

USER: Lince Whitaker TAB: Cover
DATE: September 10, 2019 -- 9:10:41 AM
DRAWING: S:\JOBS\Job2018\18-0136\CAD\18-0136-COVER-SPEC-18-0136.dwg

LEGEND

EXISTING		PROPOSED
--- 460 --- --- 459 --- +620.15	CONTOURS	--- 460 --- --- 459 --- +621.25 (TOP OF CURB) (PVSIST PAVEMENT)
~~~~~	SPOT GRADE	~~~~~
⊗	TREE LINE	⊗
⊗	TREE	⊗
⊗	BUSH	⊗
⊗	STORM MANHOLE	⊗
⊗	AREA INLET	⊗
⊗	CURB INLET	⊗
⊗	GRATED INLET	⊗
⊗	FLARED END SECTION	⊗
12" RCP	STORM SEWER	12" RCP
①	GRATED MANHOLE	①
○ DS	STORM DESIGNATOR	○ DS
DP	DOWNSPOUT	DP
---	DRAINAGE PIPE	---
---	SWALE/SLOPE INDICATOR	---
⊗	SANITARY MANHOLE	⊗
8" VCP	SANITARY SEWER	8" VCP
⊗	CLEAN OUT	⊗
⊗	SANITARY DESIGNATOR	⊗
⊗	UTILITY POLE	⊗
⊗	GUY WIRE	⊗
OU	OVERHEAD UTILITY	OU
UE	UNDERGROUND ELECTRIC	UE
UE	ELECTRIC MARKER	UE
EPB	ELECTRIC METER	EPB
EPB	ELECTRIC BOX	EPB
EPB	ELECTRIC PULL BOX	EPB
EPB	ELECTRIC TRANSFORMER	EPB
EPB	ELECTRIC MANHOLE	EPB
UT	UNDERGROUND TELEPHONE	UT
UT	FIBER OPTIC MARKER	UT
UT	CABLE MARKER	UT
G	GAS LINE	G
GV	GAS VALVE	GV
GM	GAS METER	GM
W	GAS MARKER	W
WV	WATER LINE	WV
WV	WATER VALVE	WV
WV	WATER METER	WV
WV	FIRE HYDRANT	WV
WV	SIGN	WV
WV	MAIL BOX	WV
WV	TEST HOLE	WV
X	LIGHT STANDARD	X
X	FENCE	X
X	BOLLARD	X
X	RETAINING WALL	X
X	CONCRETE PAVEMENT	X
X	SILTATION FENCE	X
X	AIR CONDITIONER	X
X	FLAG POLE	X
X	MONITORING WELL	X
X	PARKING METER	X
X	PLANTER	X
X	SPRINKLER CONTROL BOX	X
X	SPRINKLER	X
X	SPRINKLER VALVE	X
X	TRAFFIC CONTROL BOX	X
X	TRAFFIC POLE	X
X	YARD LIGHT	X
X	GUARD RAIL	X
X	PROPERTY LINE	X
X	EASEMENT	X
X	SETBACK	X
X	INLET PROTECTION	X
X	WATTLE	X
X	CHECK DAM	X
X	USE IN PLACE	X
X	TO BE REMOVED	X
X	ADJUST TO GRADE	X
X	TO BE REMOVED & RELOCATED	X
X	TYPICAL	X
X	NOT TO SCALE	X
X	HIGH POINT IN GRADE	X
X	LOW POINT IN GRADE	X
X	TOP OF WALL	X
X	BOTTOM OF WALL	X
X	NOT IN CONTRACT	X
X	(UIP)	X
X	(TBR)	X
X	(ATG)	X
X	(TBR&R)	X
X	(TYP)	X
X	N.T.S.	X
X	HP	X
X	LP	X
X	TW	X
X	BW	X
X	(NIC)	X

SITE BENCHMARK INFORMATION

X 205 -- DISK LOCATED 0.6 MILE SOUTH ALONG THE MISSOURI PACIFIC RAILROAD FROM THE STATION AT LEE'S SUMMIT. 19.1 FEET WEST OF THE WEST RAIL OF THE MAIN TRACK, SET IN THE TOP OF THE WEST END OF THE NORTHWEST ABUTMENT OF AN OVERPASS OVER U.S. HIGHWAY 50. ELEVATION = 1046.10

LION'S CHOICE

LOT 4D OF SUMMIT ORCHARD  
LEE'S SUMMIT, MO 64063



Saint Louis, Missouri Since 1967

FINAL DEVELOPMENT PLAN



PERTINENT DATA

SITE DATA  
PARCEL NUMBER 52-900-03-65-00-0-00-000  
CURRENT ZONING DISTRICT PMIX, PLANNED MIX USE  
PROPOSED ZONING DISTRICT PMIX, PLANNED MIX USE

AREA CALCULATIONS  
BUILDING AREA 2,311 S.F. = 0.05 AC  
IMPERVIOUS AREA 24,758 S.F. = 0.57 AC  
PERVIOUS AREA 12,179 S.F. = 0.28 AC  
TOTAL SITE AREA 39,248 S.F. = 0.90 AC

UTILITIES

GAS SERVICE	SPIRE 3025 SE CLOVER DR. LEE'S SUMMIT, MO 64082 CONTACT: JON HARRELL (816)969-2298	COMMUNICATIONS SERVICE	AT&T CONTACT: MARTY LOPER (800)499-7928
WATER SERVICE	CITY OF LEE'S SUMMIT PUBLIC WORKS WATER UTILITIES 1200 SE HAMBLER ROAD, LEE'S SUMMIT, MO 64081 (816)969-1900	SANITARY SEWER SERVICE	CITY OF LEE'S SUMMIT PUBLIC WORKS WATER UTILITIES 1200 SE HAMBLER ROAD, LEE'S SUMMIT, MO 64081 (816)969-1900
ELECTRIC SERVICE	KANSAS CITY POWER AND LIGHT 1201 WALNUT ST. P.O. BOX 418679 KANSAS CITY, MO 64141 (816)471-5275	STORM SEWER SERVICE	CITY OF LEE'S SUMMIT PUBLIC WORKS WATER UTILITIES 1200 SE HAMBLER ROAD, LEE'S SUMMIT, MO 64081 (816) 969-1940

INDEX

		REVISIONS								
		1	2	3	4	5	6	7	8	9
C1.0	COVER SHEET									
C2.0	NOTE SHEET									
C3.0	DEMOLITION PLAN									
C4.0	SITE PLAN									
C4.1	HORIZONTAL CONTROL PLAN									
C4.2	AUTOTURN EXHIBIT									
C5.0	GRADING PLAN									
C6.0	UTILITY PLAN									
C6.1	SEWER PROFILES									
C7.0	EROSION CONTROL									
C7.1	EROSION CONTROL NOTES									
C7.2	EROSION CONTROL DETAILS									
C8.0	DETAIL SHEET									
C8.1	DETAIL SHEET									
C9.0	DRAINAGE AREA MAP (PRE-DEVELOPED)									
C9.1	DRAINAGE AREA MAP (POST-DEVELOPED)									
L1.0	LANDSCAPE PLAN									

DESIGN AND DEVELOPMENT CONTACTS

OWNER	LION'S CHOICE 12977 NORTH FORTY DRIVE ST. LOUIS, MO 63141 (314) 821-8665 CONTACT: JASON DENBOW
CIVIL ENGINEER	COLE & ASSOCIATES, INC. 401 SOUTH 18TH STREET, SUITE 200 ST. LOUIS, MO 63103 (314) 984-9887 CONTACT: CHRIS WILSON
ARCHITECT	OCULUS INC ONE SOUTH MEMORIAL DR SUITE 1500 ST. LOUIS, MO 63102 (314) 367-6100 CONTACT: JACK BOWE
SURVEYOR	COLE & ASSOCIATES, INC. 401 SOUTH 18TH STREET, SUITE 200 ST. LOUIS, MO 63103 (314) 984-9887 CONTACT: TOM REYNOLDS

LAND DESCRIPTION (PER TITLE)

LOT 4D, SUMMIT ORCHARD, LOTS 4A-4E, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE PLAT THEREOF.

FLOODPLAIN INFORMATION

AS DETERMINED THROUGH GRAPHIC PLOTTING ONLY, SUBJECT TRACT FALLS IN ZONE "X"; AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR JACKSON COUNTY, MISSOURI AND INCORPORATED AREAS, PANEL 417 OF 625, MAP NUMBER 29095C04176, EFFECTIVE DATE OF JANUARY 20, 2017.

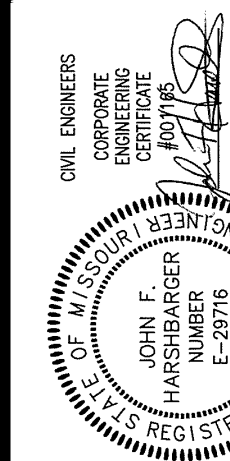
UTILITY INFORMATION

UTILITIES SHOWN HAVE BEEN TAKEN FROM AVAILABLE SURVEYS, UTILITY COMPANY MAPS AND PHYSICAL PROPERTY INSPECTION. THE LOCATIONS AND FACILITIES SHALL BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE ADDITIONAL UTILITIES THAT HAVE NOT BEEN SHOWN ON THIS SURVEY. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE LOCATIONS OF ALL UTILITIES PRIOR TO EXCAVATION OR CONSTRUCTION.



CALL 1-800-DIG-RITE (MISSOURI ONE CALL) TO HAVE LOCATIONS MARKED IN THE FIELD (SUBSCRIBING UTILITIES REQUIRE 48 HOURS NOTICE PRIOR TO CONSTRUCTION).

DEVELOPER/OWNER:  
RED LION BEEF CORPORATION  
12977 N FORTY DRIVE, SUITE 100  
ST. LOUIS, MO 63141  
(314) 821-8665



LION'S CHOICE  
SUMMIT ORCHARD  
440 NW CHIPMAN ROAD  
LEE'S SUMMIT, MO

COVER SHEET

+ ST. LOUIS  
401 South 18th Street  
Suite 200  
St. Louis, MO 63103  
(314) 984-9887 tel/  
www.colesti.com

DESIGN/CALC BY	LLW
DRAWN BY	MAB
CHECKED BY	CAW
DRAWING SCALE	AS SHOWN
DATE	08/29/2019
Job Number	18-0136
Sheet Number	C1.0



USER: Lance Whitaker TAB: Note  
DATE: September 10, 2019 -- 9:12:00 AM  
DRAWING: S:\JOBS\Job2018\18-0136\CADD\G-Plan\PlotSheet\G_P\PLAN COVER-SPEC_18-0136.dwg

## GENERAL NOTES

- THESE PLANS ARE BASED ON A SURVEY PREPARED BY COLE & ASSOCIATES, INC. DATED 07/26/19. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT THE IMPROVEMENTS EXIST AS SHOWN ON THE SURVEY. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER AND COLE OF ANY DEVIATIONS OR OMISSIONS THAT MAY EFFECT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- THE CONTRACTOR IS NOT TO START WORK UNTIL WRITTEN AUTHORIZATION FROM THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER HAS BEEN RECEIVED.
- FLOOD CERTIFICATION:**  
AS DETERMINED THROUGH GRAPHIC PLOTTING ONLY, SUBJECT TRACT FALLS IN ZONE "X"; AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR JACKSON COUNTY, MISSOURI AND INCORPORATED AREAS, PANEL 417 OF 625, MAP NUMBER 29095C04176, EFFECTIVE DATE OF JANUARY 20, 2017.
- WETLANDS NOTE:**  
ANY DEVELOPMENT, EXCAVATION, CONSTRUCTION, OR FILLING IN A U.S. ARMY CORPS OF ENGINEERS DESIGNATED WETLAND IS SUBJECT TO LOCAL, STATE AND FEDERAL APPROVALS. THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND/OR RESTRICTIONS AND ANY VIOLATION WILL BE SUBJECT TO FEDERAL PENALTY. THE CONTRACTOR SHALL HOLD THE OWNER/DEVELOPER, THE ENGINEER AND THE LOCAL GOVERNING AGENCIES HARMLESS AGAINST SUCH VIOLATION.
- WARRANTY/DISCLAIMER:**  
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.
- SAFETY NOTICE TO CONTRACTOR:**  
IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTORS SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.
- NOTICE TO BIDDERS:**  
ALL QUESTIONS REGARDING THE PREPARATION OF THE CONTRACTOR'S BID SHALL BE DIRECTED TO THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER. SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE CONTRACTOR. THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECTLY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER/DEVELOPER.

## GENERAL DEMOLITION NOTES

- ALL EXISTING IMPROVEMENTS ARE TO REMAIN UNLESS NOTED OTHERWISE IN THESE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL OF (IN A LOCATION APPROVED BY ALL JURISDICTIONS HAVING AUTHORITY) ALL DEBRIS, STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
- DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
- THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES.
- ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE GROUTED IF UNDER BUILDINGS.
- THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL PUBLIC AND PRIVATE UTILITIES, INCLUDING IRRIGATION, SPECIFIC TO THIS PROJECT PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION. SHOULD ANY UTILITY REQUIRE RELOCATION, CONTRACTOR SHALL COORDINATE WITH THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER AND THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO ANY EXISTING BUILDINGS PRIOR TO DEMOLITION OF THE EXISTING BUILDINGS.
- THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO ANY EXISTING BUILDINGS TO REMAIN AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM AND COORDINATION WITH THE BUILDING OWNER.
- THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
- ANY DRY UTILITY LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION. CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE RIGHT OF WAY DURING CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WATER MAIN WORK WITH THE FIRE DEPARTMENT AND THE UTILITY COMPANY TO PLAN PROPOSED IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGHOUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATER MAIN SHUT OFFS WITH THE UTILITY COMPANY DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATER MAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY EXISTING IRRIGATION SYSTEMS IN THE AREAS OF PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL CAP ANY EXISTING IRRIGATION SYSTEMS TO REMAIN SUCH THAT THE REMAINING SYSTEMS SHALL CONTINUE TO FUNCTION PROPERLY.
- EXISTING PAVEMENT THAT WILL REMAIN AFTER CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE. CONTRACTOR MAY LIMIT SAWCUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE PLANS, BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING IMPROVEMENTS TO REMAIN DURING CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO, DRAINAGE STRUCTURES, UTILITIES, PAVEMENT, STRIPING, CURBS, ETC.. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS AND SHALL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND NOTIFY THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
- PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
- CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER.
- CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.
- THE CONTRACTOR SHALL RESTORE ALL OFF SITE CONSTRUCTION AREAS TO AN EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO THE COMMENCEMENT OF WORK.

## GENERAL SITE NOTES

- ALL CONSTRUCTION MATERIALS AND TECHNIQUES OF INSTALLATION SHALL MEET PERFORMANCE VALUES OF THE MATERIALS SPECIFIED AND COMPLY WITH ALL REGULATIONS AND CODES OF THE AUTHORITY HAVING JURISDICTION AND O.S.H.A. STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THIS PROJECT IS CONSTRUCTED IN ACCORDANCE WITH THESE DOCUMENTS AND IN COMPLIANCE WITH CODES INDICATED HEREIN. THE QUALITY OF WORKMANSHIP AND INSTALLATION OF MATERIALS SPECIFIED BY THE ENGINEER ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER WILL NOT BE HELD RESPONSIBLE FOR ANY SUBSTANDARD OR INSUFFICIENT WORKMANSHIP, MATERIALS, OR SERVICES PROVIDED IN THE EXECUTION OF ANY PHASE OF CONSTRUCTION OF THIS PROJECT.
- ALL MATERIALS ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL MANUFACTURER'S WARRANTIES WILL BE HONORED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF EXISTING FIELD CONDITIONS AND OF ALL DRAWINGS AND SPECIFICATIONS RELATED TO THEIR FIELD. THE FAILURE TO ACQUAINT HIMSELF WITH THIS PROJECT AND HIS FIELD OF SERVICE SHALL NOT RELIEVE HIM OF ANY RESPONSIBILITY FOR PERFORMING HIS WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED DUE TO THE CONTRACTOR'S FAILURE TO CONVEY THE NECESSARY KNOWLEDGE TO FAMILIARIZE WORKERS AND SUBCONTRACTORS WITH THIS PROJECT.
- ALL CONDITIONS SHOWN TO BE "EXISTING" SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE NOTED AND SUBMITTED TO THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER AND THE ENGINEER FOR REVIEW. CHANGES TO THE ORIGINAL DESIGN OF THE PROJECT DUE TO EXISTING SITE CONDITIONS MUST BE APPROVED BY BOTH THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER AND THE ENGINEER PRIOR TO MAKING ANY CHANGES.
- SAWCUT AND REMOVE PORTIONS OF EXISTING PAVING ONLY AS REQUIRED TO INSTALL NEW UTILITIES OR TO CONSTRUCT PROPOSED FACILITIES PER THIS PLAN. REPLACE PORTIONS REMOVED TO MATCH EXISTING FLUSH AND SMOOTH.
- CONTRACTOR SHALL MATCH PROPOSED CURB AND GUTTER, CONCRETE, AND PAVEMENT TO EXISTING IN GRADE AND ALIGNMENT.
- ALL DIMENSIONS AND RADII ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF SLOPE PAVING, SIDEWALKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNS, POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.

- THE CONTRACTOR SHALL PROVIDE DUMPSTERS, PORTABLE TOILETS AND TEMPORARY POWER FOR UNRESTRICTED PROJECT RELATED USE BY OTHERS FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR RECEIVING, UNLOADING, STORING AND PROTECTING MATERIALS AND EQUIPMENT SUPPLIED BY THE OWNER/DEVELOPER UNTIL IT HAS BEEN INSTALLED AND ACCEPTED BY THE OWNER/DEVELOPER.
- THE CONTRACTOR SHALL COORDINATE PROJECT PHASING AND STORAGE OF MATERIALS WITH THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE AREA CLEAN AND FREE OF DEBRIS AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE SAFETY OF ALL PERSONS ON THE JOB SITE AT ALL TIMES INCLUDING (BUT NOT LIMITED TO) SUBCONTRACTORS, STORE PERSONNEL, VENDORS, DESIGN STAFF PROFESSIONALS AND INSPECTION PERSONNEL.
- NO MONUMENT SIGNS OR THEIR PROPOSED LOCATIONS CAN BE APPROVED WITH THESE DOCUMENTS. A SEPARATE SIGN APPLICATION MUST BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION FOR REVIEW AND APPROVAL.
- ANY RETAINING WALLS REFERRED TO IN THESE PLANS ARE SHOWN FOR REFERENCE ONLY AND ARE NOT TO BE INTERPRETED AS THE DESIGN OF THE WALL SYSTEM. THE CONTRACTOR SHALL REFER TO STRUCTURAL PLANS PREPARED BY OTHERS FOR WALL DESIGN AND CONSTRUCTION DETAILS. A SEPARATE BUILDING PERMIT MAY BE REQUIRED FOR EACH WALL.

## GENERAL GRADING NOTES

- TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER/DEVELOPER FOR REVIEW.
- EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- ALL CUT OR FILL SLOPES SHALL BE 3H:1V OR FLATTER UNLESS OTHERWISE NOTED. THE ENGINEER ASSUMES NO LIABILITY FOR SLOPES EXCEEDING THOSE RECOMMENDED IN THE APPLICABLE GEOTECHNICAL REPORT.
- THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- EXISTING DRAINAGE STRUCTURES AND STORM SEWER PIPES ARE TO BE INSPECTED, REPAIRED AS NEEDED, AND CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:  

PIPES DIAMETERS LESS THAN 12"	
HIGH DENSITY POLYETHYLENE PIPE (HDPE):	TYPE S PER AASHTO M252 (SMOOTH INTERIOR WITH CORRUGATIONS EXTERIOR)
POLYVINYL CHLORIDE PIPE (PVC):	SDR35 PER ASTM D3034 (FOR PIPES LESS THAN 12" DEEP)
POLYVINYL CHLORIDE PIPE (PVC):	SDR26 PER ASTM D3034 (FOR PIPES MORE THAN 12" DEEP)
PIPES DIAMETERS 12" OR GREATER	
REINFORCED CONCRETE PIPE (RCP):	CLASS III PER ASTM C76
POLYPROPYLENE (PP):	SMOOTH INTERIOR WITH CORRUGATIONS EXTERIOR PER ASTM F2764
- ALL STORM SEWER PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
- ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
- ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RING AND COVERS. STORM MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE.
