1.44	17.18	9.72			0.00	0.00	104	103	PEP	0.012	18	109.83	2.28	0.50	948.00	945.50	953.33	948.53
LINE 20	00	Table Concept 117																	C	Drop in In	let 102	0.50				
201	0.09	0.70	0.32	0.22	5.2	7.29	0.45	1.62	12.12	9.88			0.00	0.00	201	102	PEP	0.012	15	137.13	3.00	0.50	934.99	930.88	941.28	935.59
202	0.23	0.70	0.23	0.16	5.0	7.35	1.19	1.19	8.99	7.33			0.00	0.00	202	201	PEP	0.012	15	90.81	1.65	0.50	936.99	935.49	942.42	937.49
Desi	gn Storm:		100																							
,	K" Value:		1.25																							
Runoff	Calculatio	ns													Pipe P	roperties	\$									
			Cumul.				Runoff				Up	Up	Up									Drop				
Inlet	Area	"C"	Area	Cumul			То	Cumul.	Pipe	Pipe	Piped	Piped	Area	Up	Up	Down	Pipe	"n"	Pipe		Slope	In			Inlet	HGL
#	(acres)	Value	(acres)	CxA	Tc	Intensity	Inlet	Runoff	Cap.	Vel.	Inlet 1	Inlet 2	(acres)	CxA	Inlet	Inlet	Туре	Value	Size	Length	%	Inlet	FL Up	FL Down	Тор	Elev.
LINE 1																									DS TAIL WATER @ STR #100	FREE
101		0.70	2.83	1 98	5.6	10.09	0.00	25.01	25 70	8 18			0.00	0.00	101	100	DED	0.012	24	28.10	1 10	3.01	926 31	926.00	935 12	928.64
102	1.95	0.70	2.00	1.98	5.6	10.00	17 24	25.01	64 84	20.64	201		0.00	0.00	107	101	PFP	0.012	24	15 10	7.00	0.50	930.38	929.32	935.50	932 70
102	0.28	0.70	0.56	0.39	5.2	10.00	2 53	5.04	24 13	13 65	201		0.00	0.00	102	102	PFP	0.012	18	314.03	4.50	0.50	945.00	930.88	953 21	946.04
104	0.28	0.70	0.28	0.20	5.0	10.32	2.53	2 53	17 18	9 72			0.00	0.00	104	103	PFP	0.012	18	109.83	2.28	0.50	948.00	945 50	953 33	948 72
	0.20	00	0.20				2.00						0.00					0.012				0.00				
LINE 2	00																			Drop in In	let 102	0.50				
201	0.09	0.70	0.32	0.22	5.2	10.24	0.79	2.85	12.12	9.88			0.00	0.00	201	102	PEP	0.012	15	137.13	3.00	0.50	934.99	930.88	941.28	935.81
202	0.23	0.70	0.23	0.16	5.0	10.32	2.08	2.08	8.99	7.33			0.00	0.00	202	201	PEP	0.012	15	90.81	1.65	0.50	936.99	935.49	942.42	937.68





1-800-344-7483 or 811 mo1call.com

	Storm Sewer Construction Notes
Structure	Notes
100	STA -0+00.00, LINE 100 INSTALL 24 INCH RCP F.E.S. 264°58'18" N 1026415.6767 E 2830785.4381
101	STA 0+28.19, LINE 100 INSTALL STANDARD 4' DIA ECCENTRIC MANHOLE 84°58'17" N 1026443.7542 E 2830787.9087
102	STA 0+43.28, LINE 100 INSTALL 4 X 6 CURB INLET 88°11'33" N 1026444.3471 E 2830802.9959
103	STA 3+57.35, LINE 100 INSTALL 4 X 6 CURB INLET 102°35'10" N 1026436.7618 E 2831116.9328
104	STA 4+67.18, LINE 100 INSTALL 4 X 6 CURB INLET 178°11'33" N 1026537.0354 E 2831161.7330
201	STA 1+37.13, LINE 200 INSTALL 4 X 6 CURB INLET 358°11'08" N 1026579.8758 E 2830823.9201

SCHLAGEL & ASSOCIATES, P.A. 3 . N N N 4101 NE PORT DRIVE LEE'S SUMMIT, MISSOURI LAKEWOOD BUSINESS PARK FINAL DEVELOPMENT PL

S

Л

PREPARED BY:

		_						-	-
DESCRIPTION									
REVISION DATE	$\mathbb{V}$	$\vee$	3	4	5	<u>s</u>	$\forall$	8	6
DRAWN BY.	Maa		CHECKED BY:	JTS -	DATE PREPARED.		001201202	PROJ. NUMBER:	20-261
	S	ГС	DR	Μ	SI	ΞV	VE	ER	
F	٦L	A	N.	& I		SO	FI	LE	-







![](_page_6_Figure_4.jpeg)

¼" THICK, GALV. STEEL WATER QUALITY OUTLET

- (8)  $\frac{1}{2}$ " DIA. GALV. CONCRETE ANCHORS (TYP.)

