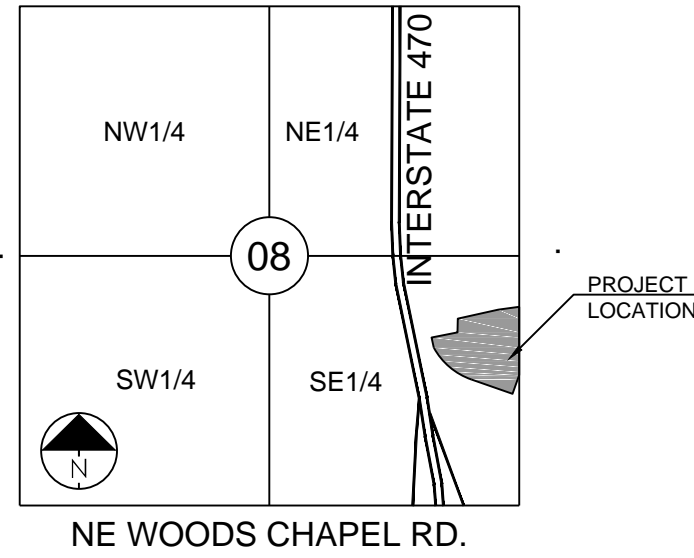


FINAL DEVELOPMENT PLANS FOR COLEMAN EQUIPMENT

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

LEGEND:

AVE	-	ACCESS EASEMENT
BC	-	BACK OF CURB
B/B	-	BACK TO BACK
BM	-	BENCHMARK
BL or B.L.	-	BUILDING LINE
CO	-	CLEANOUT
TJB	-	TELEPHONE JUNCTION BOX
C&G	-	CURB AND GUTTER
D/E	-	DRAINAGE EASEMENT
E/E	-	ELECTRICAL EASEMENT
EL	-	ELEVATION
FL	-	FLOW LINE
G/E	-	GAS LINE EASEMENT
HDPE	-	HIGH-DENSITY POLYETHYLENE
L/E	-	LANDSCAPE EASEMENT
MSFE	-	MINIMUM SERVICEABLE FLOOR ELEVATION
PVC	-	POLYVINYL CHLORIDE
P/L	-	PROPERTY LINE
PUB/E	-	PUBLIC EASEMENT
RCP	-	REINFORCED CONCRETE PIPE
ROW or R/W	-	RIGHT-OF-WAY
S/E	-	SANITARY SEWER EASEMENT
S/L	-	SERVICE LINE
S/W	-	SIDEWALK
TE	-	TOP ELEVATION
U/E	-	UTILITY EASEMENT
WSE	-	WATER SURFACE ELEVATION
W/E	-	WATERLINE EASEMENT

SECTION 08-48N-31W

LOCATION MAP

SCALE 1" = 2000'

UTILITY CONTACTS:

MISSOURI DEPARTMENT OF
TRANSPORTATION (MODOT)

Steve Holloway
600 NE Colbern Road
Lee's Summit, MO 64086
(816) 607-2186

MISSOURI GAS ENERGY (MGE)

Brent Jones
3025 SE Clover Drive
Lee's Summit, MO 64082
(816) 399-9633
brent.jones@spireenergy.

KANSAS CITY POWER & LIGHT
COMPANY (KCP&L)

Ron DeJarnette
1300 SE Hamblin Road
Lee's Summit, MO 64081
Office: (816) 347-4316
Cell: (816) 810-5234
ron.dejarnette@kcpl.com

CITY OF LEES SUMMIT PUBLIC WORKS

Dena Mezger
220 SE Green Street
Lee's Summit, MO 64063
(816) 969-1800

AT&T

Mark Manion or Marty Loper
500 E. 8th Street, Room 370
Kansas City, MO 64106
(816) 275-2341 or (816) 275-1550

COMCAST CABLE

Barbara Brown
3400 W. Duncan Road
Blue Springs, MO 64015
(816) 795-2255

PUBLIC WATER SUPPLY DISTRICT

Mark Schaufler
220 SE Green Street
Lee's Summit, MO 64063
(816) 969-1900



GENERAL NOTES:

1. ALL CONSTRUCTION TO FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
3. LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.
4. NO GEOLOGICAL INVESTIGATION HAS BEEN PERFORMED ON THE SITE.
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 UTILITIES PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT OF WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. THE CONTRACTOR MAY ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY 'MISSOURI ONE CALL SYSTEM, INC.' :1-800-DIG-RITE. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
7. PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL.
8. THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
9. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
10. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.
11. ALL EXCAVATIONS SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
12. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASED OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
13. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
14. THE SUBGRADE SOIL FOR ALL CONCRETE STRUCTURES, REGARDLESS OF THE TYPE OR LOCATION, SHALL BE 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 FEET OF THE WORKMEN OR MACHINERY ENGAGED IN SUBGRADE SURFACING, LAYING REINFORCING STEEL, AND DEPOSITING CONCRETE THEREON. IN ALL CASES WHERE SUBSOIL IS MUCKY OR WORKS INTO MUD OR MUCK DURING SUCH OPERATIONS, A SEAL COURSE OF EITHER CONCRETE OR ROCK SHALL BE PLACED BELOW SUBGRADE TO PROVIDE A FIRM BASE FOR WORKING AND FOR PLACING THE FLOOR SLAB.
15. THE CONTRACTOR SHALL CONTACT PUBLIC WORKS INSPECTIONS AT: 816-969-1800 TO OBTAIN A PUBLIC WORKS CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO PERMIT ISSUANCE.
16. THE CONTRACTOR SHALL CONTACT THE CITY'S EROSION CONTROL SPECIALIST AT: 816-969-1800 PRIOR TO ANY LAND DISTURBANCE.
17. THE CONTRACTOR SHALL CONTACT THE RIGHT OF WAY INSPECTOR AT 816-969-1800 PRIOR TO ANY LAND DISTURBANCE ACTIVITIES WITHIN THE RIGHT OF WAY. THESE ACTIVITIES MAY REQUIRE A PERMIT.
18. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD-LATEST EDITION).
19. ALL SANITARY SEWER LATERALS SHALL HAVE A TRENCH CHECK, CONSISTING OF FLOWABLE BACKFILL, 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 LOCATED AT LEAST 5 FEET FROM SANITARY MAIN.

GRADING/EARTHWORK NOTES:

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 RECOMMENDATIONS IN GEOTECHNICAL REPORT ARE FOLLOWED.
3. PRIOR TO PLACEMENT OF FILLMENT, 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.
5. ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF LENEXA TECHNICAL SPECIFICATIONS.
6. THE PROPOSITOR SHALL BE RESPONSIBLE FOR PROVIDING AERIAL, PHOTOGRAMMETRIC AND FIELD SPOT CHECKED BY SCHLAGEL AND ASSOCIATES, P.A., CONTRACTOR TO FIELD VERIFY ELEVATIONS. NO ADDITIONAL MONEY WILL BE PAID FOR HAUL-IN OR HAUL-OFF MATERIAL.

EARTHWORK:

1. IT IS RECOMMENDED THAT A GEOTECHNICAL ENGINEER OBSERVE AND DOCUMENT ALL EARTHWORK ACTIVITIES.
2. 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.
3. 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.
4. PROPOSED CONTOURS ARE TO APPROXIMATE FINISHED GRADE.
5. UNLESS OTHERWISE NOTED, PAYMENT FOR EARTHWORK SHALL INCLUDE BACKFILLING OF THE CURB AND GUTTER, SIDEWALKS AND FLIGHT MANHOLE LATICES, ROCK CRUTY TRENCH SPILLS. THE SITE SHALL BE LEFT IN A MOVABLE CONDITION AND POSITIVE DRAINAGE MAINTAINED THROUGHOUT.
6. UNLESS OTHERWISE NOTED, ALL EARTHWORK IS CONSIDERED UNCLASSIFIED, NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ROCK OR SHALE EXCAVATION, UNLESS SPECIFICALLY STATED OTHERWISE.
7. 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.
8. 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, TREES, BRUSH, AND OTHER MATERIALS AND ROCK FRITS GREATER THAN 6-INCHES AND OTHER DELETERIOUS MATERIALS SHALL BE REMOVED AND PROPERLY DISPOSED OF OFFSITE OR AS DIRECTED BY THE OWNER OR HIS APPOINTED REPRESENTATIVE.
9. 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 OBTAINED. THE FINAL SUBGRADE SHALL BE AT LEAST 6-INCHES ABOVE THE GEOTECHNICAL ENGINEER.
11. SUBGRADE FOR BUILDING PAD SHALL INCLUDE A MINIMUM OF 18-INCHES OF LOW VOLUME CHANGE (LVC) 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.
13. 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
 - C. 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. UNDERGRASS 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:

1. 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. THE 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.
4. UTILITY SEPARATION: WATERLINES SHALL HAVE A MINIMUM OF 10 FEET HORIZONTAL AND 2 FEET VERTICAL 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 EXISTING MAIN.
7. TRENCH SPOILS SHALL BE NEATLY PLACED ONSITE ADJACENT TO THE TRENCH, AND COMPACTED TO 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 LAYOUT PLAN
C2.0	GRADING PLAN
C3.0	EROSION CONTROL
C3.1	EROSION CONTROL DETAILS
C3.2	EROSION CONTROL DETAILS
C4.0	PLAN & PROFILE - PRIVATE DR.
C5.0	STORM DRAINAGE PLAN
C5.1	STORM SEWER PROFILES
C6.0	UTILITY PLAN
C7.0	CURB AND PAVEMENT DETAILS
C7.1	STORM DRAINAGE DETAILS
C7.2	SITE DETAILS

PREPARED AND SUBMITTED BY:

SCHLAGEL & ASSOCIATES, P.A.

OWNER/DEVELOPER:

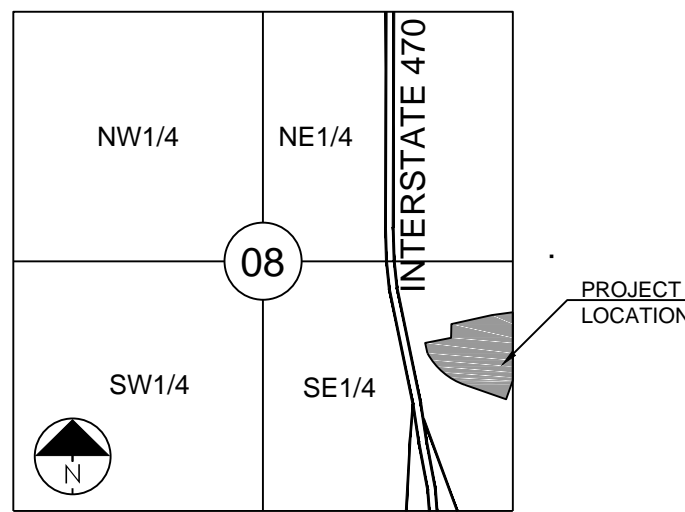
B & D BUSINESS HOLDING LLC
-
24000 W 43RD STREET
BONNER SPRINGS, KANSAS 66012
p (913) 422-3040
f -

REVISION DATE	DESCRIPTION
1	
2	10-18-17
3	
4	CITY COMMENTS
5	
6	
7	
8	10-18-17

COVER SHEET

SHEET

C0.0
OF



SECTION 08-48N-31W

LOCATION MAP
SCALE 1" = 2000'

OVERALL SITE DATA

EXISTING ZONING P-MIX
PROPOSED ZONING P-MIX
SITE AREA 12.80 ACRES

LOT 1 SITE DATA

LOT 1 AREA 6.71 ACRES (292,504.83 S.F.)
TOTAL BUILDING AREA 14,410 S.F.
DEALERSHIP AREA 7,780 S.F.
SHOP AREA 6,630 S.F. (7 BAYS)
PAVEMENT AREA 87,689.69 S.F.
TOTAL IMPERVIOUS AREA 101,689.69 S.F.
OUTDOOR DISPLAY AREA 17,989.17 S.F.
OPEN AREA 109,825 S.F.

PARKING DATA

PARKING REQUIRED
DEALERSHIP AREA 15.56 SPACES (2 PER 1,000 S.F.)
SHOP AREA 21 SPACES (3 PER SERVICE BAY)
OUTDOOR DISPLAY 7.20 SPACES (1 PER 2,500 S.F.)
TOTAL PARKING REQUIRED 44 SPACES
PARKING PROPOSED
AUTO PARKING 38 SPACES
TRUCK/TRAILER PARKING 6 SPACES
TOTAL PARKING PROVIDED 44 SPACES

NOTES:

- BOUNDARY INFORMATION, SITE AREA INFORMATION, ADJACENT PROPERTY LINES AND UTILITY INFORMATION IS FROM ALTA SURVEY PREPARED BY R.L. BUFORD & ASSOCIATES, LLC PROVIDED BY AND USED WITH APPROVAL OF THE OWNER.
- TOPOGRAPHY FROM ALTA SURVEY PREPARED BY R.L. BUFORD & ASSOCIATES, LLC PROVIDED BY AND USED WITH APPROVAL OF THE OWNER.
- AN EASEMENT OR LICENSE WILL, GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI TO LOCATE, CONSTRUCT AND MAINTAIN, OR TO AUTHORIZE THE LOCATION, CONSTRUCTION AND MAINTENANCE OF SIDEWALKS, POLES, WIRES, ANCHORS, CONDUITS AND OR STRUCTURES FOR, PEDESTRIAN ACCESS, GAS, SANITARY SEWER, STORM SEWER, SURFACE DRAINAGE CHANNEL, ELECTRICITY, TELEPHONE, CABLE TELEVISION, OR ANY OTHER NECESSARY PUBLIC UTILITY OR SERVICES, ANY OR ALL OF THEM, UPON, OVER, OR UNDER THOSE AREAS OUTLINED OR DESIGNATED UPON THIS PLAT AS "UTILITY EASEMENT" OR "U/E" OR WITHIN ANY STREET OR THOROUGHFARE DEDICATED TO PUBLIC USE. THE USE OF ALL TRACTS, LOTS, UNITS AND PROPERTIES IN THIS SUBDIVISION SHALL HEREAFTER BE SUBJECT TO THE COVENANTS AND RESTRICTIONS, WHICH INSTRUMENTS ARE TO BE RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF JACKSON COUNTY, MISSOURI, AS PROVIDED ABOVE, AND WHICH WILL BECOME A PART OF THE DEDICATION OF THE PLAT.
- BUILDING LINES (BL) OR SETBACK LINES WILL ESTABLISHED AS SHOWN ON THE PLAT AND NO BUILDING OR PORTION THEREOF SHALL BE CONSTRUCTED BETWEEN THIS LINE AND STREET RIGHT-OF-WAY.
- ALL CONSTRUCTION MUST COMPLY WITH THE MOST RECENT ADOPTED CITY CODE, ORDINANCES, AND DESIGN STANDARDS.
- ALL PARKING LOTS SHALL HAVE CG-1 CURB AS REQUIRED BY CODE.
- ALL DRIVE AISLES, DRIVEWAYS, AND STREETS ARE DIMENSIONED FROM BACK OF CURB TO BACK OF CURB ON THIS PLAN.
- ALL ACCESSIBLE PARKING SHALL COMPLY WITH THE ADA REQUIREMENTS.
- BASED ON THE GEOLOGIC DATA ON MISSOURI DEPARTMENT OF NATURAL RESOURCES WEB SITE THERE ARE NO KNOWN WELLS ON THE SITE.
- All issues pertaining to life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to the safety to fire fighters and emergency responders during emergency operations, shall be in accordance with the 2012 International Fire Code and local amendments.
- IFC 903.3.7 - Fire department connections. The location of fire department connections shall be approved by the fire code official. Connections shall be a 4 inch Storz type fitting and located within 100 feet of a fire hydrant, or as approved by the code official.
- IFC 507.5.1 - Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 300 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.
- 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.
- 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.
- 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.
- 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.
- Sanitary sewer main and easements for lots 2-6 will be provided in the future when one or more of those lots are developed.

PAVEMENT LEGEND:

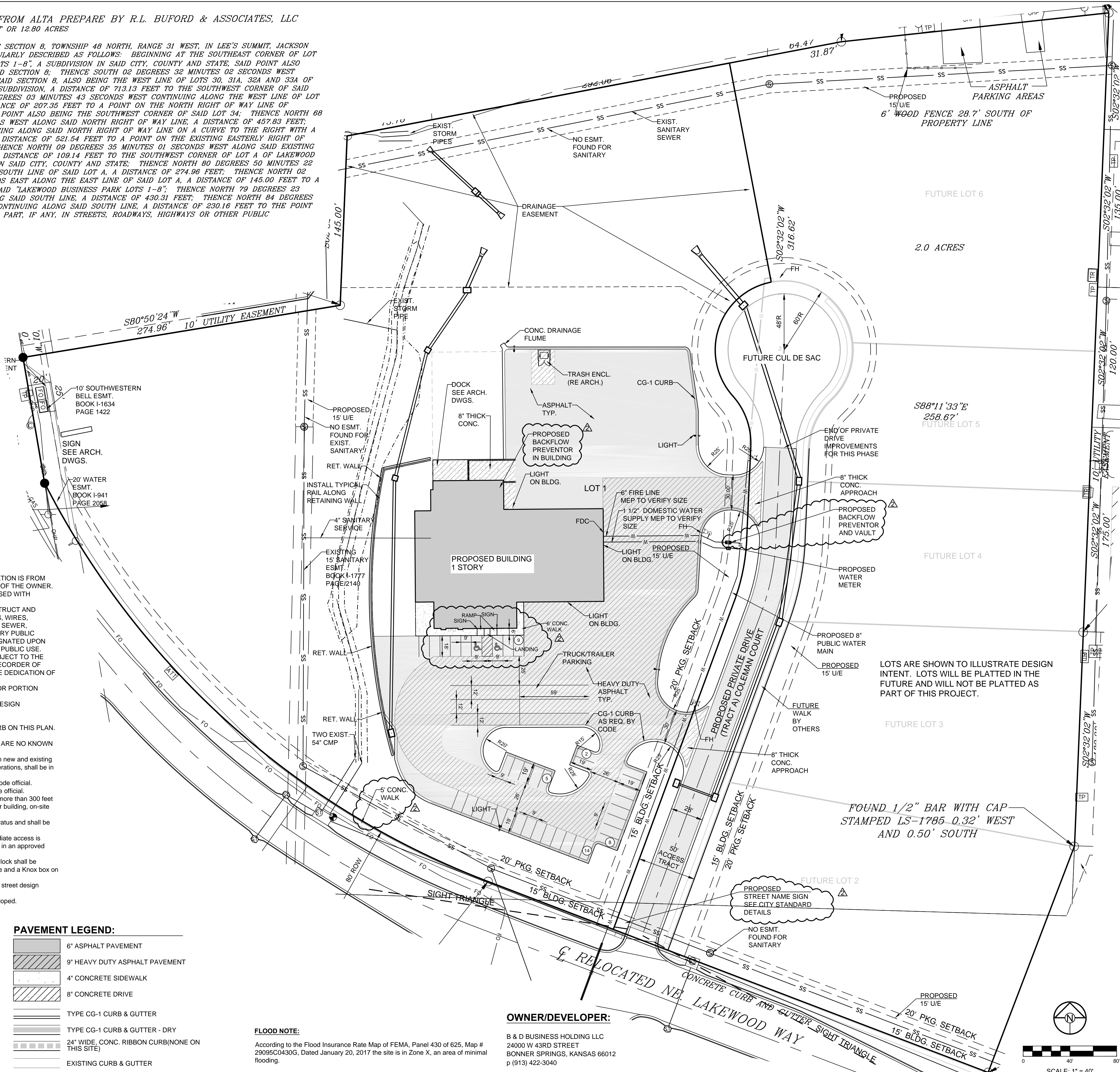
6" ASPHALT PAVEMENT
9" HEAVY DUTY ASPHALT PAVEMENT
4" CONCRETE SIDEWALK
8" CONCRETE DRIVE
TYPE CG-1 CURB & GUTTER
TYPE CG-1 CURB & GUTTER - DRY
24" WIDE, CONC. RIBBON CURB(NONE ON THIS SITE)
EXISTING CURB & GUTTER

FLOOD NOTE:

According to the Flood Insurance Rate Map of FEMA, Panel 430 of 625, Map # 29095C0430G, Dated January 20, 2017 the site is in Zone X, an area of minimal flooding.

OWNER/DEVELOPER:

B & D BUSINESS HOLDING LLC
24000 W 43RD STREET
BONNER SPRINGS, KANSAS 66012
p (913) 422-3040



SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificate of Authority
#E2002003600-F #LAC20100237 #LS200208695-F

COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI

REVISION	DATE	DESCRIPTION
1	10-18-17	CITY COMMENTS
2		
3		
4		
5		
6		
7		
8		
9		
10		

SITE LAYOUT PLAN

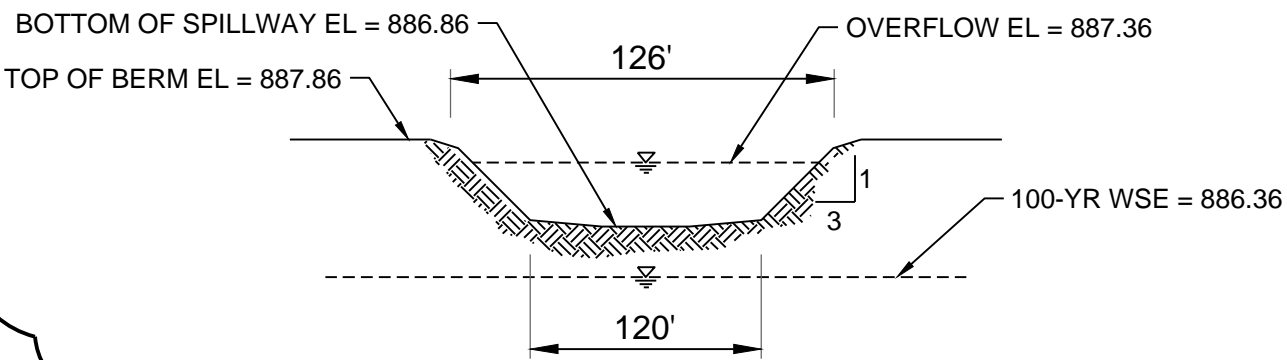
SHEET
C1.0
OF
PERMIT SET

GRADING NOTES:

1. NO EDGE DRAINS OR UNDERDRAINS ARE INDICATED BEHIND THE CURBS. OWNER SHOULD CONSIDER THE INSTALLATION OF UNDERDRAINS DUE TO THE IRRIGATION OF GREENSPACE AREAS OF THE SITE.
2. RECOMMEND A GEOTECHNICAL ENGINEER REVIEW ALL EARTHWORK ACTIVITY TO MAKE SURE RECOMMENDATIONS IN GEOTECHNICAL REPORT ARE FOLLOWED.
3. PRIOR TO PLACEMENT OF CURB AND GUTTER AND 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/OR GEOTECHNICAL REPORT.
5. ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
6. EXISTING TOPOGRAPHY SHOWN AS ESTABLISHED FROM BASE SURVEY PREPARED BY R.L. BUFORD & ASSOCIATES LLC - VERIFY GRADES PRIOR TO COMMENCEMENT OF GRADING AND CONSTRUCTION ACTIVITIES. NO ADDITIONAL MONEY WILL BE PAID FOR HAUL-IN OR HAUL-OFF OF MATERIAL.
7. ALL ROCK, CONCRETE, ASPHALT, TREE, BRUSH, ETC. TO BE REMOVED AS A PART OF THE PROJECT CONSTRUCTION SHALL BE DISPOSED OF BY THE GRADING CONTRACTOR AND SHALL BE A SUBSIDIARY OBLIGATION OF THE CONTRACT. THE GRADING CONTRACTOR IS ALSO RESPONSIBLE FOR ALL GRADING ON THE SITE INCLUDING THE MANIPULATION OF THE EXCESS DIRT MATERIAL THAT WAS LEFT ALONG THE SEWER TRENCHES. THE COST FOR THIS WORK WILL BE INCLUDED IN THE LUMP SUM FEE FOR GRADING.
8. ENTIRE PROJECT SHALL BE LEFT IN A MOWABLE CONDITION. ALL DISTURBED AREAS SHALL BE SEEDED & MULCHED AS PER PROJECT REQUIREMENTS. ALL DISTURBED AREAS WITHIN THE PUBLIC STREET RIGHT-OF-WAY SHALL BE SODDED IN COMPLIANCE WITH THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS AND MUNICIPAL CODE.
9. THE CONTRACTOR SHALL PROVIDE FOR POSITIVE DRAINAGE AWAY FROM BUILDINGS AND SIDEWALKS AT ALL TIMES.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS. ANY PROPERTY CORNERS DISTURBED OR DAMAGED BY GRADING ACTIVITIES SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.
11. RETAINING WALL DESIGN IS BY THE CONTRACTOR, WALL SUPPLIER, OR OWNER CONSULTANT. SCHLAGEL & ASSOCIATES, P.A. IS NOT RESPONSIBLE FOR THE RETAINING WALL DESIGN. BOTTOM OF WALL FINISH GRADE (BFG) IS AT EXISTING GRADE. BOTTOM OF WALL TO BE DETERMINED BY WALL DESIGNER. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR THE WALL.
12. THIS SITE CONTAINS WATER OF THE U.S. WHICH MUST BE PROTECTED. DO NOT ALTER OR DISTURB DRAINAGE DITCH.
13. A BALD EAGLE NEST IS LOCATED 1.5 MILES FROM THE PROJECT AREA. BALD EAGLES (HALIAEETUS LEUCOCEPHALUS) NEST NEAR STREAMS OR WATER BODIES. NESTS ARE LARGE AND FAIRLY EASY TO IDENTIFY. WHILE NO LONGER LISTED AS ENDANGERED, EAGLES CONTINUE TO BE PROTECTED BY THE FEDERAL GOVERNMENT UNDER THE BALD AND GOLDEN EAGLE PROTECTION ACT. WORK MANAGERS SHOULD BE ALERT FOR NESTING AREAS WITHIN 1500 METERS OF PROJECT ACTIVITIES, AND FOLLOW FEDERAL GUIDELINES AT: <http://www.fws.gov/midwest/MidwestBird/EaglePermits/index.html> if eagle nests are seen.