- ALL PROPOSED CATCHMENTS SHOWN ARE TO FINISHED ELEVATIONS ON PAVED AREAS. THE CONTRACTOR SHALL GRADE ALL AREAS TO REQUIRED SUBGRADE.
- ALL PROPOSED SPOT GRADES SHOWN ARE TO FINISHED GRADE, FINISHED PAVEMENT, OR FINISHED BOTTOM FACE OF CURB UNLESS NOTED OTHERWISE.
- ALL FILLS AND BACKFILLS SHALL CONSIST OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.
- ALL FILL PLACED FOR PROPOSED STORM AND SANITARY SEWER LINES, PAVED AREAS, OR DRAINAGE BERMS SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AS DETERMINED BY THE AASHTO T 180 MODIFIED PROCTOR COMPACTION TEST OR 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T 99 STANDARD PROCTOR COMPACTION TEST. ALL TESTS SHALL BE VERIFIED BY A GEOTECHNICAL ENGINEER CONCURRENT WITH THE GRADING AND BACKFILLING OPERATIONS.
- ALL STORM WATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT.
- WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE REESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION. PERMANENT SOD SHALL BE ESTABLISHED AS SOON AS POSSIBLE.

## GENERAL UTILITY NOTES

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATIONS AND SIZES OF ALL EXISTING UTILITIES, WHETHER SHOWN OR NOT SHOWN IN THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER HAS NOT FIELD VERIFIED THE EXISTING UTILITIES. THE UTILITIES SHOWN ON THESE PLANS HAVE BEEN TAKEN FROM RECORDS AND UTILITY MAPS MADE AVAILABLE TO THE ENGINEER AND THE LOCATIONS AND SIZES SHALL BE CONSIDERED APPROXIMATE ONLY. OTHER UTILITIES, NOT SHOWN ON THIS PLAN, MAY EXIST ON OR NEAR THE PROJECT SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SCHEDULE FOR INSTALLATION WITH THE UTILITY COMPANIES AND THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER. ALL EXISTING CONDITIONS THAT ARE REMOVED OR DISRUPTED DURING THE PLACEMENT OF NEW UTILITIES SHALL BE RESTORED OR REPAIRED TO MATCH ORIGINAL CONDITIONS. ANY EXISTING UTILITIES DISRUPTED DURING PLACEMENT OF NEW UTILITIES SHALL BE REPAIRED AND OPERATING NORMALLY THE SAME DAY OF DISRUPTION. ITEMS THAT NEED TO BE RESTORED OR REPAIRED INCLUDE, BUT ARE NOT LIMITED TO: EXISTING ASPHALT PAVING, EXISTING CONCRETE PAVING, WATER LINES, IRRIGATION LINES, GRASS AREAS, LANDSCAPING, AND SITE LIGHTING. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL EXISTING ITEMS THAT WILL BE DISRUPTED DURING THE PLACEMENT OF NEW UTILITIES AND PROVIDE THE OWNER/DEVELOPER'S CONSTRUCTION MANAGE WITH A DETAILED SCHEDULE OUTLINING THE TIMELINE FOR INSTALLATION OF NEW UTILITIES INCLUDING THE PROPOSED TIMES THAT EXISTING UTILITIES WILL BE DISRUPTED.
- THE NEW UTILITY TRENCH WIDTHS AND DEPTHS SHALL MEET ALL LOCAL AND STATE REQUIREMENTS.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ANY "STUB OUTS" FOR POWER, TELEPHONE, FIBER OPTICS, WATER AND SEWER (IF APPLICABLE) HAVE BEEN PROVIDED BY OTHERS AT THE AREA ADJACENT TO THE SITE BUILDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTIONS AT THE BUILDING.
- PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OF THE DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.
- CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE APPROPRIATE AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS AT LEAST 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
- EXISTING DRAINAGE STRUCTURES AND STORM SEWER PIPES ARE TO BE INSPECTED, REPAIRED AS NEEDED, AND CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- ALL UTILITY EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
- ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF SLOPE PAVING, SIDEWALKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
- SANITARY SEWER PIPE SHALL BE AS FOLLOWS:  

POLYVINYL CHLORIDE PIPE (PVC):	SDR35 PER ASTM D3034 (FOR PIPES LESS THAN 12" DEEP)
POLYVINYL CHLORIDE PIPE (PVC):	SDR26 PER ASTM D3034 (FOR PIPES MORE THAN 12" DEEP)
- ALL SANITARY SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS. SANITARY MANHOLES IN UNPAVED AREAS SHALL BE 12" ABOVE FINISH GRADE WITH WATER TIGHT LIDS.
- WATER LINES SHALL BE AS FOLLOWS:  

PIPE DIAMETERS 1.5" OR LESS	
COPPER (CPR):	TYPE K PER AWWA C800
PIPE DIAMETERS 2" THROUGH 3"	
COPPER (CPR):	TYPE K PER AWWA C800
POLYVINYL CHLORIDE PIPE (PVC):	SDR21 PER ASTM D2241, CLASS 200
PIPE DIAMETERS 4" THROUGH 12"	
POLYVINYL CHLORIDE PIPE (PVC):	DR18 PER AWWA C900 (DOMESTIC SERVICE)
POLYVINYL CHLORIDE PIPE (PVC):	DR14 PER AWWA C900 (FIRE SERVICE IN LIEU OF DIP, WHERE ALLOWED BY LOCAL CODES)
DUCTILE IRON PIPE (DIP):	PRESSURE CLASS 350 PER AWWA C151
PIPE DIAMETERS LARGER THAN 12"	
POLYVINYL CHLORIDE PIPE (PVC):	DR18 PER AWWA C905
DUCTILE IRON PIPE (DIP):	PRESSURE CLASS 250 PER AWWA C151
- ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING.
- ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.

- CONTRACTOR TO RELOCATE LIGHT POLES AND REPLACE LUMINAIRES AS INDICATED. CONTRACTOR TO BUILD NEW POLE BASES AND STUB WIRE AS NEEDED.
- CONTRACTOR SHALL START LAYING PIPE AT DOWNSTREAM STRUCTURE AND WORK UPSTREAM.
- CLEANOUTS SHALL BE LOCATED AT ALL HORIZONTAL AND VERTICAL CHANGES IN DIRECTION OF FLOW IN BUILDING LATERALS AND ANY SANITARY LATERAL OF 100 FEET OR LONGER.
- ALL TRENCHES UNDER AREAS TO BE PAVED, EXISTING PAVED AREAS, OR PUBLIC RIGHT-OF-WAY SHALL BE GRANULARLY BACKFILLED WITH 2 INCH MINUS CRUSHED WHITE ROCK.
- GAS, WATER AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OR HORIZONTAL LOCATION OF EXISTING OR PROPOSED SANITARY AND STORM SEWERS.
- THE CONTRACTOR SHALL PREVENT ALL STORM WATER, SURFACE WATER, MUD AND CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER SYSTEM.
- THE EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- ALL SANITARY FLOW LINES AND TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER SHALL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR.
- ALL SEWER PIPES SHALL HAVE POSITIVE DRAINAGE THROUGH STRUCTURES. NO FLAT INVERT STRUCTURES ARE ALLOWED.
- ANY ABANDONED SEWERS SHALL BE REMOVED OR COMPLETELY GROUT FILLED.

DEVELOPER/OWNER:  
**RED LION BEEF CORPORATION**  
12977 N FORTY DRIVE, SUITE 100  
ST. LOUIS, MO 63141  
(314) 821-8665

CIVIL ENGINEERS  
CORPORATE  
CERTIFICATE  
OF QUALITY  
FOR THE STATE OF MISSOURI  
JOHN F. ARSBERGER  
E-29716  
DATE 9/10/19

**LION'S CHOICE**  
SUMMIT ORCHARD  
440 NW CHIPWAW ROAD  
LEE'S SUMMIT, MO

NOTE SHEET

**ST. LOUIS**  
12977 N FORTY Street  
Suite 100  
St. Louis, MO 63103  
314.584.5887 ext  
www.colestl.com

**COLE**

CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE  
Cole & Associates, Inc. is a Missouri Corporation a.k.a. Cole Design Group, Inc. is a Missouri & Florida limited liability firm a.k.a. "Cole"

DESIGN/CALC BY  
LLW

DRAWN BY  
MAB

CHECKED BY  
CAW

DRAWING SCALE  
AS SHOWN

DATE  
08/29/2019

Job Number  
**18-0136**

Sheet Number  
**C2.0**









ALL IMPROVEMENTS ARE PARALLEL AND PERPENDICULAR TO THE SOUTH AND WEST PROPERTY LINE(S) UNLESS DIMENSIONED OTHERWISE.

2. NEW LION'S CHOICE PROPERTY AREA LIMITS.  
3. NEW LION'S CHOICE BUILDING. REFER TO ARCHITECTURAL PLANS  
4. NEW DUMPSTER ENCLOSURE. REFER TO ARCHITECTURAL PLANS.

5. NEW INTEGRAL CONCRETE CURB (STANDARD SECTION). REFER TO DETAIL ON SHEET C8.0  
6. NEW VERTICAL CONCRETE CURB. REFER TO DETAIL ON SHEET C8.0.  
7. NEW CONCRETE CURB AND GUTTER. REFER TO DETAIL ON SHEET C8.0

NEW ASPHALT PAVEMENT (LIGHT DUTY). REFER TO DETAIL ON SHEET C8.0.  
NEW ASPHALT PAVEMENT (HEAVY DUTY). REFER TO DETAIL ON SHEET C8.0.  
NEW CONCRETE PAVEMENT (HEAVY DUTY). REFER TO DETAIL ON SHEET C8.0.  
NEW CONCRETE PAVEMENT (HEAVY DUTY) WITH DETECTOR LOOP. REFER TO SHEET C8.0 FOR  
CONCRETE PAVEMENT (HEAVY DUTY) DETAIL. REFER TO ARCHITECTURAL PLANS FOR DETECTOR LOOP  
DETAIL.

1. NEW CONCRETE SIDEWALK. REFER TO DETAIL ON SHEET C8.0  
2. NEW CURB RAMP (TYPE A). REFER TO DETAIL ON SHEET C8.0  
2B. NEW CURB RAMP (TYPE B). REFER TO DETAIL ON SHEET C8.0

3. NEW ACCESSIBLE PARKING SIGN. REFER TO DETAIL ON SHEET C8.1.
4. NEW VAN ACCESSIBLE PARKING SIGN. REFER TO DETAIL ON SHEET C8.1.
5. NEW DRIVE-THRU CLEARANCE BAR. REFER TO ARCHITECTURAL PLANS.
6. NEW PREVIEW BOARD. REFER TO ARCHITECTURAL PLANS.
7. NEW MENU BOARD. REFER TO ARCHITECTURAL PLANS.
8. NEW CANOPY AND SPEAKER POST. REFER TO ARCHITECTURAL PLANS.
9. NEW "DRIVE-THRU" SIGN. REFER TO ARCHITECTURAL PLANS.
10. NEW "DO NOT ENTER" SIGN. REFER TO DETAIL ON SHEET C8.1.
11. NEW "STOP" SIGN. REFER TO DETAIL ON SHEET C8.1.

02. NEW PAINTED ACCESSIBLE PARKING SYMBOL. REFER TO DETAIL ON SHEET C8.1.  
03. NEW PAINTED AISLE (BLUE). REFER TO DETAIL ON SHEET C8.1.  
04. NEW PAINTED PARKING SPACE LINE (WHITE). REFER TO DETAIL ON SHEET C8.1.  
05. NEW PAINTED PARKING SPACE LINE (BLUE). REFER TO DETAIL ON SHEET C8.1.  
06. NEW PAINTED STOP BAR LINE (WHITE). REFER TO DETAIL ON SHEET C8.1.  
07. NEW PAINTED TRAFFIC FLOW ARROW. REFER TO DETAIL ON SHEET C8.1.  
08. NEW "DRIVE-THRU" STRIPING AND TRAFFIC FLOW ARROW. REFER TO DETAIL ON SHEET C8.1.  
09. NEW "DO NOT ENTER" STRIPING AND TRAFFIC FLOW ARROW. REFER TO DETAIL ON SHEET C8.1.  
10. (NOT USED).

31. NEW AREA LIGHT. REFER TO PHOTOMETRIC PLANS.
32. NEW LANDSCAPE AREA. REFER TO LANDSCAPE PLANS.
33. INTERNAL DRIVE AISLE BY OTHERS.
34. NEW FLAGPOLE.
35. REPLACE CONCRETE SIDEWALK IN KIND.
36. NEW MONUMENT SIGN.

TOTAL FLOOR AREA	=	2,311 SQFT	
TOTAL LOT AREA	=	39,248 SQFT	
FLOOR AREA RATIO	=	2,311/39,248	=0.059
TOTAL IMPERVIOUS AREA	=	24,758 SQFT	

LAND USE	VACANT / UNDEVELOPED LOT
EXISTING	LION'S CHOICE RESTAURANT
PROPOSED	

USE CATEGORY	14 SPACE PER 1,000 S.F. GROSS FLOOR AREA
GROSS FLOOR AREA	2,311 S.F.
CALCULATION	$(14 \text{ SPACE}/1000 \text{ S.F.}) * (2,311 \text{ S.F.}) = 32.4 \text{ SPACES}$

26 TO 50 STANDARD SPACES      2 ACCESSIBLE SPACES  
VAN ACCESSIBLE REQUIREMENT      1 VAN ACCESSIBLE SPACE FOR EVERY 6 ACCESSIBLE SPACES

SPACES REQUIRED (TOTAL) 33 SPACES

SPACES PROVIDED (STANDARD)	31 SPACES
SPACES PROVIDED (ACCESSIBLE)	<u>2 SPACES (1 VAN ACCESSIBLE)</u>
SPACES PROVIDED (TOTAL)	33 SPACES

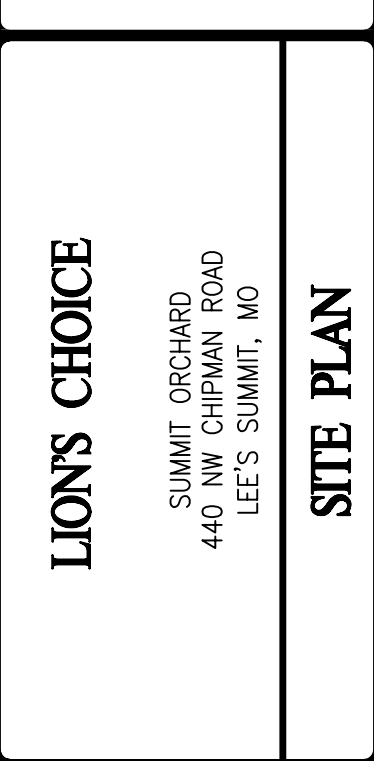
SPACES REQUIRED: 4 BEHIND THE MENU BOARD AND 4 IN FRONT OF THE MENU BOARD TO THE PICKUP WINDOW.