 $-\frac{1}{2}$ " DIA. GALV. CONCRETE ANCHORS (TYP.)

- ¼" THICK, GALV. STEEL WATER QUALITY OUTLET ORIFICE PLATE SERIES OF

![](_page_6_Picture_22.jpeg)

1-800-344-7483 or 811 mo1call.com

LAKEWOOD BUSINESS PARK - LOT 35 FINAL DEVELOPMENT PLANS 4101 NE PORT DRIVE LEE'S SUMMIT, MISSOURI	Indecention     Image: Schrond Business Park - Lot 35     Final Development Plans     4101 NE PORT DRIVE     LEE'S SUMMIT, MISSOURI
	ISION DATE DESCRIPTION

![](_page_7_Figure_0.jpeg)

SCALE: 1" = 20'

![](_page_8_Figure_0.jpeg)

**C7** 

![](_page_9_Figure_0.jpeg)

![](_page_9_Figure_1.jpeg)

![](_page_9_Picture_2.jpeg)

![](_page_9_Figure_4.jpeg)

E'C CIINAMIT	Date: 02/13
	Drawn By: JN
MISSOURI	Checked By: DL
NING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063	FILE: WAT-11
CONNECTION /METER WELL	Rev: 1/14
SOMMECTION/ METER WELL	Rev:

D CONCRETE     BEARING     AREA     (SQUARE     FEET     SF)       180     90     45     22.5     11.25       EE,     PLUG     BEND     BEND     BEND     BEND       4.7     6.7     4.0     4.0     4.0       8.4     11.8     6.4     4.0     4.0       13.1     18.5     10.0     5.1     4.0       25.7     36.3     19.6     10.0     5.0       33.5     47.4     25.6     13.1     6.6       42.4     REST.     JT.     32.5     16.5     8.3       REST.     JT.     REST.     JT.     40.1     20.4     10.3					
180     90     45     22.5     11.25       EE, PLUG     BEND     BEND     BEND     BEND     BEND       4.7     6.7     4.0     4.0     4.0       8.4     11.8     6.4     4.0     4.0       13.1     18.5     10.0     5.1     4.0       25.7     36.3     19.6     10.0     5.0       33.5     47.4     25.6     13.1     6.6       42.4     REST. JT.     32.5     16.5     8.3       REST. JT.     REST. JT.     40.1     20.4     10.3	D CONCRETE	E BEARING AI	REA (SQUARE	FEET -	SF)
4.7   6.7   4.0   4.0   4.0     8.4   11.8   6.4   4.0   4.0     13.1   18.5   10.0   5.1   4.0     18.8   26.7   14.4   7.4   4.0     25.7   36.3   19.6   10.0   5.0     33.5   47.4   25.6   13.1   6.6     42.4   REST. JT.   32.5   16.5   8.3     REST. JT.   REST. JT.   40.1   20.4   10.3	180 EE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
DFCT IT DFCT IT DFCT IT $20.4$ $1.40$	4.7 8.4 13.1 18.8 25.7 33.5 42.4 REST. JT.	6.7 11.8 18.5 26.7 36.3 47.4 REST. JT. REST. JT.	4.0 6.4 10.0 14.4 19.6 25.6 32.5 40.1	4.0 4.0 5.1 7.4 10.0 13.1 16.5 20.4	4.0 4.0 4.0 5.0 6.6 8.3 10.3

![](_page_9_Figure_8.jpeg)

BURVEYORS LANDSCAPE ARCHITECTS	Time   14920 West 107th Street • Lenexa, Kansas 66215     Time   (913) 492-5158 • Fax: (913) 492-8400     Time   WWW.SCHLAGELASSOCIATES.COM     Missouri State Certificates of Authority   #E2002003800-F #LAC2001005237 #LS2002008859-F
SCHLAGEL & AS	SOCIATES, P.A.
LAKEWOOD BUSINESS PARK - LOT 35 FINAL DEVELOPMENT PLANS	4101 NE PORT DRIVE LEE'S SUMMIT, MISSOURI
VISION DATE DESCRIPTION	
DRAWN BY: RE RPM CHECKED BY: JTS	DATE PREPARED: 5 06/25/2021
SHEET C7	1