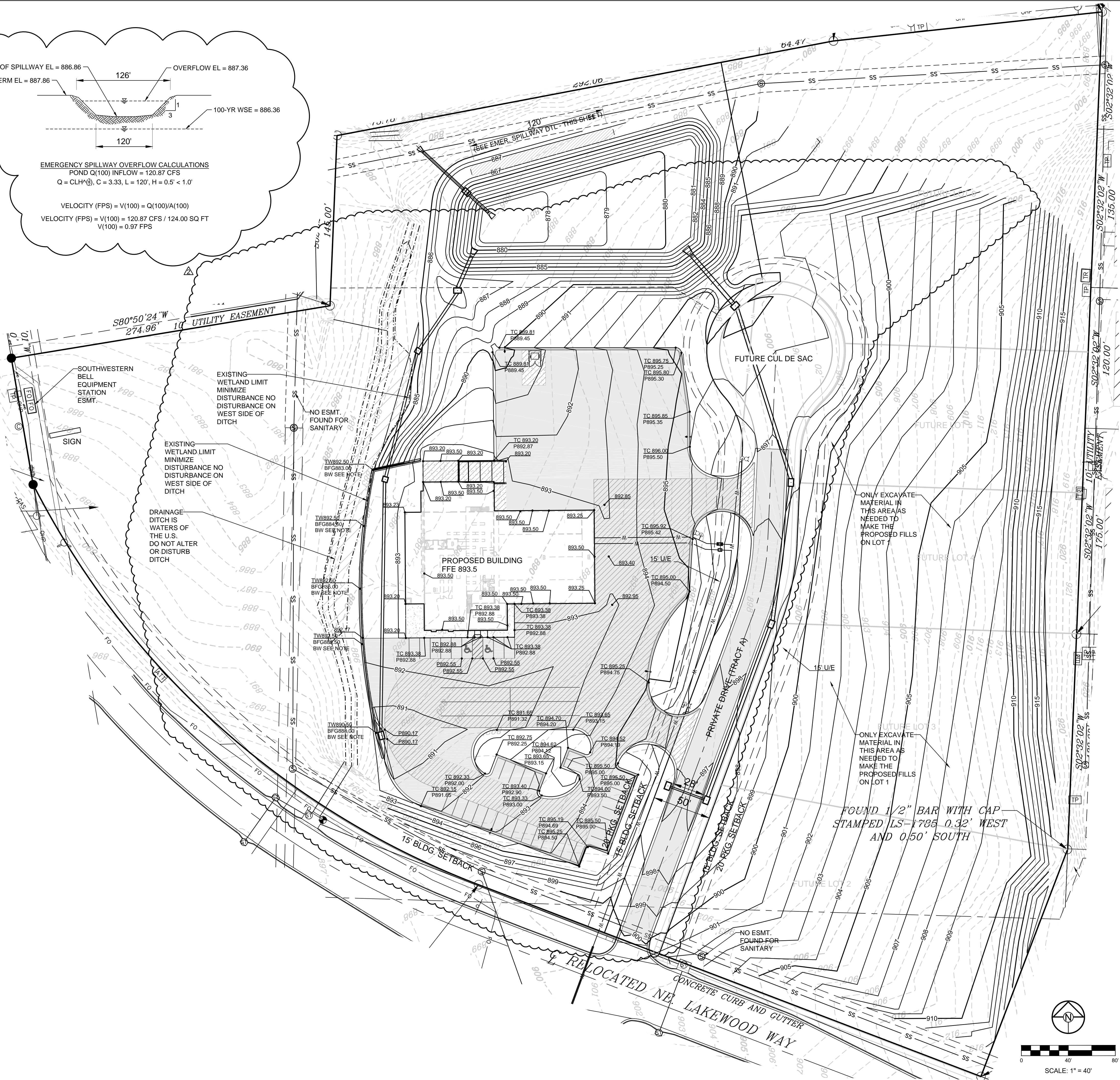
LEGEND

BFG	BOTTOM OF WALL FINISH GRADE ELEVATION
BW	BOTTOM OF WALL
TW	TOP OF WALL ELEVATION
P	PAVEMENT ELEVATION
TC	TOP OF CURB ELEVATION



EMERGENCY SPILLWAY OVERFLOW CALCULATIONS
POND Q(100) INFLOW = 120.87 CFS
 $Q = CLH^{\frac{2}{3}}$, $C = 3.33$, $L = 120'$, $H = 0.5' < 1.0'$

VELOCITY (FPS) = $V(100) = Q(100)/A(100)$
VELOCITY (FPS) = $V(100) = 120.87 \text{ CFS} / 124.00 \text{ SQ FT}$
 $V(100) = 0.97 \text{ FPS}$



COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI

SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificate of Authority
#E2002003600-F #LAC200100237 #LS200200859-F

DRAWN BY:	REVISION DATE	DESCRIPTION
PWDF	10-18-17	CITY COMMENTS
CHECKED BY:		
JTSMAB		
DATE PREPARED:		
9/22/2017		
PROJ. NUMBER:		
17-019		

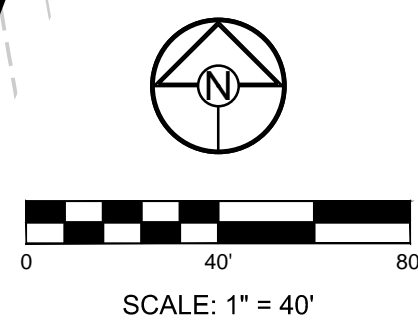
GRADING PLAN

SHEET
C2.0
OF
PERMIT SET

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
2. THE CONTRACTOR SHALL PROTECT ALL EXISTING TREES ON THE SITE.
3. THE DRAINAGE FEATURE THROUGH THE MIDDLE OF THE SITE IS A PROTECTED AREA. NO CONSTRUCTION EQUIPMENT OR ACTIVITY IS ALLOWED IN THESE AREAS UNLESS A SPECIFIC PERMIT/PERMISSION FROM THE GOVERNING AUTHORITY HAS BEEN OBTAINED.
4. A SWPPP HAS BEEN PREPARED FOR THIS PROJECT AND IS INCORPORATED INTO THIS EROSION CONTROL PLAN BY REFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE SWPPP IMPLEMENTATION AND REPORTING REQUIREMENTS.
5. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART.
6. 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.
7. SOIL STABILIZATION OF DISTURBED AREAS SHALL BE COMPLETED AFTER PERIODS OF INACTIVITY IN CONSTRUCTION OF GREATER THAN 7 DAYS. INITIAL STABILIZATION MUST BE COMPLETED WITHIN 21 DAYS.
8. ALL SLOPE, FENCE, AND EROSION CONTROL MEASURES THAT ARE PLACED PRIOR TO LAND DISTURBANCE WILL BE MAINTAINED BY THE GENERAL CONTRACTOR AND ALL CONTRACTORS ON SITE.
9. AREAS WITHIN THE PUBLIC RIGHT OF WAY SHALL BE ESTABLISHED IMMEDIATELY AFTER THE CONSTRUCTION IN THAT AREA IS COMPLETE.
10. ALL PUBLIC STREETS SHALL BE KEPT CLEAN PER THE SWPPP AND CITY REQUIREMENTS.

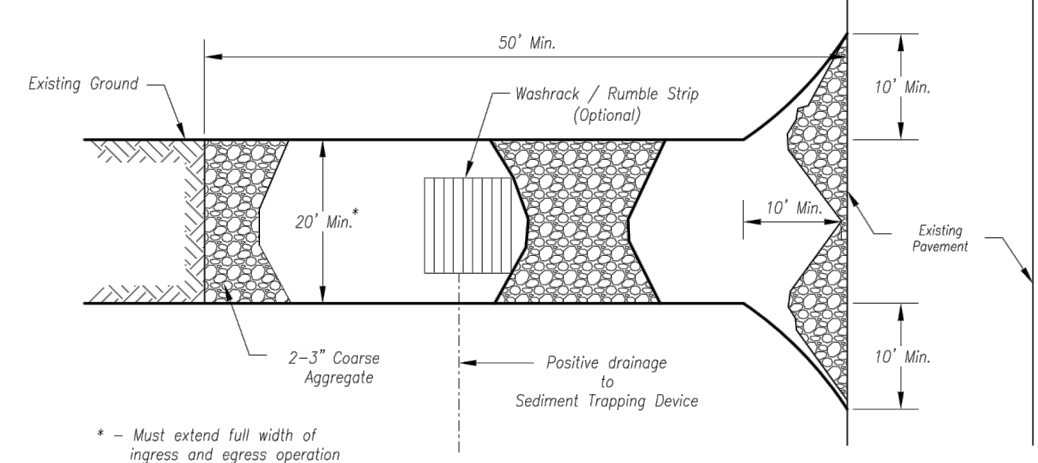
The graph illustrates the percentage of people who have ever been in a romantic relationship, categorized by age group (18 to 65 years) for two different years: 1990 (dashed line) and 2010 (solid line). The y-axis represents the percentage, ranging from 0 to 100. The x-axis represents age in years, with markers at 18, 24, 30, 36, 42, 48, 54, and 60. The 2010 data shows a higher percentage of people in romantic relationships across all ages compared to 1990, with a particularly significant increase in the 18-24 age group.

1. Survey data and legal description from Owner provided ALTA survey dated March 19, 2015 and prepared by Aylett Survey & Engineering Company. Used with permission from the Owner.
2. Topographic data is City GIS data.

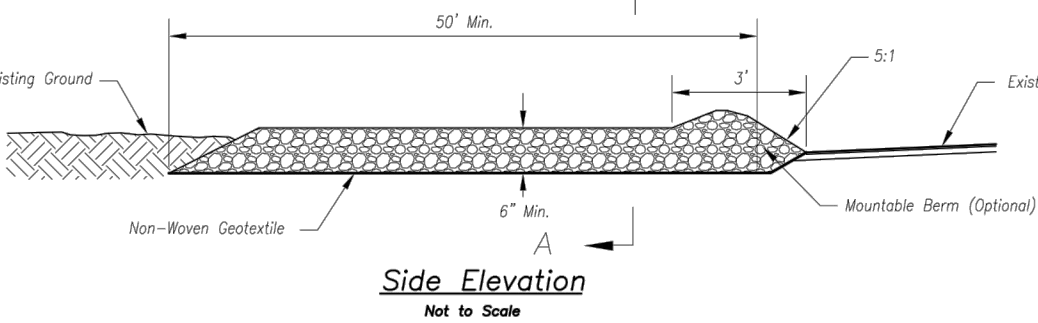


EROSION AND SEDIMENT CONTROL STAGING CHART				
PROJECT STAGE	BMP PLAN REF. NO	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A - PRIOR TO LAND DISTURBANCE	1	CONSTRUCTION ENTRANCE & STAGING AREA	D	EXISTING SITE ACCESS TO BE UTILIZED FOR ENTRANCE, PLACE WHERE INDICATED ON THE PLAN. MAINTAIN, REPAIR, OR REPLACE AS NECESSARY. REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	2	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
	3	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
	4	CONCRETE WASHOUT AREA	D	ESTABLISH PRIOR TO ANY CONCRETE WORK
	5	ROCK DITCH CHECK	E	PLACE WHERE INDICATED IN EXISTING DRAINAGE DITCH
B - MASS GRADING	6	SILT FENCE (DURING CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	7	FOAM SILT DIKE OR ROCK DITCH CHECK	E	PLACE WHERE INDICATED AS SOON AS SWALE IS ESTABLISHED, REPAIR OR REPLACE AS NECESSARY
C - STORM SEWER/ SANITARY SEWER/ WATER MAIN/UTILITY CONSTRUCTION	8	CURB AND YARD AREA INLET PROTECTION (SILT FENCE)	E	EXCAVATE A SEDIMENT TRAP AND PLACE SILT FENCE WITH WIRE BACKING AND GRAVEL AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES SILT FENCE TO BE REMOVED ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
D - AFTER PAVING OPERATIONS	9	CURB 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
	10	YARD AREA INLET PROTECTION		MAINTAIN A SEDIMENT TRAP AND SILT FENCE WITH WIRE BACKING AND GRAVEL AROUND ALL STORM SEWER YARD AREA INLET STORM STRUCTURES ONCE LAID WORK IS COMPLETE AND SEDIMENT TRAP IS REMOVED, SEED/SOD THE AREA AND PLACE GRAVEL FILTER BAGS IN FRONT OF INLET OPENING
	11	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
	12	SEEDING AND MULCHING	E	ALL DISTURBED AREAS AFTER 14 DAYS OF CONSTRUCTION INACTIVITY
E - UNTIL CLOSURE OF LAND DISTURBANCE PERMIT				ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE.

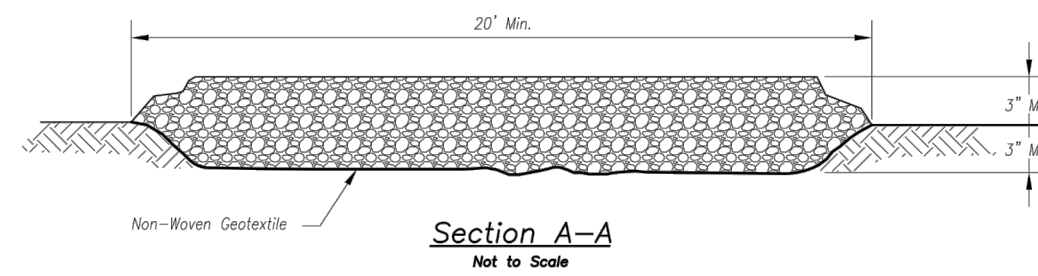
</



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

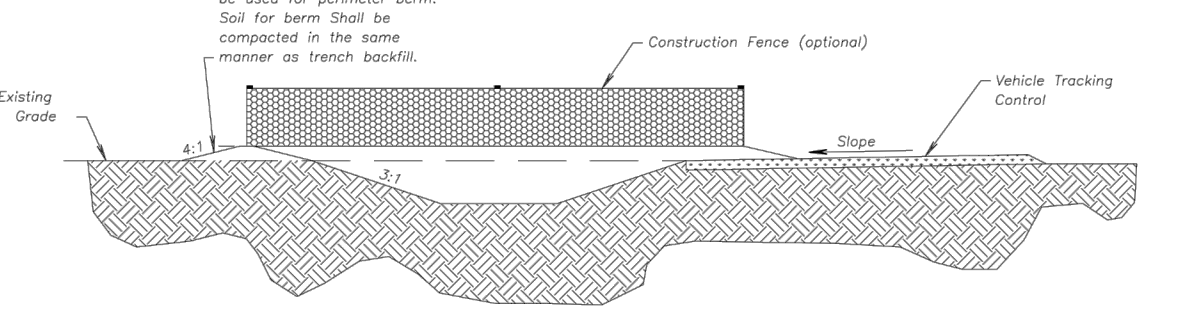
Notes for Concrete Washout:

- Concrete washout areas shall be installed prior to any concrete placement on site.
- Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking post shall be sloped towards the concrete washout area.
- Vehicle tracking control is required at the access point to all concrete washout areas.
- Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
- A one-place impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

- Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
- Concrete washout area shall be enlarged as necessary to maintain capacity for washed concrete.
- Concrete washout water, residual pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a sealed right container and disposed of properly.
- Concrete washout areas shall remain in place until all concrete for the project is placed.
- When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topped, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

CONCRETE WASHOUT



Excavated material shall be used for perimeter berm. Soil for berm shall be compacted in the same manner as trench backfill.

Construction Fence (optional)

Vehicle Tracking Control

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

Notes for Construction Entrance:

- Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
- Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
- If slope towards the public road exceeds 2%, construct a 6" to 8" high ridge with 3:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
- Install pipe under the entrance if needed to maintain drainage ditches along public roads.
- Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
- Divert all surface runoff and drainage from the entrance to a sediment control device.
- If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

- Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

CONSTRUCTION ENTRANCE

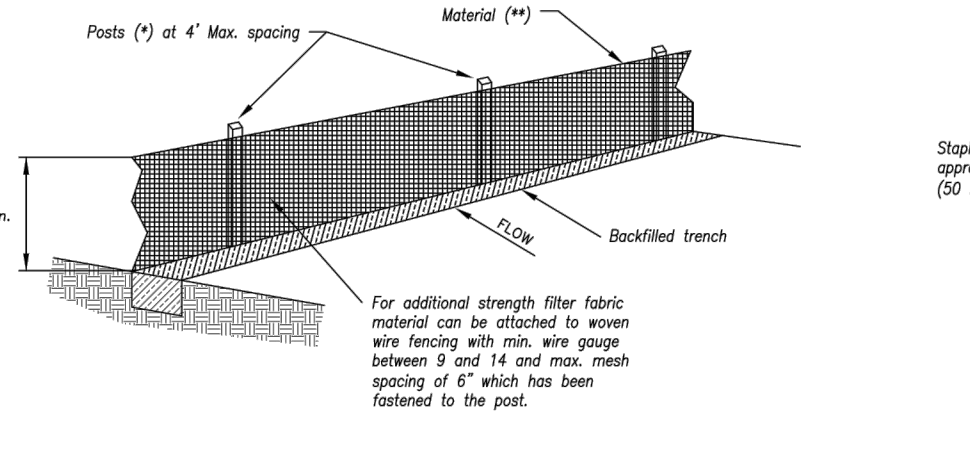
AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

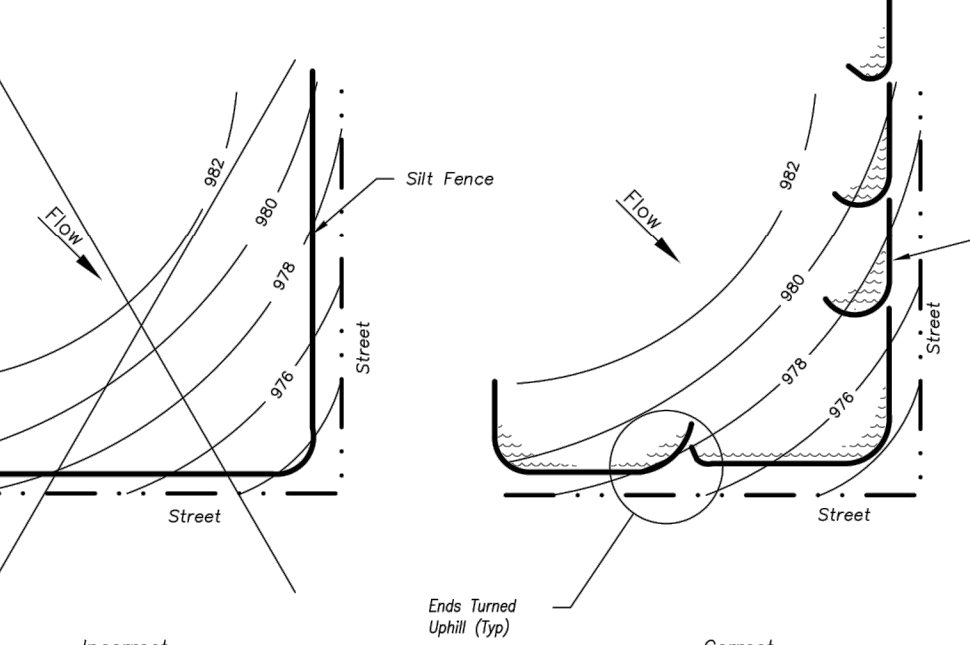
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01

ADOPTED: 10/24/2016



Silt Fence Details
Not to Scale



Silt Fence Layout
Not to Scale

Notes:

- In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
- Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
- Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
- Attach fabric to upstream side of post.
- Install posts a minimum of 2' into the ground.
- Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

- Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of silt fence.
- Repair as necessary to maintain function and structure.

JOINING FENCE SECTIONS

Not to Scale

AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

SILT FENCE

STANDARD DRAWING NUMBER ESC-03

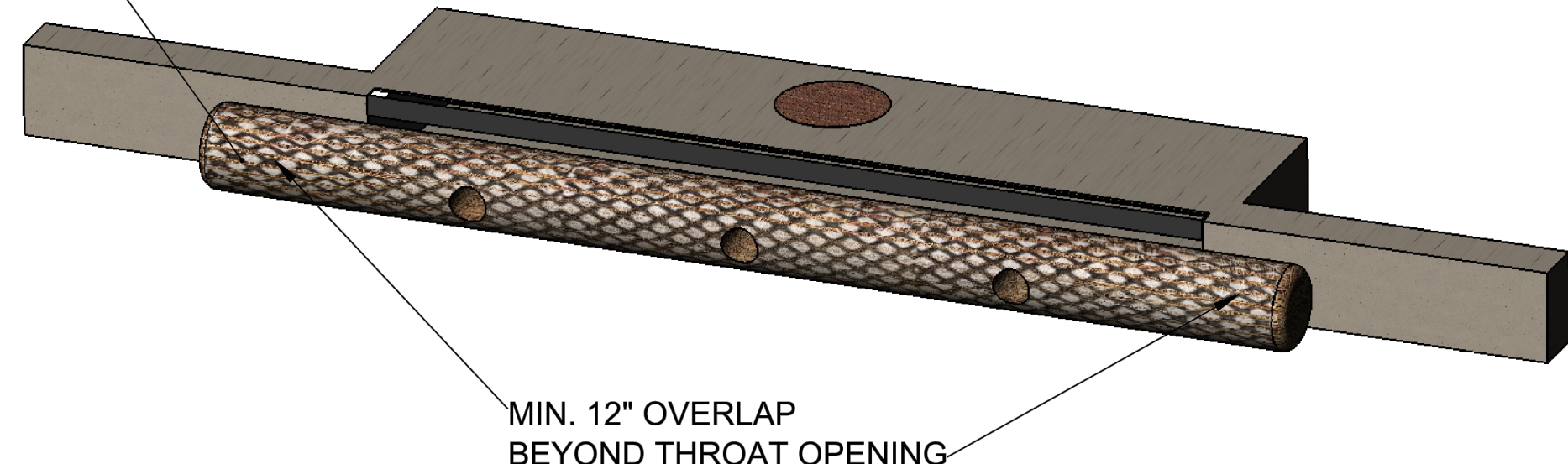
ADOPTED: 10/24/2016

ADDITIONAL EROSION CONTROL MEASURES SHALL BE PROVIDED AT THE DISCRETION OF THE CITY INSPECTOR OR ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

EROSION CONTROL NOTES:

- THIS PROJECT CONSISTS OF THE CONSTRUCTION OF STREETS AND SEWERS NEEDED FOR A COMMERCIAL SUBDIVISION.
- TOTAL DISTURBED AREA IS APPROXIMATELY 9.89 ACRES.
- PROJECT PHASING
 - SANITARY CONSTRUCTION
 - STORM SEWER CONSTRUCTION
 - MASS GRADING
 - STREET CONSTRUCTION
 - SITE CLEANUP & STABILIZATION
- ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.
- ALL SLOPES STEEPER THAN 6:1 SHALL BE IMMEDIATELY SEEDED AND MULCHED WITH EROSION CONTROL BLANKETS INSTALLED.
- STOCKPILES OF TOPSOIL TO BE LOCATED IN AREAS WHERE EROSION WILL NOT LEAVE SITE OR ENTER STORM SEWER.



