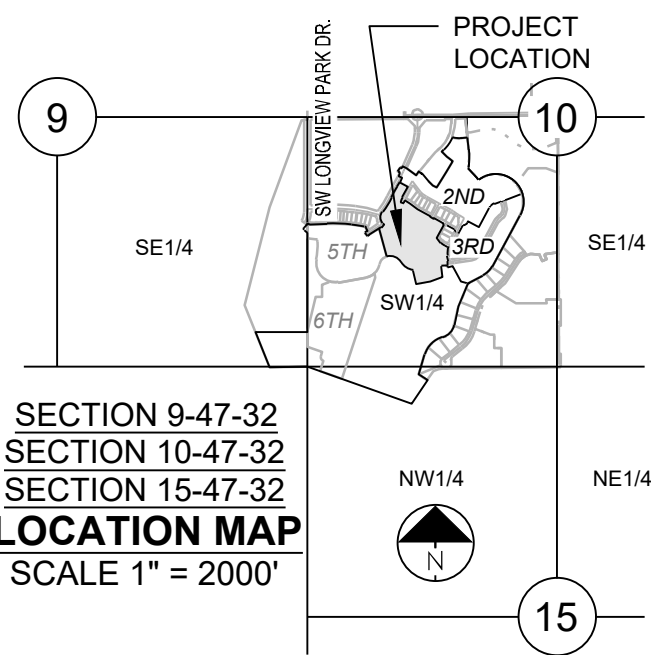


PERGOLA PARK 4TH PLAT

- ACCESS EASEMENT
- BACK OF CURB
- BACK TO BACK
- BENCHMARK
- BUILDING LINE
- CLEANOUT
- TELEPHONE JUNCTION BOX
- CURB AND GUTTER
- DRAINAGE EASEMENT
- ELECTRICAL EASEMENT
- ELEVATION
- FLOW LINE
- GAS LINE EASEMENT
- HIGH-DENSITY POLYETHYLENE
- LANDSCAPE EASEMENT
- MINIMUM SERVICEABLE FLOOR ELEVATION
- POLYVINYL CHLORIDE
- PROPERTY LINE
- PUBLIC EASEMENT
- REINFORCED CONCRETE PIPE
- RIGHT-OF-WAY
- SANITARY SEWER EASEMENT
- SERVICE LINE
- SIDEWALK
- TOP ELEVATION
- UTILITY EASEMENT
- WATER SURFACE ELEVATION
- WATERLINE EASEMENT

MISSOURI DEPARTMENT OF
TRANSPORTATION (MODOT)

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

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

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

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

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

John Meadows
4700 Little Blue Parkway
Independence, MO 64057
(816) 795-2257

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



SUMMARY OF QUANTITIES		
	ITEM	QUANTITY
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		

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 BASED 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. AFTER APPROVAL OF THE SHOP DRAWINGS, A COPY OF THE APPROVED AND SIGNED SHOP DRAWINGS SHALL BE PROVIDED TO THE CITY INSPECTOR UPON REQUEST.
8. THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT THE PERMIT 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 PHASES OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
13. ALIEN HOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
14. THE CONTRACTOR SHALL CONTACT DEVELOPMENT SERVICES SPECIALIST AT: 816-969-1800 TO OBTAIN A DEVELOPMENT SERVICES CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO PERMIT ISSUANCE.
15. THE CONTRACTOR SHALL CONTACT THE CITY'S EROSION CONTROL SPECIALIST AT: 816-969-1800 PRIOR TO ANY LAND DISTURBANCE.
16. THE CONTRACTOR SHALL CONTACT THE RIGHT OF WAY INSPECTOR AT 816-969-1800 PRIOR TO ANY LAND DISTURBANCE OR ACTIVITIES WITHIN THE RIGHT OF WAY. THESE ACTIVITIES WILL REQUIRE A PERMIT.
17. 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).

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 a g.p.s. observation near 2-20-19. 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 areas provided for earthwork activities 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, sidewalk and further manipulation of utility trench spoils. 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 the areas to be graded and stockpiled adjacent to the site at an area specified by the project owner or his appointed representative. Vegetation, trash, trees, brush, tree roots and limbs, rock fragments greater 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 achieved and final approval has been obtained from 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, 4:1V Maximum
 - b. Paved Areas – 1.2% Minimum, 5% Maximum
15. A.D.A. parking stalls shall not be sloped greater than 2% in any direction and constructed per A.D.A. requirements.
16. All disturbed areas shall be fertilized, seeded and mulched immediately after earthwork activities have ceased. Seeding shall be per the Erosion and Sediment Control Plan and/or Landscape Plan. If not specified seeding shall be per APWA Section 2400, latest edition. Unless otherwise noted, seeding shall be subsidiary to the contract price for earthwork and grading activities.
17. All disturbed areas in the right-of-way shall be sodded.
18. Underdrains are recommended for all paved areas adjacent to irrigated turf and landscaped beds.
19. Contractor shall adhere to the reporting requirements outlined in the Storm Water Pollution Prevention Plan (SWPPP) prepared for this project. Erosion and Sediment control devices shall be properly maintained and kept clean of silt and debris and in good working order. Additional erosion and sediment control measures shall be installed as required.

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 replaced by the contractor.
3. Contractor shall verify low-volts 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 sewer lines, manholes, and sanitary sewer service laterals, as measured from edge to edge. If minimum separations cannot be obtained, concrete encasement of the sanitary line shall be required 10 feet in each direction of the conflict.
5. Payment for trenching, backfilling, pipe embedment, flowable fill, backfill materials, clean up, seeding, sodding and any other items necessary for the construction of the utility line shall be included in the contract price for the utility installation.
6. The Contractor shall be responsible for contacting respective utility companies 48-hours in advance for the inspection of any proposed utility main extension or service line or service connection to any existing main.
7. The Contractor shall be responsible for sealing and protecting the trench, any connection, saturation and excess sediment runoff. Unsuitable materials, excess rock and shale, asphalt, concrete, tires, brush etc. shall be properly disposed of offsite. Materials may be wasted onsite at the direction of the Owner or his appointed representative.
8. All excavation is considered unclassified, unless noted otherwise. Unclassified excavation for utility trenching is subsidiary to the unit price provided for the pipe. Any quantity provided for rock excavation is estimated based on the best information provided to the Project Engineer. The Engineer has the authority to identify and define the physical characteristics to determine the classification of the excavation. The unit price for rock excavation shall be paid for a trench width of the nominal pipe diameter of the installed main plus 18 inches. Contractor is required to dispose of excess rock from the trenches by disposing it in areas as specified by the Project Engineer.

Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	GENERAL LAYOUT
3	MASTER DRAINAGE PLAN - GRADING PLAN
4	MASTER DRAINAGE PLAN - LOT INFO
5	MASTER DRAINAGE PLAN - DRAINAGE MAP
6	MASTER DRAINAGE PLAN - DRAINAGE CALC'S
7	EROSION CONTROL PLAN
8	EROSION CONTROL DETAILS
9	EROSION CONTROL DETAILS
10	PERGOLA PARK DR
11	ALLEY 9
12	OVATION DR.
13	SE MARY ST
14	SW REDBUCK CR
15	SW ARMIE ST
16	ALLEY 8
17	STORM PLAN
18	STORM PROFILES
19	DETAIL SHEET
20	DETAIL SHEET
21	DETAIL SHEET
22	DETAIL SHEET

SCHLAGEL & ASSOCIATES, P.A.

CITY ENGINEER

APPROVED FOR ONE YEAR FROM THIS DATE

NAI HEARTLAND
RUSSELL PEARSON
4400 COLLEGE BLVD , SUITE 170
OVERLAND PARK, KS 66211
p 913-362-1000
f 913-273-0205
RUSSELL@NAI-HEARTLAND.COM

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

ELEV. 935.18

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

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL
- LEE'S SUMMIT, MISSOURI

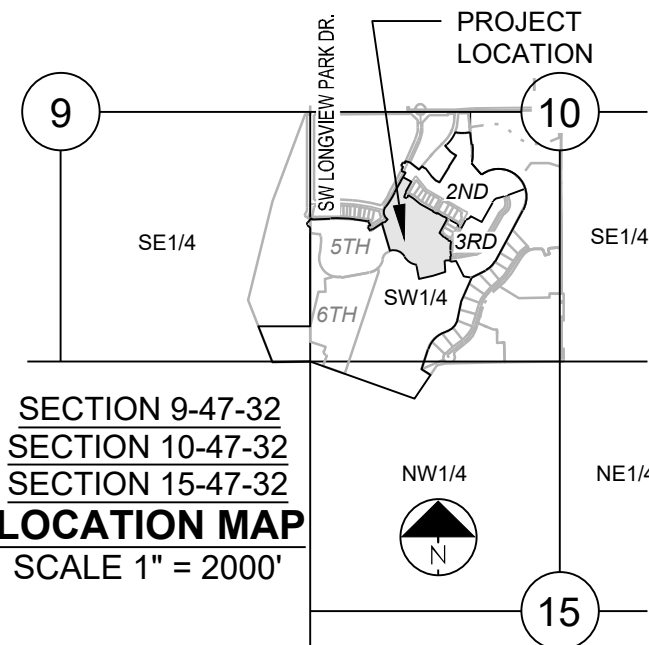
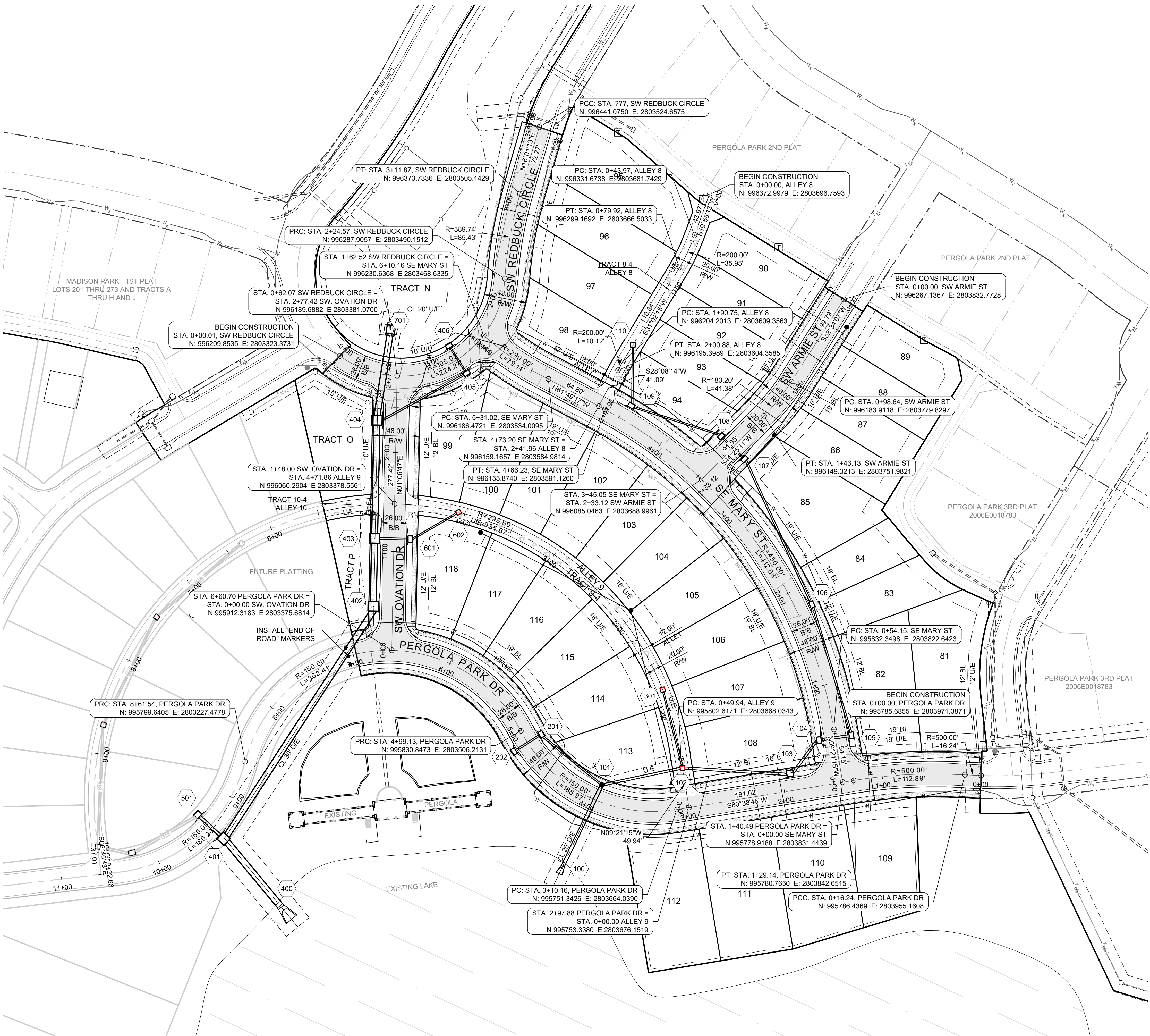
REVISION DATE	DESCRIPTION
1	
2	BAL
3	CHECKED BY:
4	MAB
5	
6	DATE PREPARED
7	4-15-19
8	PROJ. NUMBER:
9	19-002