![](_page_10_Figure_0.jpeg)

NON-SETBACK CURB INLET (6" Throat)

### NOTES:

### General

- 1. All storm sewer structures shall be pre-cast or poured in place. If pre-cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height 2" below the finish top elevation, or as directed by the city Engineer.
- 2. Pre-cast shop drawings are to be approved by the city Engineer Prior to casting.
- 3. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the city Engineer prior to construction.
- 4. The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L"+"H") and ("W"+"H") less then or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

### Concrete

- 5. Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board, unless noted otherwise.
- 6. Concrete construction shall meet the applicable requirements of Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, latest edition, unless noted otherwise.
- 7. Inlet floors shall be shaped with non-reinforced concrete inverts to provide smooth flow.
- 8. Bevel all exposed edges with 3/4" triangular molding.

### **Reinforcing Steel**

- Reinforcing steel shall be new billet, minimum Grade 40 as per ASTM 9. A615, and shall be bent cold.
- 10. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of +/- 1/8" shall be permitted.
- 11. All lap splices not shown shall be a minimum of 40 bar diameters in length.
- 12. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
- 13. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.

## Construction

- 14. The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane curing compound.
- 15. Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.
- 16. Material selection and compaction requirements for backfill around structures shall be as specified in the project manual.

## NON-SETBACK CURB INLET

![](_page_10_Figure_41.jpeg)

![](_page_10_Figure_42.jpeg)

![](_page_11_Figure_0.jpeg)

REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FLEXIBLE PIPE-TO-MANHOLE CONNECTORS/GASKETS CAST INTO THE PRECAST WALL STRUCTURE.

EXISTING MH WALL

REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FLEXIBLE PIPE-TO-MANHOLE CONNECTORS/GASKETS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: SAN-5
Rov: 1/14

![](_page_11_Picture_7.jpeg)

![](_page_12_Figure_0.jpeg)

NOTE: MODIFICATION REQUESTED FOR PLANT SIZES

![](_page_12_Figure_2.jpeg)

	2.5" Cal.	B&B
	2.5" Cal.	B&B
	2.5" Cal.	B&B
nar Zelkova	2.5" Cal.	B&B
	6' Ht.	B&B
	6' ht.	B&B
	6' ht.	B&B
Serviceberry	2" Cal. & 8' Ht.	B&B
	2" Cal. & 8' ht.	B&B
/ood	5 gal.	Cont.
vig Dogwood	5 gal.	Cont.
	5 gal.	Cont.
rnum	5 gal.	Cont.

2 gal.

Cont.