GUTTERBUDDY COMPOSED OF 100% RECYCLED SYNTHETIC CARPET FIBERS

MIN. 12" OVERLAP BEYOND THROAT OPENING

9.00" DIA.

OVERFLOW

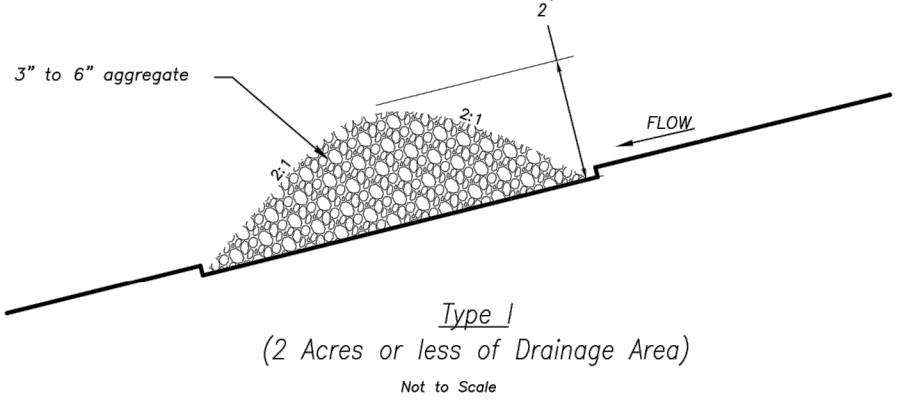
VARIES

ACF GUTTERBUDDY SIZES	
ACF ITEM CODE	LENGTH
4GUTTER04	4'
4GUTTER06	6'
4GUTTER08	8'
4GUTTER10	10'
4GUTTER12	12'
4GUTTER14	14'
4GUTTER16	16'

ACF GUTTERBUDDY

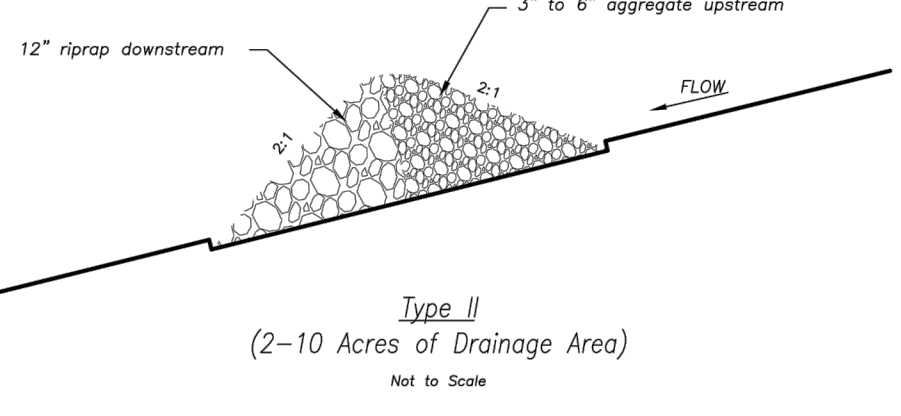
FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL, 800-448-3636, WWW.ACFENVIRONMENTAL.COM

DATE 9/7/16



Type I
(2 Acres or less of Drainage Area)

Not to Scale



Type II
(2-10 Acres of Drainage Area)

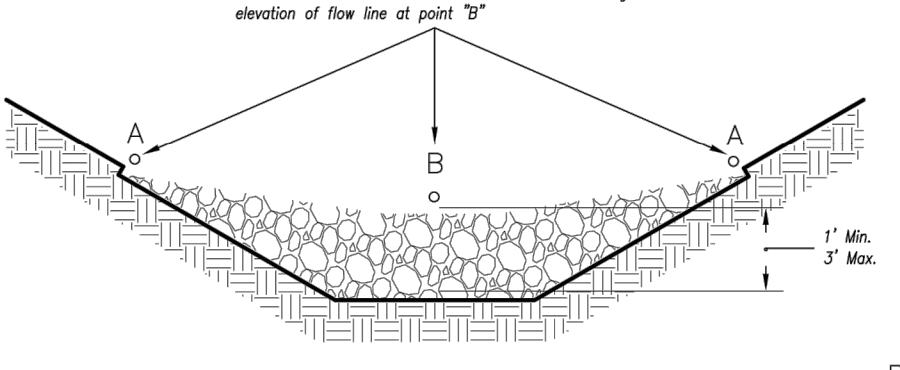
Not to Scale

Temporary Rock Ditch Check Spacing

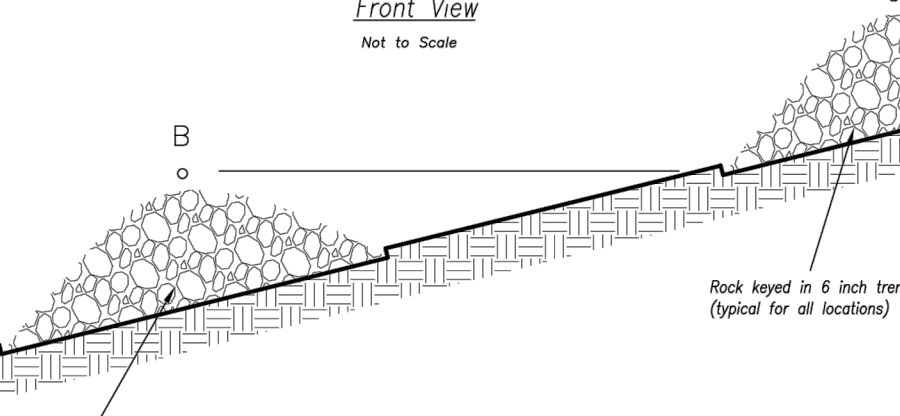
Ditch Centerline Slope (%)	Spacing Interval (feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29

Note: Use this spacing only for Rock Ditch Checks.

ROCK DITCH CHECK



Front View
Not to Scale



Spacing Between Check Dams (all types)
Not to Scale

Notes:

- Rock check dams shall be used only for drainage areas less than 10 acres unless approved by the City Engineer.
- Use rock checks only in situations where the ditch slope exceeds 6%.

Maintenance:

- Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of the ditch check.
- Replace and reshape as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

ROCK DITCH CHECKS

STANDARD DRAWING NUMBER ESC-10

ADOPTED: 10/24/2016

SCHLAGEL & ASSOCIATES, P.A.

Engineers • Planners • Surveyors • Landscape Architects

14920 West 107th Street • Lenexa, Kansas 66215

(913) 492-5158 • Fax: (913) 492-9400

WWW.SCHLAGELASSOCIATES.COM

Missouri State Certificates of Authority

#E2002003690-F #LAC200100237 #LS200200859-F

PREPARED BY:

MARK ALLEN BREUER

NUMBER PE-2009007268

Mark Allen Breuer, P.E.

MO# PE-2009007268

COLEMAN EQUIPMENT

FINAL DEVELOPMENT PLANS

4101 NE LAKEWOOD WAY

LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

DRAWN BY: PWDF

CHECKED BY: MAB/JS

DATE PREPARED: 9/22/2017

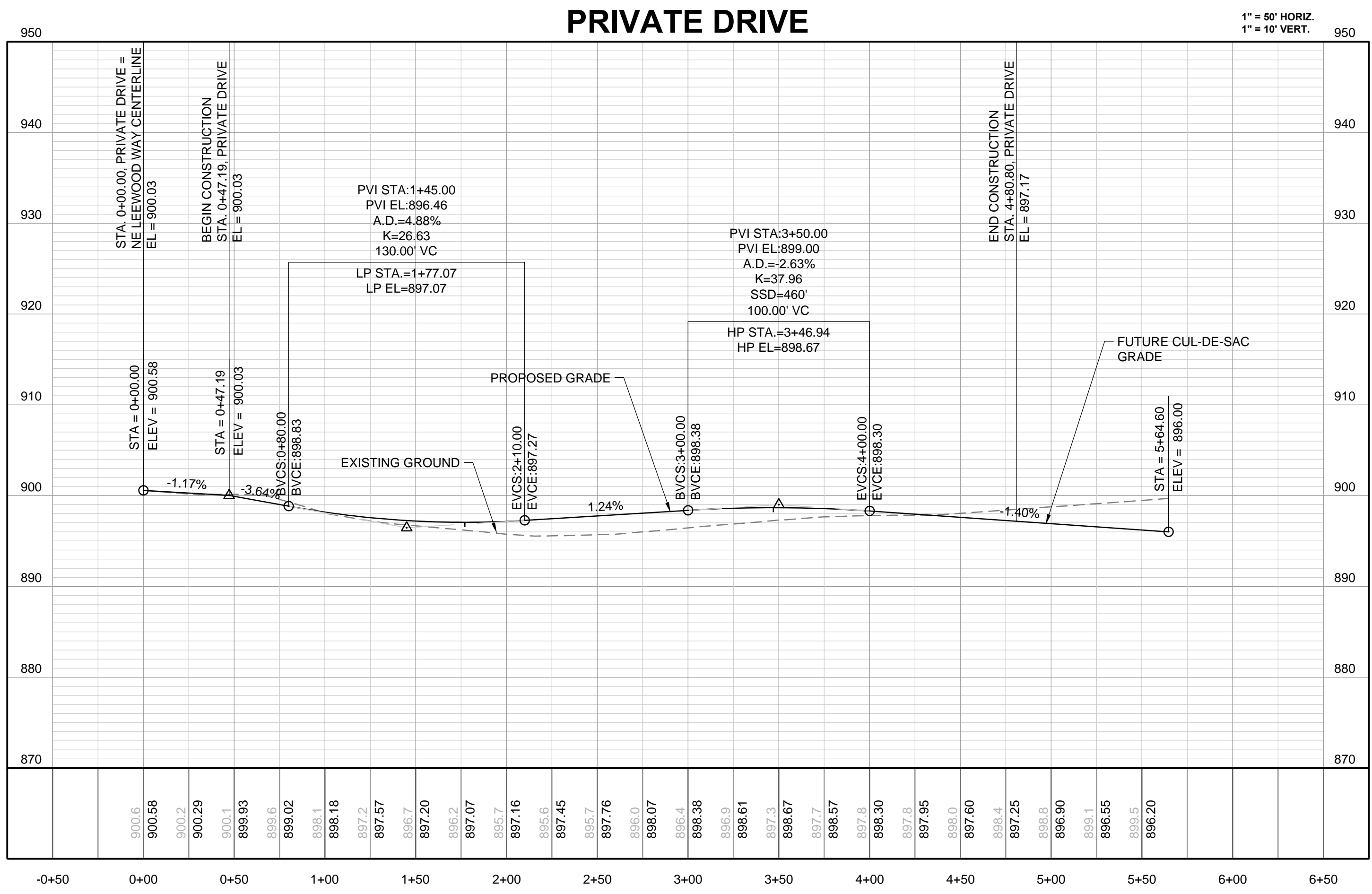
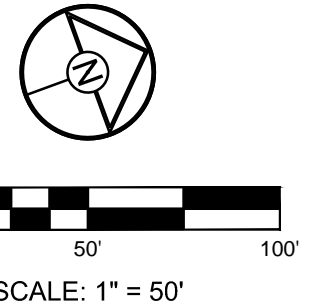
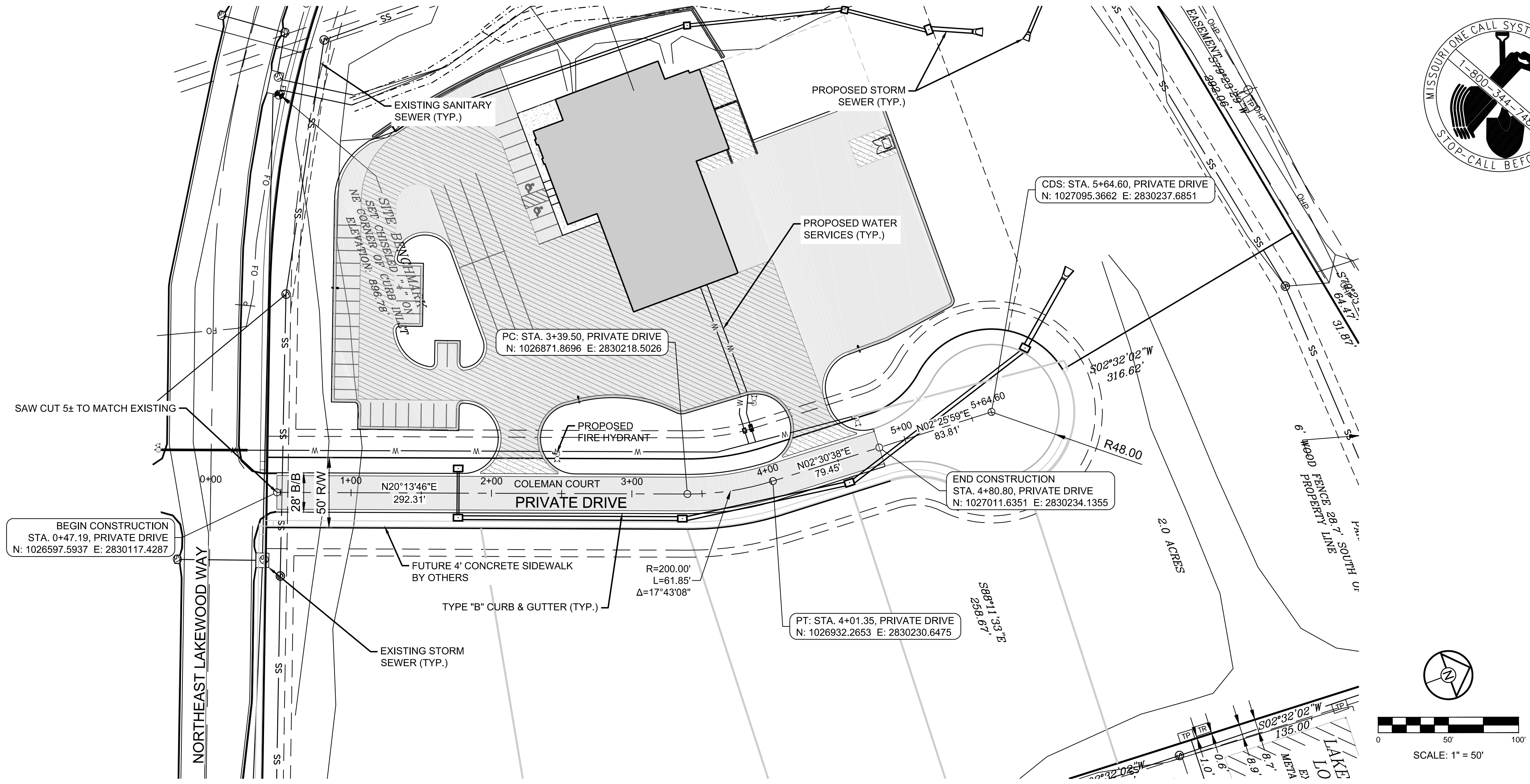
PROJ. NUMBER: 17-019

EROSION CONTROL DETAILS

SHEET

C3.1

OF PERMIT SET



SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC201002237 #LS2002008659-F

**COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI**

REVISION DATE	DESCRIPTION
10-18-17	CITY COMMENTS

DRAWN BY:
PWDF

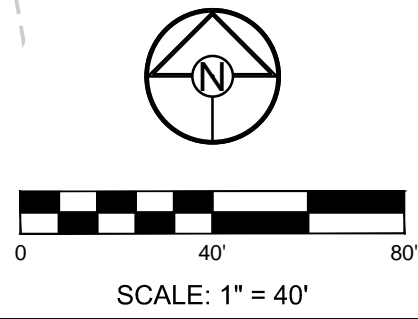
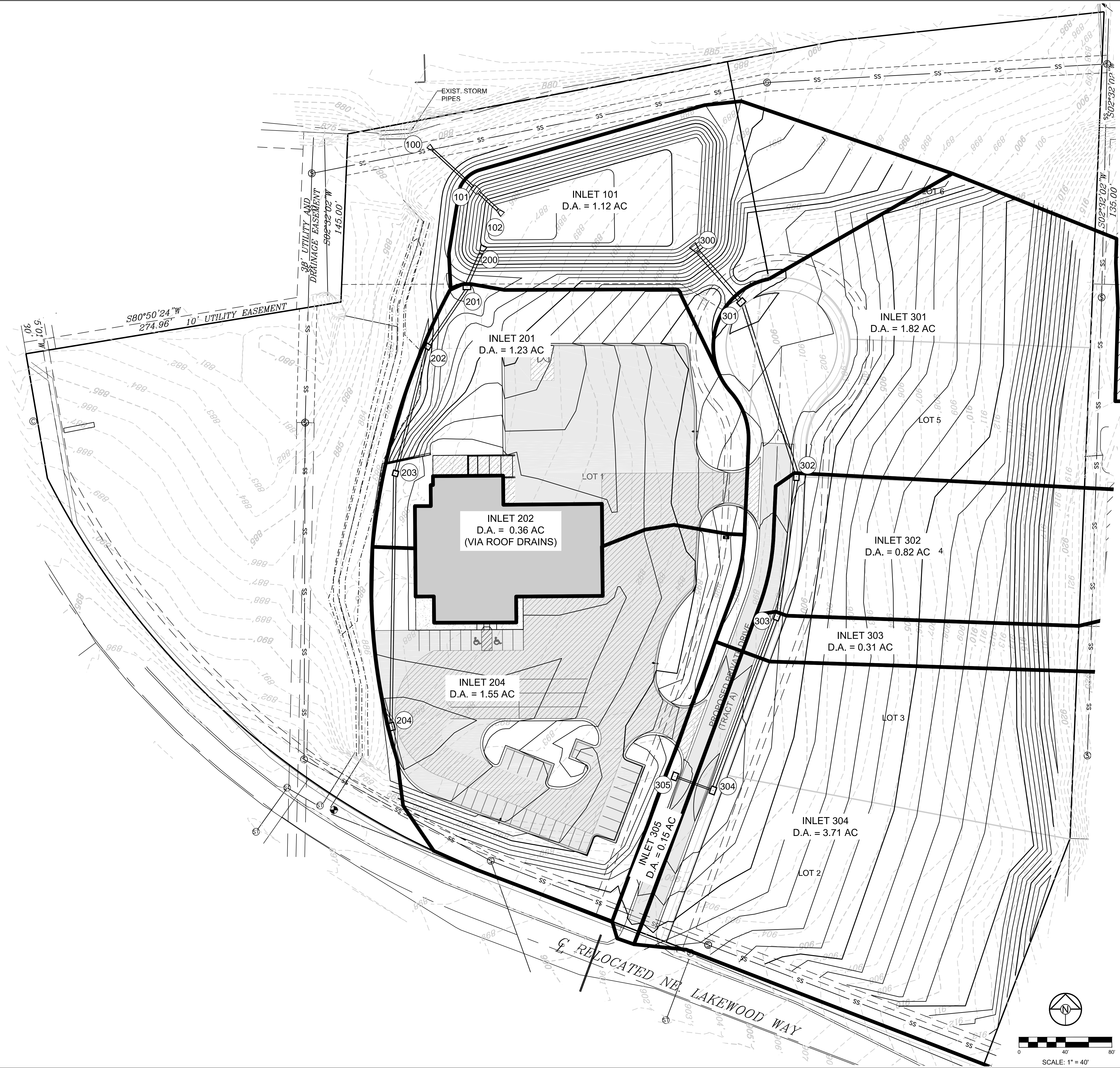
CHECKED BY:
MAB/JS