COVER SHEET

SHEET

1
OF 22

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-GEN.dwg, 4/19/2019 7:51:06 AM, 11



MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

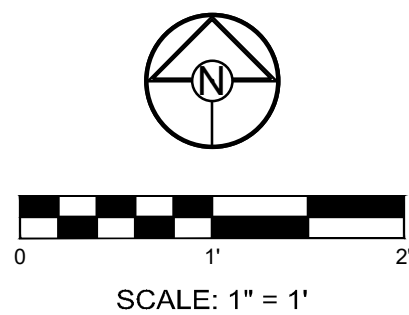
BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

ELEV. 935.18

PROJECT BENCHMARK:

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

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



**PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI**

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

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	19-002

GENERAL LAYOUT

SHEET

2
OF 22



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

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-GRAD.dwg, 4/19/2019 7:51:44 AM, 1:1



NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.

- ** --- DENOTES LIMITS OF DISTURBANCE
- DENOTES PROPOSED MAJOR CONTOUR
- DENOTES PROPOSED MINOR CONTOUR
- DENOTES EXISTING MAJOR CONTOUR
- DENOTES EXISTING MINOR CONTOUR

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST, AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

ELEV. 935.18

PROJECT BENCHMARK:

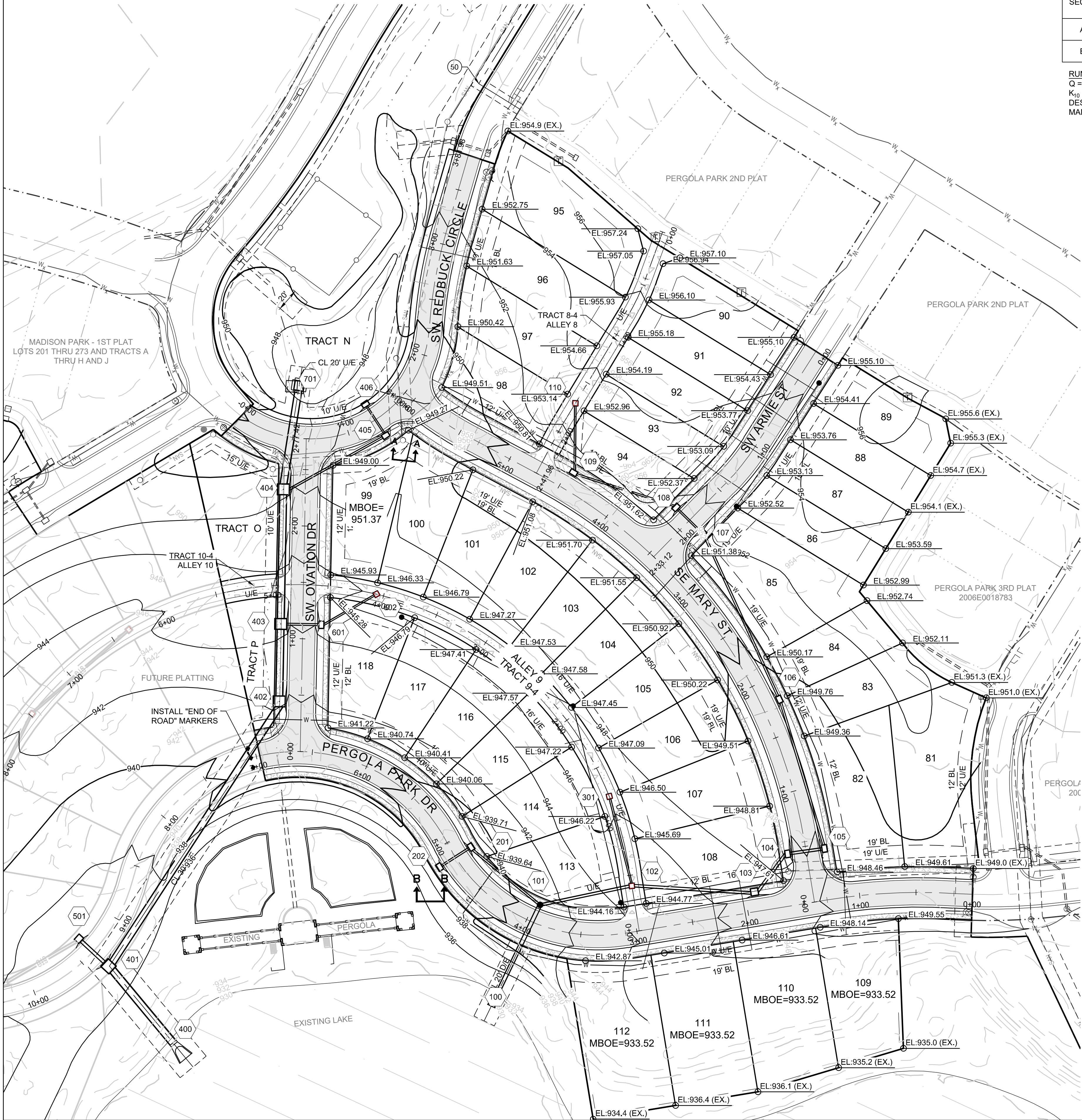
CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09

**PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI**

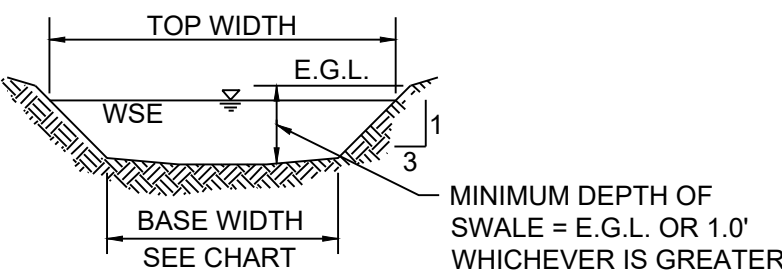
REVISION DATE	DESCRIPTION
1/19/2019	1.0
2/19/2019	2.0
3/19/2019	3.0
4/19/2019	4.0
5/19/2019	5.0
6/19/2019	6.0
7/19/2019	7.0
8/19/2019	8.0
9/19/2019	9.0
10/19/2019	10.0
11/19/2019	11.0
12/19/2019	12.0
1/20/2020	13.0
2/20/2020	14.0
3/20/2020	15.0
4/20/2020	16.0
5/20/2020	17.0
6/20/2020	18.0
7/20/2020	19.0
8/20/2020	20.0
9/20/2020	21.0
10/20/2020	22.0
11/20/2020	23.0
12/20/2020	24.0
1/21/2021	25.0
2/21/2021	26.0
3/21/2021	27.0
4/21/2021	28.0
5/21/2021	29.0
6/21/2021	30.0
7/21/2021	31.0
8/21/2021	32.0
9/21/2021	33.0
10/21/2021	34.0
11/21/2021	35.0
12/21/2021	36.0
1/22/2022	37.0
2/22/2022	38.0
3/22/2022	39.0
4/22/2022	40.0
5/22/2022	41.0
6/22/2022	42.0
7/22/2022	43.0
8/22/2022	44.0
9/22/2022	45.0
10/22/2022	46.0
11/22/2022	47.0
12/22/2022	48.0
1/23/2023	49.0
2/23/2023	50.0
3/23/2023	51.0
4/23/2023	52.0
5/23/2023	53.0
6/23/2023	54.0
7/23/2023	55.0
8/23/2023	56.0
9/23/2023	57.0
10/23/2023	58.0
11/23/2023	59.0
12/23/2023	60.0
1/24/2024	61.0
2/24/2024	62.0
3/24/2024	63.0
4/24/2024	64.0
5/24/2024	65.0
6/24/2024	66.0
7/24/2024	67.0
8/24/2024	68.0
9/24/2024	69.0
10/24/2024	70.0
11/24/2024	71.0
12/24/2024	72.0
1/25/2025	73.0
2/25/2025	74.0
3/25/2025	75.0
4/25/2025	76.0
5/25/2025	77.0
6/25/2025	78.0
7/25/2025	79.0
8/25/2025	80.0
9/25/2025	81.0
10/25/2025	82.0
11/25/2025	83.0
12/25/2025	84.0
1/26/2026	85.0
2/26/2026	86.0
3/26/2026	87.0
4/26/2026	88.0
5/26/2026	89.0
6/26/2026	90.0
7/26/2026	91.0
8/26/2026	92.0
9/26/2026	93.0
10/26/2026	94.0
11/26/2026	95.0
12/26/2026	96.0
1/27/2027	97.0
2/27/2027	98.0
3/27/2027	99.0
4/27/2027	100.0
5/27/2027	101.0
6/27/2027	102.0
7/27/2027	103.0
8/27/2027	104.0
9/27/2027	105.0
10/27/2027	106.0
11/27/2027	107.0
12/27/2027	108.0
1/28/2028	109.0
2/28/2028	110.0
3/28/2028	111.0
4/28/2028	112.0
5/28/2028	113.0
6/28/2028	114.0
7/28/2028	115.0
8/28/2028	116.0
9/28/2028	117.0
10/28/2028	118.0
11/28/2028	119.0
12/28/2028	120.0
1/29/2029	121.0
2/29/2029	122.0
3/29/2029	123.0
4/29/2029	124.0
5/29/2029	125.0
6/29/2029	126.0
7/29/2029	127.0
8/29/2029	128.0
9/29/2029	129.0
10/29/2029	130.0
11/29/2029	131.0
12/29/2029	132.0
1/30/2030	133.0
2/30/2030	134.0
3/30/2030	135.0
4/30/2030	136.0
5/30/2030	137.0
6/30/2030	138.0
7/30/2030	139.0
8/30/2030	140.0
9/30/2030	141.0
10/30/2030	142.0
11/30/2030	143.0
12/30/2030	144.0
1/31/2031	145.0
2/31/2031	146.0
3/31/2031	147.0
4/31/2031	148.0
5/31/2031	149.0
6/31/2031	150.0
7/31/2031	151.0
8/31/2031	152.0
9/31/2031	153.0
10/31/2031	154.0
11/31/2031	155.0
12/31/2031	156.0
1/32/2032	157.0
2/32/2032	158.0
3/32/2032	159.0
4/32/2032	160.0
5/32/2032	161.0
6/32/2032	162.0
7/32/2032	163.0
8/32/2032	164.0
9/32/2032	165.0
10/32/2032	166.0
11/32/2032	167.0
12/32/2032	168.0
1/33/2033	169.0
2/33/2033	170.0
3/33/2033	171.0
4/33/2033	172.0
5/33/2033	173.0
6/33/2033	174.0
7/33/2033	175.0
8/33/2033	176.0
9/33/2033	177.0
10/33/2033	178.0
11/33/2033	179.0
12/33/2033	180.0
1/34/2034	181.0
2/34/2034	182.0
3/34/2034	183.0
4/34/2034	184.0
5/34/2034	185.0
6/34/2034	186.0
7/34/2034	187.0
8/34/2034	188.0
9/34/2034	189.0
10/34/2034	190.0
11/34/2034	191.0
12/34/2034	192.0
1/35/2035	193.0
2/35/2035	194.0
3/35/2035	195.0
4/35/2035	196.0
5/35/2035	197.0
6/35/2035	198.0
7/35/2035	199.0
8/35/2035	200.0
9/35/2035	201.0
10/35/2035	202.0
11/35/2035	203.0
12/35/2035	204.0
1/36/2036	205.0
2/36/2036	206.0
3/36/2036	207.0
4/36/2036	208.0
5/36/2036	209.0
6/36/2036	210.0
7/36/2036	211.0
8/36/2036	212.0
9/36/2036	213.0
10/36/2036	214.0
11/36/2036	215.0
12/36/2036	216.0
1/37/2037	217.0
2/37/2037	218.0
3/37/2037	219.0
4/37/2037	220.0
5/37/2037	221.0
6/37/2037	222.0
7/37/2037	223.0
8/37/2037	224.0
9/37/2037	225.0
10/37/2037	226.0
11/37/2037	227.0
12/37/2037	228.0
1/38/2038	229.0
2/38/2038	230.0
3/38/2038	231.0
4/38/2038	232.0
5/38/2038	233.0
6/38/2038	234.0
7/38/2038	235.0
8/38/2038	236.0
9/38/2038	237.0
10/38/2038	238.0
11/38/2038	239.0
12/38/2038	240.0
1/39/2039	241.0
2/39/2039	242.0
3/39/2039	243.0
4/39/2039	244.0
5/39/2039	245.0
6/39/2039	246.0
7/39/2039	247.0
8/39/2039	248.0
9/39/2039	249.0
10/39/2039	250.0
11/39/2039	251.0
12/39/2039	252.0
1/40/2040	253.0
2/40/2040	254.0
3/40/2040	255.0
4/40/2040	256.0
5/40/2040	257.0
6/40/2040	258.0
7/40/2040	259.0
8/40/2040	260.0
9/40/2040	261.0
10/40/2040	262.0
11/40/2040	263.0
12/40/2040	264.0
1/41/2041	265.0
2/41/2041	266.0
3/41/2041	267.0
4/41/2041	268.0
5/41/2041	269.0
6/41/2041	270.0
7/41/2041	271.0
8/41/2041	272.0
9/41/2041	273.0
10/41/2041	274.0
11/41/2041	275.0
12/41/2041	276.0
1/42/2042	277.0
2/42/2042	278.0
3/42/2042	279.0
4/42/2042	280.0
5/42/2042	281.0
6/42/2042	282.0
7/42/2042	283.0
8/42/2042	284.0
9/42/2042	285.0
10/42/2042	286.0
11/42/2042	287.0
12/42/2042	288.0
1/43/2043	289.0
2/43/2043	290.0
3/43/2043	291.0
4/43/2043	292.0
5/43/2043	293.0
6/43/2043	294.0
7/43/2043	295.0
8/43/2043	296.0
9/43/2043	297.0
10/43/2043	298.0
11/43/2043	299.0
12/43/2043	300.0
1/44/2044	301.0
2/44/2044	302.0
3/44/2044	303.0
4/44/2044	304.0
5/44/2044	305.0
6/44/2044	306.0
7/44/2044	307.0
8/44/2044	308.0
9/44/2044	309.0
10/44/2044	310.0
11/44/2044	311.0
12/44/2044	312.0
1/45/2045	313.0
2/45/2045	314.0
3/45/2045	315.0
4/45/2045	316.0
5/45/2045	317.0
6/45/2045	318.0
7/45/2045	319.0
8/45/2045	320.0
9/45/2045	321.0
10/45/2045	322.0
11/45/2045	323.0
12/45/2045	324.0
1/46/2046	325.0
2/46/2046	326.0
3/46/2046	327.0
4/46/2046	328.0
5/46/2046	329.0
6/46/2046	330.0
7/46/2046	331.0
8/46/2046	332.0
9/46/2046	333.0
10/46/2046	334.0
11/46/2046	335.0
12/46/2046	336.0
1/47/2047	337.0
2/47/2047	338.0
3/47/2047	339.0
4/47/2047	340.0
5/47/2047	341.0
6/47/2047	342.0
7/47/2047	343.0
8/47/2047	344.0
9/47/2047	345.0
10/47/2047	346.0
11/47/2047	347.0
12/47/2047	348.0
1/48/2048	349.0
2/48/2048	350.0
3/48/2048	351.0
4/48/2048	352.0
5/48/2048	353.0
6/48/2048	354.0
7/48/2048	355.0
8/48/2048	356.0
9/48/2048	357.0
10/48/2048	358.0
11/48/2048	359.0
12/48/2048	360.0
1/49/2049	361.0
2/49/2049	362.0
3/49/2049	363.0
4/49/2049	364.0
5/49/2049	365.0
6/49/2049	366.0
7/49/2049	367.0
8/49/2049	368.0
9/49/2049	369.0
10/49/2049	370.0
11/49/2049	371.0
12/49/2049	372.0
1/50/2050	373.0
2/50/2050	374.0
3/50/2050	375.0
4/50/2050	376.0
5/50/2050	377.0
6/50/2050	378.0
7/50/2050	379.0
8/50/2050	380.0
9/50/2050	381.0
10/50/2050	382.0
11/50/2050	383.0
12/50/2050	384.0
1/51/2051	385.0
2/51/2051	386.0
3/51/2051	387.0
4/51/2051	388.0
5/51/2051	389.0
6/51/2051	390.0
7/51/2051	391.0
8/51/2051	392.0
9/51/2051	393.0
10/51/2051	394.0
11/51/2051	395.0
12/51/2051	396.0
1/52/2052	397.0
2/52/2052	398.0
3/52/2052	399.0
4/52/2052	400.0
5/52/2052	401.0
6/52/2052	402.0
7/52/2052	403.0
8/52/2052	404.0
9/52/2052	405.0
10/52/2052	406.0
11/52/2052	407.0
12/52/2052	40

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-GRAD.dwg, 4/19/2019 7:51:54 AM, 1:1



NOTES:

- MBOE = MINIMUM BUILDING OPENING ELEVATION FOR HOUSES ADJACENT TO ENGINEERED OVERFLOW SWALES SHALL BE MINIMUM 2 FEET ABOVE THE 100 YR WATER SURFACE ELEVATION.
- EGL = ENERGY GRADE LINE (100 YR)
- WSE = WATER SURFACE ELEVATION (100 YR)
- ENGINEERED SWALES TO BE GRADED TO NORMAL DEPTH OF FLOW (WATER SURFACE ELEVATION) OR 1.0 FT, WHICHEVER IS GREATER. MINIMUM SLOPE OF ENGINEERED SWALES SHALL BE AS NOTED.
- MBOE'S ADJACENT TO SUMPED INLETS SHALL BE A MINIMUM OF 1' ABOVE TOP OF ADJACENT BERM



100 YR OVERFLOW SWALE SECTIONS
SECTION 1-2

100 YEAR OVERFLOW SWALES											
SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	Q10 (CFS)	DESIGN OVERFLOW (CFS)	BED SLOPE (%)	BASE WIDTH (FT.)	SIDE SLOPE	TOP WIDTH (FT.)	NORMAL DEPTH (FT.)	VELOCITY (FPS)	VELOCITY HEAD (FT.)
A-A	2.16	18.39	-	18.3900	2.13	5	3:1	8.68	0.61	4.39	0.30
B-B	6.93	59.00	-	59.0000	7.25	10	3:1	13.55	5.91	8.48	1.12