SPACES PROVIDED: 8 BEHIND THE MENU BOARD AND 4 IN FRONT OF THE MENU BOARD TO THE PICKUP WINDOW

**SETBACKS**

FRONT	=	15'
SIDE	=	0'
REAR	=	0'

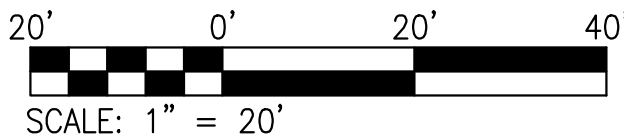
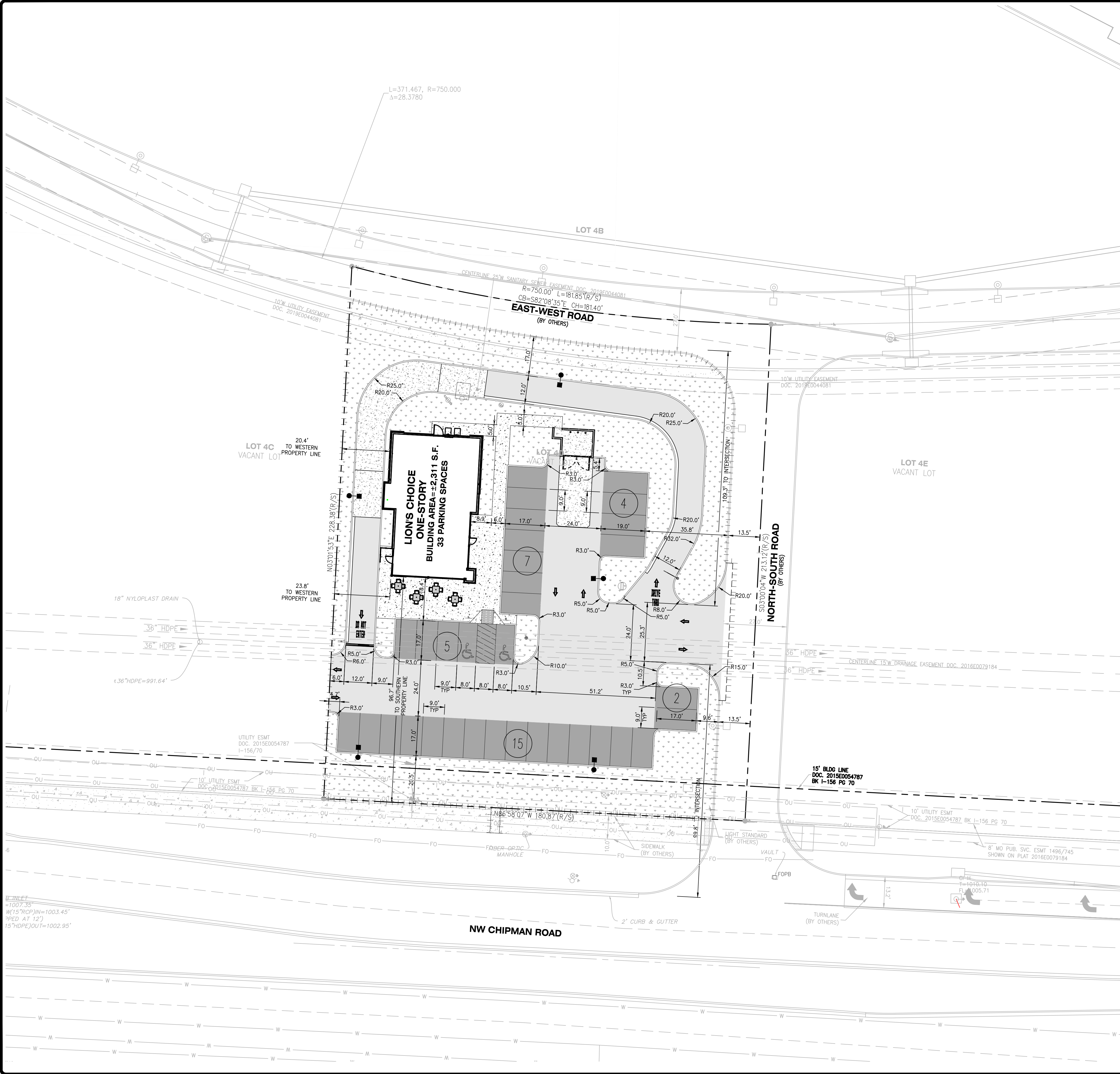
**DEVELOPER/OWNER:**  
**RED LION BEEF CORPORATION**  
**12977 N FORTY DRIVE, SUITE 100**  
**ST. LOUIS MO 63141**  
**(314) 821-8665**



DESIGN/CALC BY	LLW
DRAWN BY	MAB
CHECKED BY	CAW
DRAWING SCALE	AS SHOWN
DATE	08/29/2019
<i>Job Number</i> <b>18-0136</b>	
<i>Sheet Number</i> <b>C4.0</b>	



USER: Lance Whitaker TAB: C4.1  
DATE: September 10, 2019 -- 9:29:37 AM  
DRAWING: S:\JOBS\Jobs2018\18-0136\CAD\G-Plan\PlotSheets\O_Plan_Site_18-0136.dwg



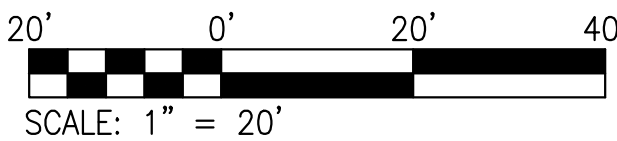
DESIGN/CALC BY LLW	
DRAWN BY MAB	
CHECKED BY CAW	
DRAWING SCALE AS SHOWN	
DATE 08/29/2019	
Job Number 18-0136	
Sheet Number C4.1	

+ ST. LOUIS 1111 South Street Suite 200 St. Louis, MO 63103 314.584.5887 tel www.coilesti.com		COILE CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE <small>Coile &amp; Associates, Inc. is a Missouri Corporation and Coile Design Group, Inc. is a Delaware &amp; Texas limited liability company.</small>	
LION'S CHOICE SUMMIT ORCHARD 440 NW CHIPMAN ROAD LEE'S SUMMIT, MO		HORIZONTAL CONTROL PLAN	
CIVIL ENGINEERS CORPORATE LICENSE JOHN F. HARBIGER E-29716 PE MOE-2018 DATE 9/10/19		DEVELOPER/OWNER: RED LION BEEF CORPORATION 12977 N FORTY DRIVE, SUITE 100 ST. LOUIS, MO 63141 (314) 821-8665	
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON IS NOT BEING USED FOR ANY OTHER PROJECTS AND THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. THIS DRAWING IS NOT TO BE USED FOR ANY OTHER PROJECTS WITHOUT THE WRITTEN CONSENT OF THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON.		DATE NO REVISION DESCRIPTION	





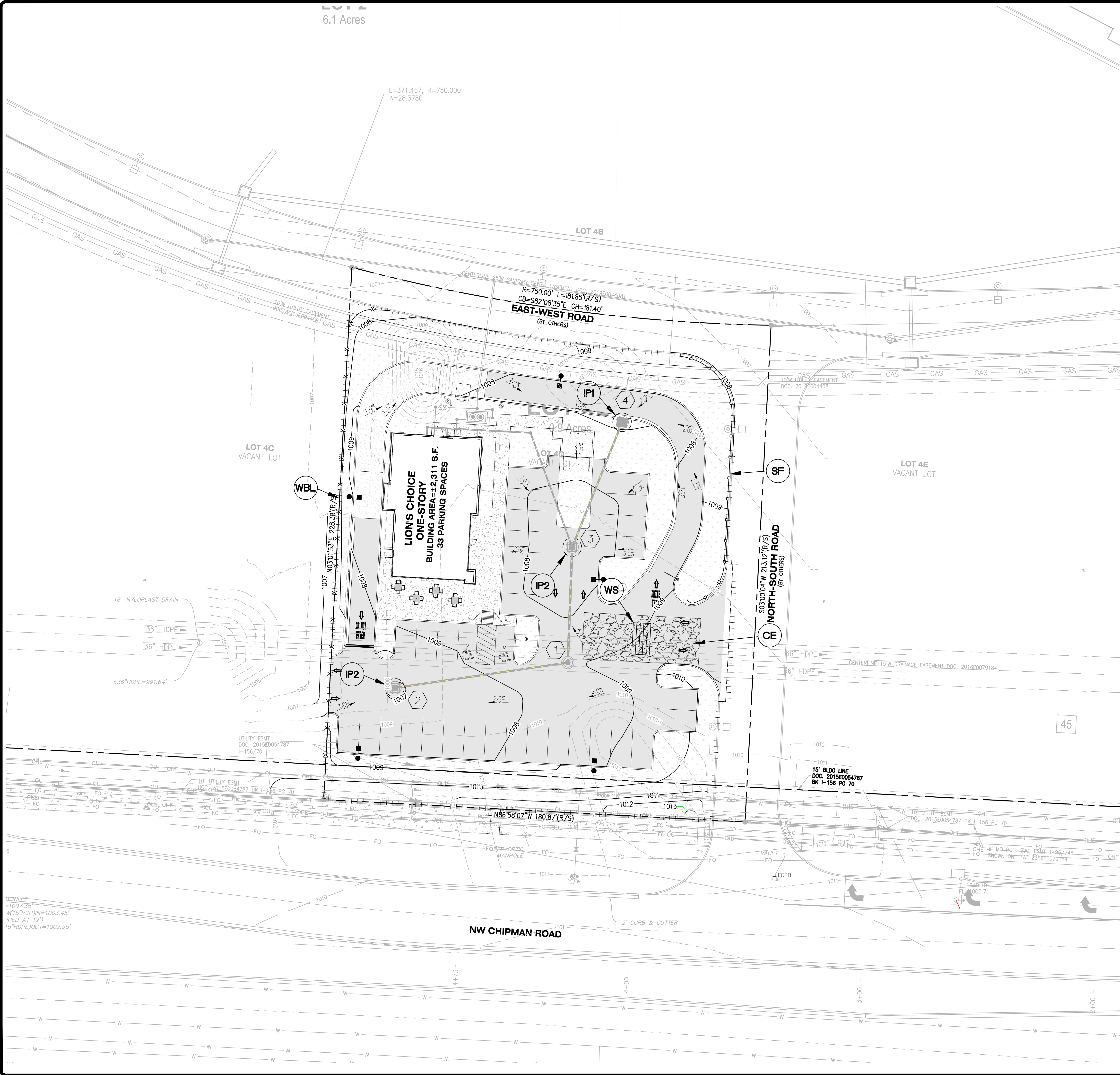




32. THE CONTRACTOR SHALL MAINTAIN 18" MINIMUM VERTICAL CLEARANCE AT ALL UTILITY CROSSINGS.  
33. REMOVE AND REPLACE EXISTING SIDEWALK IN KIND AS NECESSARY TO INSTALL THE PROPOSED UTILITIES.

DESIGN/CALC BY	LLW
DRAWN BY	MAB
CHECKED BY	CAW
DRAWING SCALE	AS SHOWN
DATE	08/29/2019
Job Number <b>18-0136</b>	
Sheet Number <b>C6.0</b>	





EROSION CONTROL LEGEND		
LABEL	SYMBOL	DESCRIPTION
LD	.....	LIMITS OF DISTURBANCE
CE		CONSTRUCTION ENTRANCE - APWA (REFER TO DETAIL ON SHEET C7.2)
IP1		CURB INLET PROTECTION - APWA (REFER TO DETAIL ON SHEET C7.2)
IP2		INLET PROTECTION - DANDY BAG (REFER TO DETAIL ON SHEET C7.2)
PS		PERMANENT SEEDING / SODDING (REFER TO SUMMARY ON SHEET C7.2)
SF		SILT FENCE - APWA (REFER TO DETAIL ON SHEET C7.2)
WBL		WATTLES / BIODEGRADABLE LOG - APWA (REFER TO DETAIL ON SHEET C7.2)
WS		WASHDOWN STATION - APWA (REFER TO DETAIL ON SHEET C7.2)

DEVELOPER / OWNER:  
**RED LION BEEF CORPORATION**  
12977 N FORTY DRIVE, SUITE 100  
ST. LOUIS, MO 63141  
(314) 821-8665

CIVIL ENGINEERS  
CORPORATE  
LICENSE  
STATE OF MISSOURI  
JOHN F. HARBARGER  
E-29716  
DATE 9/10/19

ST. LOUIS  
4500 S. GARDEN STREET  
SUITE 200  
ST. LOUIS, MO 63103  
314.584.5887  
WWW.COLESTL.COM

CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE  
Cole & Associates, Inc. is a Missouri Corporation and a Missouri Professional Engineer in the State of Missouri.

LION'S CHOICE  
SUMMIT ORCHARD  
440 NW CHIPMAN ROAD  
LEE'S SUMMIT, MO

EROSION CONTROL PLAN

DESIGN/CALC BY  
LLW

DRAWN BY  
MAB

CHECKED BY  
CAW

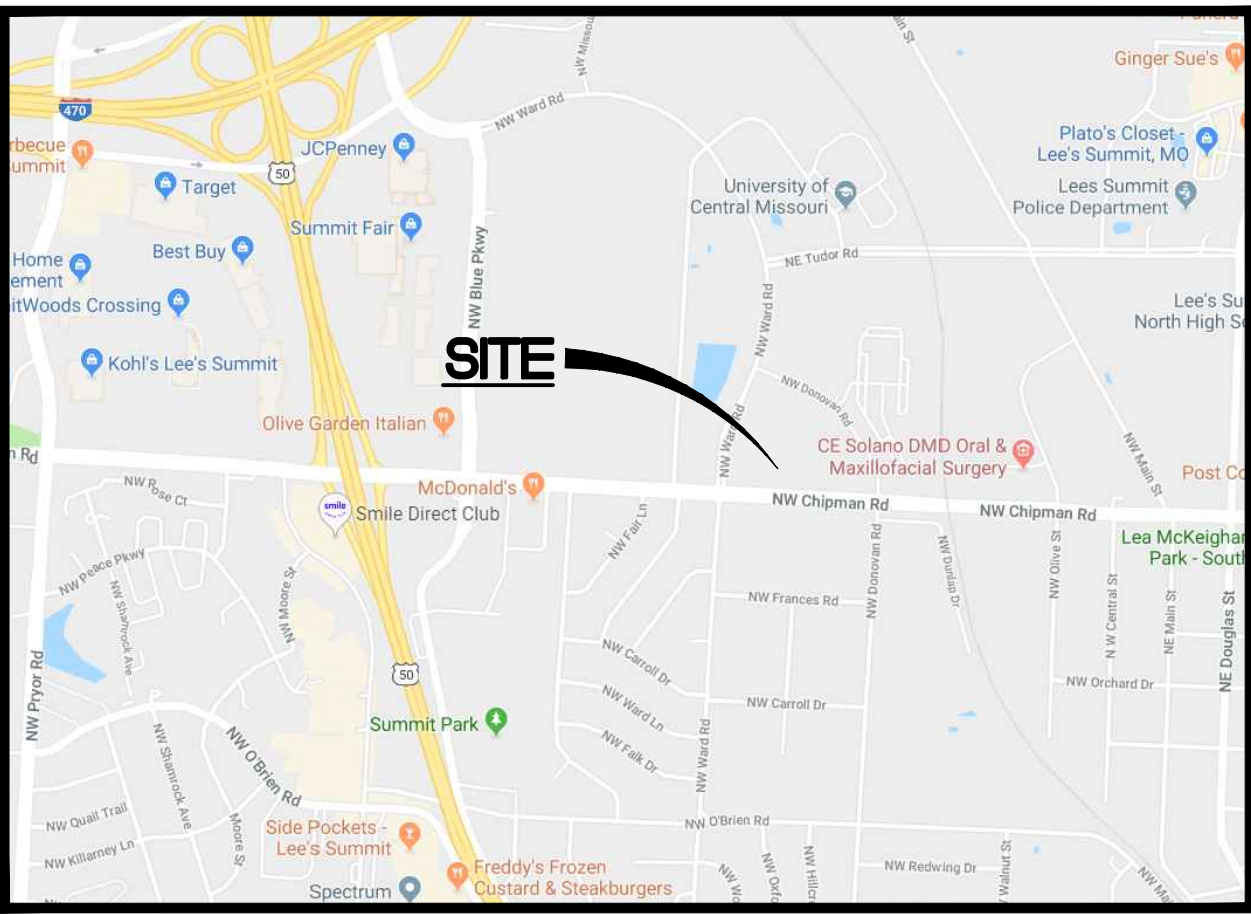
DRAWING SCALE  
AS SHOWN

DATE  
08/29/2019

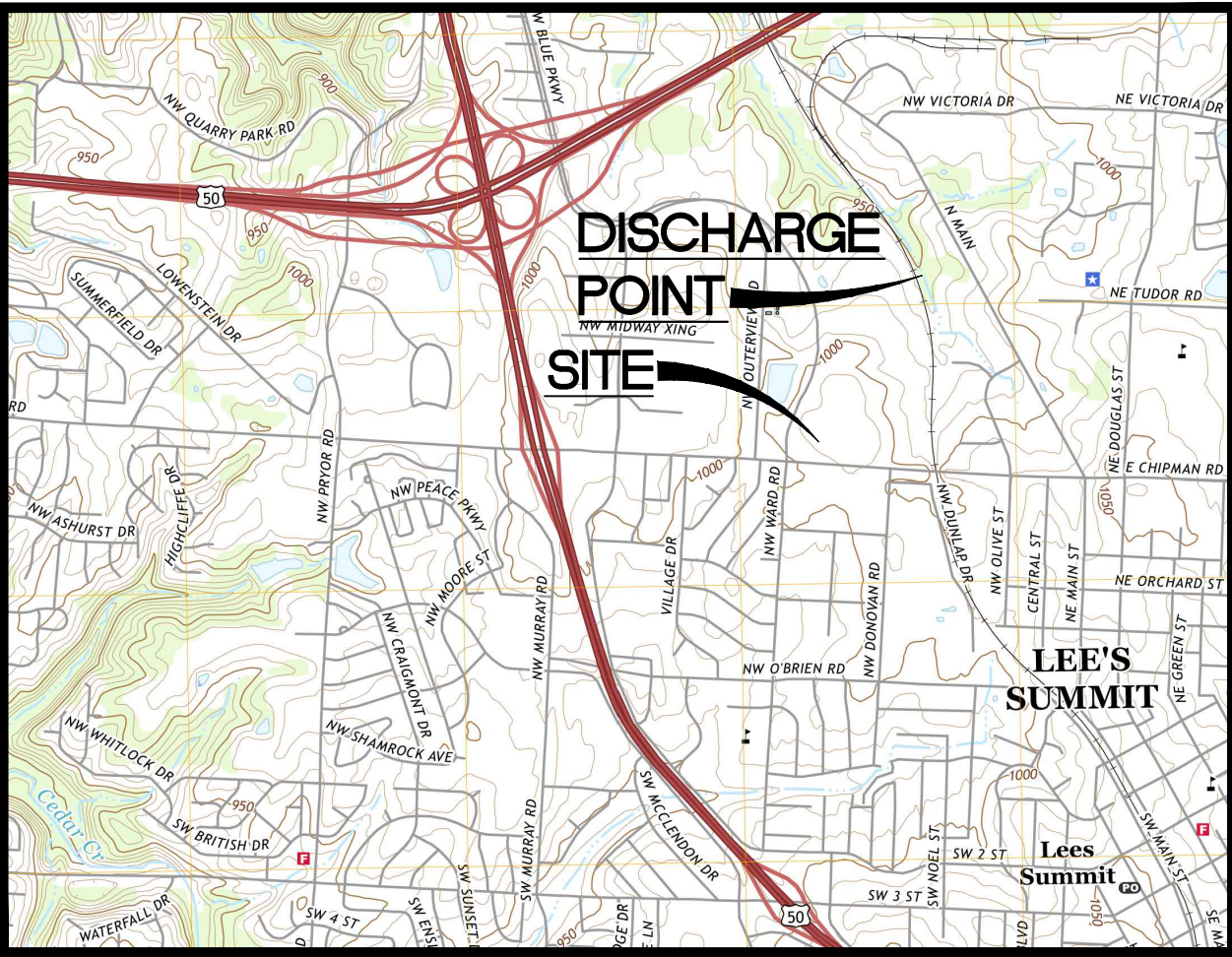
Job Number  
18-0136

Sheet Number  
C7.0

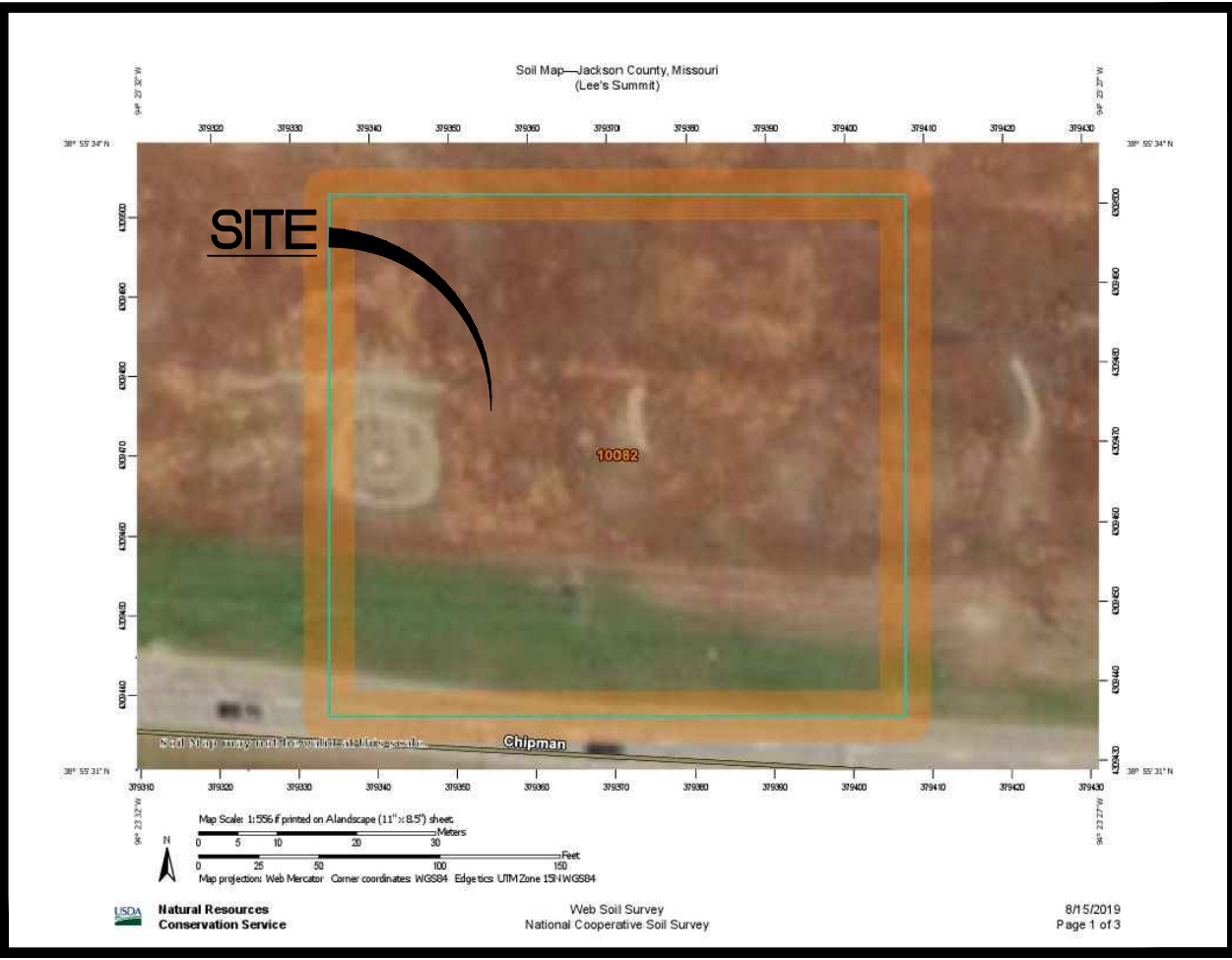




**LOCATION MAP**  
(NOT TO SCALE)



**USGS MAP**  
(NOT TO SCALE)



**SOILS MAP**  
(NOT TO SCALE)

**Map Unit Legend**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
10082	Arlsburg-Urban land complex, 1 to 5 percent slopes	1.2	100.0%
<b>Totals for Area of Interest</b>		<b>1.2</b>	<b>100.0%</b>

**SOILS MAP KEY**  
(NOT TO SCALE)

**EROSION CONTROL CONTACT DATA**

SITE ADDRESS	440 NW CHIPMAN ROAD LEE'S SUMMIT, MO 64063
OWNER	LION'S CHOICE 12977 NORTH FORTY DRIVE ST. LOUIS, MO 63141
EMERGENCY CONTACT	TBD
SITE OPERATOR	TBD

**EROSION CONTROL SITE DATA**

TOTAL SITE AREA	0.90 ACRES
ON-SITE DISTURBED AREA	0.78 ACRES
OFF-SITE DISTURBED AREA	0.00 ACRES
TOTAL DISTURBED AREA	0.78 ACRES
RUNOFF COEFFICIENT (IMPERVIOUS AREA)	0.90
RUNOFF COEFFICIENT (PERVIOUS AREA)	0.30
IMPERVIOUS AREA (PRE-DEVELOPED)	0.14 ACRES
PERVIOUS AREA (PRE-DEVELOPED)	0.76 ACRES
RUNOFF COEFFICIENT (PRE-DEVELOPED)	0.39
IMPERVIOUS AREA (POST-DEVELOPED)	0.58 ACRES
PERVIOUS AREA (POST-DEVELOPED)	0.32 ACRES
RUNOFF COEFFICIENT (POST-DEVELOPED)	0.69

**EROSION CONTROL SEQUENCE**

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S) AND SWPPP INFORMATION SIGN.