DATE PREPARED:
9/22/2017

PROJ. NUMBER:
17-019

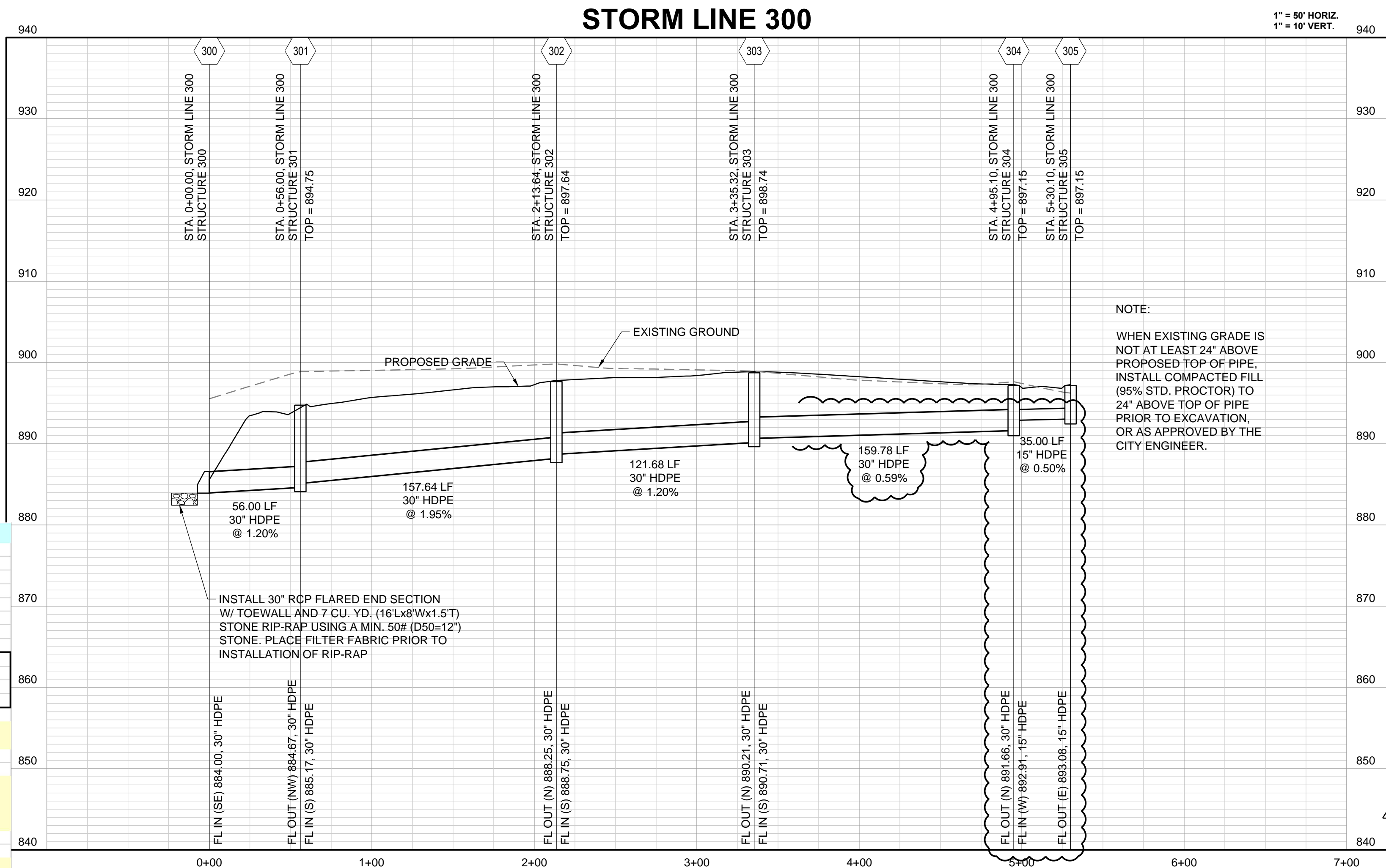
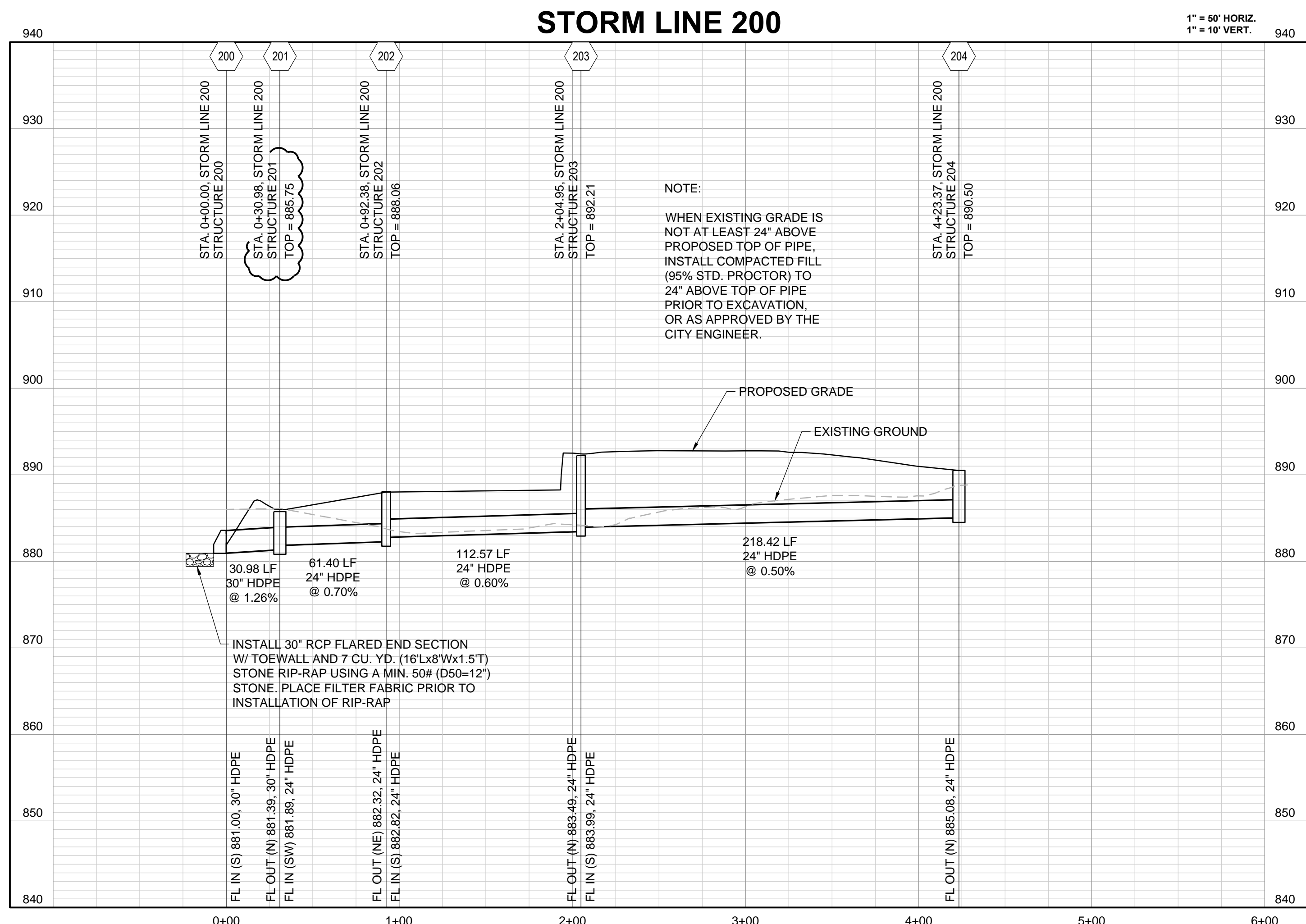
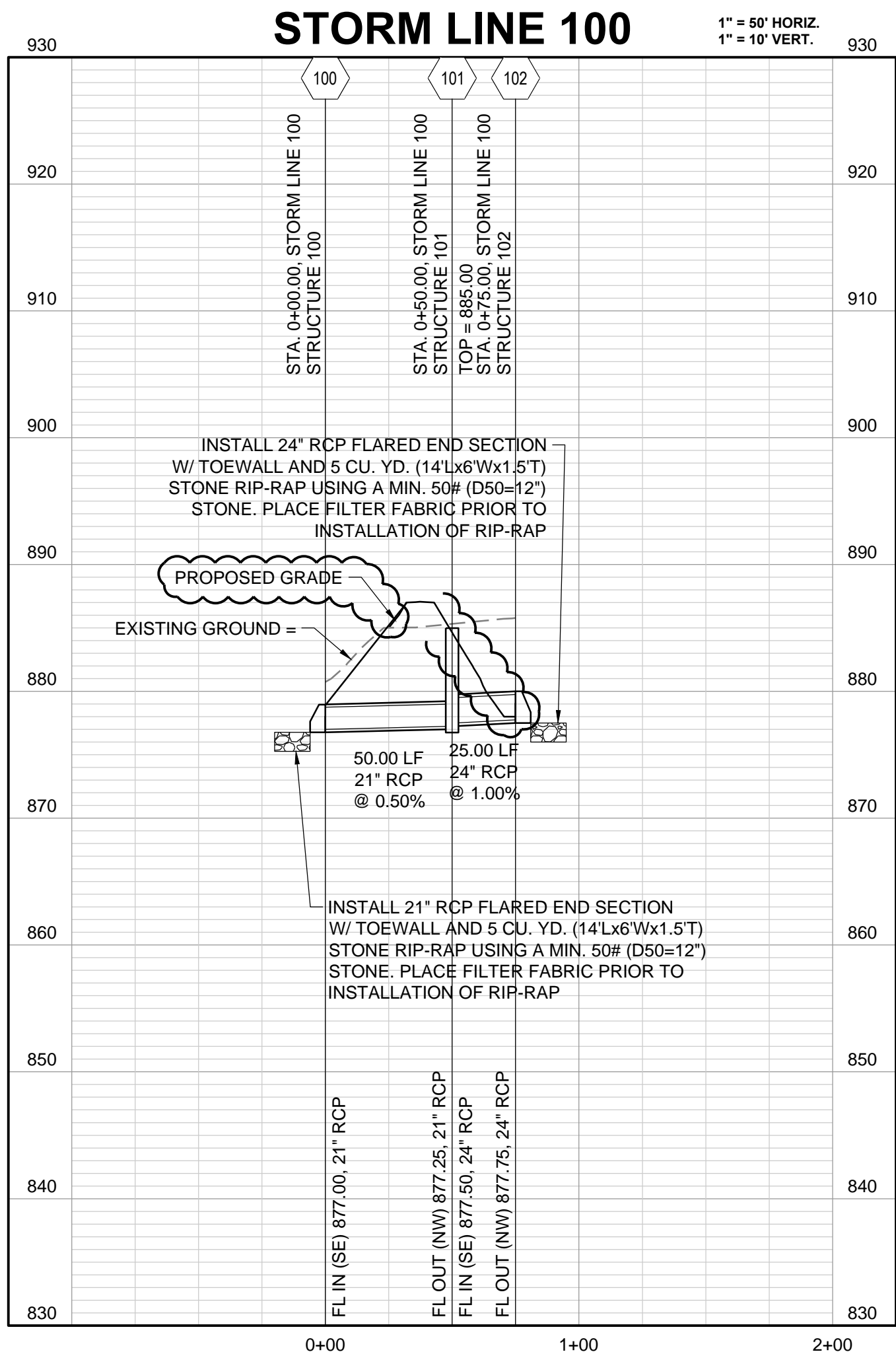
PLAN & PROFILE
- PRIVATE DR.

SHEET
C4.0
OF
PERMIT SET



SCHLAGEL & ASSOCIATES, P.A. Engineers • Planners • Surveyors • Landscape Architects 14920 West 107th Street • Lenexa, Kansas 66215 (913) 492-5158 • Fax: (913) 492-8400 WWW.SCHLAGELASSOCIATES.COM Missouri State Certificate of Authority #E2002003600-F #LAC200100237 #LS200200859-F		COLEMAN EQUIPMENT FINAL DEVELOPMENT PLANS 4101 NE LAKEWOOD WAY LEE'S SUMMIT, MISSOURI		<table><tr><th>REVISION DATE</th><th>DESCRIPTION</th></tr><tr><td>1</td><td></td></tr><tr><td>2</td><td></td></tr><tr><td>3</td><td></td></tr><tr><td>4</td><td></td></tr><tr><td>5</td><td></td></tr><tr><td>6</td><td></td></tr><tr><td>7</td><td></td></tr><tr><td>8</td><td></td></tr><tr><td>9</td><td></td></tr><tr><td>10</td><td></td></tr></table>		REVISION DATE	DESCRIPTION	1		2		3		4		5		6		7		8		9		10	
REVISION DATE	DESCRIPTION																										
1																											
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
<table><tr><td>DRAWN BY: SCH</td><td>CHECKED BY: SCH</td><td>DATE PREPARED: 9/22/2017</td><td>PROJ. NUMBER: 17-019</td></tr></table>		DRAWN BY: SCH	CHECKED BY: SCH	DATE PREPARED: 9/22/2017	PROJ. NUMBER: 17-019	STORM DRAINAGE PLAN		SHEET C5.0 OF PERMIT SET																			
DRAWN BY: SCH	CHECKED BY: SCH	DATE PREPARED: 9/22/2017	PROJ. NUMBER: 17-019																								

Storm Sewer Construction Notes	
Structure	Notes
100	STA 0+00.00, STORM LINE 100 INSTALL 21" RCP FLARED END SECTION W/ TOEWALL AND 5 CU. YD. (14'Lx6'Wx1.5'T) STONE RIP-RAP USING A MIN. 50# (D50=12") STONE. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP 137"14'46" N 1027264.2233 E 2829937.5044
101	STA 0+50.00, STORM LINE 100 CONSTRUCT OUTLET STRUCTURE PER DETAILS ON SHEET C7.2 47"15'13" N 1027230.2808 E 2829974.2182
102	STA 0+75.00, STORM LINE 100 INSTALL 24" RCP FLARED END SECTION W/ TOEWALL AND 5 CU. YD. (14'Lx6'Wx1.5'T) STONE RIP-RAP USING A MIN. 50# (D50=12") STONE. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP 317"14'47" N 1027213.3099 E 2829992.5754
200	STA 0+00.00, STORM LINE 200 INSTALL 30" RCP FLARED END SECTION W/ TOEWALL AND 7 CU. YD. (16'Lx8'Wx1.5'T) STONE RIP-RAP USING A MIN. 50# (D50=12") STONE. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP 67"40'33" N 1027175.1356 E 2829978.2545
201	STA 0+30.98, STORM LINE 200 6 X 4 AREA INLET 180"10'34" N 1027146.4816 E 2829966.4810
202	STA 0+92.38, STORM LINE 200 4 X 4 JUNCTION BOX 236"47'38" N 1027095.1099 E 2829932.8566
203	STA 2+04.95, STORM LINE 200 4 X 4 JUNCTION BOX 255"40'37" N 1026986.0370 E 2829905.0077
204	STA 4+23.37, STORM LINE 200 CONSTRUCT 6'X4' CURB INLET 284"16'34" N 1026767.6430 E 2829901.8119
300	STA 0+00.00, STORM LINE 300 INSTALL 30" RCP FLARED END SECTION W/ TOEWALL AND 7 CU. YD. (16'Lx8'Wx1.5'T) STONE RIP-RAP USING A MIN. 50# (D50=12") STONE. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP 130"47'40" N 1027175.8888 E 2830166.4831
301	STA 0+56.00, STORM LINE 300 CONSTRUCT 6'X4' CURB INLET 222"43'13" N 1027133.4003 E 2830202.9623
302	STA 2+13.64, STORM LINE 300 CONSTRUCT 6'X4' CURB INLET 87'29'22" N 1026983.0688 E 2830250.3917
303	STA 3+35.32, STORM LINE 300 CONSTRUCT 6'X4' CURB INLET 69'46'14" N 1026862.5344 E 2830233.7129
304	STA 4+95.10, STORM LINE 300 CONSTRUCT 6'X4' CURB INLET 249'46'14" N 1026712.6074 E 2830178.4631
305	STA 5+30.10, STORM LINE 300 CONSTRUCT 6'X4' CURB INLET 69'46'14" N 1026724.7097 E 2830145.6220



Schlagel & Associates, P.A.

Project Name:		COLEMAN EQUIPMENT										Curb Type: B														
Project #:		17-019										City: LEE'S SUMMIT, MO														
Time:		10/19/2017 7:43																								
Design Storm:		100																								
"K" Value:		1.25																								
"F" Factor:		1.00																								
Runoff Calculations												Pipe Properties														
Inlet	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. CxA	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlet 1	Up Piped Inlet 2	Up Area (acres)	Up CxA	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev
LINE 100																										
101	0.00	0.81	11.07	6.92	6.2	9.85	0.00	85.26	11.20	4.66			0.00	0.00	101	100	RCP	0.013	21	50.00	0.50	0.25	877.25	877.00	885.00	N/A
102	1.12	0.81	11.07	6.92	6.1	9.87	11.20	85.45	22.62	7.20	201	301	9.95	6.02	102	101	RCP	0.013	24	25.00	1.00	N/A	877.75	877.50	N/A	N/A
LINE 200																										
201	1.23	0.81	3.14	2.54	6.1	9.87	12.30	31.39	49.68	10.12			0.00	0.00	201	200	PEP	0.012	30	30.98	1.25	0.50	881.39	881.00	885.75	883.77
202	0.36	0.81	1.91	1.55	6.0	9.93	3.62	19.21	20.50	6.53			0.00	0.00	202	201	PEP	0.012	24	61.40	0.70	0.50	882.32	881.89	888.06	884.35
203	0.00	0.81	1.55	1.26	5.7	10.06	0.00	15.78	18.98	6.04			0.00	0.00	203	202	PEP	0.012	24	112.57	0.60	0.50	883.49	882.82	892.30	885.26
204	1.55	0.81	1.55	1.26	5.0	10.32	16.20	16.20	17.33	5.52			0.00	0.00	204	203	PEP	0.012	24	218.42	0.50	N/A	885.08	883.99	890.50	886.92
LINE 300																										
301	1.82	0.51	6.81	3.47	5.9	9.95	11.54	43.18	48.68	9.92			0.00	0.00	301	300	PEP	0.012	30	56.00	1.20	0.50	884.67	884.00	894.75	887.56
302	0.82	0.51	4.99	2.54	5.7	10.03	5.24	31.90	62.05	12.64			0.00	0.00	302	301	PEP	0.012	30	157.64	1.95	0.50	885.25	885.17	895.75	890.65
303	0.31	0.51	4.17	2.13	5.5	10.11	2.00	26.87	48.68	9.92			0.00	0.00	303	302	PEP	0.012	30	121.68	1.20	0.50	890.21	888.75	898.74	892.38
304	3.71	0.51	3.86	1.97	5.1	10.26	24.27	25.25	34.25	6.98			0.00	0.00	304	303	PEP	0.012	30	159.78	0.59	1.25	891.66	890.71	897.15	893.75
305	0.15	0.51	0.15	0.08	5.0	10.32	0.99	0.99	4.93	4.02			0.00	0.00	305	304	PEP	0.012	15	35.00	0.50	N/A	893.08	892.91	897.15	893.77

SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificate of Authority
#E200200360-F #LAC20100237 #LS20020865-F



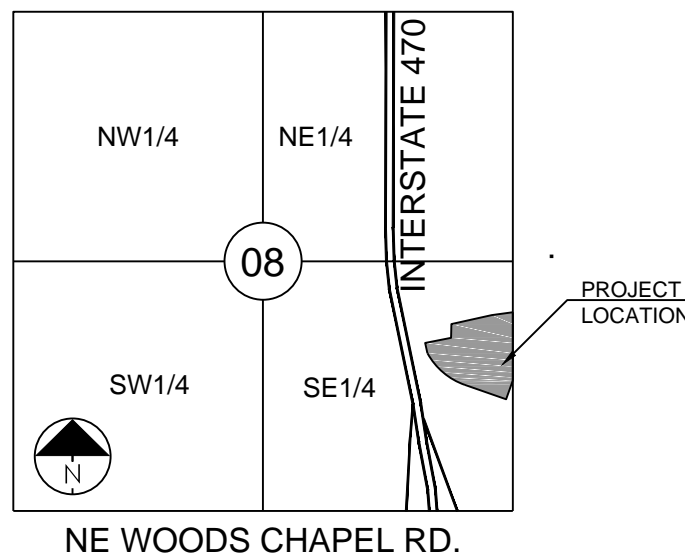
**COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS**
**4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI**

REVISION DATE	DESCRIPTION
9-19-17	RPT #6
9-19-17	SCH
9-19-17	CHECKED BY
9-19-17	SCH
9-19-17	DATE PREPARED
9-22-2017	PROJ. NUMBER:
17-019	

**STORM SEWER
PROFILES**

SHEET

C5.1
OF
PERMIT SET



SECTION 08-48N-31W

LOCATION MAP
SCALE 1" = 2000'

UTILITY INFORMATION & CONTACTS:

Missouri Gas Energy
Attn: Lucas Walls
3025 Southeast Clover Drive
Lee's Summit, Missouri 64082
Phone: (816) 969-2218
Email: lucas.walls@sgc.com

Kansas City Power & Light
Attn: Phillip Ingram
1300 Hamblen Road
Lee's Summit, Missouri 64081
Phone: (816) 347-4339
Email: phillip.ingram@kcpl.com

Sewer and Water - City of Lee's Summit
220 SE Green Street
Lee's Summit, Missouri 64063
Phone: (816) 969-1900
Email: publicworks@cityoffs.net

AT&T
Attn: Herb Upshaw
9444 Nail Avenue
Overland Park, Kansas 66207
Phone: (913) 383-4929
Email: hu4112@att.com

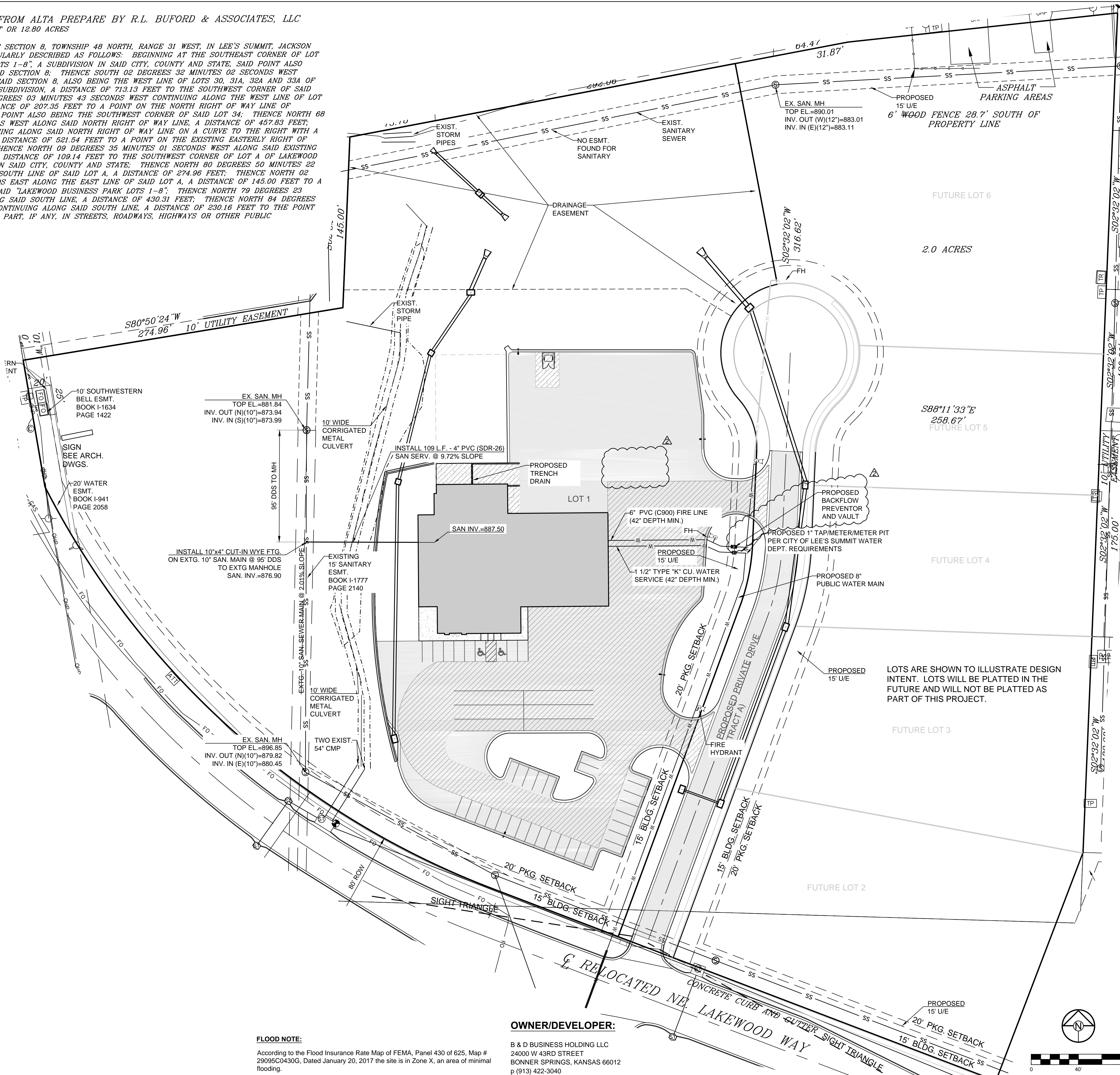
811
Missouri One Call - 1-800-344-7483

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDON. THE SURVEYOR FURTHER DOES NOT WARRANTY THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

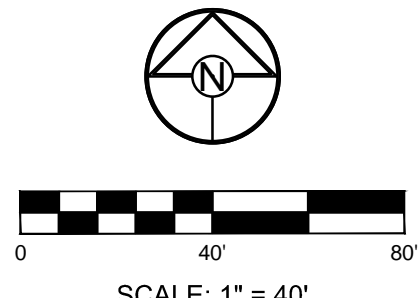
PROPERTY DESCRIPTION FROM ALTA PREPARE BY R.L. BUFORD & ASSOCIATES, LLC
CONTAINING 557,618 SQUARE FEET OR 12.80 ACRES

PART OF THE SOUTHEAST 1/4 OF SECTION 8, TOWNSHIP 48 NORTH, RANGE 31 WEST, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF LOT 5, "LAKEWOOD BUSINESS PARK LOTS 1-8", A SUBDIVISION IN SAID CITY, COUNTY AND STATE, SAID POINT ALSO BEING ON THE EAST LINE OF SAID SECTION 8; THENCE SOUTH 02 DEGREES 32 MINUTES 02 SECONDS WEST ALONG THE SAID EAST LINE OF SAID SECTION 8, ALSO BEING THE WEST LINE OF LOTS 30, 31A, 32A AND 33A OF SAID LAKEWOOD BUSINESS PARK SUBDIVISION, A DISTANCE OF 713.13 FEET TO THE SOUTHWEST CORNER OF SAID LOT 33A; THENCE SOUTH 21 DEGREES 03 MINUTES 43 SECONDS WEST CONTINUING ALONG THE WEST LINE OF LOT 34 OF SAID SUBDIVISION, A DISTANCE OF 207.35 FEET TO A POINT ON THE NORTH RIGHT OF WAY LINE OF RELOCATED LAKEWOOD WAY, SAID POINT ALSO BEING THE SOUTHWEST CORNER OF SAID LOT 34; THENCE NORTH 68 DEGREES 56 MINUTES 17 SECONDS WEST ALONG SAID NORTH RIGHT OF WAY LINE, A DISTANCE OF 457.83 FEET; THENCE NORTHWESTERLY CONTINUING ALONG SAID NORTH RIGHT OF WAY LINE ON A CURVE TO THE RIGHT WITH A RADIUS OF 710.00 FEET, AN ARC DISTANCE OF 521.54 FEET TO A POINT ON THE EXISTING EASTERLY RIGHT OF WAY LINE OF I-470 HIGHWAY; THENCE NORTH 09 DEGREES 35 MINUTES 01 SECONDS WEST ALONG SAID EXISTING EASTERLY RIGHT OF WAY LINE, A DISTANCE OF 109.14 FEET TO THE SOUTHWEST CORNER OF LOT A OF LAKEWOOD BUSINESS PARK, A SUBDIVISION IN SAID CITY, COUNTY AND STATE; THENCE NORTH 80 DEGREES 50 MINUTES 22 SECONDS EAST ALONG THE SAID SOUTH LINE OF SAID LOT A, A DISTANCE OF 274.96 FEET; THENCE NORTH 02 DEGREES 32 MINUTES 02 SECONDS EAST ALONG THE EAST LINE OF SAID LOT A, A DISTANCE OF 145.00 FEET TO A POINT ON THE SOUTH LINE OF SAID "LAKEWOOD BUSINESS PARK LOTS 1-8"; THENCE NORTH 79 DEGREES 23 MINUTES 29 SECONDS EAST ALONG SAID SOUTH LINE, A DISTANCE OF 430.31 FEET; THENCE NORTH 84 DEGREES 00 MINUTES 15 SECONDS EAST CONTINUING ALONG SAID SOUTH LINE, A DISTANCE OF 230.16 FEET TO THE POINT OF BEGINNING, SUBJECT TO THAT PART, IF ANY, IN STREETS, ROADWAYS, HIGHWAYS OR OTHER PUBLIC RIGHT-OF-WAYS.