RUNOFF CALCULATIONS:

$Q = K \cdot C \cdot I \cdot A$
 $K_{10} = 1.0 \quad K_{100} = 1.25 \quad C = 0.51 \quad I = \text{INTENSITY}$
 $\text{DESIGN OVERFLOW} = Q_{\text{OVERFLOW}} = Q_{100} - Q_{10}$
MANNINGS "n" = .030 FOR SWALES

LOT TYPE TABLE		
LOT #	BASEMENT TYPE	MBOE
81	STANDARD	N/A
82	STANDARD	N/A
83	STANDARD	N/A
84	STANDARD	N/A
85	STANDARD	N/A
86	STANDARD	N/A
87	STANDARD	N/A
88	STANDARD	N/A
89	STANDARD	N/A
90	STANDARD	N/A
91	STANDARD	N/A
92	STANDARD	N/A
93	STANDARD	N/A
94	STANDARD	N/A
95	STANDARD	N/A
96	STANDARD	N/A
97	STANDARD	N/A
98	STANDARD	N/A
99	STANDARD	951.37
100	STANDARD	N/A
101	STANDARD	N/A
102	STANDARD	N/A
103	STANDARD	N/A
104	STANDARD	N/A
105	STANDARD	N/A
106	STANDARD	N/A
107	STANDARD	N/A
108	STANDARD	N/A
109	WALKOUT	933.52
110	WALKOUT	933.52
111	WALKOUT	933.52
112	DAYLIGHT	933.52
113	STANDARD	N/A
114	STANDARD	N/A
115	STANDARD	N/A
116	STANDARD	N/A
117	STANDARD	N/A
118	STANDARD	N/A

- DENOTES OVERFLOW SWALE
- EL:000.00 DENOTES FINISHED GRADE ELEVATION
- EL:000.00 (EX.) DENOTES EXISTING GRADE ELEVATION
- HP 000.00 DENOTES LOT HIGH POINT ELEVATION
- DENOTES RETAINING WALL

MISSOURI GEOGRAPHIC REFERENCE SYSTEM
BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

ELEV. 935.18

PROJECT BENCHMARK:

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

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	19-002

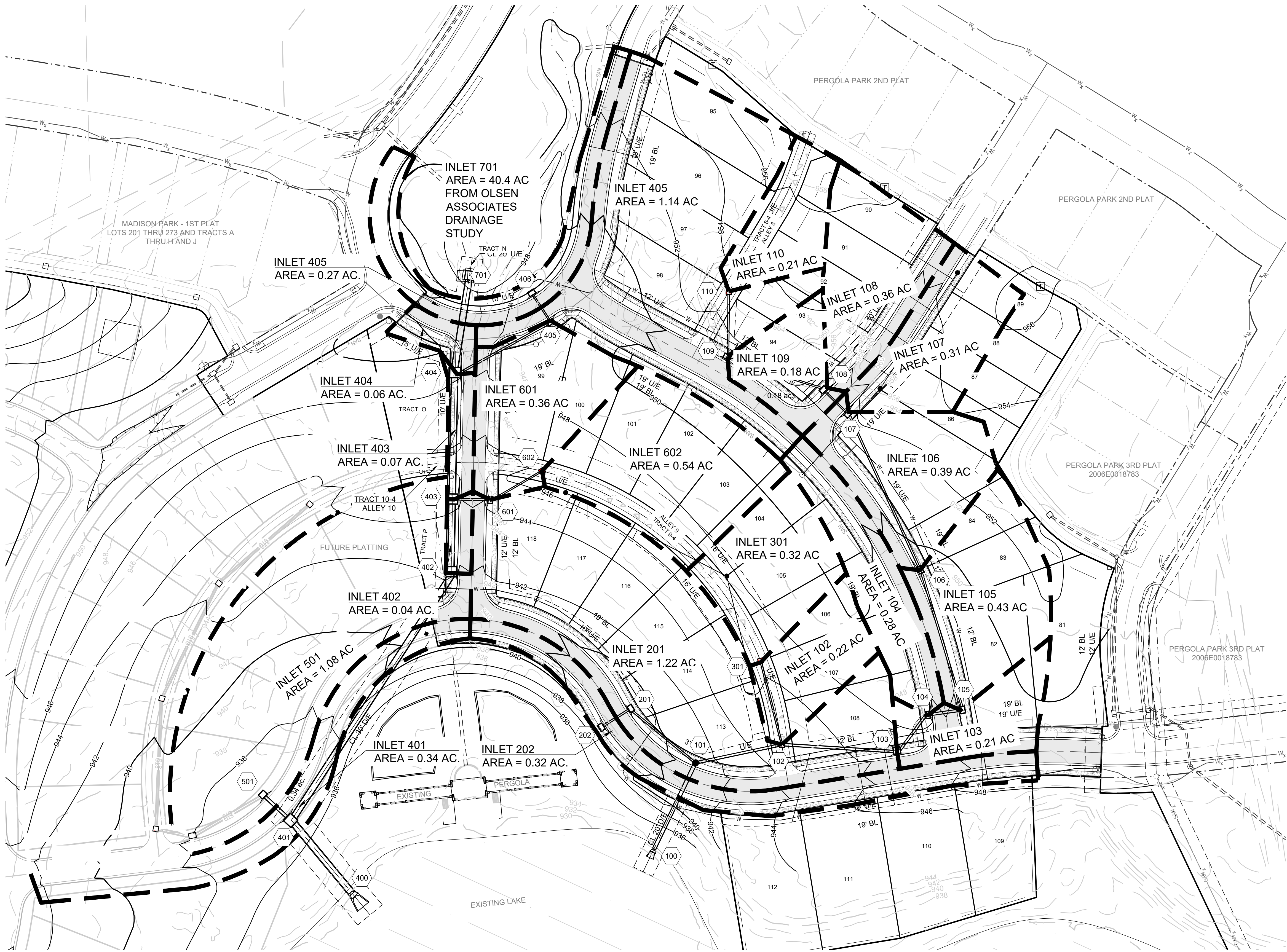
MASTER
DRAINAGE PLAN
- LOT INFO

SHEET

4

OF 22

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-DRAINAGE-AREA.dwg, 4/19/2019 7:52:17 AM, 1:1



PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL - LEE'S SUMMIT, MISSOURI

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

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	19-002

MASTER
DRAINAGE PLAN
- DRAINAGE MAP

SHEET
5
OF 22



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

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-DRAINAGE-AREA.dwg, 4/19/2019 7:52:20 AM, 1:1

GUTTER SPREAD AND INLET CAPACITY CALCULATIONS - PERGOLA PARK 4TH PLAT

DESIGN STORM
"K" FACTOR

10
1.00

CURB TYPE "A" = LAZY BACK
CURB TYPE "B" = HIGH BACK

RUNOFF CALCULATIONS

INLET #	COMPOSITE "C"	AREA	INLET Tc	INTENSITY	RUNOFF	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	TOTAL RUNOFF	STREET GRADE	CROSS SLOPE	CURB TYPE	INLET LENGTH	LENGTH 80% CAP	INLET INTERCEPTION	DOWNSTREAM INLET	STREET GRADE	CROSS SLOPE	DEPTH AT CURB	SPREAD OF FLOW	
LINE 1																							
102	0.66	0.22	5	7.35	1.07	301					0.22	1.29	1.56	2.08	A	4	3.2	1.11	0.18	1.56	2.08	0.14	7.27
103	0.66	0.21	5	7.35	1.02	104					0.09	1.10	2.18	2.08	A	6	4.8	0.98	0.12	2.18	2.08	0.12	6.50
104	0.66	0.28	5	7.35	1.36						0.00	1.36	1.10	2.08	A	6	4.8	1.27	0.09	1.10	2.08	0.15	7.87
105	0.66	0.43	5	7.35	2.09	106					0.22	2.30	1.10	2.08	A	6	4.8	1.98	0.33	1.10	2.08	0.19	9.49
106	0.66	0.39	5	7.35	1.89	107					0.19	2.08	1.10	2.08	A	6	4.8	1.86	0.22	1.10	2.08	0.18	9.15
107	0.66	0.31	5	7.35	1.50						0.00	1.50	1.71	2.08	A	6	4.8	1.31	0.19	1.71	2.08	0.15	7.55
108	0.66	0.36	5	7.35	1.75						0.00	1.75	1.71	2.08	A	6	4.8	1.49	0.26	1.71	2.08	0.16	7.96
109	0.66	0.18	5	7.35	0.87	108					0.26	1.13	4.00	2.08	A	6	4.8	0.97	0.16	4.00	2.08	0.11	5.90
110	0.66	0.21	5	7.35	1.02						0.00	1.02	4.00	2.08	A	4	3.2	0.81	0.20	4.00	2.08	0.11	5.69
LINE 2																							
201	0.66	1.22	5	7.35	5.92	102	103	601			0.84	6.76	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	< 10.50
202	0.66	0.32	5	7.35	1.55						0.00	1.55	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	< 10.50
LINE 3																							
301	0.66	0.32	5	7.35	1.55						0.00	1.55	1.56	2.08	A	4	3.2	1.33	0.22	1.56	2.08	0.15	7.76
LINE 4																							
401	0.66	0.34	5	7.35	1.65						0.00	1.65	SUMP	2.08	A	8	6.4	17.92	0.00	SUMP	2.08	< 0.21	< 10.50
402	0.66	0.04	5	7.35	0.19	403					0.01	0.20	3.24	2.08	A	9	7.2	0.20	0.00	3.24	2.08	0.06	3.44
403	0.66	0.07	5	7.35	0.34	404					0.00	0.34	3.24	2.08	A	8	6.4	0.34	0.01	3.24	2.08	0.07	4.10
404	0.66	0.06	5	7.35	0.29						0.00	0.29	3.24	2.08	A	8	6.4	0.29	0.00	3.24	2.08	0.07	3.88
405	0.66	1.14	5	7.35	5.53						0.00	5.53	SUMP	2.08	A	6	4.8	13.44	0.00	SUMP	2.08	< 0.21	< 10.50
406	0.66	0.27	5	7.35	1.31						0.00	1.31	SUMP	2.08	A	6	4.8	13.44	0.00	SUMP	2.08	< 0.21	< 10.50
LINE 5																							
501	0.66	1.08	5	7.35	5.24	402	502				0.18	5.42	SUMP	2.08	A	6	4.8	13.44	0.00	SUMP	2.08	< 0.21	< 10.50
502	0.66	0.10	5	7.35	0.49	503					0.87	1.36	2.12	2.08	A	6	4.8	1.18	0.18	2.12	2.08	0.14	7.01
503	0.66	0.49	5	7.35	2.38	504					0.73	3.11	1.49	2.08	A	4	3.2	2.24	0.87	1.49	2.08	0.20	10.00
504	0.66	0.45	5	7.35	2.18	505					0.63	2.81	1.49	2.08	A	4	3.2	2.08	0.73	1.49	2.08	0.19	9.65
505	0.66	0.46	5	7.35	2.23	506					0.35	2.58	1.49	2.08	A	4	3.2	1.95	0.63	1.49	2.08	0.18	9.36
506	0.66	0.42	5	7.35	2.04						0.00	2.04	1.12	2.08	A	4	3.2	1.69	0.35	1.12	2.08	0.18	9.05
LINE 6																							
601	0.66	0.36	5	7.35	1.75	602					0.48	2.23	3.24	2.08	A	6	4.8	1.70	0.53	3.24	2.08	0.15	7.75
602	0.66	0.54	5	7.35	2.62						0.00	2.62	1.12	2.08	A	4	3.2	2.14	0.48	1.12	2.08	0.20	9.90