2. INSTALL SILT FENCE(S) AND WATTLES/ BIODEGRADABLE LOG(S) ON THE SITE (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE).
3. PREPARE TEMPORARY PARKING AND STORAGE AREA.
4. HALT ALL ACTIVITIES AND OBTAIN ANY AND ALL REQUIRED INITIAL BMP INSPECTIONS BEFORE PROCEEDING WITH CONSTRUCTION.
5. INSTALL AND STABILIZE ANY HYDRAULIC CONTROL STRUCTURES (DIKES, SWALES, CHECK DAMS, ETC.).
6. BEGIN CLEARING AND GRUBBING THE SITE.
7. BEGIN GRADING THE SITE.
8. START CONSTRUCTION OF THE BUILDING PAD AND ACCESSORY STRUCTURES.
9. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
10. INSTALL BUILDING AND ACCESSORY STRUCTURES.
11. INSTALL PIPING, UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
12. INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES AS EACH INLET STRUCTURE IS INSTALLED.
13. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
14. PREPARE SITE FOR PAVING.
15. PAVE SITE.
16. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES.
17. COMPLETE GRADING AND INSTALL PERMANENT STABILIZATION OVER ALL AREAS.
18. OBTAIN CONCURRENCE FROM THE OWNER/DEVELOPER'S DESIGNATED REPRESENTATIVE (AS APPROPRIATE) THAT THE SITE HAS BEEN FULLY STABILIZED.
19. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
20. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF BMP'S.
21. OBTAIN ANY AND ALL REQUIRED FINAL BMP INSPECTIONS.

**EROSION CONTROL NOTES**

1. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ("SITE MAP"), THE STANDARD DETAILS, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
3. THE GENERAL CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
4. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE GENERAL CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
5. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
6. THE GENERAL CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
7. THE GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERM ON DOWN STREAM SIDES IN COMPLIANCE WITH THIS SWPPP.
8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
10. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
12. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
13. ALL DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE MUST BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES, STRAW/HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKETS AS SHOWN ON SITE MAP.
14. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE PLANS. THESE AREAS SHALL BE SEED, SODDED, AND/OR VEGETATED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
15. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OF MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.
16. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
17. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
18. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
19. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
20. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTION DISCHARGE.
21. SEE SITE PLAN FOR PERMANENT AND TEMPORARY SIGNAGE.
22. GENERAL CONTRACTOR IS TO DESIGNATE/IDENTIFY AREAS ON THE SITE MAPS, INSIDE OF THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.
23. REFER TO THE APPLICABLE NPDES PERMIT FOR REPORTABLE SPILL QUANTITIES OF PETROLEUM PRODUCTS AND/OR HAZARDOUS WASTES.
24. GENERAL CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.
25. ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE CONSTRUCTION SITE BY USING THE DESIGNATED ENTRANCE OVERLAID WITH GRAVEL.
26. NO CONSTRUCTION MATERIALS OR EQUIPMENT CAN BE STORED ON ADJACENT PROPERTIES.
27. NO COMBUSTIBLE RUBBISH SHALL ACCUMULATE ON THE CONSTRUCTION SITE. ALL COMBUSTIBLE RUBBISH MUST BE REMOVED DAILY AND SHALL NOT BE DISPOSED OF BY BURNING.
28. THE GENERAL CONTRACTOR SHALL MAINTAIN THE SILTATION CONTROL DEVICES SO AS TO PREVENT SILT FROM BYPASSING THEM AND DISTURBED AREAS SHALL BE ADEQUATELY RE-VEGETATED.
29. ALL GRADED AREAS SHALL BE PROTECTED FROM EROSION BY EROSION CONTROL DEVICES AND/OR SEEDING AND MULCHING. EROSION CONTROL SHALL NOT BE LIMITED TO WHAT IS SHOWN ON THE PLAN. WHATEVER MEANS NECESSARY SHALL BE TAKEN TO PREVENT SILTATION AND EROSION FROM ENTERING NATURAL STREAMS AND ADJACENT ROADWAYS, PROPERTIES AND DITCHES.
30. WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 30 DAYS, PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED.

**BMP MAINTENANCE NOTES**

- ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
  2. ALL SEEDDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDDED AS NEEDED.
  3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
  4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
  5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
  6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
  7. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

DEVELOPER/OWNER:  
**RED LION BEEF CORPORATION**  
12977 N FORTY DRIVE, SUITE 100  
ST. LOUIS, MO 63141  
(314) 821-8665

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON HAS REVIEWED THIS DRAWING AND CERTIFIES THAT IT COMPLIES WITH THE REQUIREMENTS OF THE MISSOURI PROFESSIONAL ENGINEERING ACT AND THE MISSOURI PROFESSIONAL LANDSCAPE ARCHITECTURE ACT. ANY PERSONS OR FIRMS WHOSE NAMES OR LOGOS APPEAR ON THIS DRAWING ARE NOT BEING RECOMMENDED BY THE ENGINEER OR LANDSCAPE ARCHITECT. THE ENGINEER OR LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING OR FOR ANY DAMAGE TO PERSONS OR PROPERTY THAT MAY BE CAUSED BY THE USE OF THIS DRAWING.

CIVIL ENGINEERS  
CORPORATE  
SEAL  
JOHN F. LARSEN  
E-29716  
MISSOURI PROFESSIONAL ENGINEERING BOARD  
MISSOURI PROFESSIONAL LANDSCAPE ARCHITECTURE BOARD  
JULY 1, 2018  
JULY 1, 2018

JOHN F. LARSEN  
E-29716  
MISSOURI PROFESSIONAL ENGINEERING BOARD  
MISSOURI PROFESSIONAL LANDSCAPE ARCHITECTURE BOARD  
JULY 1, 2018  
JULY 1, 2018

LION'S CHOICE  
SUMMIT ORCHARD  
440 NW CHIPMAN ROAD  
LEE'S SUMMIT, MO

EROSION CONTROL NOTES

+ ST. LOUIS  
©  
**cole**  
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE  
Cole & Associates, Inc. is a Missouri Corporation and a Civil Design Studio, Inc. is a Missouri & Texas limited liability company.

DESIGN/CALC BY  
LLW

DRAWN BY  
MAB

CHECKED BY  
CAW

DRAWING SCALE  
AS SHOWN

DATE  
08/29/2019

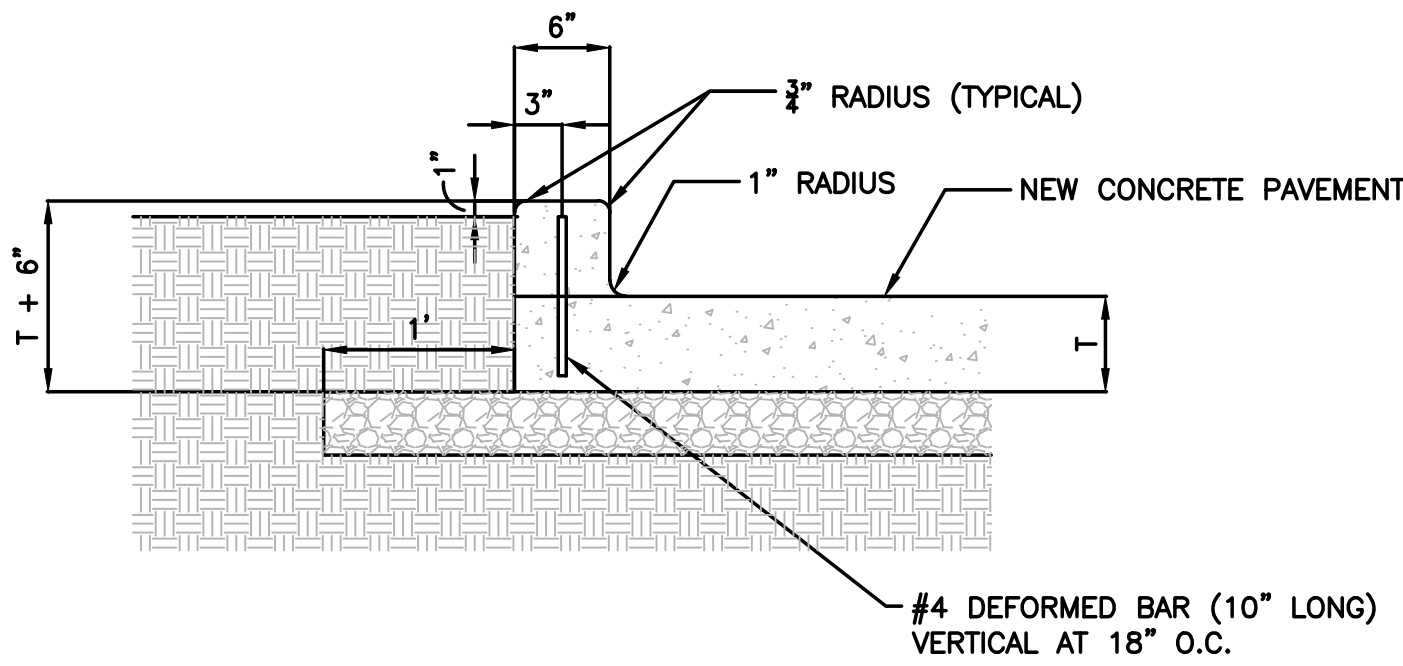
Job Number  
18-0136

Sheet Number  
C7.1





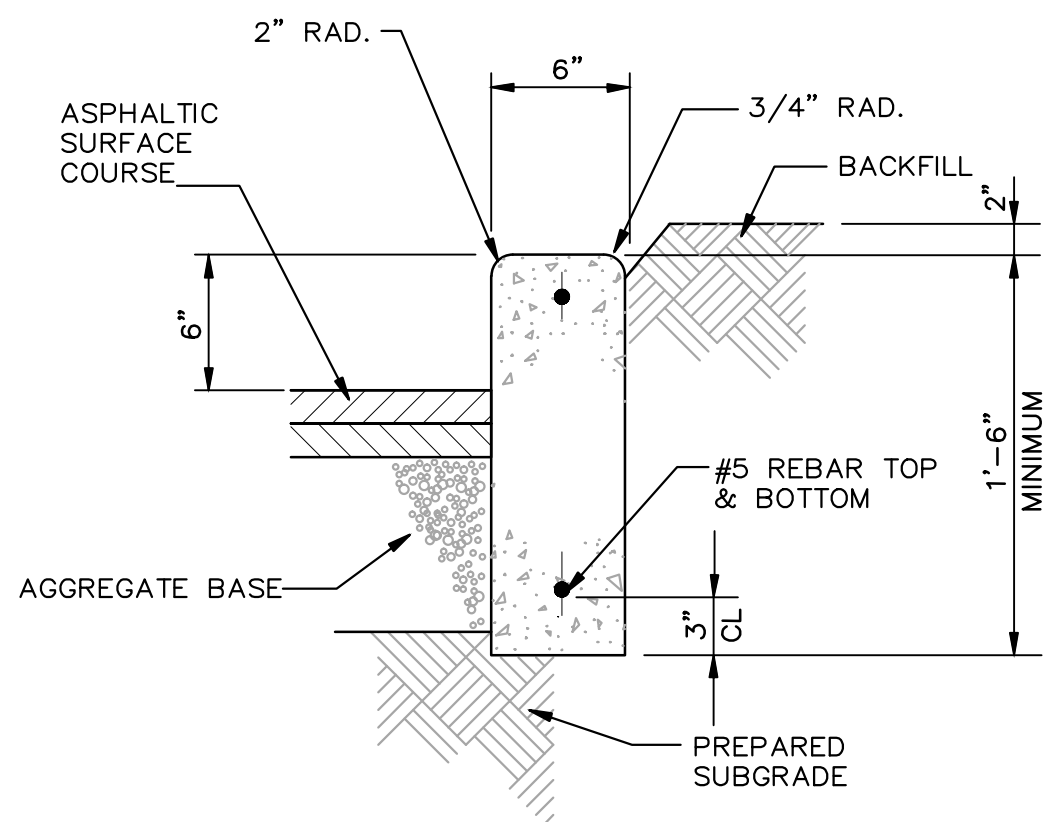




- DETAIL NOTES:**
1. COMPACT AGGREGATE BASE COURSE TO 95% MODIFIED PROCTOR PER ASTM D-1557.
  2. COMPACT PREPARED EARTH SUBGRADE TO 90% OR GREATER OF MAXIMUM DRY DENSITY PER ASTM D-1557.
  3. IF CURB IS POURED INTEGRAL WITH PAVEMENT, THEN DOWEL BAR AND CONSTRUCTION JOINT MAY BE OMITTED.
  4. CONTINUE ALL PAVEMENT JOINTS THROUGH CURB.

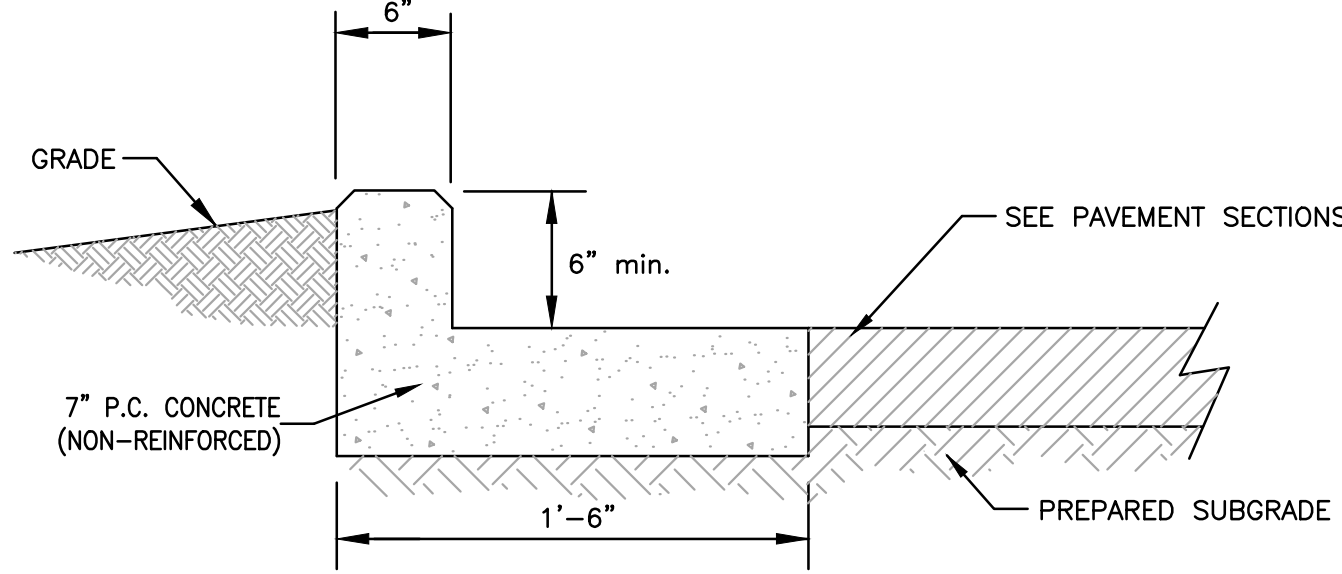
### 1 INTEGRAL CONCRETE CURB DETAIL (STANDARD SECTION)

SCALE: N.T.S. REF. DWG. C4.0



### 2 VERTICAL CONCRETE CURB DETAIL

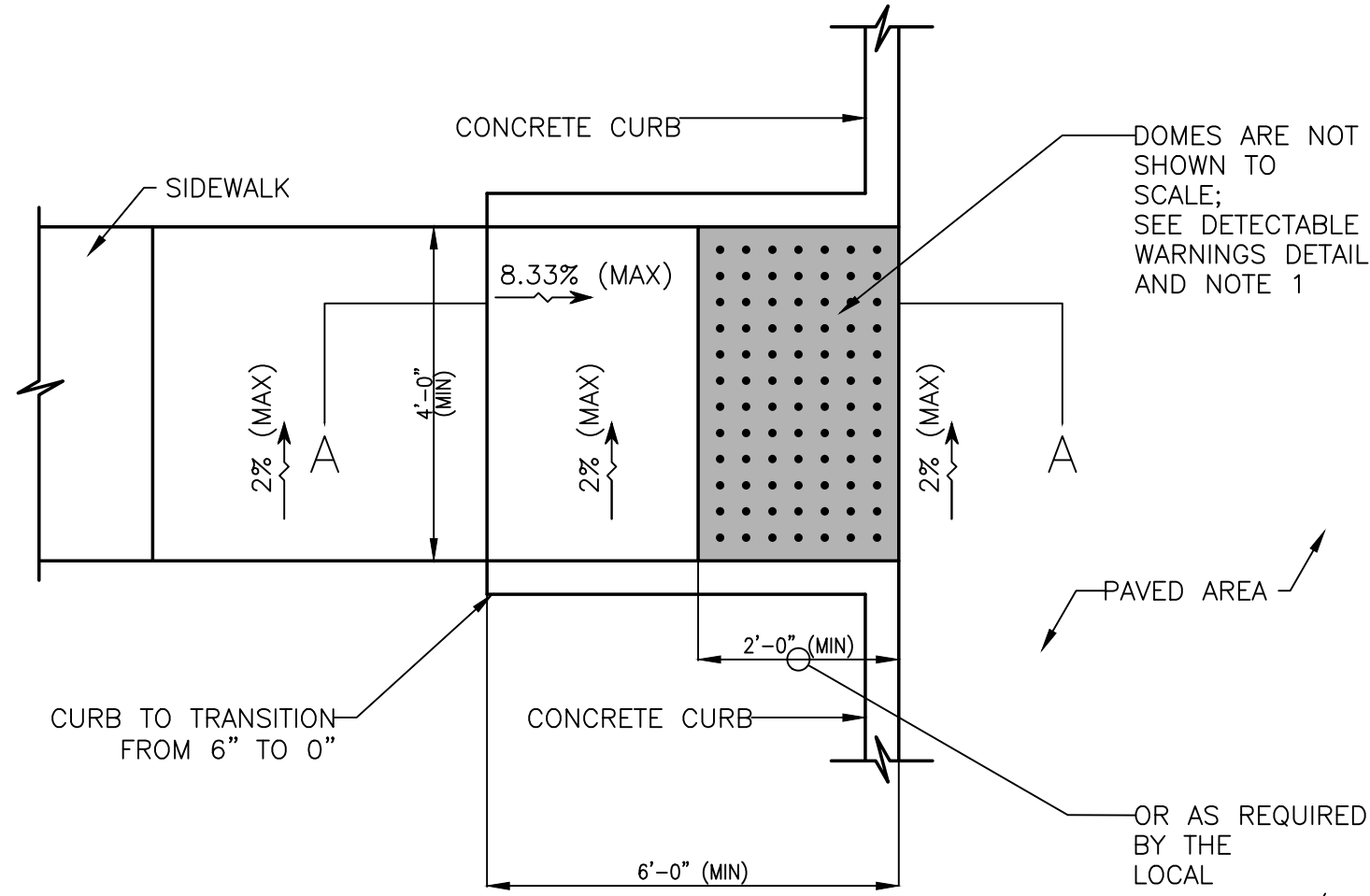
SCALE: N.T.S. REF. DWG. C4.0