FLOOD NOTE:
According to the Flood Insurance Rate Map of FEMA, Panel 430 of 625, Map # 29095C0430G, Dated January 20, 2017 the site is in Zone X, an area of minimal flooding.

OWNER/DEVELOPER:
B & D BUSINESS HOLDING LLC
24000 W 43RD STREET
BONNER SPRINGS, KANSAS 66012
p (913) 422-3040



SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certified of Authority
#E2002003600-F #LAC200100237 #LS200200859-F

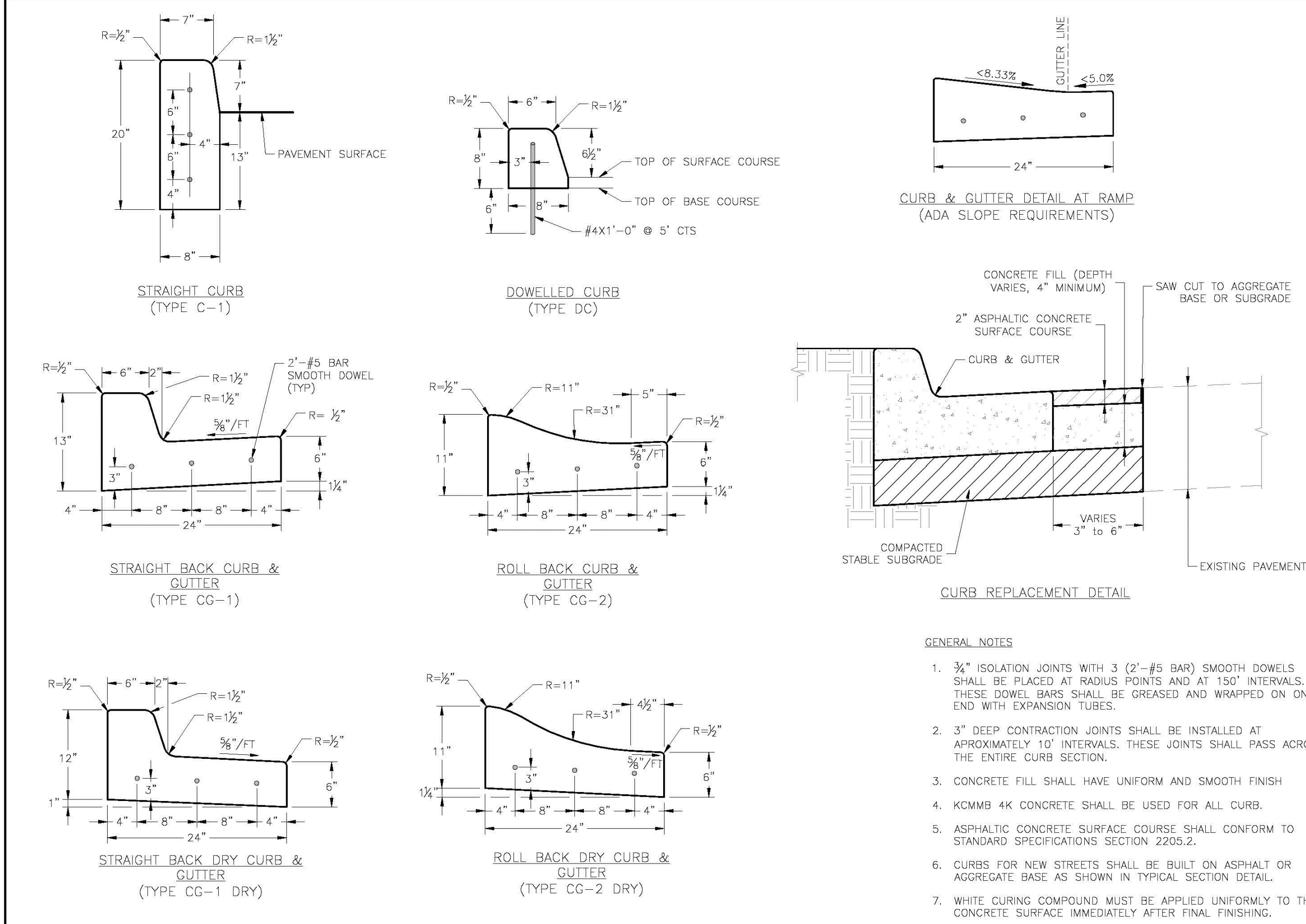
**COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI**

REVISION	DATE	DESCRIPTION
1	10-18-17	CITY COMMENTS
2		
3		
4		
5		
6		
7		
8		
9		
10		

UTILITY PLAN

DRAWN BY: SCH
CHECKED BY: SCH
DATE PREPARED: 9/22/2017
PROJ. NUMBER: 17-019

SHEET
C6.0
OF PERMIT SET

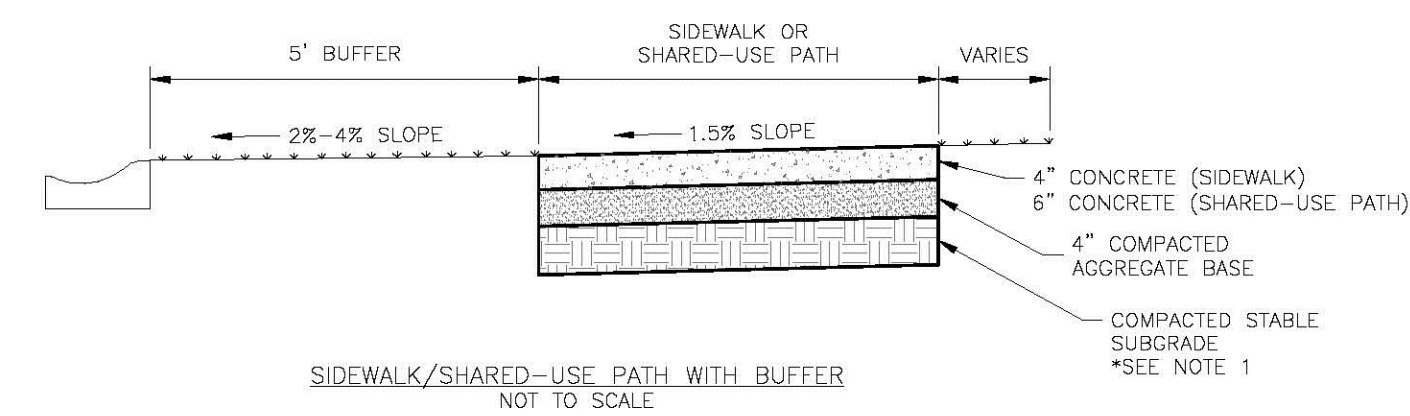
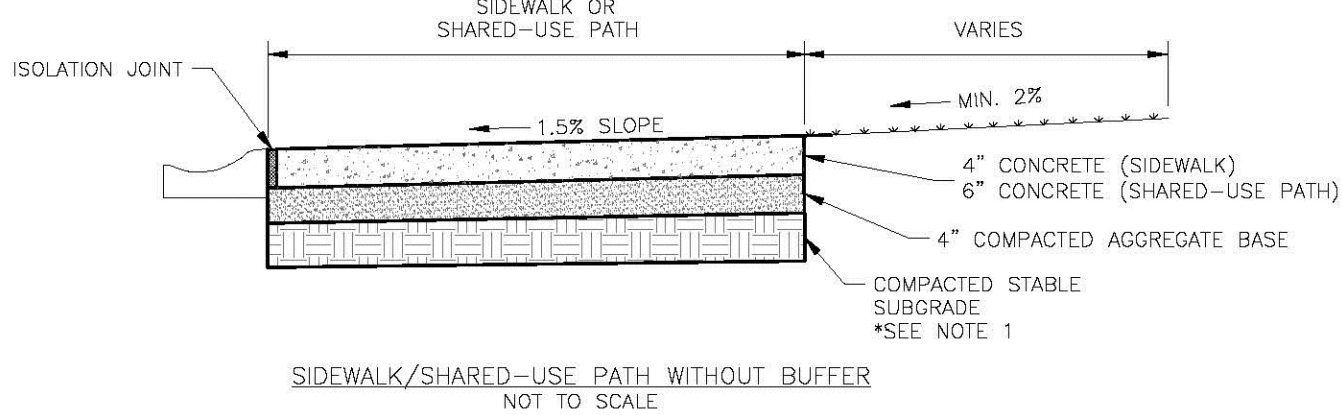


- GENERAL NOTES**
- 3/4" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
 - 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
 - CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH.
 - KCMBB 4K CONCRETE SHALL BE USED FOR ALL CURB.
 - ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
 - CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
 - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT
MISSOURI

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

GEN-4



- GENERAL NOTES:**
- SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
 - 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
 - KCMBB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
 - ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
 - AN EXPANSION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK, BUT NO GREATER THAN 10 FT.
 - SHARED-USE PATH WIDTH SHALL BE 10 FT. WIDE.
 - SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
 - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.



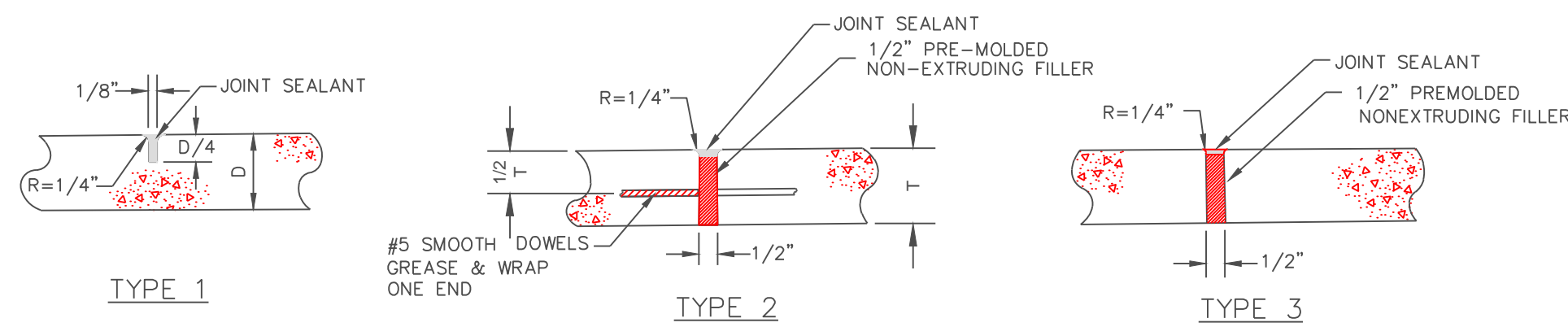
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Date: 04/17
Drawn By: MIF
Checked By: DL
GEN-2

6

TYPICAL PUBLIC CONCRETE SIDEWALK DETAIL

NOT TO SCALE



NOTES:

- TYPE 1 JOINTS MAY BE CONSTRUCTED WITH A GROOVING TOOL OR WITH A CONCRETE SAW AFTER THE CONCRETE IS SET.
- TYPE 1 JOINTS SHALL BE SPACE TO EQUAL THE WIDTH OF THE SIDEWALK.

NOTES:

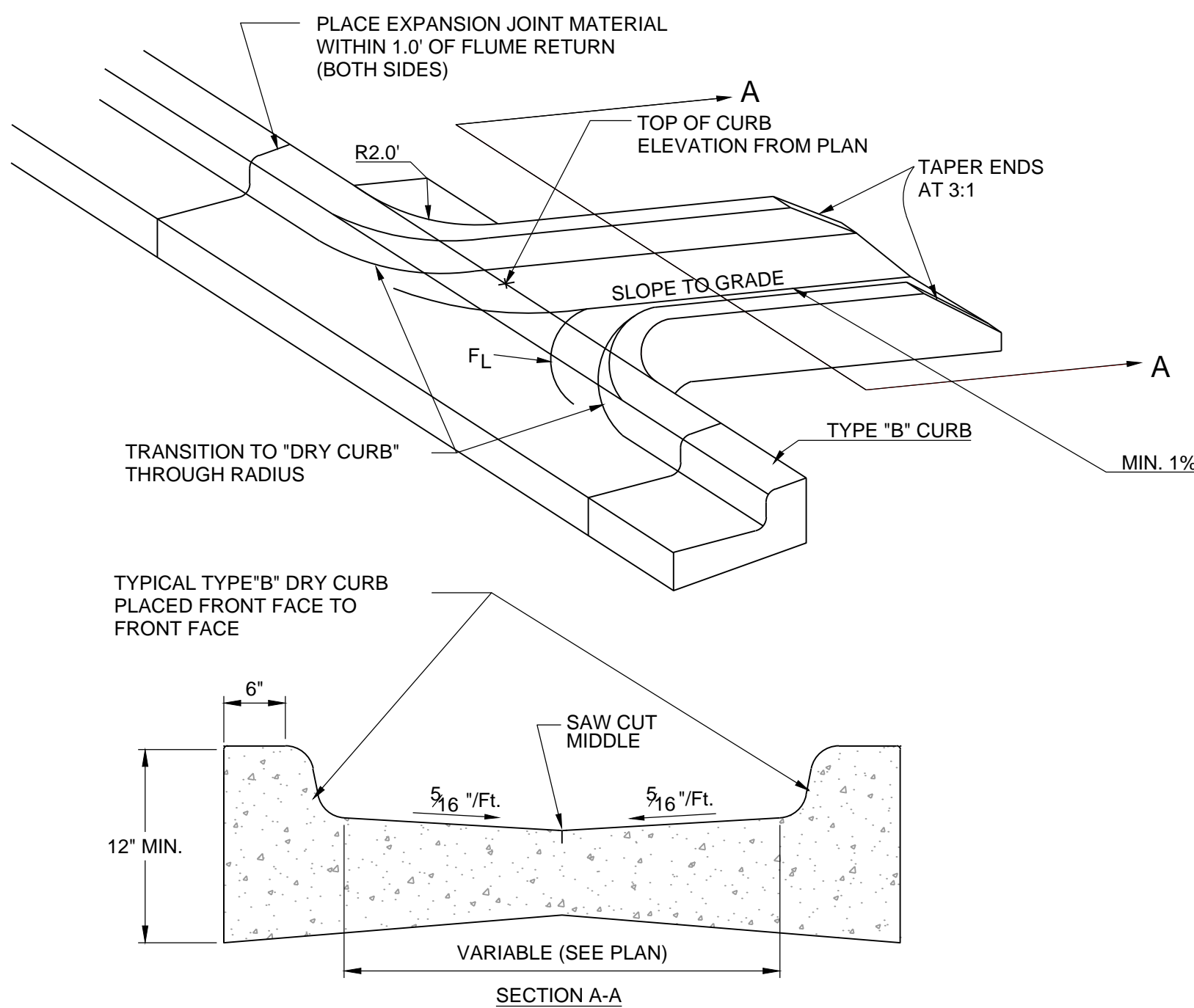
- TYPE 2 JOINTS SHALL BE PLACED @ ALL P.C.'s, P.T.'s AND TRANSITIONS, AND WHERE NEW WALK TIES INTO EXISTING WALK.
- SMOOTH BARS SHALL BE 24" LONG.

NOTE:

- TYPE 3 JOINTS SHALL BE PLACED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE AND IN AREAS WHERE DOWEL BARS ARE NOT REQUIRED BY THE ENGINEER.

2 TYPICAL - PRIVATE CONCRETE PAVEMENT JOINT DETAILS

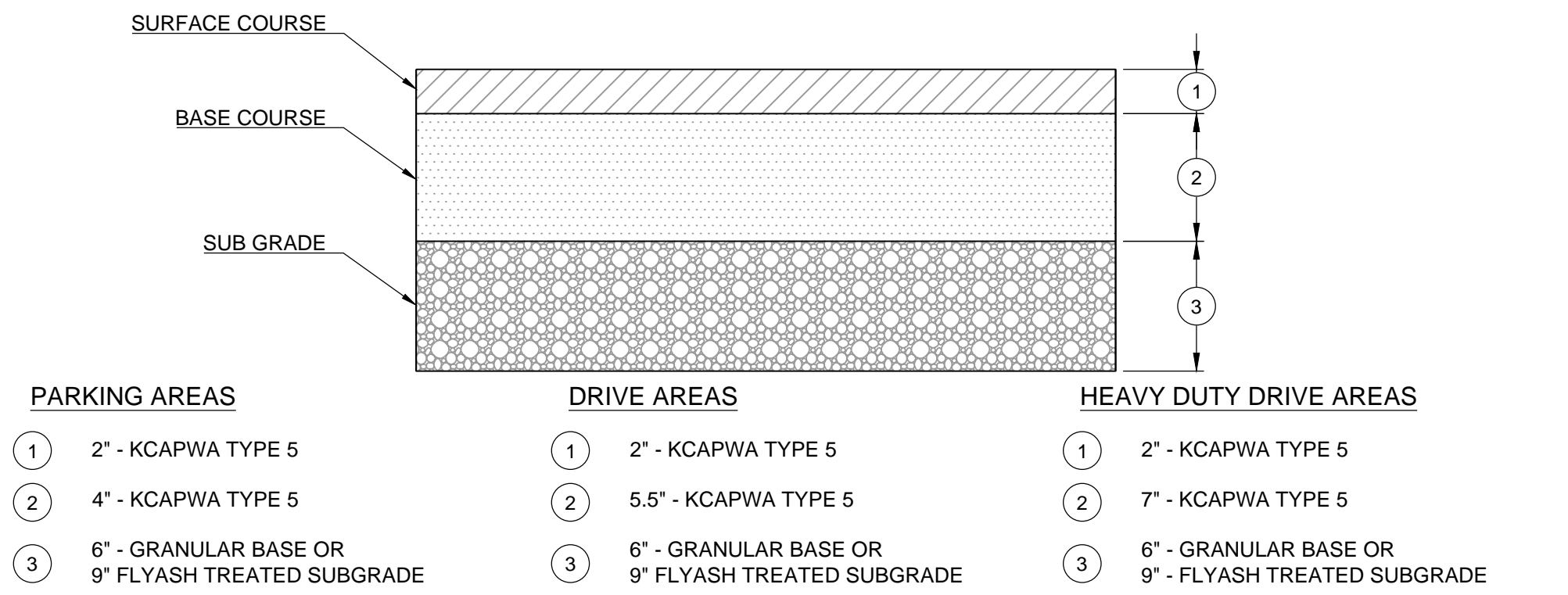
NOT TO SCALE



3

TYPICAL - CURB FLUME DETAIL

NOT TO SCALE



PARKING AREAS

- | 1 | 2" - KCAPWA TYPE 5 |
|---|--|
| 2 | 4" - KCAPWA TYPE 5 |
| 3 | 6" - GRANULAR BASE OR 9" FLYASH TREATED SUBGRADE |

DRIVE AREAS

- | 1 | 2" - KCAPWA TYPE 5 |
|---|--|
| 2 | 5.5" - KCAPWA TYPE 5 |
| 3 | 6" - GRANULAR BASE OR 9" FLYASH TREATED SUBGRADE |

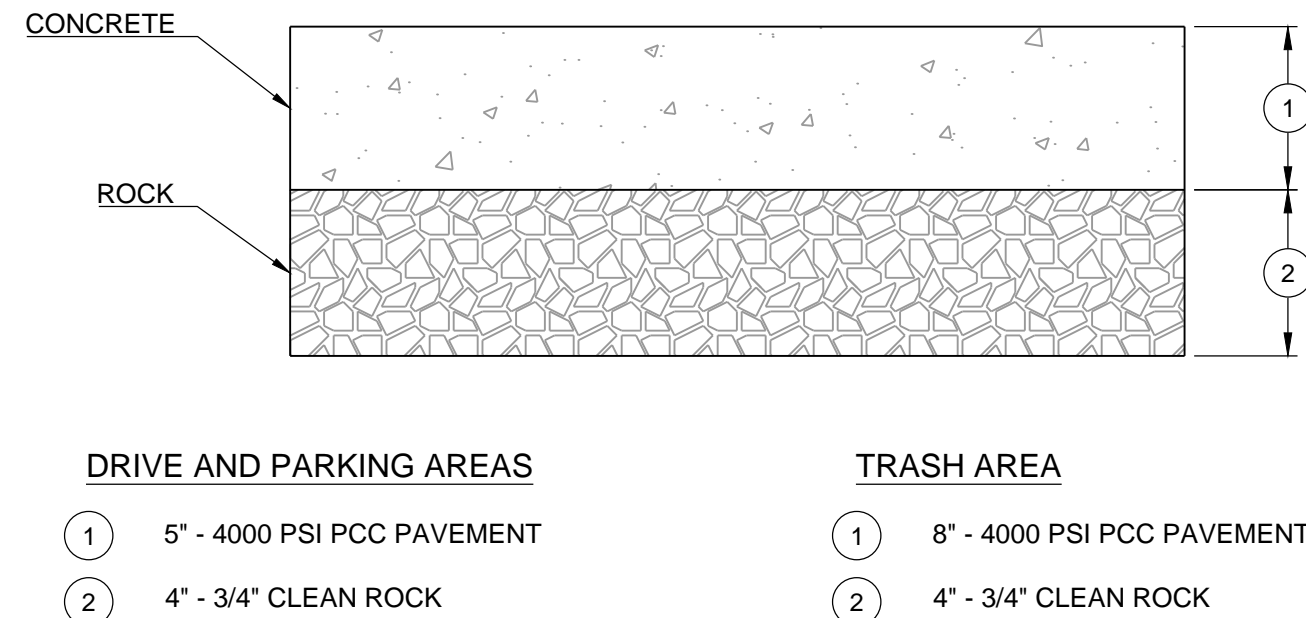
HEAVY DUTY DRIVE AREAS

- | 1 | 2" - KCAPWA TYPE 5 |
|---|--|
| 2 | 7" - KCAPWA TYPE 5 |
| 3 | 6" - GRANULAR BASE OR 9" FLYASH TREATED SUBGRADE |

The pavement subgrades be proofrolled and the moisture content and density of the top 12 inches of subgrade be checked within two days prior to commencement of actual paving operations. If any significant event, such as precipitation, occurs after proofrolling, the subgrade should be reviewed by qualified personnel immediately prior to placing the pavement. The subgrade should be in its finished form at the time of the final review.