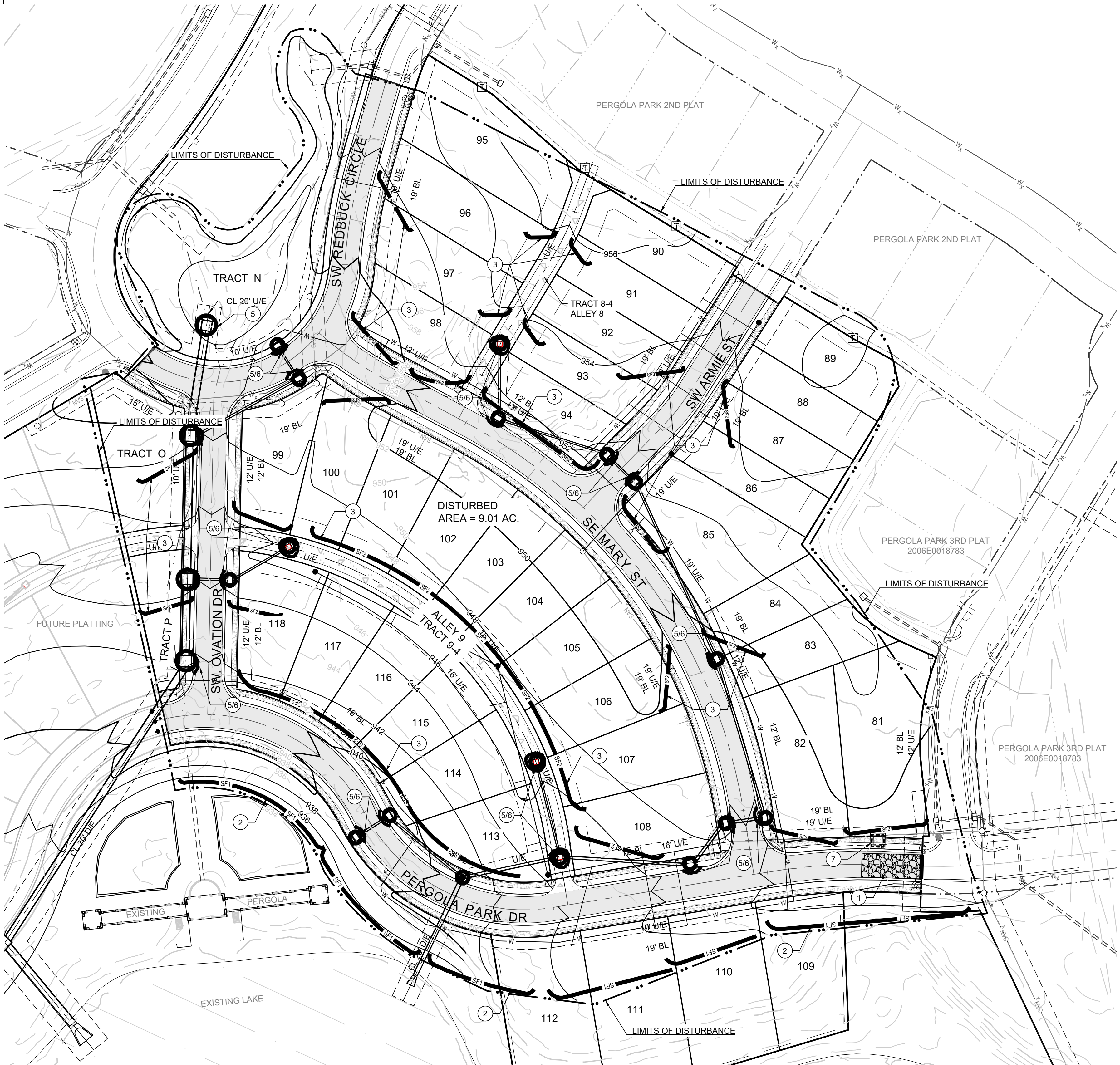
NOTES:

- CAPACITY OF INLETS ON GRADE DETERMINED USING ROUTINE OUTLINED ON PGS 56-95 TO 56-97, SECTION 5600 APWA
- CAPACITY OF SUMP INLETS CALCULATED USING FIGURE 5604-21, SECTION 5600 APWA
- MANNINGS "n" VALUE FOR COMBINED ASPHALT PAVEMENT AND CONCRETE CURB - 0.014

10 YEAR RUNOFF CALCULATIONS

Design Storm:		10																									
"K" Value:		1.00																									
"F" Factor:		1.00																									
Runoff Calculations														Pipe Properties													
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. Cx/A	To	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlet 1	Up Piped Inlet 2	Up Area (acres)	Up Cx/A	Up Inlet	Down Inlet	Pipe Type	"n"	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.	
LINE 100																											
101	0.00	0.66	4.45	2.94	7.3	6.70	0.00	19.67	55.80	7.89	201		1.54	1.02	101	100	RCP	0.013	36	90.28	0.70	2.00	932.22	931.59	940.87	933.92	
102	0.22	0.66	2.91	1.92	7.1	6.75	0.98	12.95	23.73	7.55	301		0.32	0.21	102	101	RCP	0.013	24	83.24	1.10	1.50	935.14	934.22	945.58	936.71	
103	0.21	0.66	2.37	1.56	6.8	6.82	0.95	10.67	18.93	6.02			0.00	0.00	103	102	RCP	0.013	24	108.93	0.70	0.50	937.40	936.64	946.88	938.81	
104	0.28	0.66	2.16	1.43	6.7	6.85	1.27	9.77	21.46	6.83			0.00	0.00	104	103	RCP	0.013	24	45.07	0.90	0.50	938.31	937.90	948.15	939.65	
105	0.43	0.66	1.88	1.24	6.6	6.88	1.95	8.54	16.78	5.34			0.00	0.00	105	104	RCP	0.013	24	33.01	0.55	0.50	938.99	938.81	948.14	940.24	
106	0.39	0.66	1.45	0.96	6.3	6.97	1.80	6.67	11.98	6.78			0.00	0.00	106	105	RCP	0.013	18	138.15	1.30	0.50	941.28	939.49	949.61	942.50	
107	0.31	0.66	1.06	0.70	5.8	7.12	1.46	4.98	9.10	5.15			0.00	0.00	107	106	RCP	0.013	18	162.07	0.75	0.50	943.00	941.78	951.76	944.03	
108	0.36	0.66	0.75	0.50	5.7	7.15	1.70	3.54	6.46	5.26			0.00	0.00	108	107	RCP	0.013	15	33.00	1.00	0.50	943.83	943.50	951.76	946.17	
109	0.18	0.66	0.39	0.26	5.3	7.28	0.86	1.87	4.79	3.90			0.00	0.00	109	108	RCP	0.013	15	95.94	0.55	2.50	944.86	944.33	951.19	945.50	
110	0.21	0.66	0.21	0.14	5.0	7.35	1.02	1.02	5.00	4.08			0.00	0.00	110	109	RCP	0.013	15	61.51	0.60	N/A	947.73	947.36	952.82	948.19	
LINE 200																											
201	1.22	0.66	1.54	1.02	5.1	7.31	5.89	7.43	13.29	7.52			0.00	0.00	201	101	RCP	0.013	18	79.68	1.60	0.50	935.00	933.72	939.47	936.30	
202	0.32	0.66	0.32	0.21	5.0	7.35	1.55	1.55	7.79	4.41			0.00	0.00	202	201	RCP	0.013	18	33.00	0.55	N/A	935.68	935.50	939.46	936.34	
LINE 300																											
301	0.32	0.66	0.32	0.21	5.0	7.35	1.55	1.55	12.59	10.26			0.00	0.00	301	102	RCP	0.013	15	81.86	3.80	0.75	N/A	939.00	935.89	945.58	939.58
LINE 400																											
401	0.34	0.66	46.22	30.51	6.5	6.93	1.56	211.41	378.80	13.40	501		3.00	1.98	401	400	RCP	0.013	72	88.99	0.80	0.50	928.21	927.50	936.93	933.07	
402	0.04	0.66	42.88	28.30	5.5	7.19	0.19	203.59	367.86	15.48			0.00	0.00	402	401	RCP	0.013	66	277.93	1.20	0.50	932.05	928.71	942.08	936.98	
403	0.07	0.66	42.84	28.27	5.5	7.22	0.33	204.04	367.86	15.48	601		0.90	0.59	403	402	RCP	0.013	66	70.66	1.20	0.50	933.40	932.55	944.36	938.34	
404	0.06	0.66	41.67	27.63	5.3	7.25	0.29	200.48	367.86	15.48	701		40.40	26.66	404	403	RCP	0.013	66	119.40	1.20	0.40	935.33	933.03	948.24	940.22	
405	1.14	0.66	1.41	0.93	5.1	7.32	5.50	6.81	14.86	8.41			0.00	0.00	405	404	RCP	0.013	18	101.61	2.00	0.50	941.36	939.33	949.08	942.59	
406	0.27	0.66	0.27	0.18	5.0	7.35	1.31	1.31	5.59	4.56			0.00	0.00	406	405	RCP	0.013	15	33.00	0.75	N/A	942.11	941.86	949.08	942.64	
LINE 500																											
501	1.08	0.66	3.00	1.98	6.5	6.93	1.46	13.72	31.77	6.47			0.00	0.00	501	401	RCP	0.013	30	35.50	0.60	0.50	931.92	931.71	936.92	933.42	
502	0.10	0.66	1.21	0.81	6.3	6.98	0.46	8.84	23.73	7.55			0.00	0.00	502	501	RCP	0.013	24	76.93	1.10	0.50	933.20	932.35	938.01	934.47	
503	0.49	0.66	1.82	1.20	6.2	7.00	2.26	8.41	23.73	7.55			0.00	0.00	503	502	RCP	0.013	24	35.15	1.10	0.50	934.08	933.70	938.71	935.32	
504	0.45	0.66	1.33	0.88	5.9	7.09	2.11	6.22	11.51	6.51			0.00	0.00	504	503	RCP	0.013	18	123.35	1.20	0.50	936.06	934.58	940.55	937.74	
505	0.46	0.66	0.88	0.58	5.4	7.22	2.19	4.19	7.79	4.41			0.00	0.00	505	504	RCP	0.013	18	121.26	0.55	0.50	937.23	936.56	942.25	938.27	
506	0.42	0.66	0.42	0.28	5.0	7.35	2.04	2.04	7.79	4.41			0.00	0.00	506	505	RCP	0.013	18	113.83	0.55	N/A	938.38	937.73	943.60	938.99	
LINE 600																											
601	0.36	0.66	0.90	0.59	5.1	7.32	1.74	4.35	18.19	10.30			0.00	0.00	601	403	RCP	0.013	18	35.00	3.00	0.50	938.45	937.40	944.34	939.40	
602	0.54	0.66	0.54	0.36	5.0	7.35	2.62	2.62	11.19	9.12			0.00	0.00	602	601	RCP	0.013	15	55.86	3.00	N/A	940.62	938.95	946.14	941.40	
LINE 700																											
701	0.40	0.66	40.40	26.66	5.0	7.35	196.06	196.06	474.91	19.99			0.00	0.00	701	404	RCP	0.013	66	91.55	2.00	0.50	937.66	935.83	948.50	942.42	