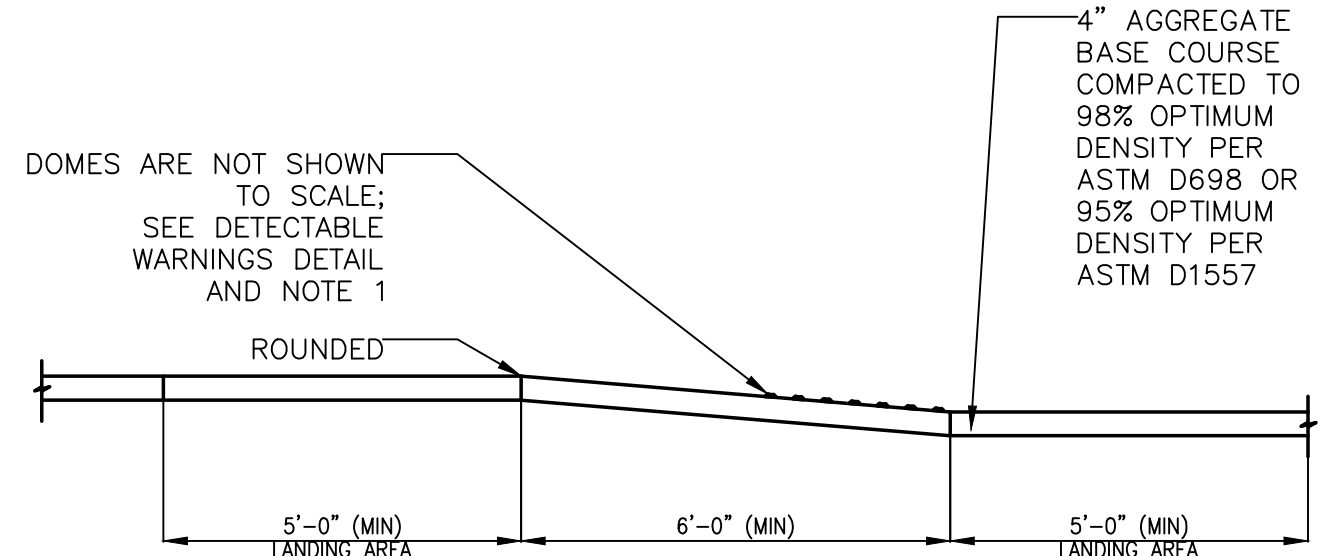
- NOTES:**
1. ALL CONCRETE SHALL BE MIN. FC.=4,000 P.S.I. (UNLESS OTHERWISE NOTED).
  2. ANY UNSUITABLE SOIL (AS DETERMINED BY SOILS ENGINEER) BELOW STRUCTURE SHALL BE REMOVED AND REPLACED WITH SELECT EARTHEN MATERIAL COMPACTED IN PLACE WITH VIBRATORY TAMPER.
  3. ALL EXPOSED CONCRETE EDGES TO HAVE 3/4" CHAMFER.
  4. DIMENSIONS SHOWN ARE TO FACE OF CURB.

### 3 CONCRETE CURB & GUTTER DETAIL

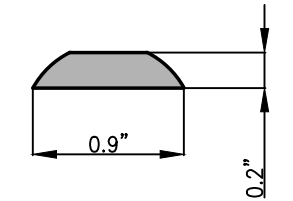
SCALE: N.T.S. REF. DWG. C4.0



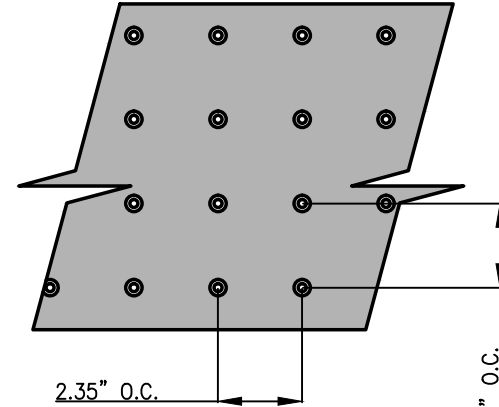
### PLAN - STRAIGHT



### SECTION A-A



### ELEVATION



### PLAN

#### DETAIL NOTE:

PREFABRICATED PANELS PER A.D.A. ACCESSIBILITY GUIDELINES SECTION 4.29.2 & A4.29.2 SHALL BE USED.

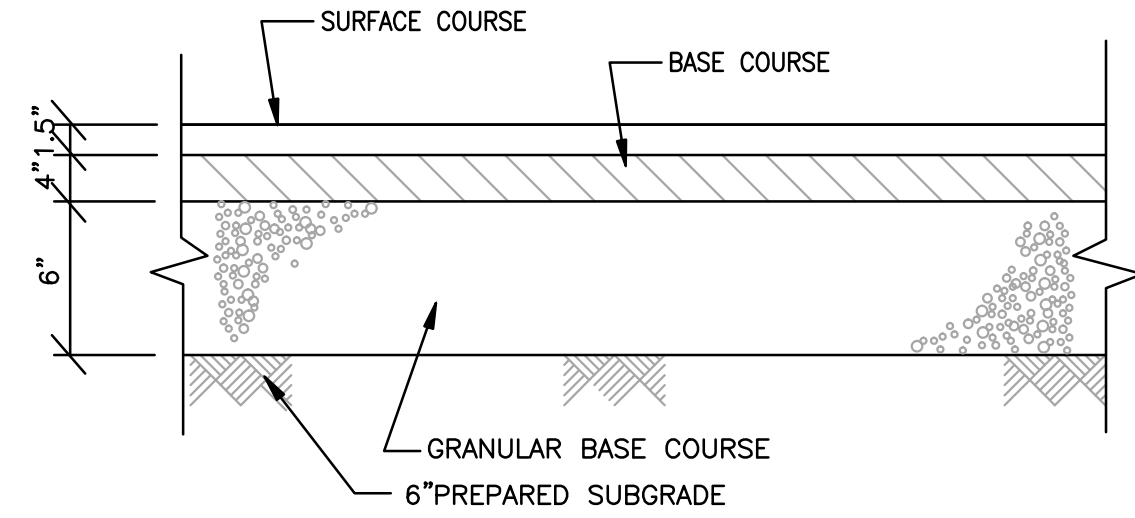
### DETECTABLE WARNING DETAIL

#### DETAIL NOTES:

1. THE SURFACE OF RAMP SHALL HAVE DETECTABLE WARNINGS AS SHOWN. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES. SEE DETECTABLE WARNINGS DETAIL.
2. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 10% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
3. CONSTRUCT PER A.D.A. STANDARDS.
4. REFER TO PLANS FOR ADJACENT SLOPES.
5. THE CROSS SLOPE OF THE RAMP SURFACE SHALL BE NO GREATER THAN 1:50.

### 10 CURB RAMP (TYPE B) DETAIL

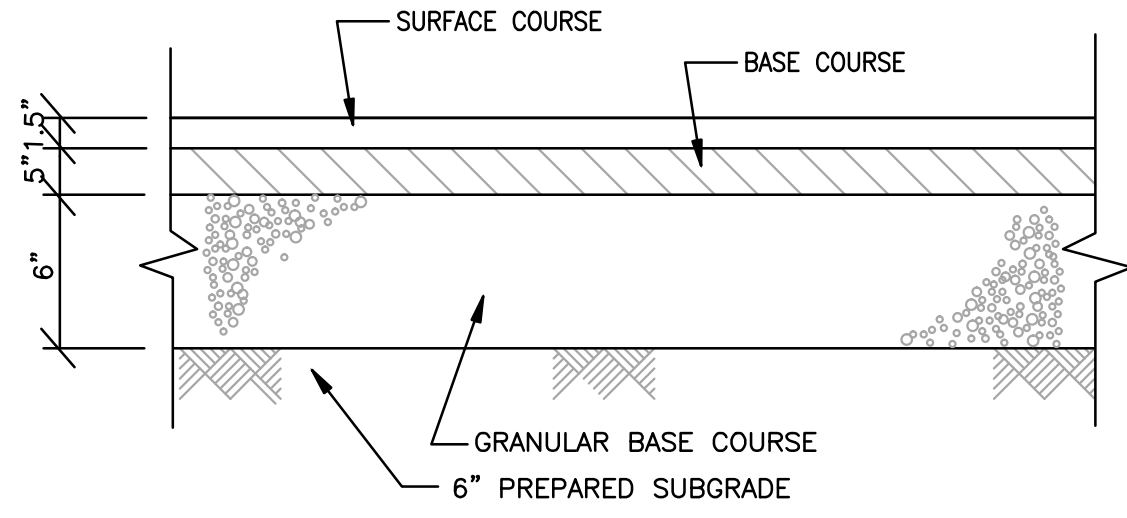
SCALE: N.T.S. REF. DWG. C4.0



**NOTE:**  
PAVEMENT DETAILS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY FINAL PAVEMENT REQUIREMENTS WITH GEOTECH REPORT AND/OR OWNER.

### 4 ASPHALT PAVEMENT (LIGHT DUTY)

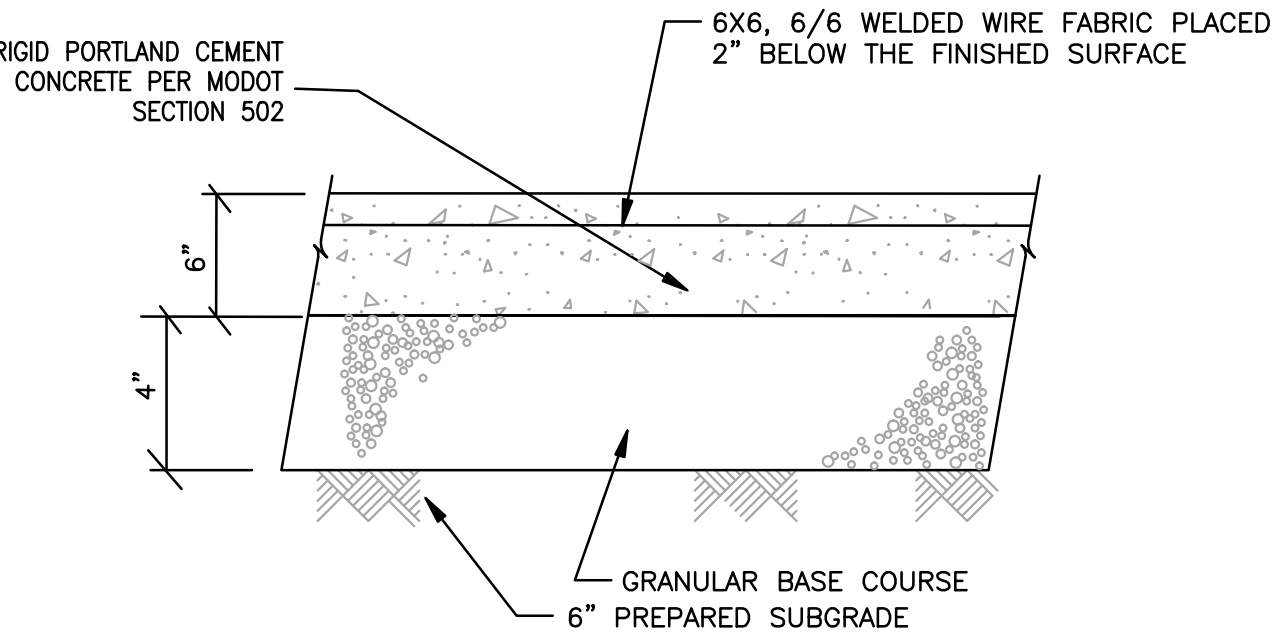
SCALE: N.T.S. REF. DWG. C4.0



**NOTE:**  
PAVEMENT DETAILS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY FINAL PAVEMENT REQUIREMENTS WITH GEOTECH REPORT AND/OR OWNER.

### 5 ASPHALT PAVEMENT (HEAVY DUTY)

SCALE: N.T.S. REF. DWG. C4.0

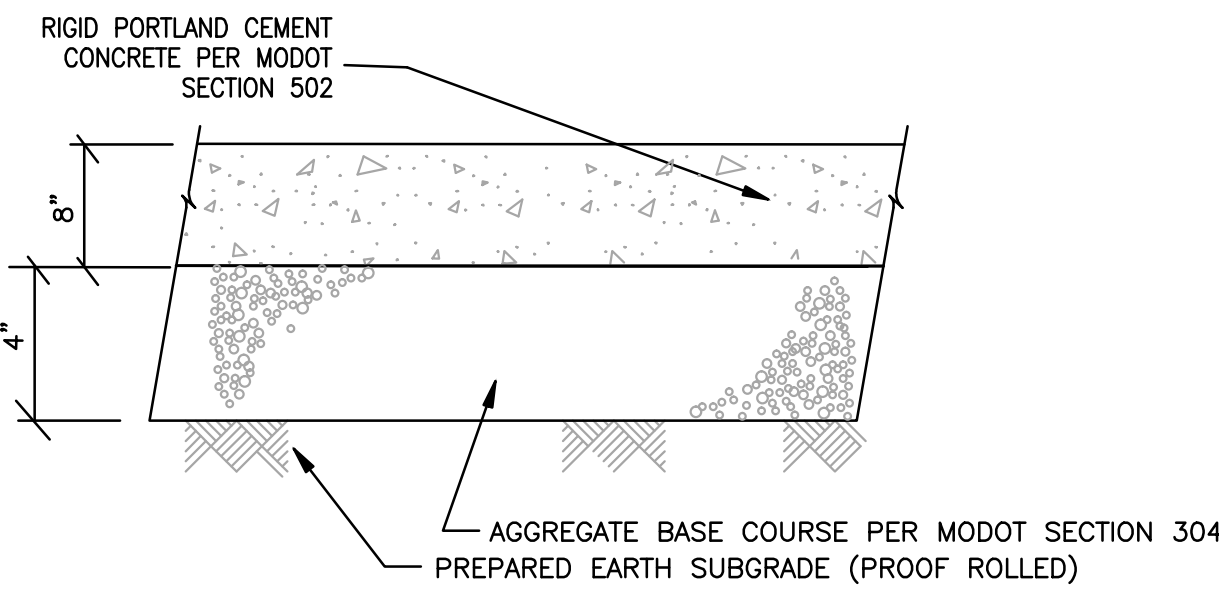


**NOTE:**  
PAVEMENT DETAILS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY FINAL PAVEMENT REQUIREMENTS WITH GEOTECH REPORT AND/OR OWNER.

CONTRACTOR TO INSTALL CONCRETE PAVEMENT JOINTS PER THE AMERICAN CONCRETE INSTITUTES "GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS"

### 6 CONCRETE PAVEMENT (HEAVY DUTY)

SCALE: N.T.S. REF. DWG. C4.0

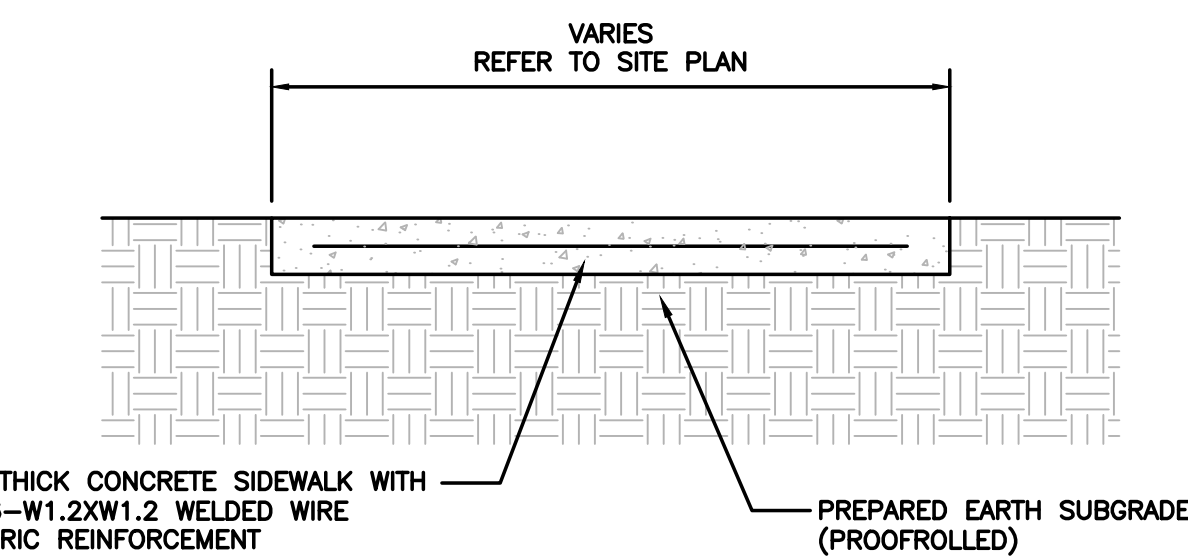


**NOTE:**  
PAVEMENT DETAILS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY FINAL PAVEMENT REQUIREMENTS WITH GEOTECH REPORT AND/OR OWNER.