3 TYPICAL - ASPHALT PAVEMENT SECTION

NOT TO SCALE



DRIVE AND PARKING AREAS

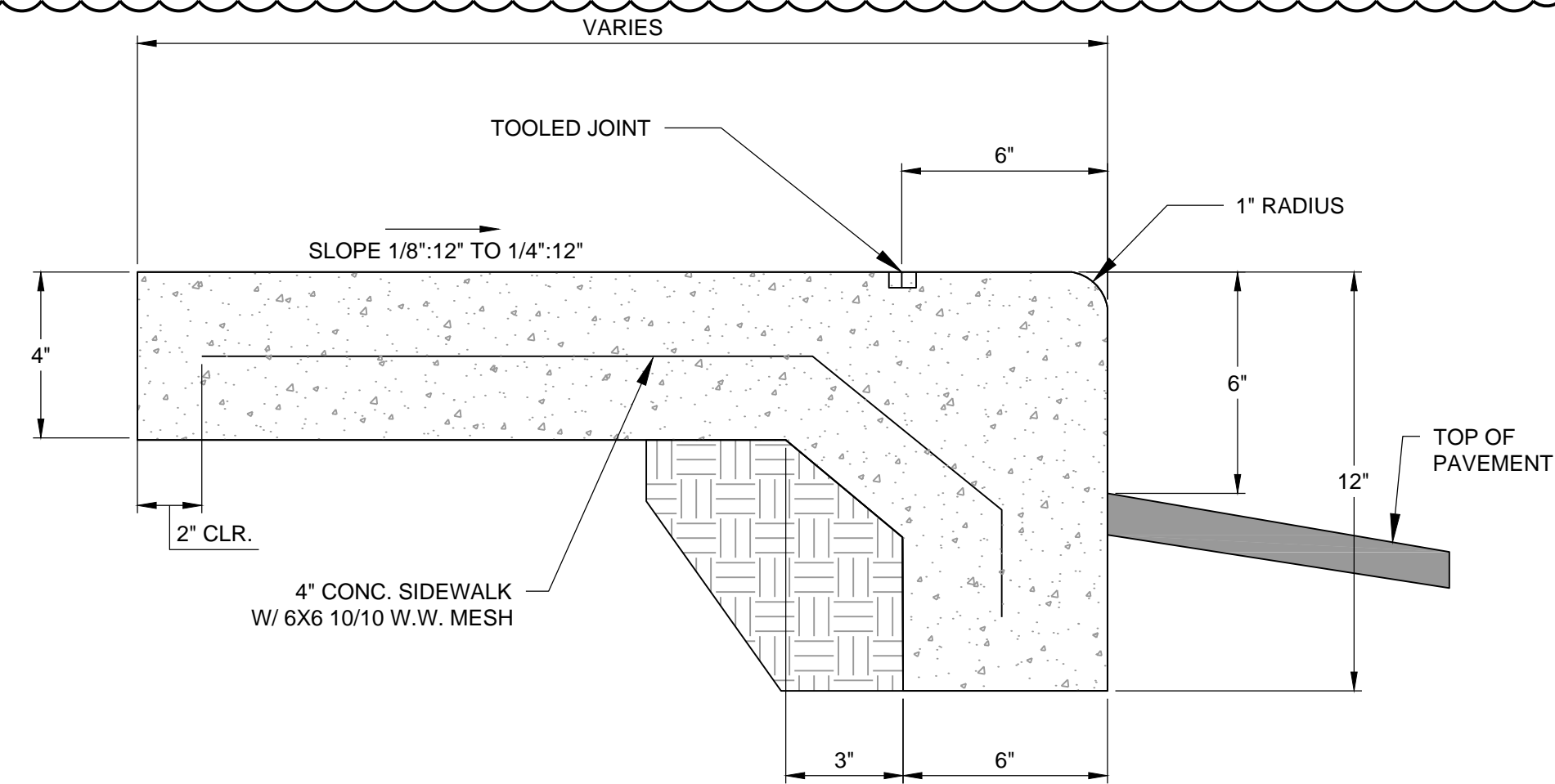
- | 1 | 5" - 4000 PSI PCC PAVEMENT |
|---|----------------------------|
| 2 | 4" - 3/4" CLEAN ROCK |

TRASH AREA

- | 1 | 8" - 4000 PSI PCC PAVEMENT |
|---|----------------------------|
| 2 | 4" - 3/4" CLEAN ROCK |

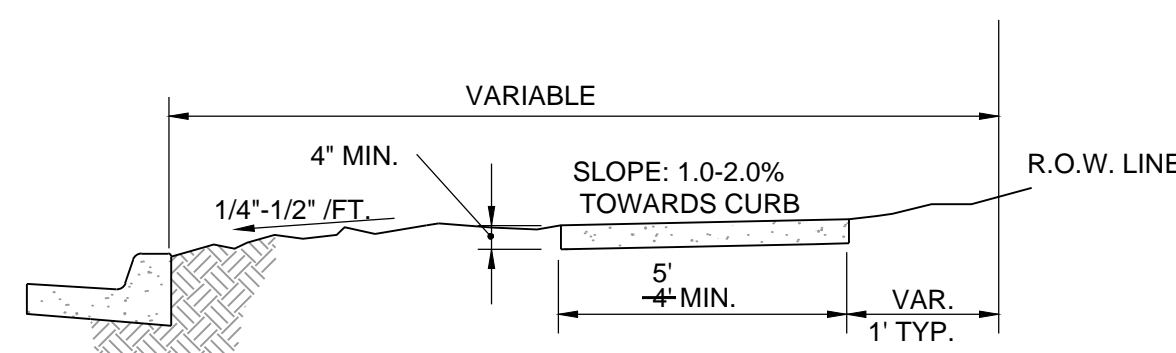
4 TYPICAL - CONCRETE PAVEMENT SECTION

NOT TO SCALE



5 TYPICAL - INTERGRAL CONCRETE WALK/CURB DETAIL

NOT TO SCALE



NOTES:

- JOINTS SHALL BE FORMED AT RIGHT ANGLES TO THE ALIGNMENT OF THE SIDEWALK AND TO THE DEPTHS INDICATED BELOW.
- THE SIDEWALK SHALL BE MARKED OFF INTO SQUARE STONES BY CONTRACTION JOINTS. CONTRACTION JOINTS SHALL BE ONE-EIGHTH (1/8) INCH WIDE BY ONE (1) INCH DEEP AND MAY BE FORMED BY TOOLING OR BY USE OF A CONCRETE SAW.
- EXPANSION JOINTS SHALL BE FORMED BY A ONE-HALF (1/2) INCH THICK PREFORMED JOINT FILLER, EXTENDING THE FULL DEPTH OF THE SLAB, AND SECURED SO THAT THEY ARE NOT MOVED BY DEPOSITING AND COMPACTING THE CONCRETE AT THESE JOINTS. 3/4" JOINT FILLER WILL BE USED WHEN SPACING EXCEEDS 100'.
- EXPANSION JOINTS SHALL BE PLACED WHERE SIDEWALK ABUTS OTHER STRUCTURES AND SHALL NOT BE SPACED MORE THAN 50 FEET APART ON STRAIGHT RUNS FOR HAND LAID SIDEWALK AND NOT MORE THAN 200 FEET APART ON STRAIGHT RUNS FOR MACHINE LAID SIDEWALKS.

6 TYPICAL PRIVATE CONCRETE SIDEWALK DETAIL

NOT TO SCALE

SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC2001002237 #LS2002008659-F



COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI

REVISION DATE

DESCRIPTION

CITY COMMENTS

DRAWN BY:

PN/DIF

CHECKED BY:

MAB/JS

DATE PREPARED:

9/22/2017

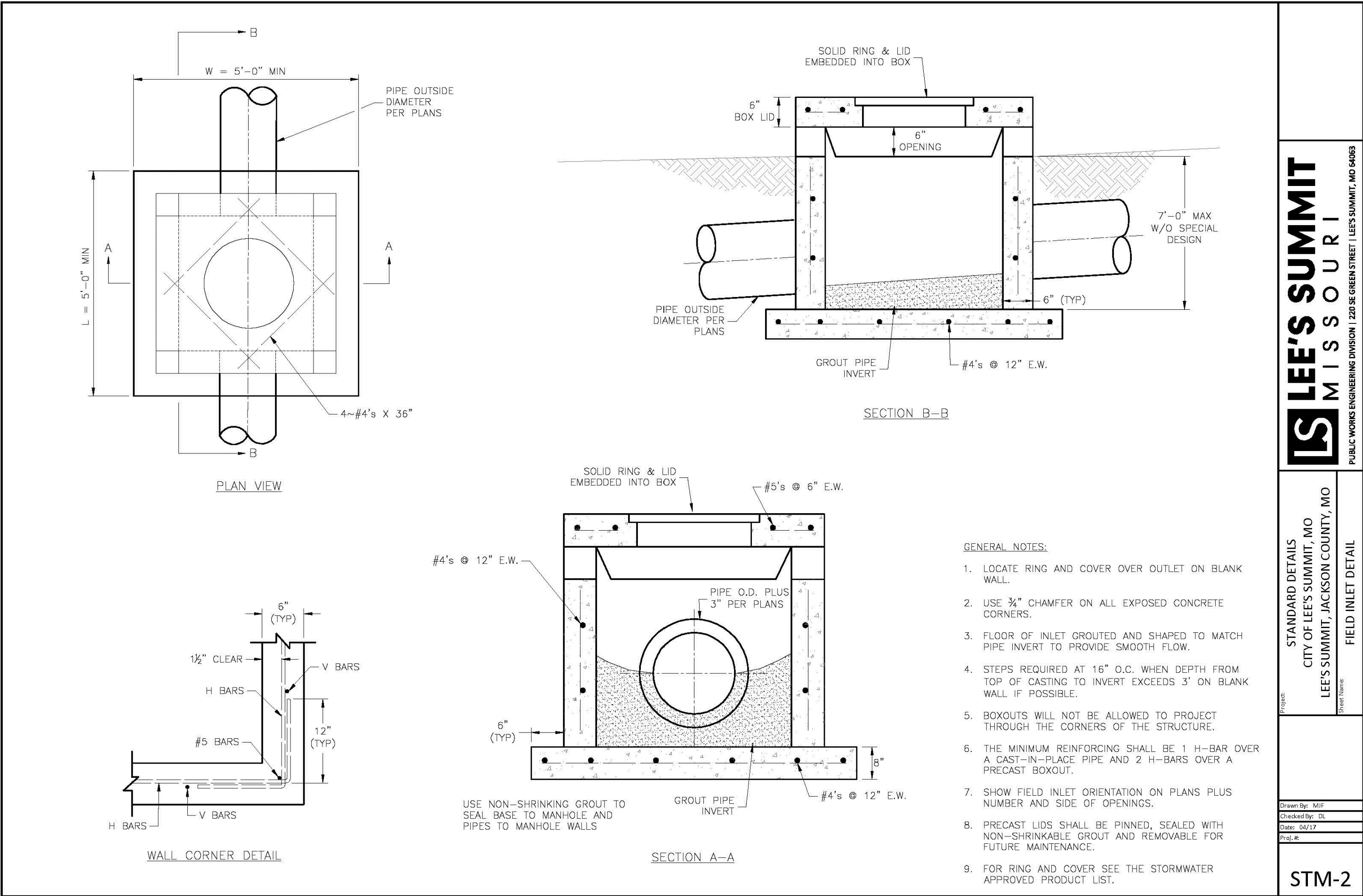
PROJ. NUMBER:

17-019

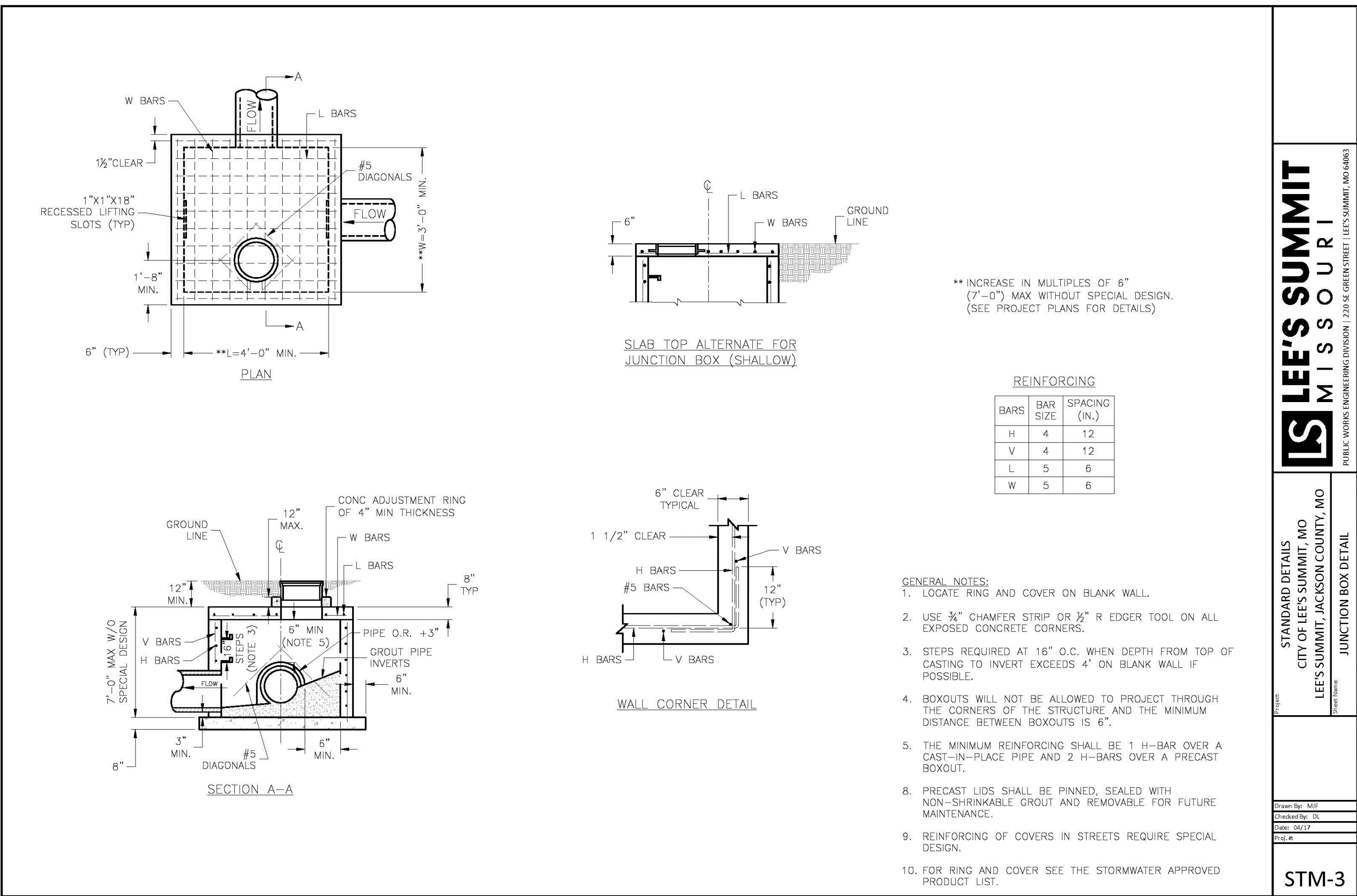
CURB AND PAVEMENT DETAILS

SHEET

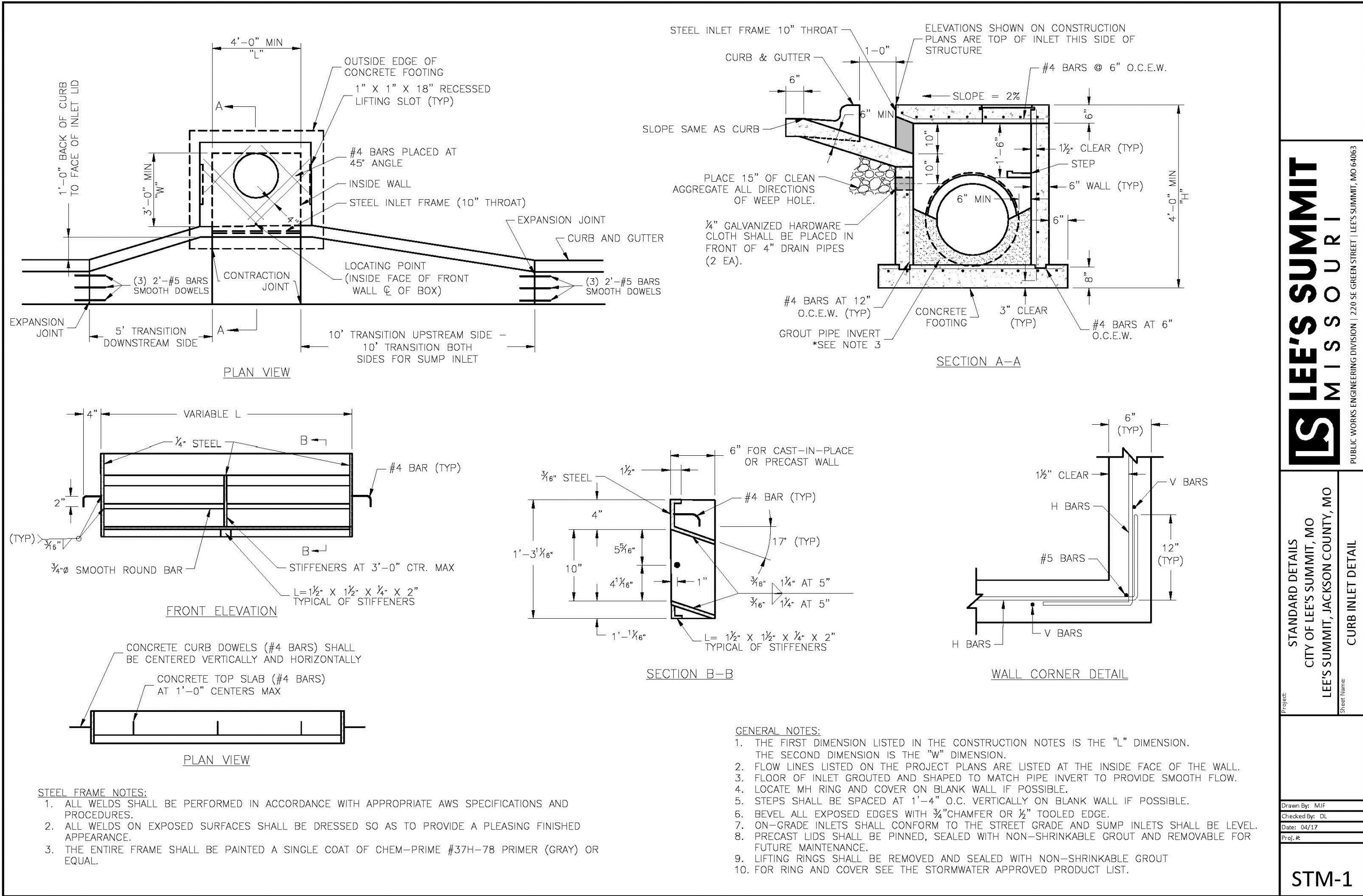
C7.0
OF



STM-2



STM-3



STM-1

COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI

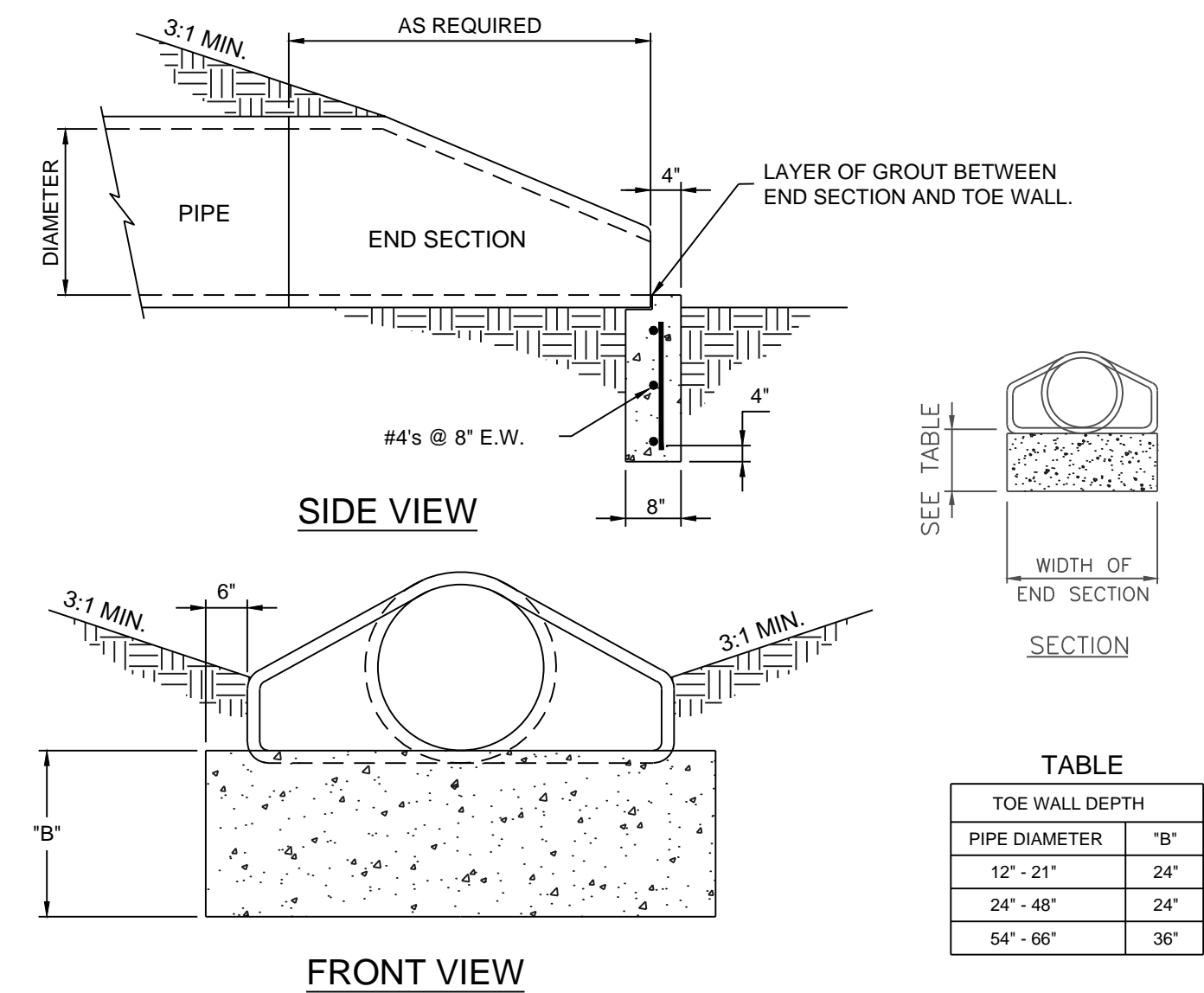
SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC200100237 #LS200200859-F

SHEET
C7.1
OF

STORM
DRAINAGE
DETAILS

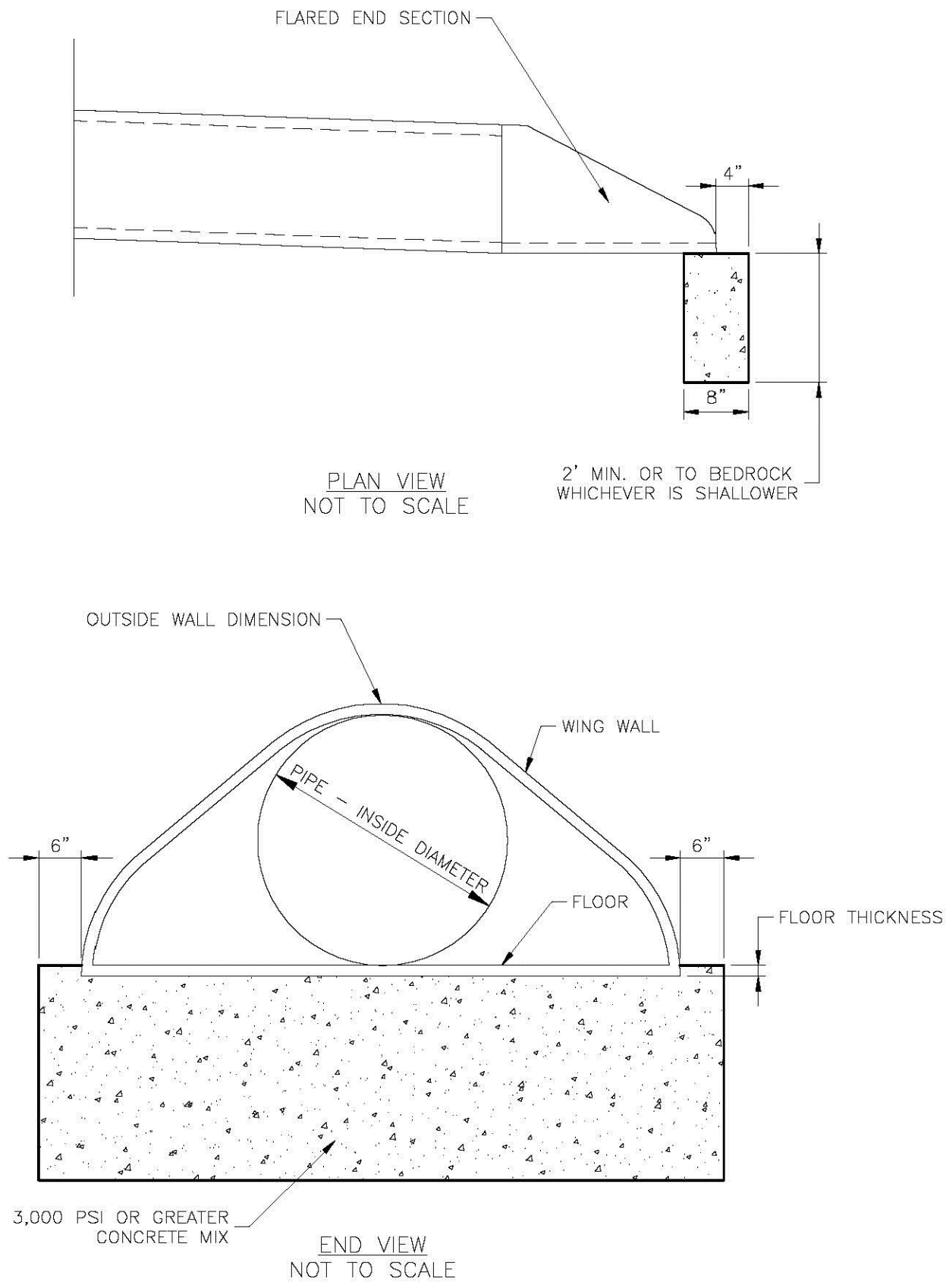
REVISION DATE	DESCRIPTION
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS

DRAWN BY:	PKWDF
CHECKED BY:	MAB/JS
DATE PREPARED:	9/22/2017
PROJ. NUMBER:	17-019



- NOTES:
1. THE DEPTH OF THE TOE WALL SHALL BE PER TABLE. IF BEDROCK IS ENCOUNTERED A MINIMUM OF 12" INTO BEDROCK IS REQUIRED.
 2. ALL CONCRETE SHALL CONFORM TO STANDARD SPECIFICATION SECTION 2205.2.