## NOTES:

- 1. UTILITY INFORMATION SHOWN IS DESIGNED LOCATION OR LOCATIONS BASED ON UTILITY LOCATES. AS BUILT LOCATIONS MAY VARY. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO COMMENCING LANDSCAPE INSTALLATION. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS OR OBSTRUCTIONS.
- 2. QUANTITIES INDICATED ON THE PLAN ARE FOR CONVENIENCE ONLY. CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES PRIOR TO PLANTING. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. THE PLAN QUANTITIES AND NUMBER OF SYMBOLS SHALL SUPERSEDED QUANTITIES IN THE SCHEDULE 3. ALL PLANT MATERIAL SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT STANDARDS AND ANSI A60.1 THE AMERICAN STANDARD FOR NURSERY STOCK.
- 4. ALL TREES SHALL MEET THE SIZE REQUIREMENTS OF THE LEE'S SUMMIT ORDINANCE. ALL TREES SHALL BE CALLIPERED AND UNDERSIZED TREES SHALL BE REJECTED. 5. ALL SHRUBS TO BE UTILIZED FOR SCREENING SHALL BE 24" HEIGHT AT TIME OF PLANTING.
- 6. ALL PLANTING BEDS CONTAINING SHRUBS, GROUND COVER, PERENNIALS, ANNUALS SHALL BE IN A PLANTING BED WITH 3" MIN. DEPTH OF MULCH AND A "V-CUT" EDGE. 7. ALL TREES SHALL HAVE A MIN. 3 FT. DIA. AREA THAT HAS 3" MIN. DEPTH OF WOOD MULCH.
- 8. ALL TURF AREAS SHALL BE SODDED UNLESS INDICATED ON THE PLANS. 9. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN SHALL REQUIRE WRITTEN APPROVAL OF THE
- LANDSCAPE ARCHITECT AND THE CITY OF LEE'S SUMMIT, PRIOR TO INSTALLATION. 10. THE LANDSCAPE ARCHITECT AND OWNER SHALL APPROVE GRADES AND CONDITION OF SITE PRIOR TO SODDING OPERATIONS.
- 11. INSTALLATION AND MAINTENANCE OF LANDSCAPING SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT STANDARDS
- 12. ALL PLANT MATERIAL SHALL BE INSTALLED TO ALLOW A MINIMUM CLEARANCE BETWEEN PLANT AND ADJACENT PAVEMENT OF 1 FT. FOR PERENNIALS AND GROUNDCOVER AND 1.5 FT. FOR SHRUBS. A 2 FT. CLEARANCE(4 FEET FROM BACK OF CURB TO THE CENTER OF SHRUB)FOR CAR OVERHANG IS REQUIRED AT ALL PARKING ISLANDS AND PERIMETERS.
- 13. AFTER COMPLETE INSTALLATION OF ALL PLANT MATERIAL AND SOD THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT THAT THE WORK IS COMPLETE AND READY FOR REVIEW. THE LANDSCAPE ARCHITECT SHALL REVIEW THE LANDSCAPE INSTALLATION TO DETERMINE COMPLIANCE WITH THE APPROVED PLANS. WHEN THE LANDSCAPE INSTALLATION MEETS THE REQUIREMENTS OF THE APPROVED PLAN, THE LANDSCAPE ARCHITECT SHALL PROVIDE A SIGNED AND SEALED LETTER TO THE CITY STATING THAT ALL LANDSCAPE PLANTINGS HAVE BEEN INSTALLED PER THE APPROVED PLAN.
- 14. ALL EXTERIOR GROUND OR BUILDING MOUNTED EQUIPMENT (MECHANICAL, ELECTRICAL AND/OR TELEPHONE CABINETS), TRANSFORMERS, AIR CONDITIONING UNITS, ETC. SHALL BE SCREENED FROM PUBLIC VIEW BY INSTALLING FIVE SEA GREEN JUNIPERS EVENLY SPACED AROUND THE PERIMETER. FINAL LOCATION OF ANY EQUIPMENT SHALL BE DETERMINED AND VERIFIED WITH THE FINAL DESIGN AND PERMITTING OF THE PROJECT.
- ALL ROOFTOP EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW WITH AN ARCHITECTURAL TREATMENT COMPATIBLE WITH THE BUILDING AND INTEGRAL TO THE OVERALL APPEARANCE OF THE BUILDING.

## STREET FRONTAGE LANDSCAPE

PORT DRIVE TREES PROVIDED

LAKEWOOD WAY SHRUBS REQUIRED(1 PER 20')(169.12'/20') LAKEWOOD WAY SHRUBS PROVIDED PORT DRIVE SHRUBS REQUIRED(1 PER 20')(294.05'/20') PORT DRIVE SHRUBS PROVIDED

SITE LANDSCAPE REQUIRED

TREES REQUIRED (1 PER 5,000 S.F OF OPEN SPACE)(93,083/5000)

TREES PROVIDED

SHRUBS REQUIRED (2 PER 5,000 S.F. OF LOT AREA)(93,083/5000X2) SHRUBS PROVIDED

PARKING LOT LANDSCAPE

LANDSCAPE AREA PROVIDED TREES PROVIDED

## MEDIUM IMPACT LANDSCAPE BUFFER- EAST BOUNDARY

TREES PROVIDED EVERGREEN TREES PROVIDED

## LANDSCAPE DATA LOT 1 ONLY

LAKEWOOD WAY TREES REQUIRED(1 PER 30')(169.12'/30') LAKEWOOD WAY TREES PROVIDED PORT DRIVE TREES REQUIRED(1 PER 30')(294.05'/30')

LANDSCAPE AREA REQUIRED(5% OF PARKING AREA)(2741.0 x 0.05) TREES REQUIRED (1 PER ISLAND)

SCREENING (2.5 FT. HT ALONG ENTIRE FRONTAGE ADJ. TO STREET)

TREES REQUIRED (1 PER 1,000 S.F.)(5,041/1,000) ORNAMENTAL TREES REQUIRED (1 PER 500 S.F.)(5,041/500) ORNAMENTAL TREES PROVIDED EVERGREEN TREES REQUIRED (1 PER 300 S.F.)(5,041/300)