CONTRACTOR TO INSTALL CONCRETE PAVEMENT JOINTS PER THE AMERICAN CONCRETE INSTITUTES "GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS"

### 7 CONCRETE PAVEMENT (HEAVY DUTY) WITH DETECTOR LOOP

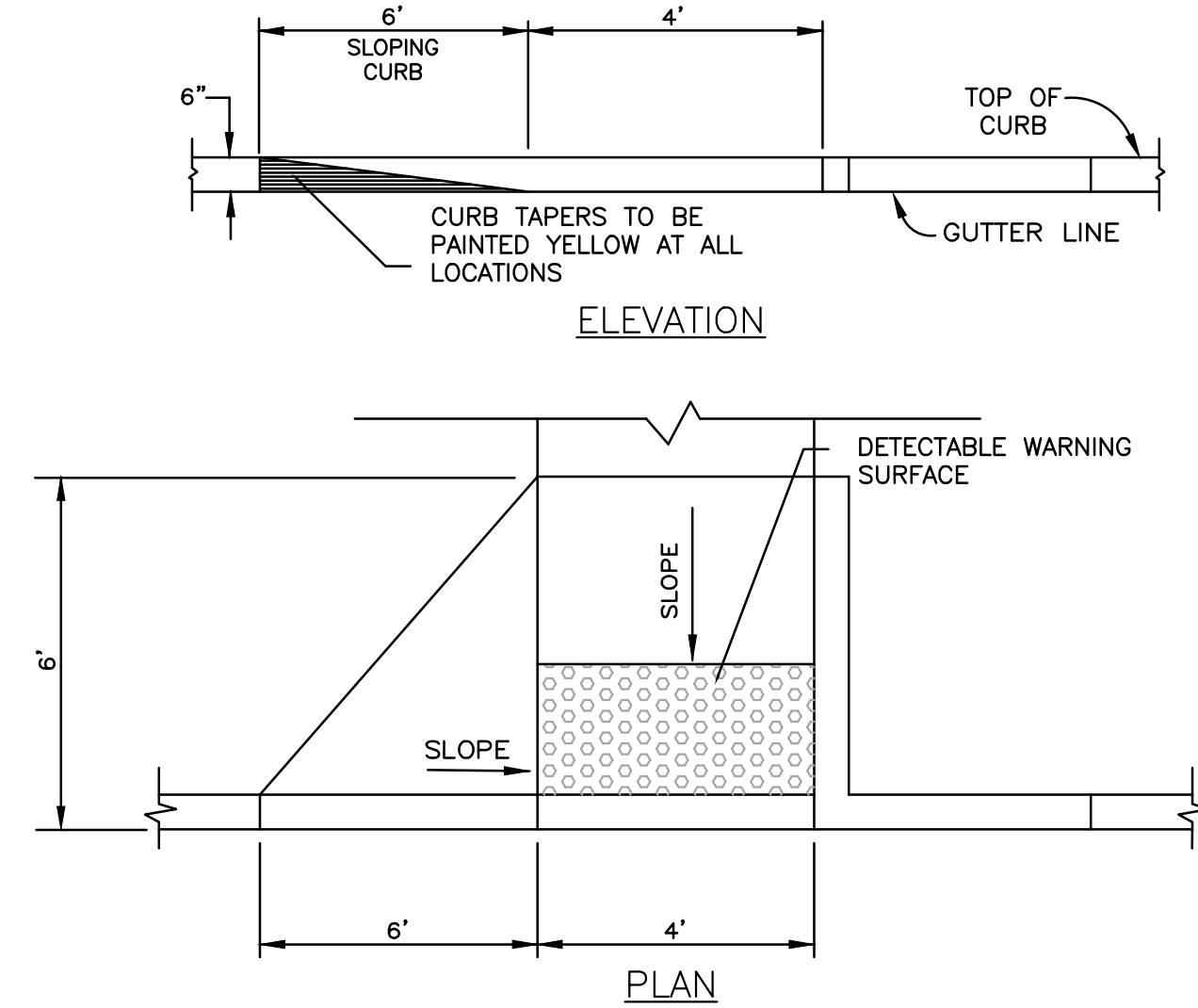
SCALE: N.T.S. REF. DWG. C4.0



- DETAIL NOTES:**
1. PROVIDE 1/4" PREMOLDED EXPANSION JOINT FILLER AT 60' CENTERS.
  2. PROVIDE TOOLED CONTRACTION JOINTS AT 10' CENTERS.

### 8 CONCRETE SIDEWALK DETAIL

SCALE: N.T.S. REF. DWG. C4.0



**NOTE:** MAINTAIN 4" SIDEWALK THICKNESS IN DEPRESSED AREA.

### 9 CURB RAMP (TYPE A) DETAIL

SCALE: N.T.S. REF. DWG. C4.0

DEVELOPER/OWNER:  
**RED LION BEEF CORPORATION**  
12977 N FORTY DRIVE, SUITE 100  
ST. LOUIS, MO 63141  
(314) 821-8665

CIVIL ENGINEERS  
CORPORATE  
SEAL  
JOHN F. HARBARGER  
E-29716  
DATE 9/10/19

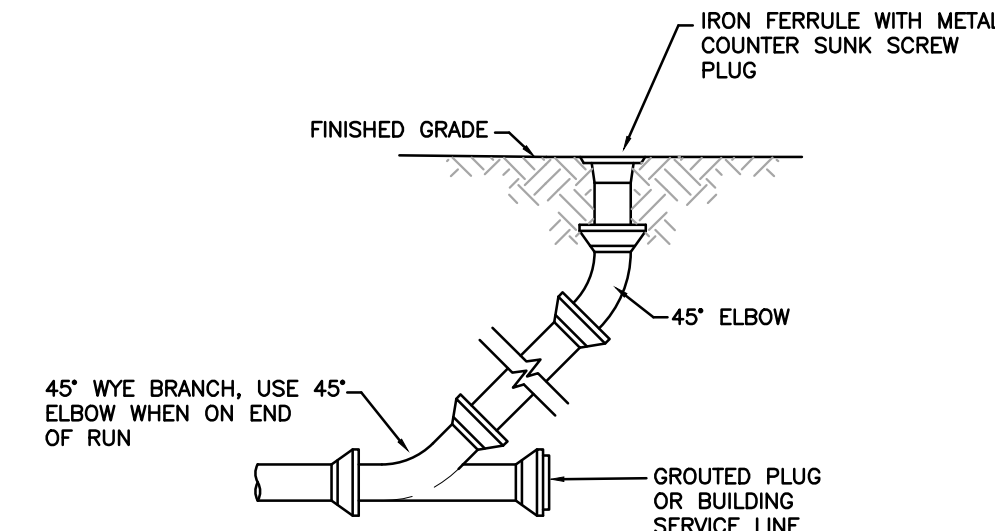
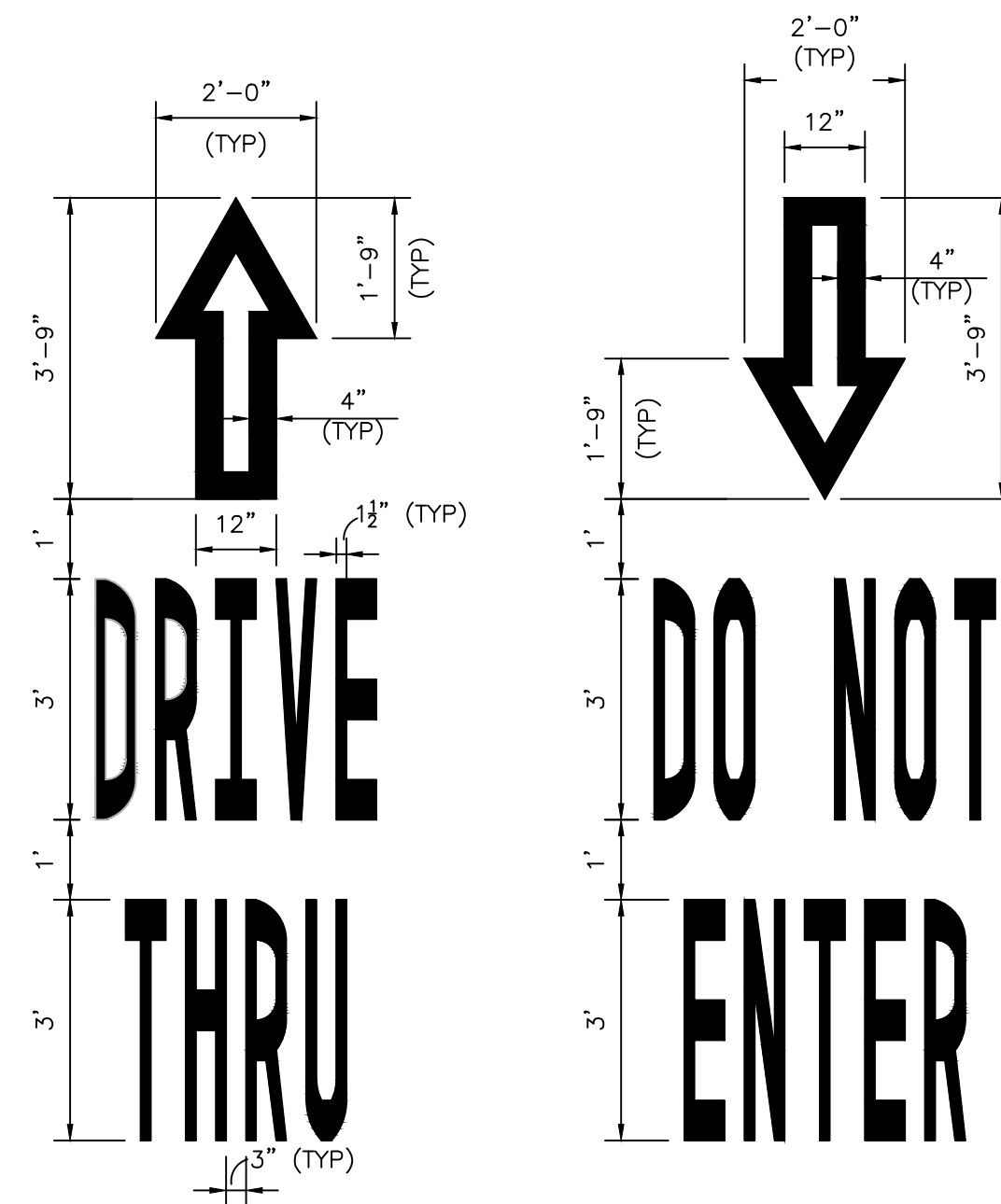
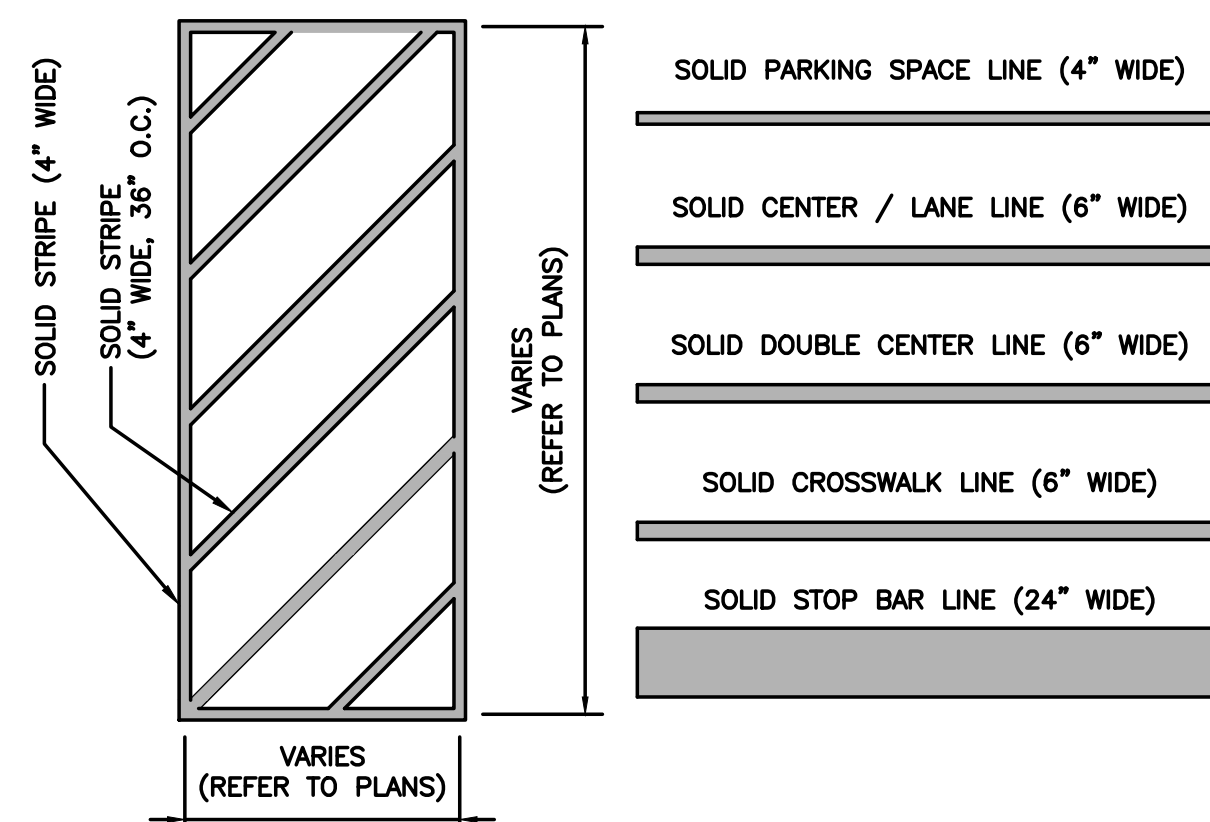
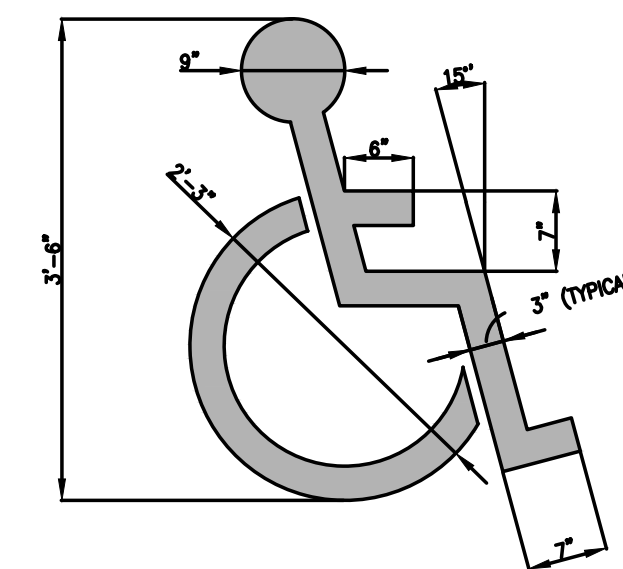
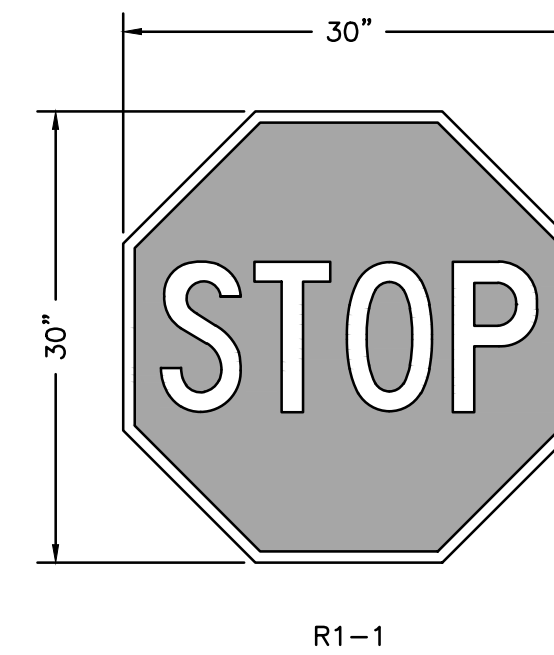
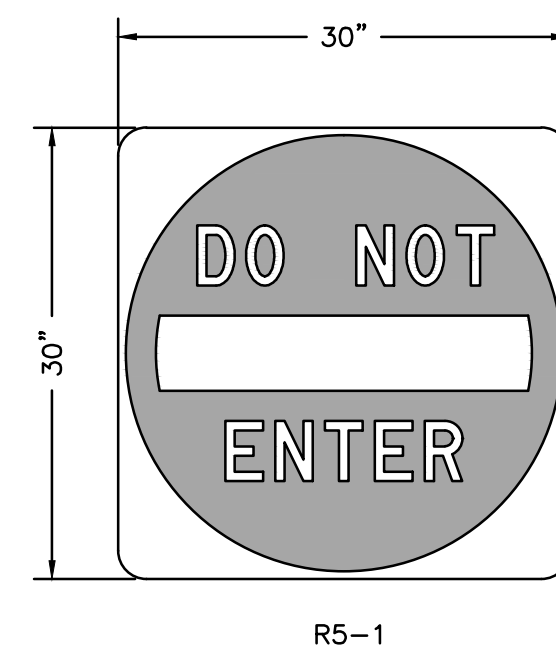
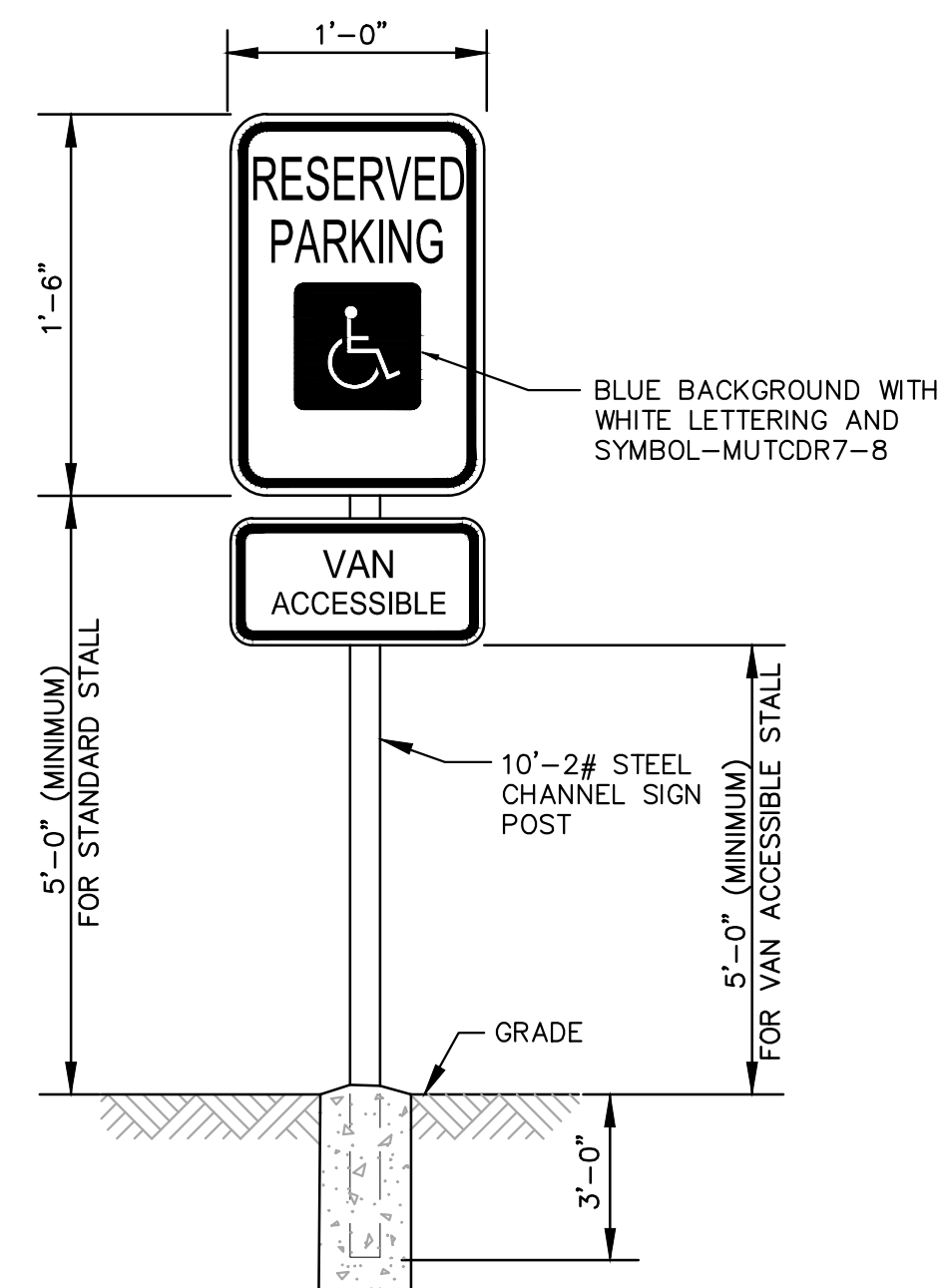
**LION'S CHOICE**  
SUMMIT ORCHARD  
440 NW CHIPMAN ROAD  
LEE'S SUMMIT, MO

**DETAIL SHEET**

**+ ST. LOUIS**  
10th Street  
Suite 200  
St. Louis, MO 63103  
314.584.5887 tel/  
www.coledesign.com

DESIGN/CALC BY  
LLW  
DRAWN BY  
MAB  
CHECKED BY  
CAW  
DRAWING SCALE  
AS SHOWN  
DATE  
08/29/2019  
Job Number  
18-0136  
Sheet Number  
C8.0





USER: Lance Whittaker TAB: 08.1  
DATE: September 10, 2019 - 9:44:24 AM  
DRAWING: S:\JORG\jobs\2018\18-0136\CADD\C-Plan\PlgSheets\0_Plan_DETAIL_18-0136.dwg

**DEVELOPER/OWNER:**  
**RED LION BEEF CORPORATION**  
**12977 N FORTY DRIVE, SUITE 100**  
**ST. LOUIS, MO 63141**  
**(314) 821-8665**

CIVIL ENGINEERS  
CORPORATE  
ENGINEERING  
CERTIFICATE  
NOV 1985

*John F. Harshbarger*

JOHN F. HARSHBARGER  
CIVIL ENGINEER  
PE NO. E-29716  
DATE: 9/10/19

STATE OF MISSOURI  
JOHN F. HARSHBARGER  
REGISTERED PROFESSIONAL ENGINEER  
NUMBER E-29716

**ALLIANCE'S CHOICE**  
SUMMIT ORCHARD  
440 NW CHIPMAN ROAD  
LEE'S SUMMIT, MO

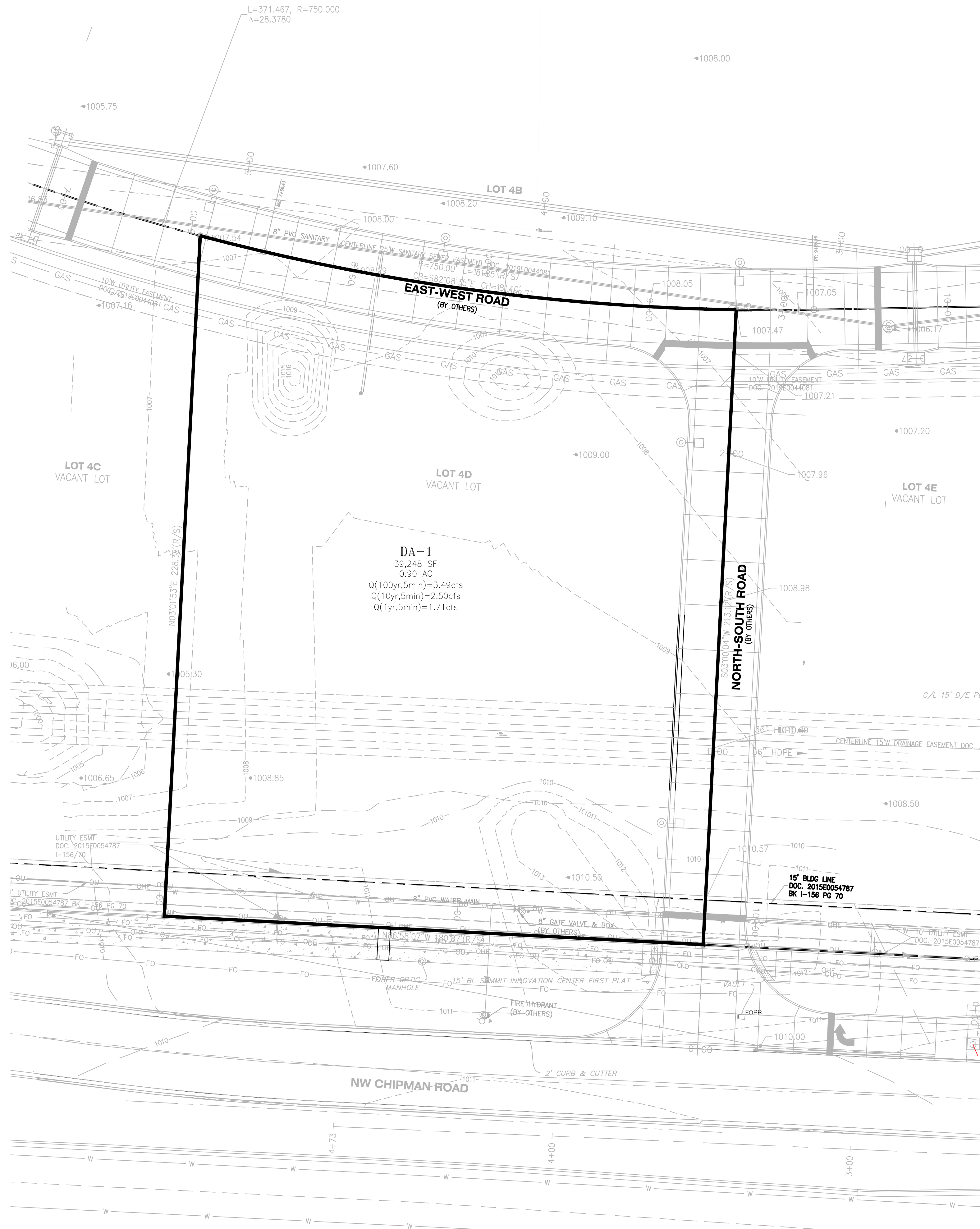
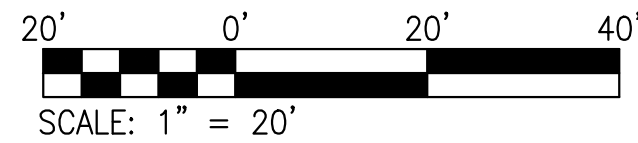
**DETAIL SHEET**

**cole**[®]  
+ ST. LOUIS  
401 S. 18th Street  
Suite 200  
St. Louis, MO 63103  
314.984.9887 tel  
www.colestl.com

DESIGN/CALC BY	LLW
DRAWN BY	MAB
CHECKED BY	CAW
DRAWING SCALE	AS SHOWN
DATE	08/29/2019
Job Number	
18-0136	
Sheet Number	

## C8.1





Q VALUES	
RATIONAL METHOD:	
Q=CA	
C (IMPERVIOUS)	=0.90
C (PERVIOUS)	=0.30
PERVIOUS AREA = 0.78 AC.	