END SECTION AND TOEWALL DETAIL



LS

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

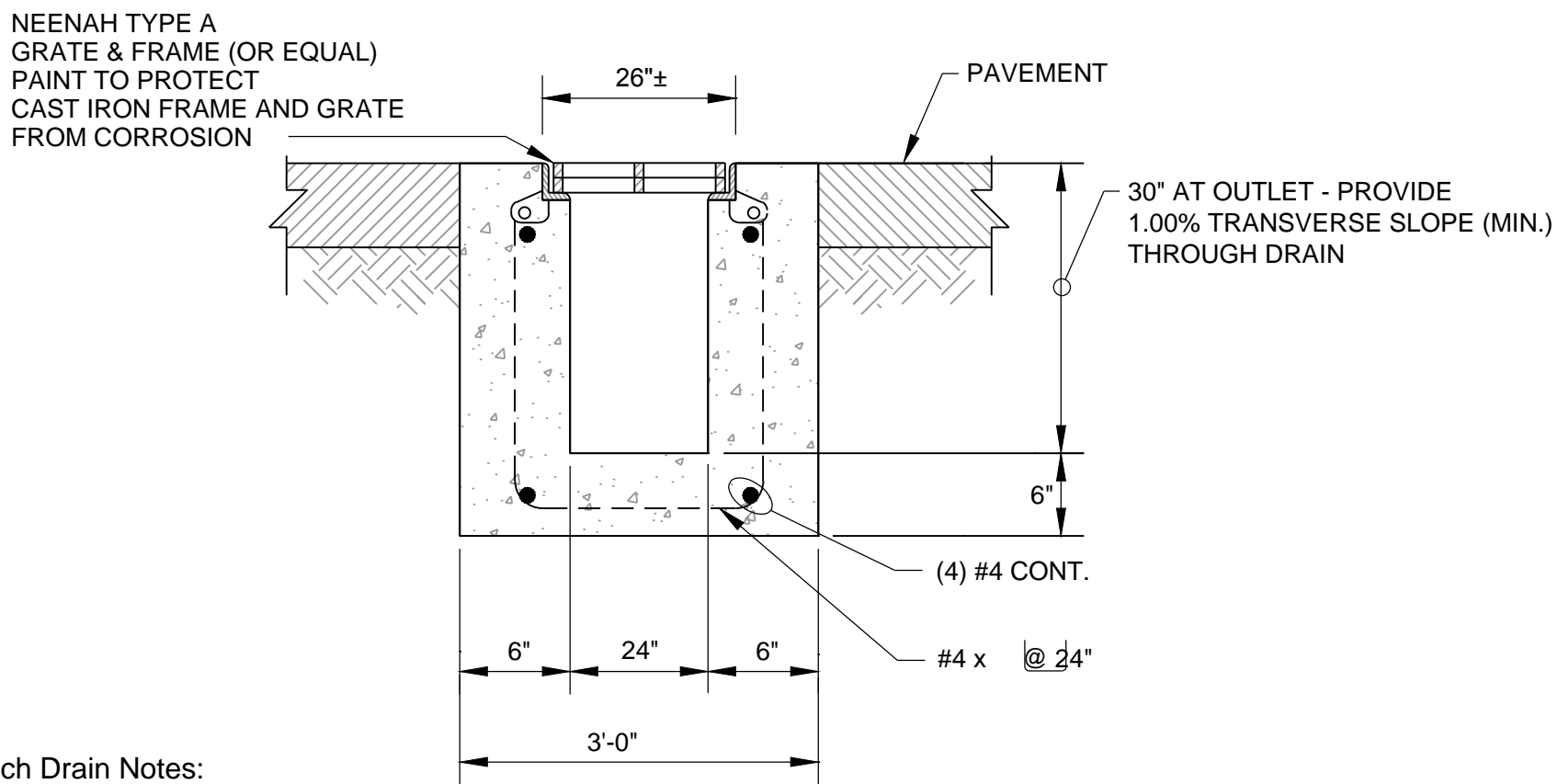
FLARED END SECTION SUPPORT DETAIL

STM-5

Date: 06/21

Drawn By: MJF

Checked By: DL

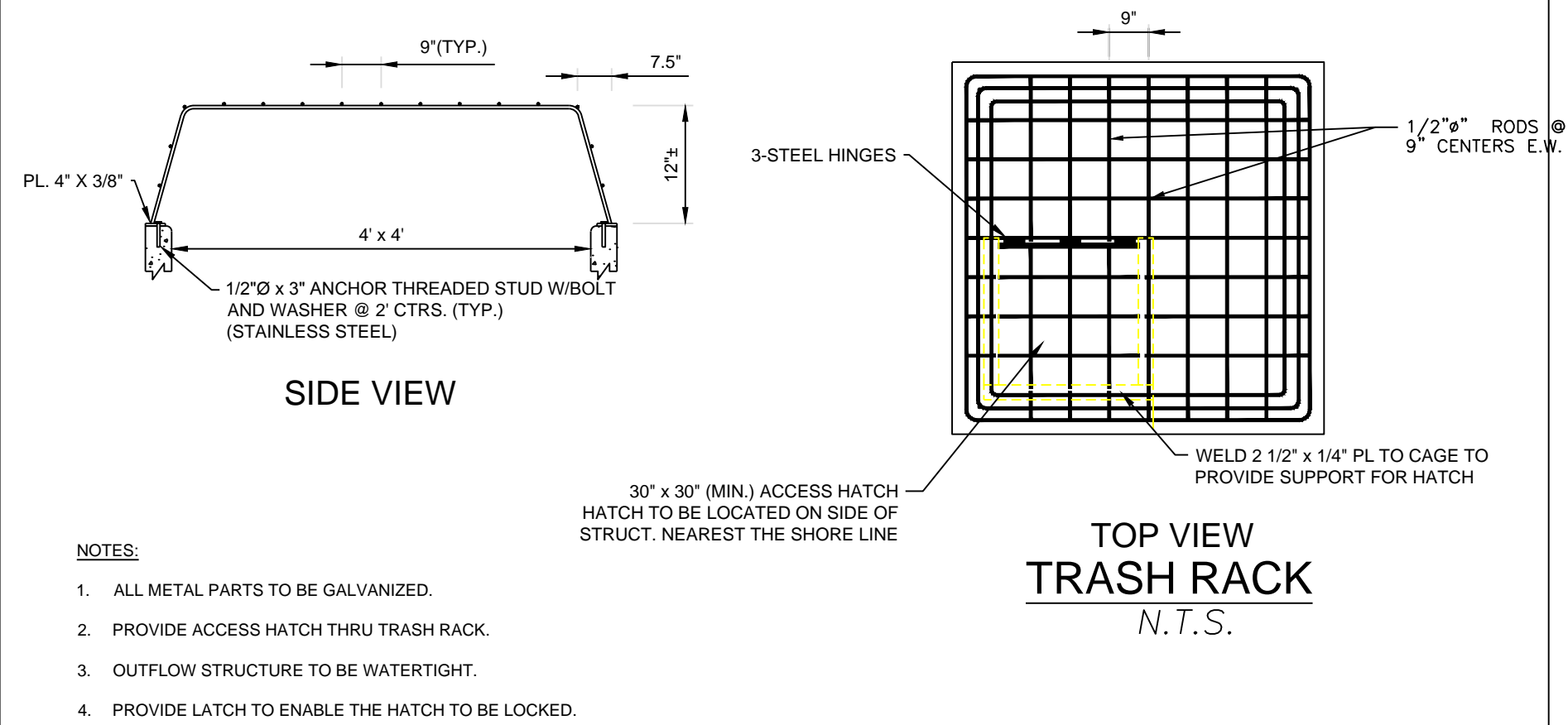


Trench Drain Notes:

- 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 for publicly financed or administered projects. Pre-cast shop drawings for privately financed projects are to be submitted to the Engineering Services Division of the Planning and Development Services Department.
 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. Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board.
 5. Concrete construction shall meet the applicable requirements of Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, latest edition, except as modified in the Overland Park Municipal Code.
 6. Inlet floors shall be shaped with non-reinforced concrete inverts to provide smooth flow.
 7. Reinforcing steel shall be new billet, minimum Grade 40 as per ASTM A615, and shall be bent cold.
 8. 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.
 9. All lap splices not shown shall be a minimum of 40 bar diameters in length.
 10. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
 11. 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.
 12. Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.

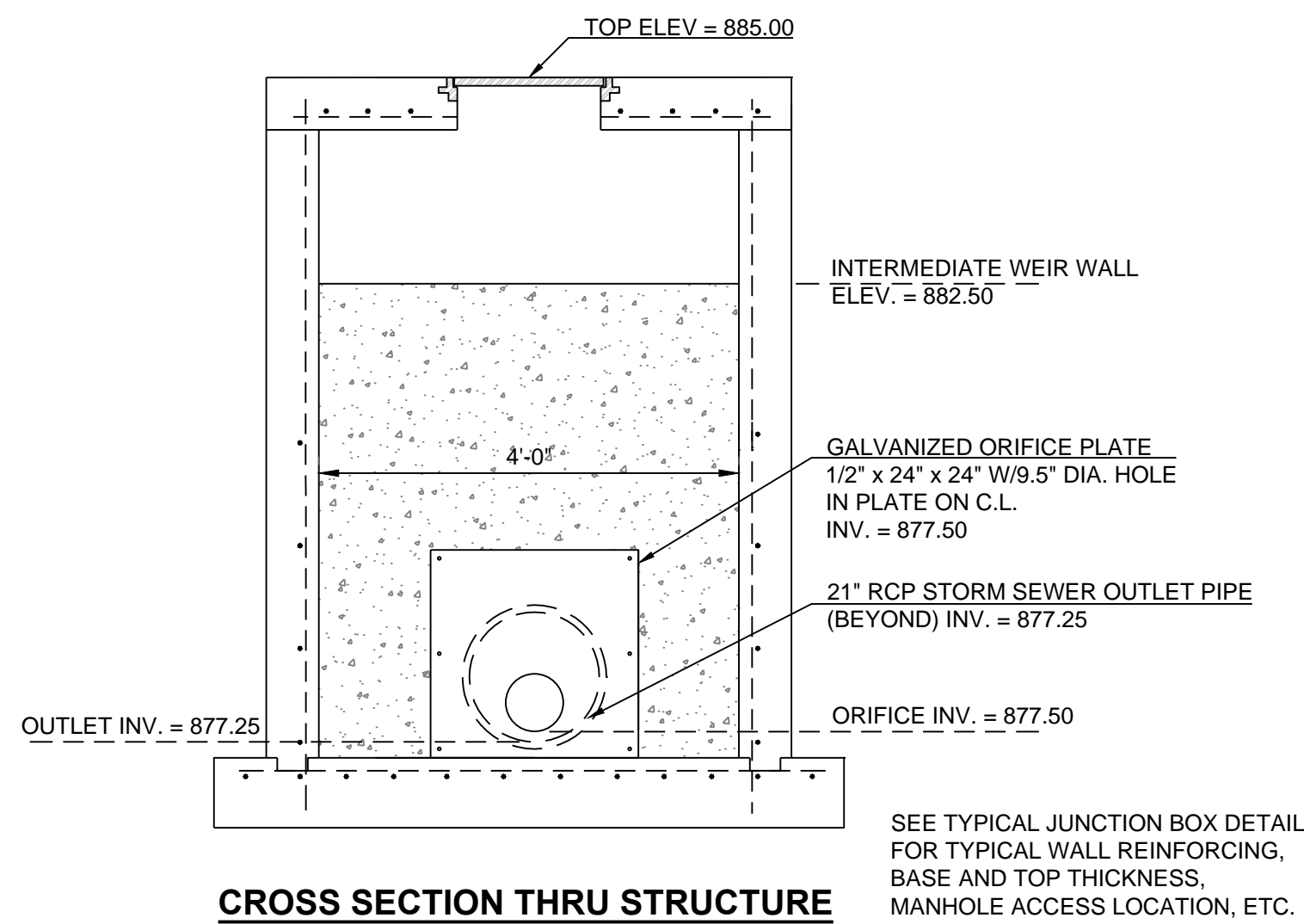
4 TYPICAL - CAST-IN-PLACE TRENCH DRAIN DETAIL

NOT TO SCALE

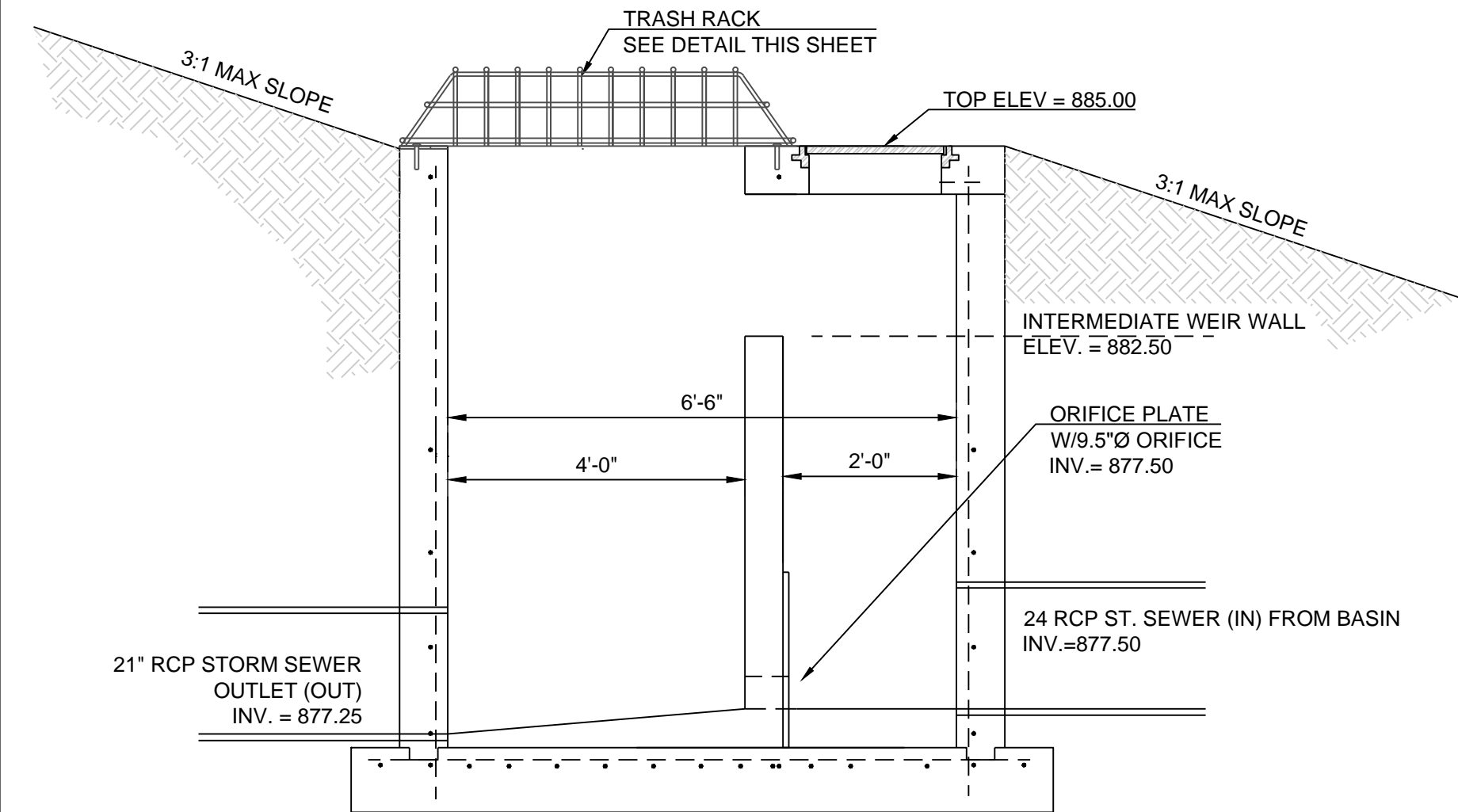


- NOTES:
1. ALL METAL PARTS TO BE GALVANIZED.
 2. PROVIDE ACCESS HATCH THRU TRASH RACK.
 3. OUTFLOW STRUCTURE TO BE WATERTIGHT.
 4. PROVIDE LATCH TO ENABLE THE HATCH TO BE LOCKED.

7 OUTLET STRUCTURE - TRASH RACK DETAILS



CROSS SECTION THRU STRUCTURE



LONGITUDINAL SECTION THRU STRUCTURE

8 DETAILS @ DETENTION OUTLET STRUCTURE

NOT TO SCALE

SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certified of Authority
#E2002003600-F #LAC200100237 #LS200200865-F

COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1	10-18-17 CITY COMMENTS
2	
3	
4	
5	
6	
7	
8	

DRAWN BY:	SCH
CHECKED BY:	SCH
DATE PREPARED:	9/22/2017
PROJ. NUMBER:	17-019

SITE DETAILS

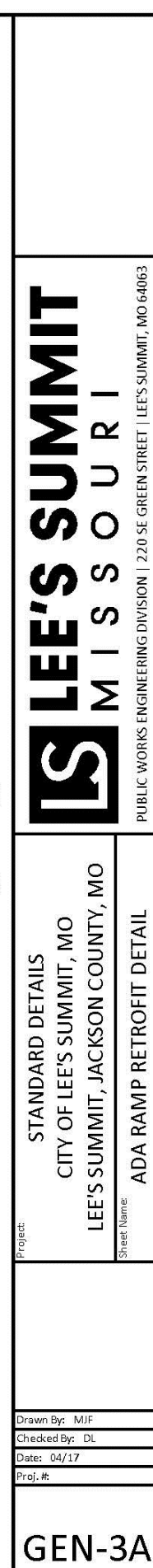
SHEET

C7.2

PLAN REVIEW/BID SET



6 WALL DETAIL



COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
10-18-17	CITY COMMENTS

SITE DETAILS									
--------------	--	--	--	--	--	--	--	--	--

SHEET

C7.3

OF



LANDSCAPE DATA LOT 1 ONLY

STREET FRONTAGE LANDSCAPE

LAKEWOOD WAY TREES REQUIRED(1 PER 30') (745.37/30')
LAKEWOOD WAY TREES PROVIDED
PRIVATE DRIVE TREES REQUIRED(1 PER 30') (502.31/30')
PRIVATE DRIVE TREES PROVIDED

LAKEWOOD WAY SHRUBS REQUIRED(1 PER 20') (745.37/20')
LAKEWOOD WAY SHRUBS PROVIDED
PRIVATE DRIVE SHRUBS REQUIRED(1 PER 20') (502.31/20')
PRIVATE DRIVE SHRUBS PROVIDED

SITE LANDSCAPE REQUIRED

TREES REQUIRED (1 PER 5,000 S.F. OF LOT AREA EXCL. BLDG.) (292,504-14,410-5,580/5000)
TREES PROVIDED

SHRUBS REQUIRED (2 PER 5,000 S.F. OF LOT AREA) (292,504-83-14,410-5,580/5000X2)
SHRUBS PROVIDED

PARKING LOT LANDSCAPE

LANDSCAPE AREA REQUIRED(5% OF PARKING AREA) (32,052.8X.05)
LANDSCAPE AREA PROVIDED
TREES REQUIRED(1 PER ISLAND)
TREES PROVIDED
PARKING SCREENING FROM LAKEWOOD WAY REQUIRED
(2.5 FT. HT ALONG ENTIRE FRONTAGE ADJ. TO ST.12 SHRUBS PER 40 FT.) (169/40X12)
PARKING SCREENING FROM LAKEWOOD WAY PROVIDED
PARKING SCREENING FROM PRIVATE DRIVE REQUIRED
(2.5 FT. HT ALONG ENTIRE FRONTAGE ADJ. TO ST.12 SHRUBS PER 40 FT.) (72/40X12)
PARKING SCREENING FROM PRIVATE DRIVE PROVIDED

NOTES:

- 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.
- 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 SUPERSEDE QUANTITIES IN THE SCHEDULE.
- ALL PLANT MATERIAL SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT STANDARDS AND ANSI A60.1 THE AMERICAN STANDARD FOR NURSERY STOCK.
- ALL TREES SHALL MEET THE SIZE REQUIREMENTS OF THE LEE'S SUMMIT ORDINANCE. ALL TREES SHALL BE CALLIPERED AND UNDERSIZED TREES SHALL BE REJECTED.
- ALL SHRUBS TO BE UTILIZED FOR SCREENING SHALL BE 24" HEIGHT AT TIME OF PLANTING.
- ALL PLANTING BEDS CONTAINING SHRUBS, GROUND COVER, PERENNIALS, ANNUALS SHALL BE IN A PLANTING BED WITH 3" MIN. DEPTH OF MULCH AND A 1/4" CUT EDGE.
- ALL TREES SHALL HAVE A MIN. 3 FT. DIA. AREA THAT HAS 3" MIN. DEPTH OF WOOD MULCH.
- ALL TURF AREAS SHALL BE SODDED UNLESS INDICATED ON THE PLANS.
- 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.
- THE LANDSCAPE ARCHITECT AND OWNER SHALL APPROVE GRADES AND CONDITION OF SITE PRIOR TO SODDING OPERATIONS.
- INSTALLATION AND MAINTENANCE OF LANDSCAPING SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT STANDARDS.
- ALL PLANT MATERIAL SHALL BE INSTALLED TO ALLOW A MINIMUM CLEARANCE BETWEEN PLANT AND ADJACENT PAVEMENT OF 1 FT. FOR PERENNIALS AND GROUND COVER 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.
- 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.
- 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.

SHADE TREES

+	AFA	24 EA.	Acer x freemanii 'Armstrong'	Armstrong Maple	2.5" Cal.	B&B
+	APC	3 EA.	Acer platanoides 'Columnare'	Columnar Norway Maple	2.5" Cal.	B&B
+	QRR	15 EA.	Quercus robur x bicolor(aka x warei) 'Long'	Regal Prince Oak	2.5" Cal.	B&B
+	UXF	18 EA.	Ulmus x Frontier	Frontier Elm	2.5" Cal.	B&B
+	ZSM	12 EA.	Zelkova serrata 'Musashino'	Musashino Columnar Zelkova	2.5" Cal.	B&B

SHRUBS

●	BSW	64 EA.	Buxus sinica var. insularis 'Wintergreen' fka a microphylla var. Wintergreen Boxwood	5 gal.	Cont.
●	JCS	59 EA.	Juniperus chinensis 'Sea Green'	5 gal.	Cont.
●	VCK	12 EA.	Viburnum carlesii 'Korean Spice'	5 gal.	Cont.