SHRUBS REQUIRED (1 PER 200 S.F.)(5,041/200)

6 TREES **6 NEW TREES** 10 TREES **11 NEW TREES** 

9 SHRUBS 9 SHRUBS 15 SHRUBS 15 SHRUBS (IN PARKING LOT SCREEN)

19 TREES 19 TREES (3 IN BUFFER SCREEN)

37 SHRUBS 37 SHRUBS (25 IN BUFFER, 12 IN FRONT)

138 S.F. 738.0 S.F. 1 TREE 1 TREE 58 SHRUBS (12 FROM OPEN SPACE, 15 FROM LAKEWOOD WAY)

5 TREES 5 TREES (3 FROM OPEN SPACE) 10 TREES 10 TREES 17 TREES 17 TREES 25 SHRUBS 25 SHRUBS (25 FROM OPEN SPACE)

PARKING LOT LANDSCAPING BED

![](_page_12_Picture_45.jpeg)

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![](_page_13_Figure_0.jpeg)

- meet all State and Federal regulations and be certified to be disease and insect free.
- form that will not restrict normal growth, stability and health for the expected life of the plant.
- 3. All trees shall be nursery-grown. the followina:
- 5. Crown: The form and density of the crown shall be typical for a young specimen of the species or cultivar pruned to a central and dominant leader.
- over watering as indicated by wilted, shriveled, or dead leaves. 8. Branches: Shoot growth (length and diameter) throughout the crown should be appropriate for the age and size of the species or cultivar. Trees shall not have dead, diseased, broken, distorted, or otherwise injured branches.
  - shall form a balanced crown appropriate for the cultivar/species.

  - The attachment of the largest branches (scaffold branches) shall be free of included bark. C.)
  - e.) The attachment of scaffold branches shall be free of included bark.
- the tree and can split easy.
- branches should be less than half the diameter of the adjacent trunk (less than one-third is preferred).
- Codominant trunks (trunks of similar size) will not be accepted.
- should be no greater than 3/8-inch diameter. Clear trunk should be no more than 40% of the total height of the tree. 14. Central Leader: Trees shall have a single(one), relatively straight central leader and tapered trunk, free of co-dominant stems and vigorous, upright branches that compete with the central
- end of the warranty period. 15. All graft unions, where applicable, shall be completely closed without visible sign of graft rejection. All grafts shall be visible above the soil line.
- 17. Plant roots shall be normal to the plant type specified. Root observations shall take place without impacting tree health. Root quality at or below the soil line shall comply with the project Root Acceptance details and the following:
- 18. The roots shall be reasonably free of scrapes, broken or split wood. produce a high quality root system are not considered injuries.
- growth shall be appropriate for the species.
- 21.Plants with structural roots on only one side of the trunk (J roots) shall be rejected.
- 23. The root system shall be free of stem girdling roots over the root collar or kinked roots from nursery production practices.
- roots.

24.Plant Grower Certification: The final plant grower shall be responsible to have determined that the plants have been root pruned at each step in the plant production process to remove stem girdling roots and kinked roots, or that the previous production system used practices that produce a root system throughout the root ball that meets these specifications. Regardless of the work of previous growers, the plant's root system shall be modified at the final production stage, if needed, to produce the required plant root quality. The final grower shall certify in writing that all plants are reasonably free of stem girdling and kinked roots as defined in this specification, and that the tree has been grown and harvested to produce a plant that meets these specifications. 25. At time of observations and delivery, the root ball shall be moist throughout. Roots shall not show signs of excess soil moisture conditions as indicated by stunted, discolored, distorted, or dead

22. The root collar shall be within the upper 1 inch of the substrate/soil. Two structural roots shall reach the side of the root ball near the top surface of the root ball. The grower may request a modification to this requirement for species with roots that rapidly descend, provided that the grower removes all stem girdling roots above the structural roots across the top of the root ball. Any excess soil shall be removed from the root ball so that the root flare is visible as indicated in the "Planting Depth Detail". The root collar shall be visible above the mulch layer.