IMPERVIOUS AREA = 0.12 AC.	
TOTAL AREA = 0.90 AC.	
100 YEAR STORM (1% CHANCE), 5 MIN. DURATION	
I FOR 100 YEAR, 5 MINUTE DURATION = 10.2	
Q(PER)	=(0.30*10.2*0.78)
Q(PER)	=2.39 CFS
Q(IMP)	=(0.90*10.2*0.12)
Q(IMP)	=1.10 CFS
Q100(TOTAL)	=3.49 CFS
10 YEAR STORM (10% CHANCE), 5 MIN. DURATION	
I FOR 10 YEAR, 5 MINUTE DURATION = 7.3	
Q(PER)	=(0.30*7.3*0.78)
Q(PER)	=1.71 CFS
Q(IMP)	=(0.90*7.3*0.12)
Q(IMP)	=0.79 CFS
Q10(TOTAL)	=2.50 CFS
1 YEAR STORM (100% CHANCE), 5 MIN. DURATION	
I FOR 1 YEAR, 5 MINUTE DURATION = 5.0	
Q(PER)	=(0.30*5.0*0.78)
Q(PER)	=1.17 CFS
Q(IMP)	=(0.90*5.0*0.12)
Q(IMP)	=0.54 CFS
Q1(TOTAL)	=1.71 CFS

USER: Lance Whitaker TAB: C9.0  
DATE: September 10, 2019 - 9:49:56 AM  
DRAWING: S:\0085\Jobs2018\18-0136\CAD\18-0136.dwg

THIS SHEET IS FOR DRAINAGE CALCULATION PURPOSES ONLY AND NOT TO BE USED AS CONSTRUCTION PLANS

DEVELOPER/OWNER:  
**RED LION BEEF CORPORATION**  
12977 N FORTY DRIVE, SUITE 100  
ST. LOUIS, MO 63141  
(314) 821-8665

CIVIL ENGINEERS  
CORPORATE  
OFFICE  
ST. LOUIS, MO  
JOHN F. HARSBARGER  
E-29716  
DATE 9/10/19

**LION'S CHOICE**  
SUMMIT ORCHARD  
440 NW CHIPMAN ROAD  
LEE'S SUMMIT, MO

**DRAINAGE AREA MAP (PRE)**

**+ ST. LOUIS**  
11111 South Street  
Suite 200  
St. Louis, MO 63103  
314.584.5887 tel/  
www.coledesign.com

**© cole**  
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE  
Cole & Associates, Inc. is a Missouri Corporation and a State of Missouri Registered Professional Engineer in the State of Missouri.

DESIGN/CALC BY  
LLW

DRAWN BY  
MAB

CHECKED BY  
CAW

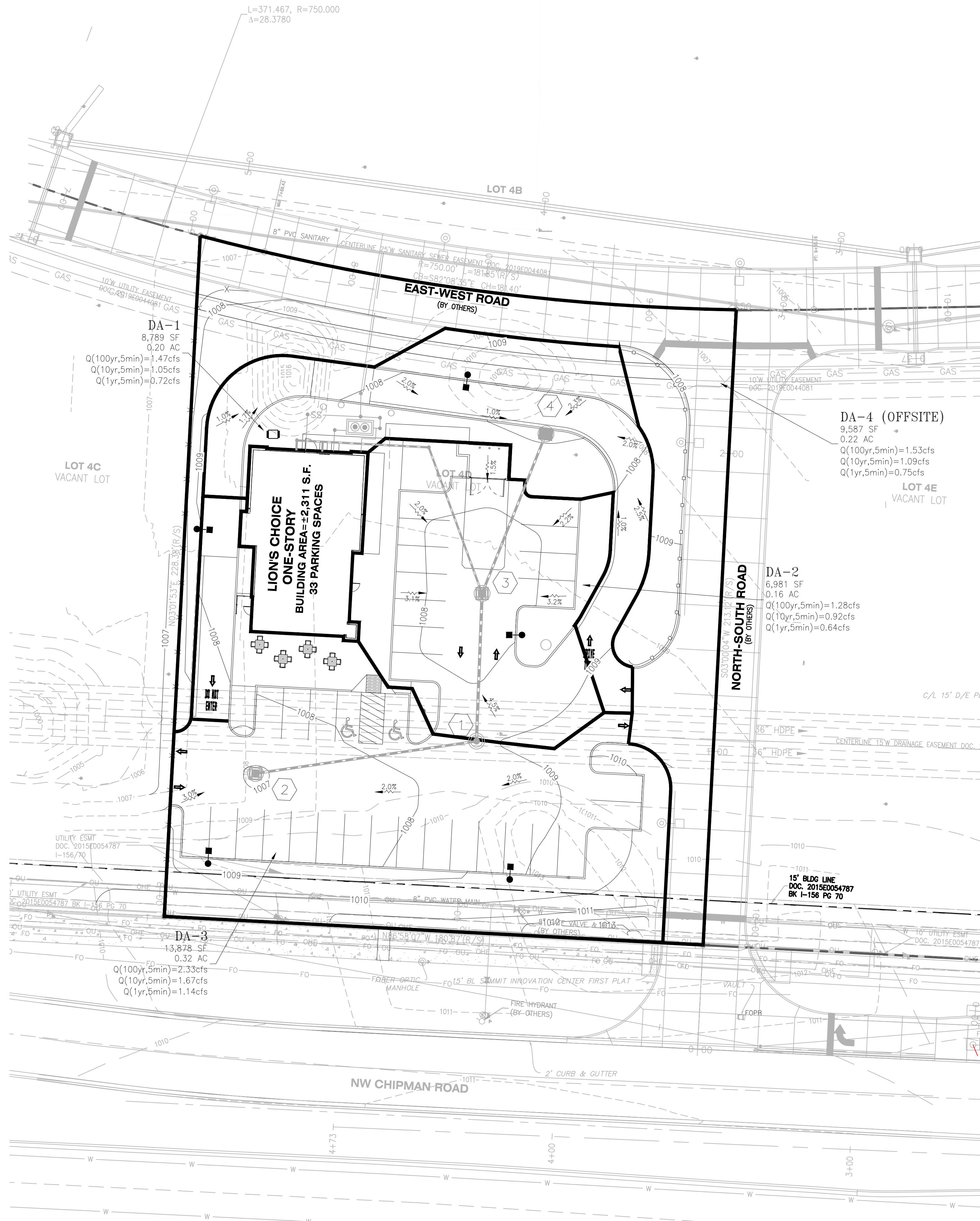
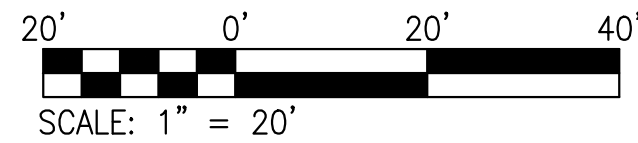
DRAWING SCALE  
AS SHOWN

DATE  
08/29/2019

Job Number  
18-0136

Sheet Number  
C9.0





Q VALUES FOR CURB INLET (DA-1)

RATIONAL METHOD:  
Q=CA  
C (IMPERVIOUS) =0.90  
C (PERVIOUS) =0.30

PERVIOUS AREA = 0.06 AC.  
IMPERVIOUS AREA = 0.14 AC.  
TOTAL AREA (A) = 0.20 AC.

100 YEAR STORM (1% CHANCE), 5 MIN. DURATION  
I FOR 100 YEAR, 5 MINUTE DURATION = 10.2

Q(PER) = (0.30*10.2*0.06)  
Q(PER) =0.18 CFS  
Q(IMP) = (0.90*10.2*0.14)  
Q(IMP) =1.29 CFS  
Q100(TOTAL) =1.47 CFS

10 YEAR STORM (10% CHANCE), 5 MIN. DURATION  
I FOR 10 YEAR, 5 MINUTE DURATION = 7.3

Q(PER) = (0.30*7.3*0.06)  
Q(PER) =0.13 CFS  
Q(IMP) = (0.90*7.3*0.14)  
Q(IMP) =0.92 CFS  
Q10(TOTAL) =1.05 CFS

1 YEAR STORM (100% CHANCE), 5 MIN. DURATION  
I FOR 1 YEAR, 5 MINUTE DURATION = 5.0

Q(PER) = (0.30*5.0*0.06)  
Q(PER) =0.09 CFS  
Q(IMP) = (0.90*5.0*0.14)  
Q(IMP) =0.63 CFS  
Q1(TOTAL) =0.72 CFS

Q VALUES FOR GRATED INLET (DA-2)

RATIONAL METHOD:  
Q=CA  
C (IMPERVIOUS) =0.90  
C (PERVIOUS) =0.30

PERVIOUS AREA = 0.03 AC.  
IMPERVIOUS AREA = 0.13 AC.  
TOTAL AREA (A) = 0.16 AC.

100 YEAR STORM (1% CHANCE), 5 MIN. DURATION  
I FOR 100 YEAR, 5 MINUTE DURATION = 10.2

Q(PER) = (0.30*10.2*0.03)  
Q(PER) =0.09 CFS  
Q(IMP) = (0.90*10.2*0.13)  
Q(IMP) =1.19 CFS  
Q100(TOTAL) =1.28 CFS

10 YEAR STORM (10% CHANCE), 5 MIN. DURATION  
I FOR 10 YEAR, 5 MINUTE DURATION = 7.3

Q(PER) = (0.30*7.3*0.03)  
Q(PER) =0.07 CFS  
Q(IMP) = (0.90*7.3*0.13)  
Q(IMP) =0.85 CFS  
Q10(TOTAL) =0.92 CFS

1 YEAR STORM (100% CHANCE), 5 MIN. DURATION  
I FOR 1 YEAR, 5 MINUTE DURATION = 5.0

Q(PER) = (0.30*5.0*0.03)  
Q(PER) =0.05 CFS  
Q(IMP) = (0.90*5.0*0.13)  
Q(IMP) =0.59 CFS  
Q1(TOTAL) =0.64 CFS

Q VALUES FOR GRATED INLET (DA-3)

RATIONAL METHOD:  
Q=CA  
C (IMPERVIOUS) =0.90  
C (PERVIOUS) =0.30

PERVIOUS AREA = 0.10 AC.  
IMPERVIOUS AREA = 0.22 AC.  
TOTAL AREA (A) = 0.32 AC.

100 YEAR STORM (1% CHANCE), 5 MIN. DURATION  
I FOR 100 YEAR, 5 MINUTE DURATION = 10.2

Q(PER) = (0.30*10.2*0.10)  
Q(PER) =0.31 CFS  
Q(IMP) = (0.90*10.2*0.22)  
Q(IMP) =2.02 CFS  
Q100(TOTAL) =2.33 CFS

10 YEAR STORM (10% CHANCE), 5 MIN. DURATION  
I FOR 10 YEAR, 5 MINUTE DURATION = 7.3

Q(PER) = (0.30*7.3*0.10)  
Q(PER) =0.22 CFS  
Q(IMP) = (0.90*7.3*0.22)  
Q(IMP) =1.45 CFS  
Q10(TOTAL) =1.67 CFS

1 YEAR STORM (100% CHANCE), 5 MIN. DURATION  
I FOR 1 YEAR, 5 MINUTE DURATION = 5.0

Q(PER) = (0.30*5.0*0.10)  
Q(PER) =0.15 CFS  
Q(IMP) = (0.90*5.0*0.22)  
Q(IMP) =0.99 CFS  
Q1(TOTAL) =1.14 CFS

Q VALUES FOR OFFSITE DRAINAGE (DA-4)

RATIONAL METHOD:  
Q=CA  
C (IMPERVIOUS) =0.90  
C (PERVIOUS) =0.30

PERVIOUS AREA = 0.08 AC.  
IMPERVIOUS AREA = 0.14 AC.  
TOTAL AREA (A) = 0.22 AC.