EXISTING TREES

- EXISTING SHADE TREE THAT ARE 2" CAL. MINIMUM
- EXISTING EVERGREEN TREE THAT ARE 6' HEIGHT MINIMUM
- EXISTING SHADE TREE TO BE REMOVED
- EXISTING EVERGREEN TREE TO BE REMOVED

25 TREES
24 NEW TREES & 1 EXISTING TREE
17 TREES
17 NEW TREES

37 SHRUBS
37 SHRUBS
25 SHRUBS
25 SHRUBS

55 TREES
55 TREES
24 EXISTING TREES ALONG NORTH BNDY
4 EXISTING TREES ALONG DITCH
26 NEW TREES
110 SHRUBS
110 SHRUBS(73 FOR PARKING LOT SCREEN)

1,602.64 S.F.
3,934.67 S.F.
6 TREES
6 TREES
51 SHRUBS
51 SHRUBS
22 SHRUBS
22 SHRUBS

SCHLAGEL & ASSOCIATES, P.A.
Engineers-Planners-Surveyors-Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC200100237 #LS200200869-F

COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1	CITY COMMENTS
2	
3	
4	
5	
6	
7	
8	
9	
10	

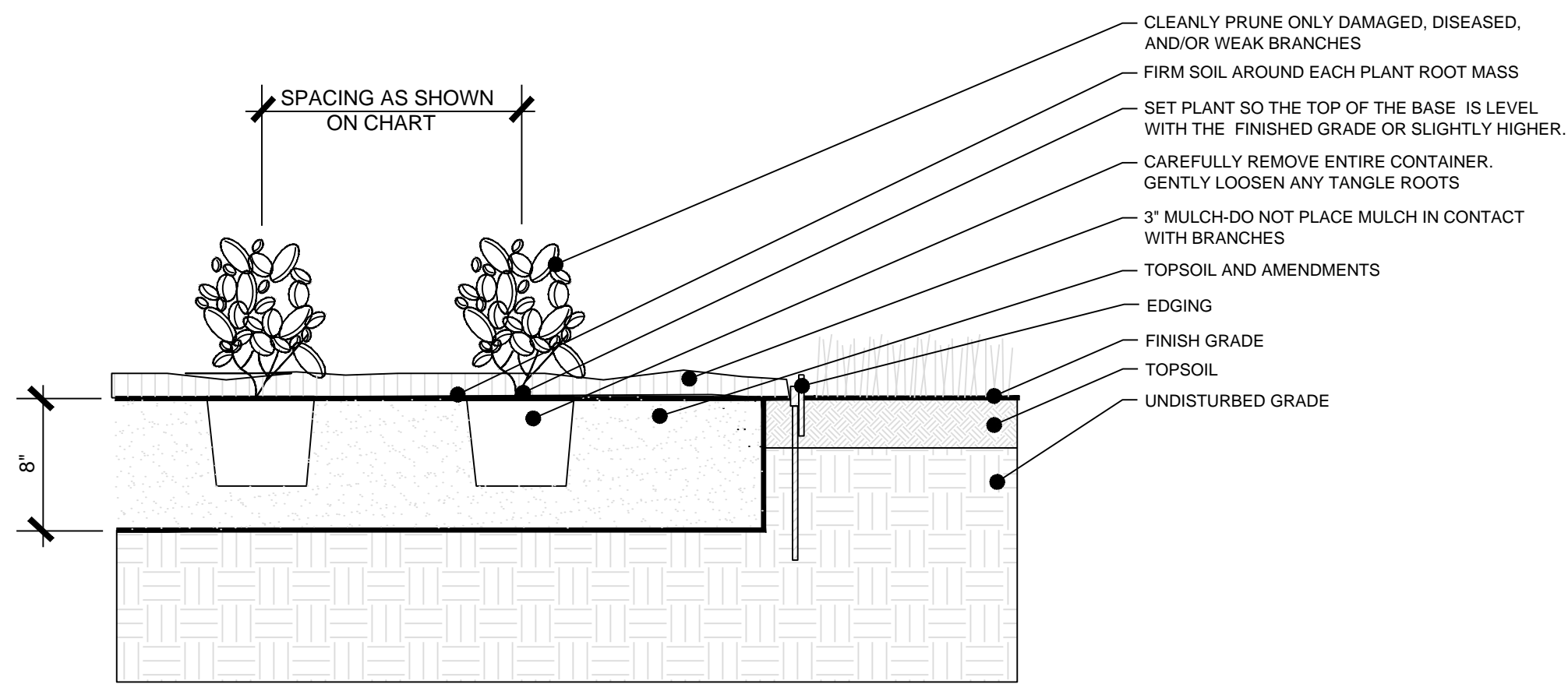
DRAWN BY:	PNW/D
CHECKED BY:	MAB/JS
DATE PREPARED:	9/22/2017
PROJ. NUMBER:	17-019

LANDSCAPE PLAN

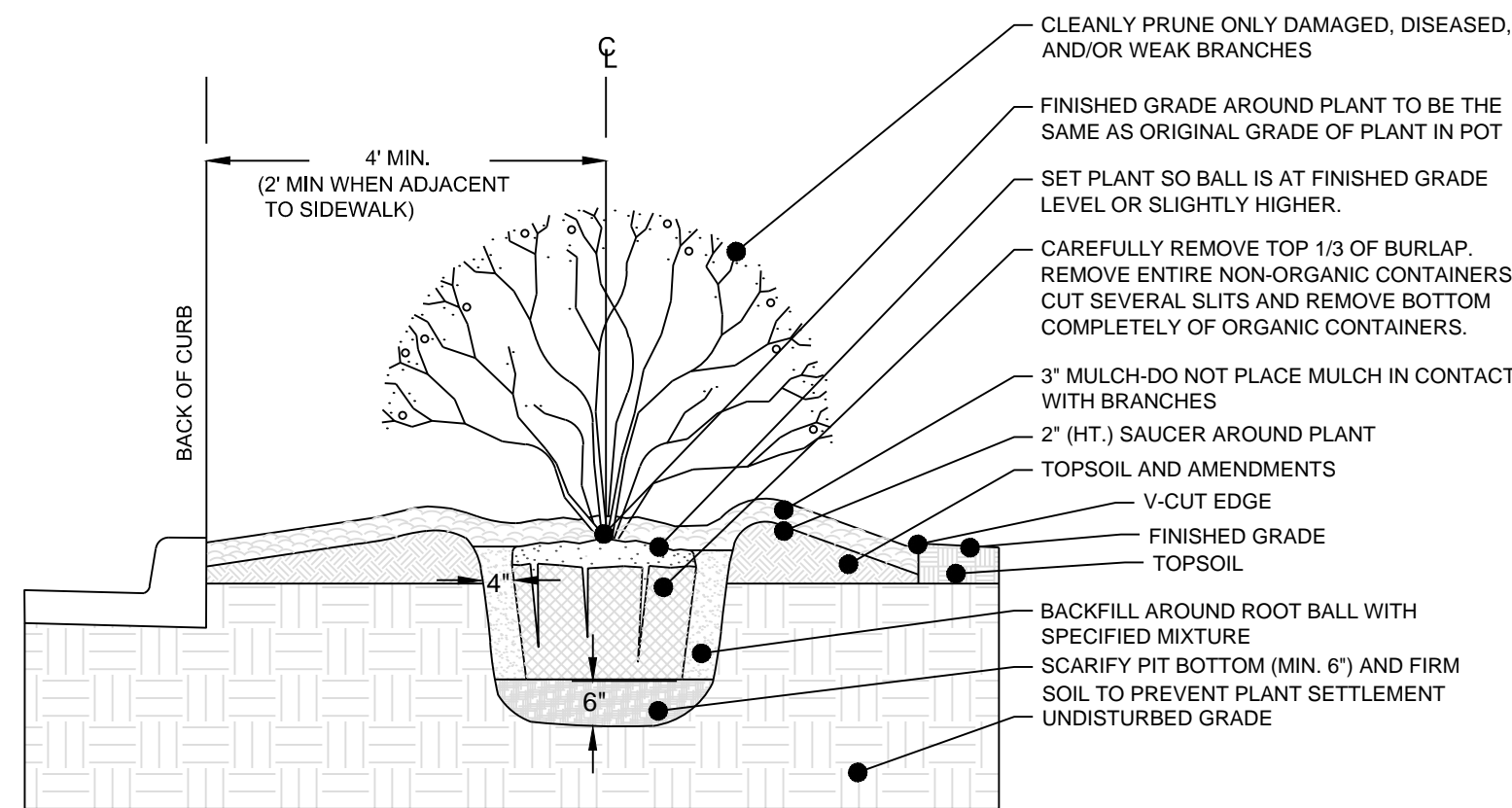
SHEET

L1.0

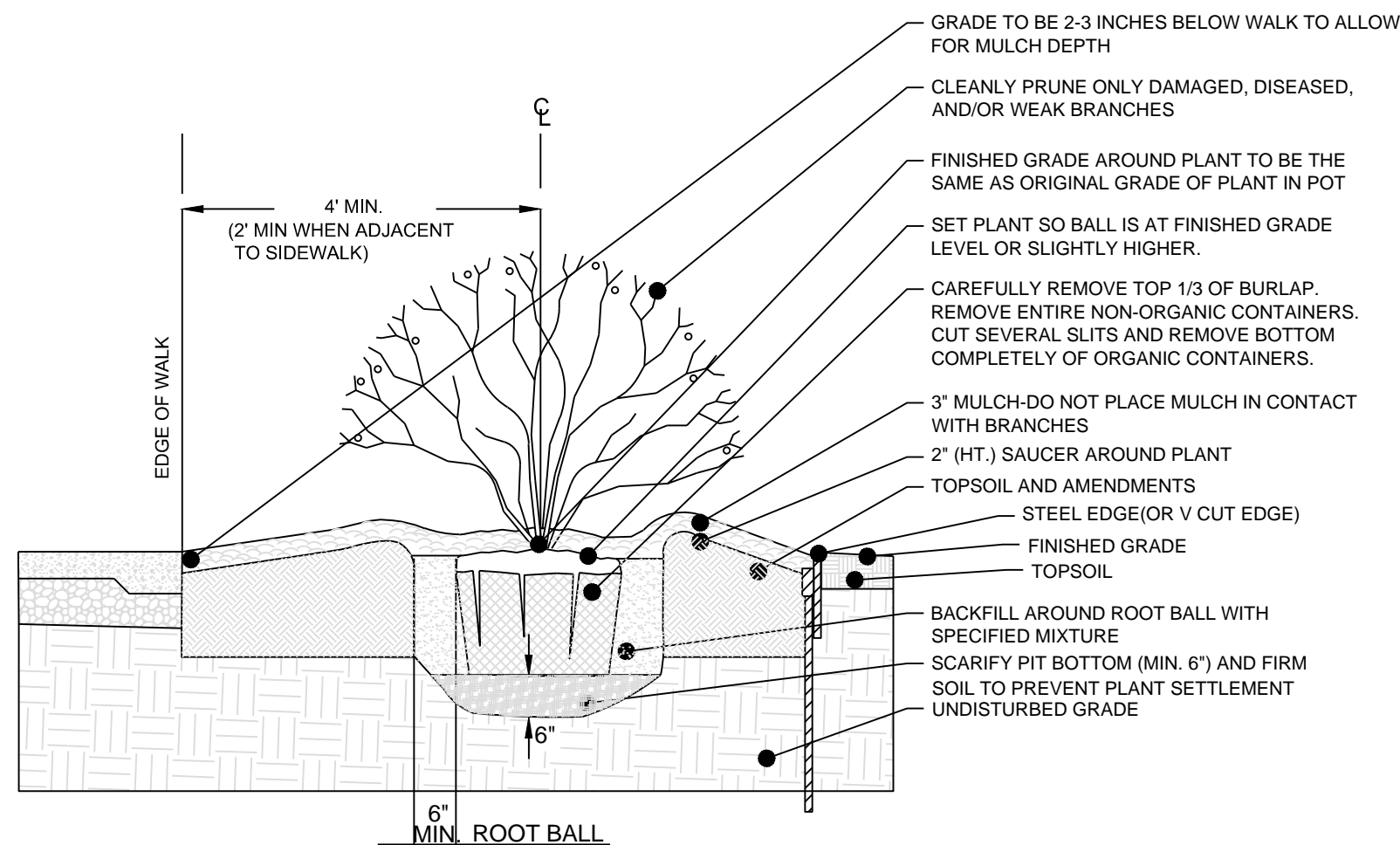
OF



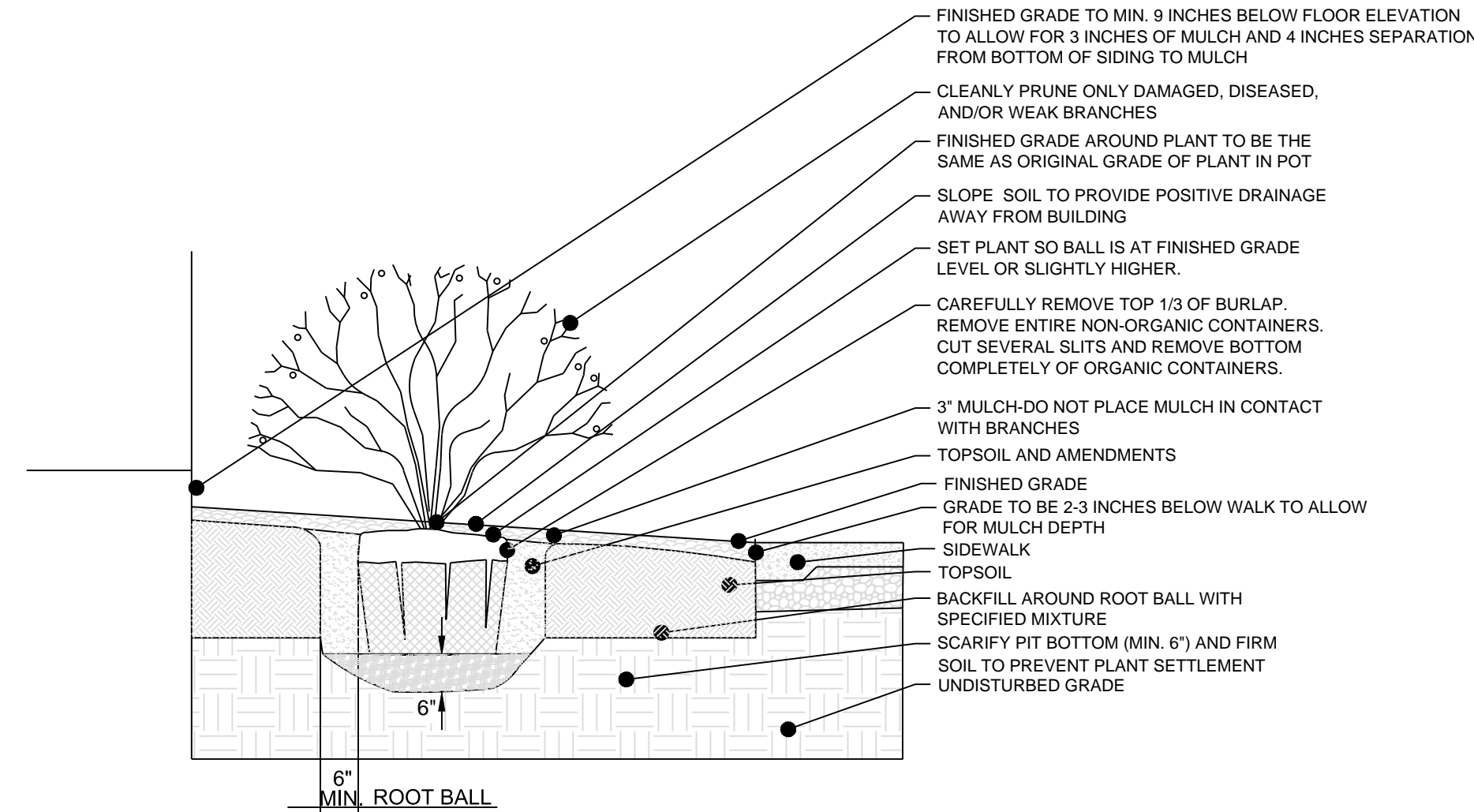
TYP. ANNUAL/PERENNIAL PLANTING
NO SCALE



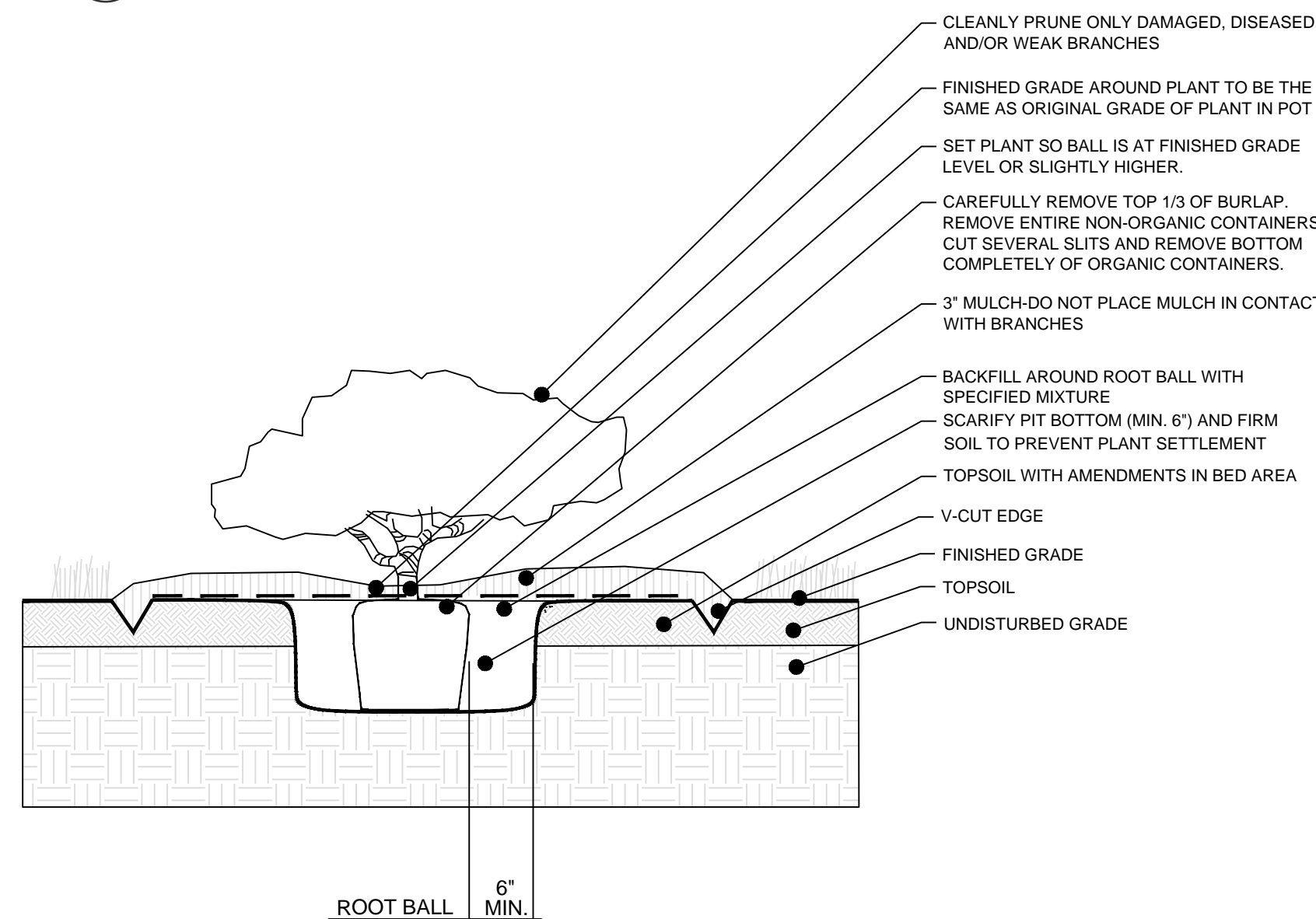
TYP. SHRUB PLANTING ADJACENT TO CURB
NO SCALE



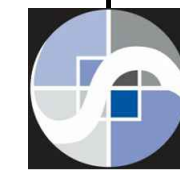
TYP. SHRUB PLANTING ADJACENT TO WALK
NO SCALE



TYP. SHRUB PLANTING ADJACENT TO BUILDING
NO SCALE



TYP. SHRUB BED IN LAWN DETAIL
NO SCALE



SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificate of Authority
#E2002003600-F #LAC200100237 #LS2002008659-F



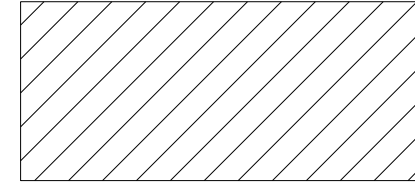
Daniel G. Foster
Landscape Architect
KS# 523

**COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS**
**4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI**

REVISION	DATE	DESCRIPTION
1	10-18-17	CITY COMMENTS
2		
3		
4		
5		
6		
7		
8		

**LANDSCAPE
DETAILS**

SHEET
L2.1
PLAN REVIEW/BID PLANS



INDICATES AREA TO
BE IRRIGATED

IRRIGATION NOTES:

1. METHOD OF DELIVERY FOR THE IRRIGATION SYSTEM IS DESIGN/BUILD.
2. CONTRACTOR TO PROVIDE SEPARATE BIDS FOR THE FOLLOWING:
 - 2.1. Fescue Sod-Turf Irrigation
 - 2.2. Large Radius for display areas
3. QUANTITIES PROVIDED ON THE PLANS ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES AND COMPLETING ON TAKE OFFS FOR BIDS.
4. FINAL IRRIGATION DESIGN SHALL BE DONE BY COMPETENT DESIGN/BUILD IRRIGATION CONTRACTOR AND/OR LANDSCAPE CONTRACTOR THAT HAVE PROVEN EXPERIENCE WITH SIMILAR PROJECTS. DRAWINGS ARE TO BE APPROVED BEFORE ANY CONSTRUCTION IS INITIATED. THE CONTRACTOR IS TO KEEP DETAILED CONSTRUCTION DRAWINGS AND PROVIDE ACCURATE AND LEGIBLE (AS-BUILT) DRAWINGS FOR ALL PHASES OF THE PROJECT. ALL IRRIGATION WORK IS TO BE COORDINATED AND SCHEDULED IN COOPERATION WITH ALL OTHER CONTRACTORS. ANY DIFFICULTIES, COST CHANGES, OR DAMAGES DUE TO LACK OF COOPERATION OR COMMUNICATION ARE THE RESPONSIBILITY OF THE CONTRACTOR, IRRIGATION CONTRACTOR AND/OR LANDSCAPE CONTRACTORS.
5. THE LANDSCAPE/IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE AND AVAILABLE FLOW PRIOR TO CONSTRUCTION. IF DEFICIENCIES ARE NOTED THAT WILL HINDER THE SYSTEM'S PERFORMANCE, NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION TO CORRECT DEFICIENCIES.
6. ALL LANDSCAPED AREAS SHALL HAVE AN AUTOMATIC UNDERGROUND SPRINKLER SYSTEM WHICH INSURES COMPLETE COVERAGE AND PROPERLY ZONED FOR REQUIRED WATER USES. EACH HYDRO-ZONE IS TO BE IRRIGATED WITH SEPARATE INDIVIDUAL STATIONS.
7. SLEEVING SHALL BE INSTALLED AT ALL ROADS, DRIVES, WALKS, AND UTILITY CROSSINGS USING SCHEDULE 40 PVC. SLEEVES SHALL EXTEND 12" BEYOND SURFACE CROSSED.
8. PLANTER BEDS AND LAWN AREAS ARE TO HAVE SEPARATE HYDRO-ZONES.
9. MAIN LINES SHALL BE A MINIMUM DEPTH OF 36". LATERAL LINES SHALL BE A MINIMUM DEPTH OF 12".
10. PROPER BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED PER ALL LOCAL, COUNTY, AND STATE REGULATIONS AND CODES WHEN CONNECTING TO A PUBLIC WATER SOURCE.
11. POP-UP SPRINKLER HEADS SHALL HAVE A MINIMUM RISER HEIGHT OF 4" IN LAWN AREAS AND 12" IN PLANTER AREAS.
12. ANNUALS, PERENNIALS, AND GROUND COVERS, SHALL HAVE A POP-UP SPRAY SYSTEM USING MIN. 12" POP-UPS. CONTRACTOR CAN UTILIZE SUBSURFACE DRIP IRRIGATION IN PLANTER BED AREAS.
13. ELECTRONIC WATER DISTRIBUTION/TIMING CONTROLLERS ARE TO BE PROVIDED. MINIMUM CONTROLLER REQUIREMENTS ARE AS FOLLOWS:
 - PRECISE INDIVIDUAL STATION TIMING
 - RUN TIME CAPABILITIES FOR EXTREMES IN PRECIPITATION RATES
 - SUFFICIENT MULTIPLE CYCLES TO AVOID WATER RUN-OFF
 - POWER FAILURE BACKUP FOR ALL PROGRAMMED INDIVIDUAL VALVED WATERING STATIONS WILL BE DESIGNED AND INSTALLED TO PROVIDE WATER TO RESPECTIVE HYDRO-ZONES
14. THE IRRIGATION SYSTEM SHALL BE DESIGNED TO PROVIDE 100% HEAD-TO-HEAD COVERAGE SQUARE OR TRIANGULAR SPACING AS APPROPRIATE.
15. SPRINKLER HEADS SHALL BE ADJUSTED TO ELIMINATE OVERSPRAY ON ADJACENT IMPERVIOUS SURFACES SUCH AS SIDEWALKS, DRIVEWAYS, PATIO, FENCES, BUILDINGS, AND PARKING AREAS.
16. PROVIDE MINIMUM (1) QUICK COUPLER VAL VIE PER EACH (6) AUTOMATIC VALVE ZONES. APPROVE LOCATIONS WITH OWNER.

SCHLAGEL & ASSOCIATES, P.A.
Engineers-Planners-Surveyors-Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificate of Authority
#E2002003600-F #LAC201002237 #LS2002008659-F

COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLANS
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS
10-18-17	CITY COMMENTS

IRRIGATION
DESIGN
REQUIREMENTS

SHEET
IR-1
OF