20.A minimum of three structural roots reasonably distributed around the trunk (not clustered on one side) shall be found in each plant. Root distribution shall be uniform throughout the root ball, and

19. The root system shall be reasonably free of injury from biotic (e.g., insects and pathogens) and abiotic (e.g., herbicide toxicity and salt injury) agents. Wounds resulting from root pruning used to

16. Trunk caliper and taper shall be sufficient so that the lower five feet of the trunk remains vertical without a stake. Auxiliary stake may be used to maintain a straight leader in the upper half of the

leader. Preferably, the central leader should not have been headed. However, in cases where the original leader has been removed, an upright branch at least ½ (one-half) the diameter of the original leader just below the pruning point shall be present. All trees are assumed to have one central leader trees unless a different form is specified in the plant list or drawings. If the central leader is broken or damaged during delivery or installation the tree shall be rejected and removed from the site. If the central leader dies wihin the warranty period the tree shall be replaced at the

13. Temporary branches, unless otherwise specified, can be present along the lower trunk below the lowest main (scaffold) branch, particularly for trees less than 1 inch in caliper. These branches

11. Trunk: The tree trunk shall be relatively straight, vertical, and free of wounds that penetrate to the wood (properly made pruning cuts, closed or not, are acceptable and are not considered wounds), sunburned areas, conks (fungal fruiting bodies), wood cracks, sap leakage, signs of boring insects, galls, cankers, girdling ties, or lesions (mechanical injury). 12. Evergreen tree trunk: Evergreen trees shall have a single trunck that isstraight, vertical, and free of wounds that penetrate to the wood (properly made pruning cuts, closed or not, are acceptable and are not considered wounds), sunburned areas, conks (fungal fruiting bodies), wood cracks, sap leakage, signs of boring insects, galls, cankers, girdling ties, or lesions (mechanical injury).

inches of the ground and be along the full length of the trunk. Trees which are not symmetrical or that have an "open area" will be rejected. For structural integrity on evergreen trees, all side

(lower right) represent lesser quality than trees free of these potential problems. Included bark can be seen between the two arrows below. Branches with bark inclusions are weakly attached to 10. Evergreen branch structure: The branch pattern should dense, symmetrical and the branch stems should be evenly spaced completely around the trunk. The branches shall extend to within 12

9. Branch structure: The better quality, large-maturing shade trees (lower extreme left) have all branches less than about two-thirds the trunk diameter. Poor quality shade trees (lower left center) have larger upright branches. Trees such as crape myrtle and other small-maturing trees can have several trunks. Trees with extensive defects in branches such as cracks and included bark

d.) Branches shall be distributed radially around and vertically along the trunk, forming a generally symmetrical crown typical for the species.

b.) Branch diameter shall be no larger than two-thirds (one-half is preferred) the diameter of the central leader measured 1 inch above the branch union.

a.) Main branches shall be distributed along the central leader not clustered together. Potential main branches shall be evenly spaced and have appropriate space between them. They

6. Crown specifications do not apply to plants that have been specifically trained in the nursery as topiary, espalier, multi-stem, clump, or unique selections such as contorted or weeping cultivars. 7. Leaves: The size, color, and appearance of leaves shall be typical for the time of year and stage of growth of the species or cultivar. Trees shall not show signs of prolonged moisture stress or

4. Plants shall be healthy with the color, shape, size and distribution of trunk, stems, branches, buds and leaves normal to the plant type specified. Tree quality above the soil line shall comply with

2. Provide healthy stock, grown in a nursery and reasonably free of die-back, disease, insects, eggs, bores, and larvae. At the time of planting all plants shall have a root system, stem, and branch

1. All trees shall comply with State and Federal regulations. Trees should be obtained from local sources but must meet the quaility quidelines herein. Trees transported from out of the region shall

	NGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS	14920 West 107th Street • Lenexa, Kansas 66215 (913) 492-5158 • Fax: (913) 492-8400 WWW SCHI AGEL ASSOCIATES COM	
LAKEWOOD BUSINESS PARK - LOT 35		4101 NE PORT DRIVE LEE'S SUMMIT, 2002	T: BISODRI BISOURI
DRAWN BY: REVISION DATE DESCRIPTION		DATE PREPARED: 5 06/25/2021 6 VITE	PROJ. NUMBER: 20-261

![](_page_14_Figure_0.jpeg)

![](_page_14_Picture_2.jpeg)

# TYP. SHRUB PLANTING ADJACENT TO WALK

![](_page_14_Figure_4.jpeg)

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![](_page_14_Figure_6.jpeg)

![](_page_14_Figure_7.jpeg)

![](_page_14_Figure_8.jpeg)

![](_page_14_Figure_9.jpeg)

![](_page_14_Figure_10.jpeg)

## TYP. SHRUB BED IN LAWN DETAIL

NO SCALE