100 YEAR STORM (1% CHANCE), 5 MIN. DURATION  
I FOR 100 YEAR, 5 MINUTE DURATION = 10.2

Q(PER) = (0.30*10.2*0.08)  
Q(PER) =0.24 CFS  
Q(IMP) = (0.90*10.2*0.14)  
Q(IMP) =1.29 CFS  
Q100(TOTAL) =1.53 CFS

10 YEAR STORM (10% CHANCE), 5 MIN. DURATION  
I FOR 10 YEAR, 5 MINUTE DURATION = 7.3

Q(PER) = (0.30*7.3*0.08)  
Q(PER) =0.17 CFS  
Q(IMP) = (0.90*7.3*0.14)  
Q(IMP) =0.92 CFS  
Q10(TOTAL) =1.09 CFS

1 YEAR STORM (100% CHANCE), 5 MIN. DURATION  
I FOR 1 YEAR, 5 MINUTE DURATION = 5.0

Q(PER) = (0.30*5.0*0.08)  
Q(PER) =0.12 CFS  
Q(IMP) = (0.90*5.0*0.14)  
Q(IMP) =0.63 CFS  
Q1(TOTAL) =0.75 CFS

USER: Lance Whitaker TAB: C9.1  
DATE: September 10, 2019 9:48:21 AM  
DRAWING: S:\0085\00852018\18-0136\DWG\18-0136.dwg

THIS SHEET IS FOR DRAINAGE CALCULATION PURPOSES ONLY AND NOT TO BE USED AS CONSTRUCTION PLANS

DEVELOPER/OWNER:  
**RED LION BEEF CORPORATION**  
12977 N FORTY DRIVE, SUITE 100  
ST. LOUIS, MO 63141  
(314) 821-8665

CIVIL ENGINEERS  
CORPORATE  
LICENSE  
E-29716  
JOHN F. HARBARGER  
P.E. NO. 29716  
DATE 9/10/19

**coile**  
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE  
1001 S. 1st Street  
Suite 200  
St. Louis, MO 63103  
314.584.5887  
www.coilesti.com

DESIGN/CALC BY  
LLW

DRAWN BY  
MAB

CHECKED BY  
CAW

DRAWING SCALE  
AS SHOWN

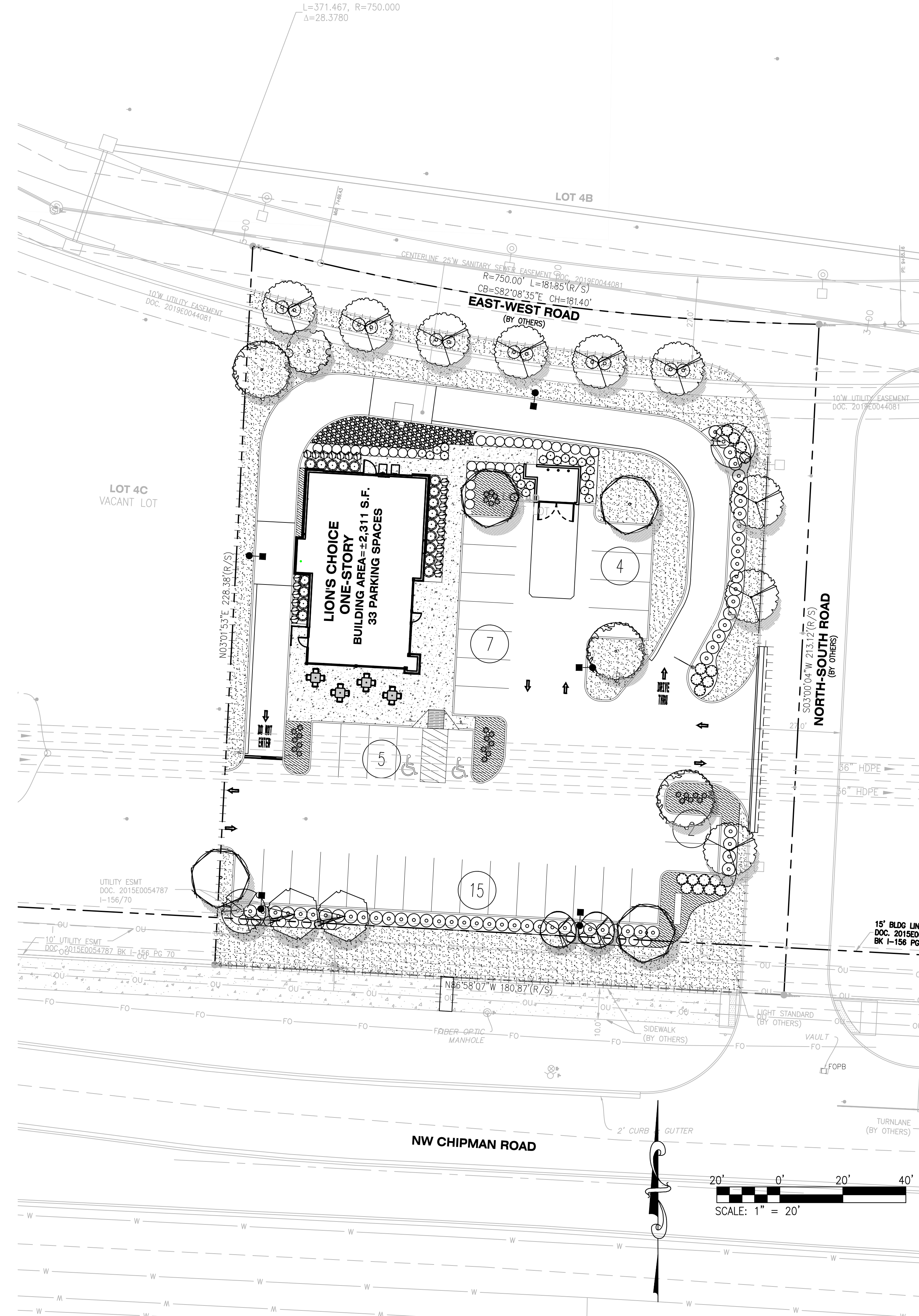
DATE  
08/29/2019

Job Number  
18-0136



Sheet Number  
C9.1

DRAINAGE AREA MAP (POST)





LANDSCAPE AND TREE REQUIREMENTS			
LEE'S SUMMIT UDO - SECTION 8.790 (a) (1)&(3) - STREET FRONTAGE			
REQUIREMENT	AREA / MEASUREMENT	REQ'D	PROVD
NW CHIPMAN ROAD 1 TREE FOR EVERY 30 LINEAL FEET OF FRONTAGE AND 1 SHRUB FOR EVERY 20 LINEAL FEET OF STREET FRONTAGE	+/- 167 LF OF FRONTAGE 167/30=5.6 - 6 TREES 167/20=8.35 - 9 SHRUBS	6 TREES 9 SHRUBS	6 TREES 49 SHRUBS AS REQUIRED BY SECT. 8.820 (C) (1)
EAST-WEST ROAD 1 TREE FOR EVERY 30 LINEAL FEET OF FRONTAGE AND 1 SHRUB FOR EVERY 20 LINEAL FEET OF STREET FRONTAGE	+/- 167 LF OF FRONTAGE 167/30=5.6 - 6 TREES 167/20=8.35 - 9 SHRUBS	6 TREES 9 SHRUBS	6 TREES 12 SHRUBS
LEE'S SUMMIT UDO - SECTION 8.790 (b) (1) - OPEN YARD AREAS			
2 SHRUBS PER 5,000 S.F. OF TOTAL LOT AREA	39,247.8 S.F. TOTAL LOT AREA 39,247.8/5,000 = 7.8 7.8x2 = 15.6 - 16 SHRUBS REQ.	16 SHRUBS	16 SHRUBS
LEE'S SUMMIT UDO - SECTION 8.790 (b) (3) - OPEN YARD AREAS			
1 TREE FOR EVERY 5,000 S.F. OF LOT AREA NOT COVERED BY BUILDINGS	39,247.8 S.F. TOTAL LOT AREA 39,247.8 - 2,285 = 36,962.8 S.F. 36,962.8/5,000 = 7.4 - 8 TREES REQ.	8 TREES	8 TREES
LEE'S SUMMIT UDO - SECTION 8.820 (c) (1) - SCREENING PARKING LOT			
NW CHIPMAN ROAD A HEDGE WITH MIN. 12 SHRUBS PER 40 LINEAR FEET MIN. 18" TALL AT INSTALL	+/- 167 LF OF FRONTAGE 167/40=4.1 4.1x12 = 49 SHRUBS	49 SHRUBS	49 SHRUBS
NORTH-SOUTH ROAD A HEDGE WITH MIN. 12 SHRUBS PER 40 LINEAR FEET MIN. 18" TALL AT INSTALL	+/- 136 LF OF FRONTAGE 136/40=3.4 3.4x12 = 41 SHRUBS	41 SHRUBS	41 SHRUBS

PLANT SCHEDULE						
CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
	3	Acer Rubrum	Red Maple	As Shown	3"Cal.	B&B
	4	Tilia americana	American Linden	As Shown	3"Cal.	B&B
	9	Gleditsia triacanthos f. inermis 'Skycole' SKYLINE	Skyline Honeylocust	As Shown	3"Cal.	B&B
FLOWERING ORNAMENTAL TREES	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
	1	Cercis canadensis	Eastern Redbud	As Shown	3"Cal.	B&B
	2	Betula nigra	River Birch	As Shown	3"Cal.	B&B
	2	Chionanthus retusus	Chinese Fringe Tree	As Shown	3"Cal.	B&B
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
	18	Rhus aromatica 'Grow-Low'	Fragrant sumac	As Shown	18"-24" min.	Cont.
	25	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	As Shown	3 GAL.	Cont.
	18	Physocarpus opulifolius 'SMPOTW'	Tiny Wine Ninebark	As Shown	24" min.	Cont.
	33	Ceanothus americanus	New Jersey Tea	As Shown	24" min.	Cont.
	24	Juniperus x pfitzeriana 'Sea Green'	Chinese Juniper	As Shown	30" min.	Cont.
	23	Rhamnus frangula	Fine Line Buckthorn	As Shown	36" ht. min.	Cont.
ORNAMENTAL GRASS	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
	75	Sporobolus heterolepis	Prairie Dropseed	24" o.c.	1 gal.	Cont.
PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
	27	Echinacea purpurea	Purple Coneflower	As Shown	1gal.	Cont.

## LANDSCAPE NOTES:

- LANDSCAPE CONTRACTOR TO VERIFY LOCATION OF UNDERGROUND UTILITIES BEFORE BEGINNING WORK.
- ALL LANDSCAPE SHALL COMPLY WITH THE CURRENT EDITION OF ANSI Z 60.1 "AMERICAN STANDARD FOR NURSERY STOCK."
- ALL PLANTS SHALL MEET THE REQUIREMENTS OF THE STATE AND FEDERAL LAW WITH RESPECT TO DISEASE AND INSECT INFESTATION.
- ALL PLANT BEDS SHALL BE MULCHED WITH DECORATIVE GRAVEL, 2" MIN. DEPTH.
- GENERAL CONTRACTOR SHALL INSTALL DECORATIVE GRAVEL. DECORATIVE GRAVEL COLOR SHALL MATCH BUILDING COLOR AND BE 5/8"-1" IN SIZE.
- ALL LANDSCAPE SUBSTITUTIONS MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT.
- FORMAL LINES AND GROUPINGS OF A SPECIES OF TREE, SHRUB, OR GROUNDCOVER SHALL BE MATCHED FOR SIZE, FORM, AND COLOR.
- ALL BACKFILL IN PLANTING BEDS AND TREE PITS SHALL BE BACKFILLED WITH PLANTING SOIL.
- ALL TREES OUTSIDE OF PLANT BEDS SHALL BE PLANTED WITH A MULCH RING. OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT FOR ANY TREES THAT WILL NOT BE MULCHED FOR EXCESSIVE MOISTURE REASONS.
- ALL LANDSCAPING SHALL BE INSTALLED AS SHOWN ON THE APPROVED PLAN.
- AT PLANTING, TREE TRUNKS MUST BE STRAIGHT WITH MINIMAL DOGLEGES.
- WIRE BASKETS, BURLAP WRAPPINGS, ROPE, TWINE OR ANY SIMILAR SHIPPING MATERIALS SHALL BE REMOVED BEFORE PLANTING.
- A SPADE CUT EDGE SHALL BE CREATED AT ALL LOCATIONS WHERE PLANTING BEDS ARE ADJACENT TO GRASS AREAS UNLESS OTHERWISE NOTED.
- SEE CIVIL PLANS FOR TYPE AND LOCATION OF EROSION CONTROL MATERIALS.
- DO NOT DISTURB EXISTING UTILITIES WITHIN WORK AREA. SPLIT FENCE AND PLANTINGS SHALL AVOID ANY EXISTING UTILITIES.
- THE CONTRACTOR SHALL FOLLOW THE LANDSCAPE PLANS. ANY SUBSTITUTION OR ALTERATION SHALL NOT BE ALLOWED WITHOUT APPROVAL OF THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT. OVERALL PLANT QUANTITY AND QUALITY SHALL BE CONSISTENT WITH THE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES. WRITTEN QUANTITIES TAKES PRECEDENCE OVER GRAPHIC QUANTITIES. NOTIFY OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT OF DISCREPANCIES.
- THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT RESERVES THE RIGHT TO INSPECT AND TAG ALL PLANT MATERIAL PRIOR TO SHIPPING TO THE SITE. IN ALL CASES, THE LANDSCAPE ARCHITECT MAY REJECT PLANT MATERIAL AT THE SITE IF MATERIAL IS DAMAGED, DISEASED, OR DECLINING IN HEALTH AT THE TIME OF ONSITE INSPECTIONS OR IF THE PLANT MATERIAL DOES NOT MEET THE MINIMUM SPECIFIED STANDARD IDENTIFIED ON THE PLANS AND IN THE SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT FOR INSPECTION AND APPROVAL OF ALL MATERIALS AND PRODUCTS PRIOR TO INSTALLATION.
- THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT MAY ELECT TO UPSIZE PLANT MATERIAL AT THEIR DISCRETION BASED ON SELECTION, AVAILABILITY, OR TO ENHANCE SPECIFIC AREAS OF THE PROJECT. THE CONTRACTOR SHALL VERIFY PLANT MATERIAL SIZES WITH OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT PRIOR TO PURCHASING, SHIPPING OR STOCKING OF PLANT MATERIALS. SUBMIT CHANGE ORDER REQUEST TO OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT FOR APPROVAL IF ADDITIONAL COST IS REQUESTED BY THE CONTRACTOR PRIOR TO INSTALLATION. RE-STOCKING CHARGES WILL NOT BE APPROVED IF THE CONTRACTOR FAILS TO SUBMIT A REQUEST FOR MATERIAL CHANGES.
- THE CONTRACTOR SHALL WARRANTY ALL CONTRACTED WORK AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION HAS BEEN ISSUED BY THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT FOR THE ENTIRE PROJECT UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS OR SPECIFICATIONS.
- THE DEVELOPER, HIS SUCCESSORS AND ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REPLACEMENT OF ALL LANDSCAPING MATERIALS SHOWN OR INDICATED ON THE APPROVED LANDSCAPE PLAN ON FILE WITH THE PLANNING DEPARTMENT. ALL LANDSCAPING WILL BE INSTALLED AS DELINEATED ON THE PLAN, PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
- PRIOR TO INSTALLATION OF PLANT MATERIALS, AREAS THAT HAVE BEEN COMPACTED OR DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE THOROUGHLY LOOSENEED TO A DEPTH OF 8" - 12" AND AMENDED.
- ALL LANDSCAPED AREAS ARE TO HAVE SOIL PREPARATION, (MINIMUM RATE OF 3 CU. YDS. OF ORGANIC MATTER PER 1000 S.F.). TREES SHALL NOT BE LOCATED IN DRAINAGE SWALES, DRAINAGE AREAS, OR UTILITY EASEMENTS. CONTACT OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT FOR RELOCATION OF PLANTS IN QUESTIONABLE AREAS PRIOR TO INSTALLATION.
- ALL TREES ARE TO BE STAKED AND GUYED FOR A PERIOD OF 1 YEAR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING STAKES AT THE END OF 1 YEAR FROM ACCEPTANCE OF LANDSCAPE INSTALLATION BY THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT. OBTAIN APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO REMOVAL. PLACE PLANT MATERIAL IN SHRUB BED SO THAT ONCE PLANTS GROW TO FULL SIZE THEY ARE FULLY CONTAINED WITHIN THE SHRUB BED AREA AND DO NOT HANG OVER THE EDGER LINE.
- REFER TO IRRIGATION PLANS FOR LIMITS AND TYPES OF IRRIGATION DESIGNED FOR THE LANDSCAPE. IN NO CASE SHALL IRRIGATION BE EMITTED WITHIN THE MINIMUM DISTANCE FROM BUILDING OR WALL FOUNDATIONS AS STIPULATED IN THE GEOTECHNICAL REPORT. ALL IRRIGATION DISTRIBUTION LINES, HEADS AND EMITTERS SHALL BE KEPT OUTSIDE THE MINIMUM DISTANCE AWAY FROM ALL BUILDING AND WALL FOUNDATIONS AS STIPULATED IN THE GEOTECHNICAL REPORT.
- LANDSCAPE AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH INDIVIDUAL ZONES FOR TURF AND NON-TURF AREAS, AND MUST INCLUDE A MOISTURE DETECTION DEVICE TO PREVENT OPERATION DURING RAINY PERIODS. TURF AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC POP-UP IRRIGATION SYSTEM. SHRUB AND PERENNIAL BEDS SHALL HAVE DRIP IRRIGATION.
- LANDSCAPE MATERIAL LOCATIONS SHALL HAVE PRECEDENCE OVER IRRIGATION MAINLINE AND LATERAL LOCATIONS. COORDINATE INSTALLATION OF IRRIGATION EQUIPMENT SO THAT IT DOES NOT INTERFERE WITH THE PLANTING OF TREES OR OTHER LANDSCAPE MATERIAL.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING POSITIVE DRAINAGE EXISTS IN ALL LANDSCAPE AREAS. SURFACE DRAINAGE ON LANDSCAPE AREAS SHALL NOT FLOW TOWARD STRUCTURES AND FOUNDATIONS. MAINTAIN SLOPE AWAY FROM FOUNDATIONS PER THE GEOTECHNICAL REPORT RECOMMENDATIONS. ALL LANDSCAPE AREAS BETWEEN WALKS AND CURBS SHALL DRAIN FREELY TO THE CURB UNLESS OTHERWISE IDENTIFIED ON THE GRADING PLAN. IN NO CASE SHALL THE GRADE, TURF THATCH, OR OTHER LANDSCAPE MATERIALS DAM WATER AGAINST WALKS. MINIMUM SLOPES ON LANDSCAPE AREAS SHALL BE 2%; MAXIMUM SLOPE SHALL BE 25% UNLESS SPECIFICALLY IDENTIFIED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT.
- SHRUB, GROUNDCOVER AND PERENNIAL BEDS ARE TO BE CONTAINED BY A SPADE CUT EDGE. EDGER IS NOT REQUIRED WHEN ADJACENT TO CURBS, WALLS, WALKS OR SOLID FENCES WITHIN 3" OF PRE-MULCHED FINAL GRADE. EDGER SHALL NOT BE REQUIRED TO SEPARATE MULCH TYPES UNLESS SPECIFIED ON THE PLANS.
- ALL SHRUB BEDS ARE TO BE MULCHED WITH MIN. 3" DEPTH, SHREDDED HARDWOOD BARK MULCH.
- AT SEED AREA BOUNDARIES ADJACENT TO EXISTING NATIVE AREAS, OVERLAP ABUTTING NATIVE AREAS BY THE FULL WIDTH OF THE SEEDER.
- EXISTING TURF AREAS THAT ARE DISTURBED DURING CONSTRUCTION, ESTABLISHMENT AND THE MAINTENANCE PERIOD SHALL BE RESTORED WITH NEW SOD TO MATCH EXISTING TURF SPECIES. DISTURBED NATIVE AREAS WHICH ARE TO REMAIN SHALL BE OVER SEEDED AND RESTORED WITH SPECIFIED SEED MIX.
- WHEN COMPLETE, ALL GRADES SHALL BE WITHIN +/- 1/8" OF FINISHED GRADES AS SHOWN ON THE PLANS. THESE PLANS ARE NOT INTENDED FOR CONSTRUCTION OR PERMITTING UNLESS STATED IN THE TITLE BLOCK.
- DRAWINGS ARE INTENDED TO BE PRINTED ON 24" X 36" PAPER. PRINTING THESE DRAWINGS AT A DIFFERENT SIZE WILL IMPACT THE SCALE. VERIFY THE GRAPHIC SCALE BEFORE REFERENCING ANY MEASUREMENTS ON THESE SHEETS. THE RECIPIENT OF THESE DRAWINGS SHALL BE RESPONSIBLE FOR ANY ERRORS RESULTING FROM INCORRECT PRINTING, COPYING, OR ANY OTHER CHANGES THAT ALTER THE SCALE OF THE DRAWINGS.
- VERIFY ALL PLAN DIMENSIONS PRIOR TO START OF CONSTRUCTION. NOTIFY THE OWNER'S REPRESENTATIVE TO ADDRESS ANY QUESTIONS OR CLARIFY ANY DISCREPANCIES.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- SUBMIT A CHANGE ORDER FOR APPROVAL FOR ANY CHANGES TO WORK SCOPE RESULTING FROM FIELD CONDITIONS OR DIRECTION BY OWNER'S REPRESENTATIVE WHICH REQUIRE ADDITIONAL COST TO THE OWNER PRIOR TO PERFORMANCE OF WORK.
- A METAL EDGE SHALL BE CREATED AT ALL LOCATIONS WHERE TURF IS ADJACENT TO GRAVEL PLANT BEDS.

DEVELOPER/OWNER:  
**RED LION BEEF CORPORATION**  
12977 N FORTY DRIVE, SUITE 100  
ST. LOUIS, MO 63141  
(314) 821-8665

LANDSCAPE ARCHITECT:  
**JOSEPH C. HORVATH, III**  
CORPORATE LANDSCAPE ARCHITECT CERTIFICATE #2004029446  
SALE OF MISSOURI  
STATE OF MISSOURI  
LANDSCAPE ARCHITECT  
NUMBER  
LA-2007013280  
DATE  
08/26/2019

**LION'S CHOICE**  
SUMMIT ORCHARD  
440 NW CHIPMAN ROAD  
LEE'S SUMMIT, MO

**+ ST. LOUIS**  
1500 South Street  
Suite 200  
St. Louis, MO 63103  
314.584.9887 ext/  
www.coledesign.com

**COLE**  
DESIGN / PLANNING / SURVEYING  
CIVIL ENGINEERING, Inc. is a Missouri Corporation and a Sub-Chapter S Corporation. It is a limited liability company and is not a "C" corporation.

DESIGN/CALC BY: LLW  
DRAWN BY: MAB  
CHECKED BY: CAW  
DRAWING SCALE: AS SHOWN  
DATE: 08/29/2019  
Job Number: 18-0136  
Sheet Number: L1.0