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-EROS.dwg, 4/19/2019 7:52:41 AM, 1:1



LEGEND			
	TEMP. CONSTRUCTION ENTRANCE AND STAGING AREA		SILT FENCE (PRIOR TO LAND DISTURBANCE)
	CONCRETE WASHOUT AREA		SILT FENCE (DURING CONSTRUCTION)
	SILT FOAM DIKE - STAKED & INSTALL PER MFR'S RECOMMENDATIONS		LIMITS OF DISTURBANCE
	BMP PLAN REF. NO.		EXISTING CONTOURS
			PROPOSED CONTOURS
			GRAVEL FILTER FOR STORM SEWER STRUCTURES ONLY

DISTURBED AREA = 9.01 A.C.

SITE SPECIFIC NOTES:

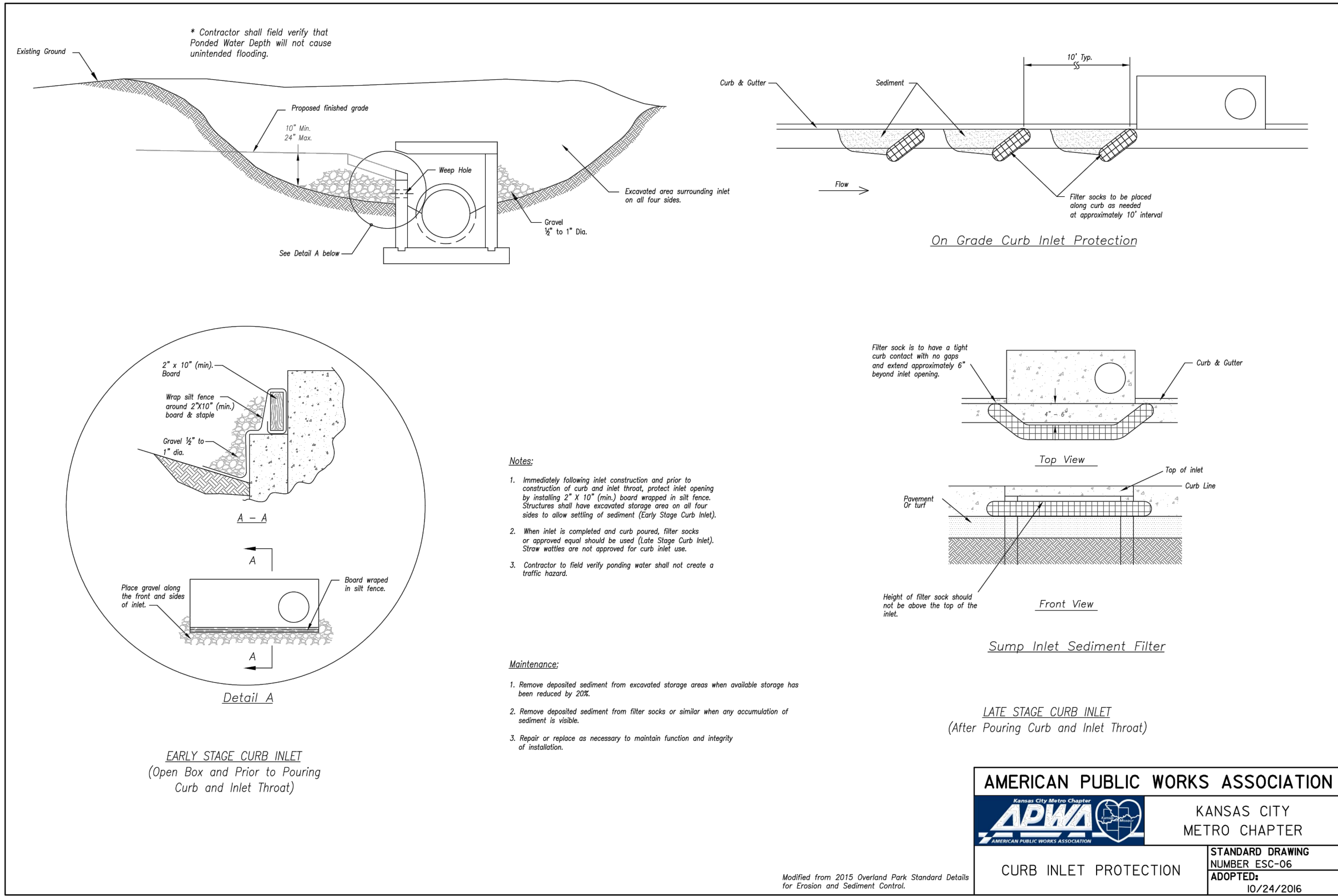
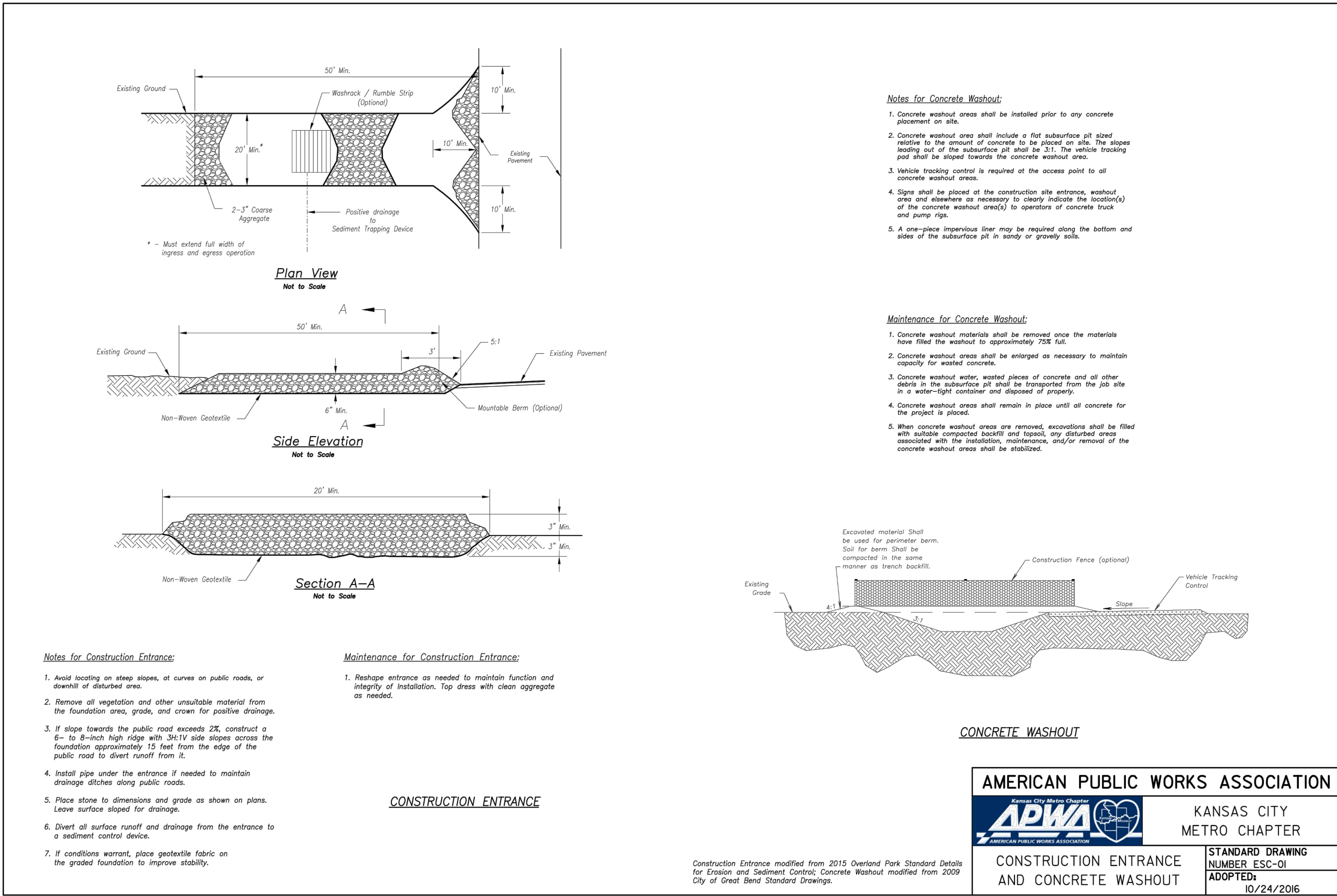
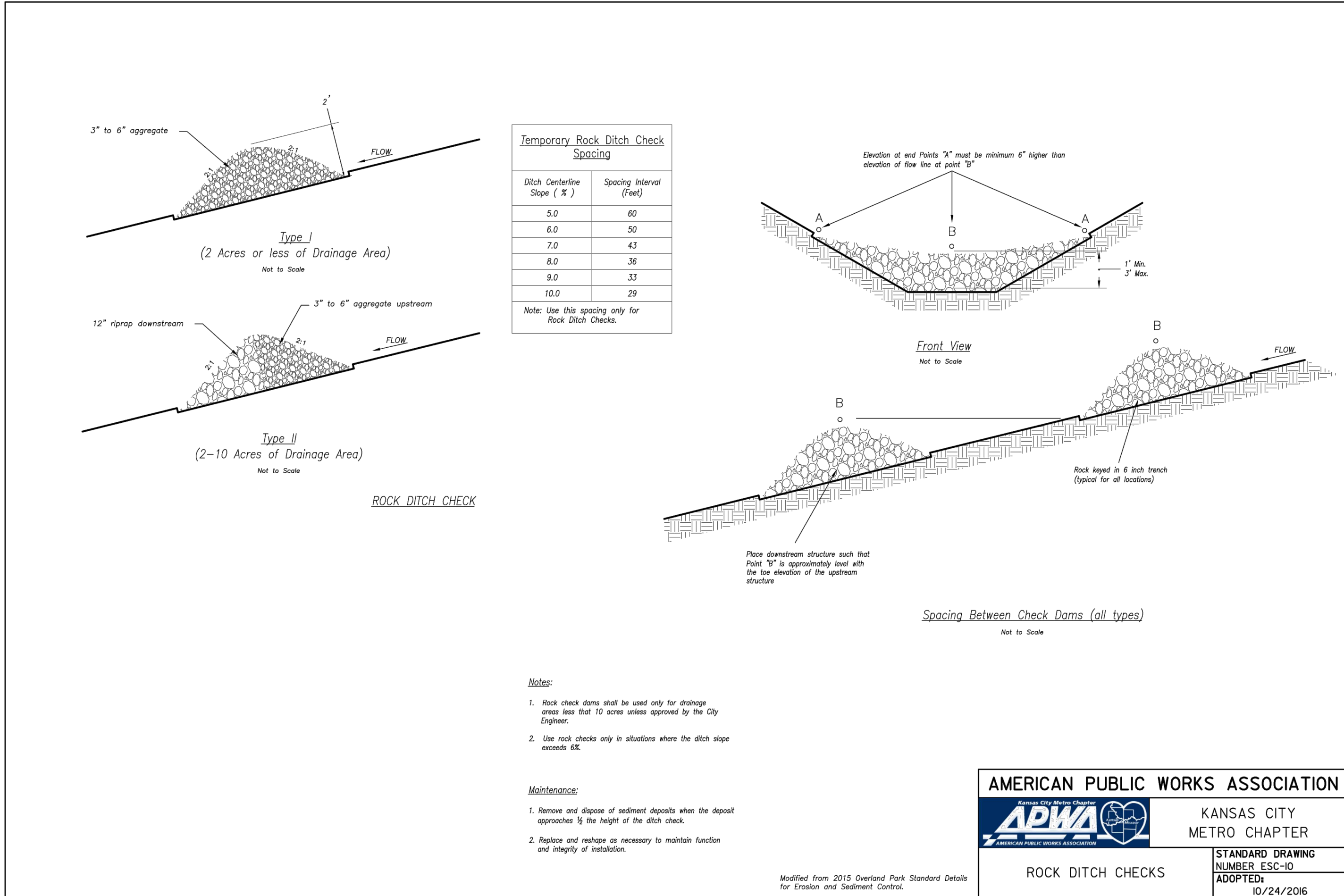
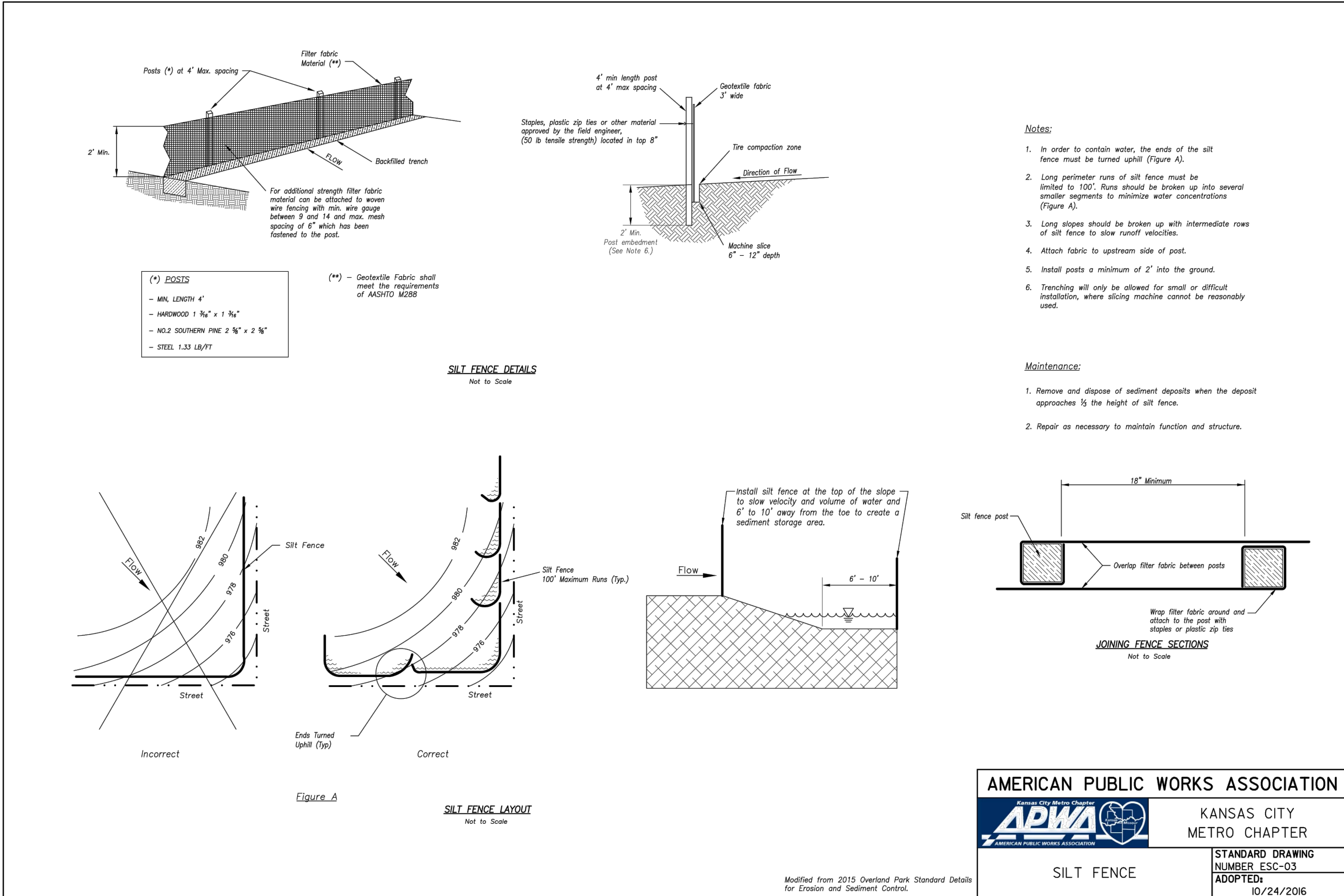
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
- THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT AREA.
- NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0414G DATED JANUARY 20TH, 2017.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART.
- 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.

- STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPs. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.
- ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN.
- SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR.
- AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.

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	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
	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
B - MASS GRADING	3	SILT FENCE (DURING CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
C - UTILITY CONSTRUCTION	4	CONCRETE WASHOUT AREA	E	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
	5	INLET PROTECTION (SILT FENCE)	D/E	PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES TO HAVE SILT FENCE REMOVED ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
D - AFTER PAVING OPERATIONS	6	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
	7	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
	8	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.

PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI

REVISION DATE		DESCRIPTION	
1	4/19/19	DATE PREPARED	4/19/19
2	4/19/19	PROJ. NUMBER	19-002
EROSION CONTROL PLAN			
SHEET			
7			
OF 22			



NOTE:

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

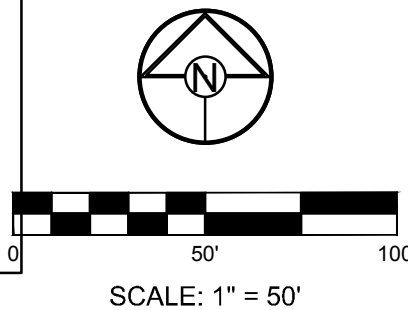
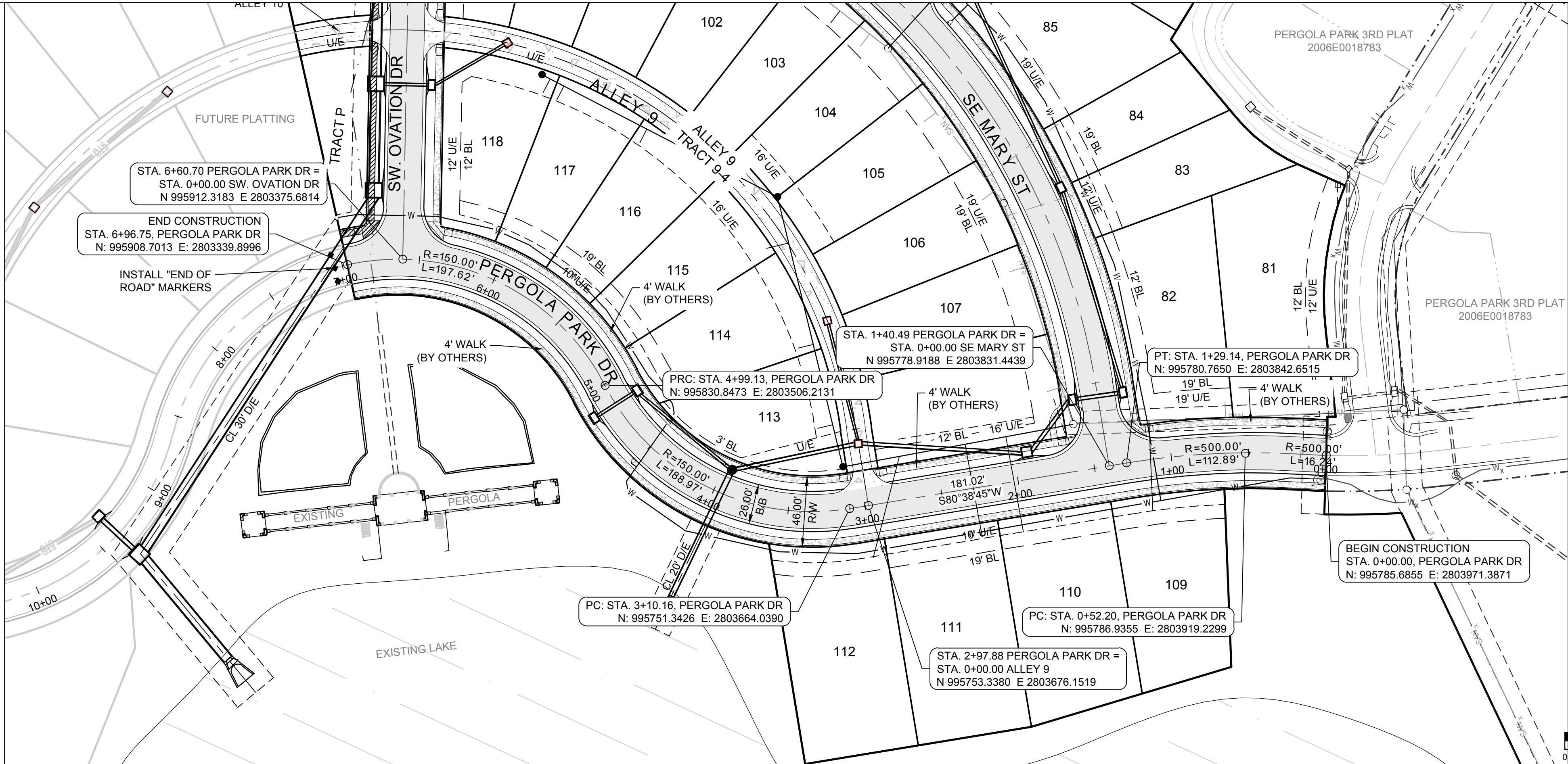
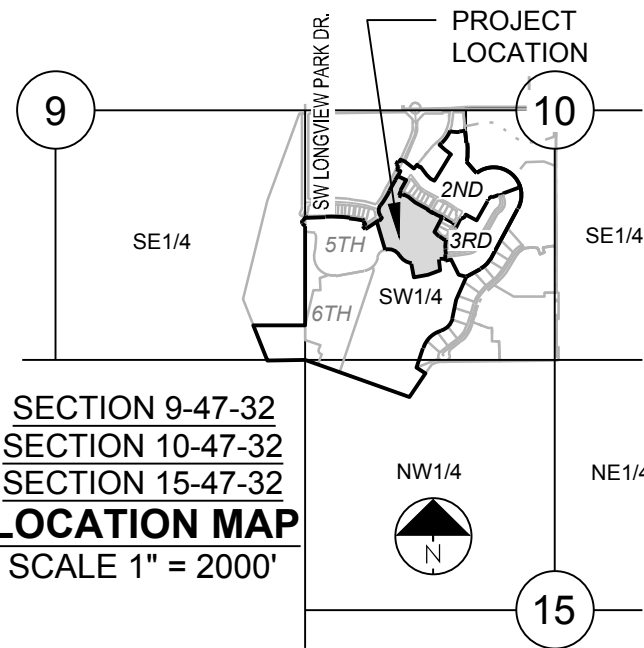
MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

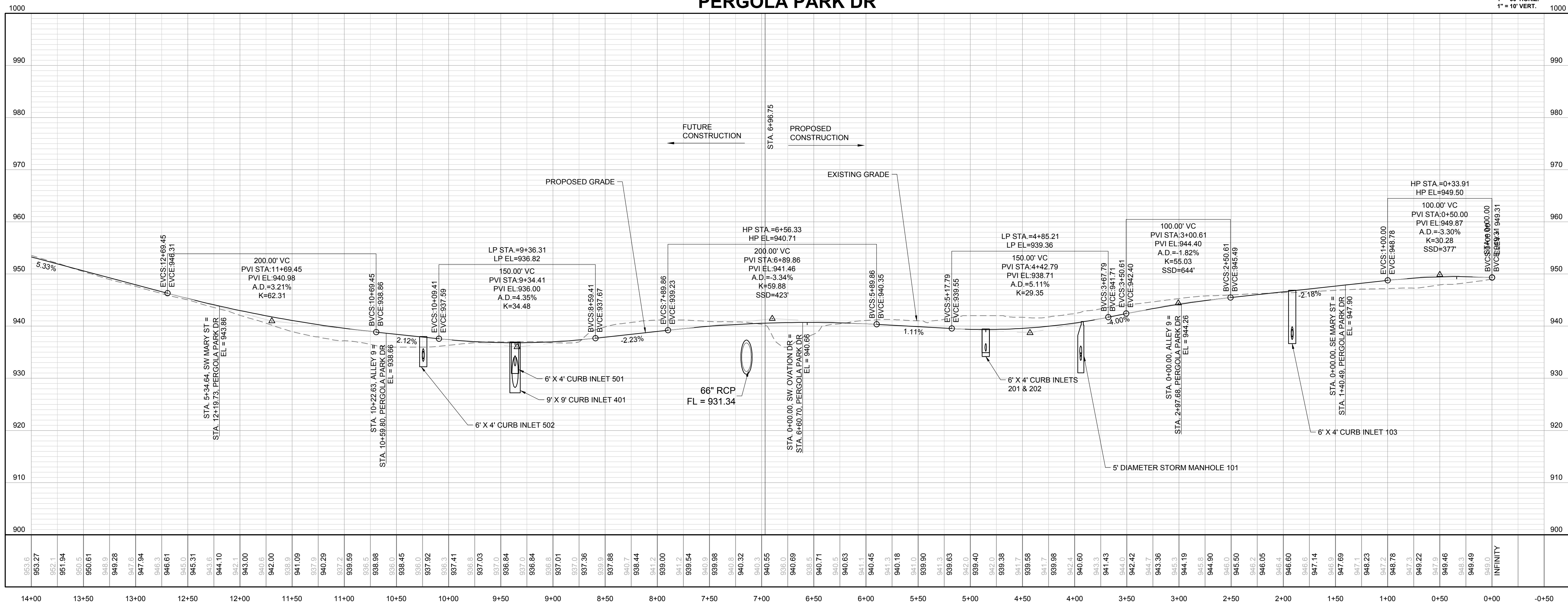
PROJECT BENCHMARK:

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

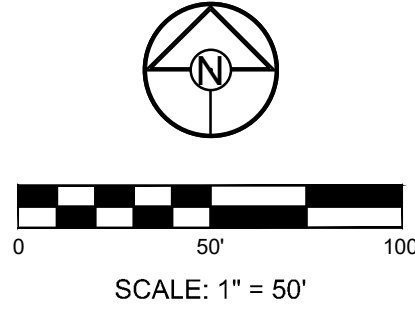
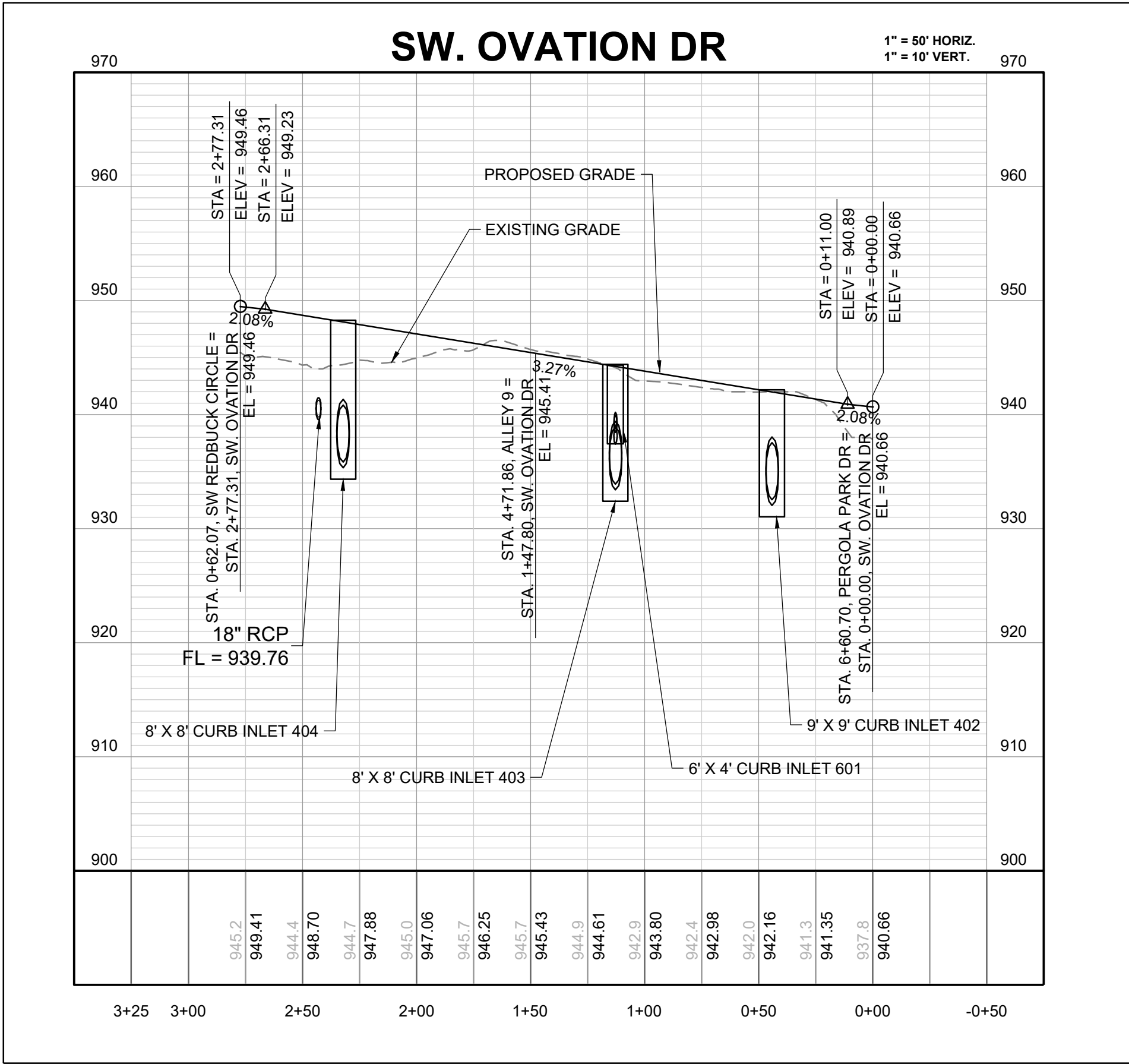
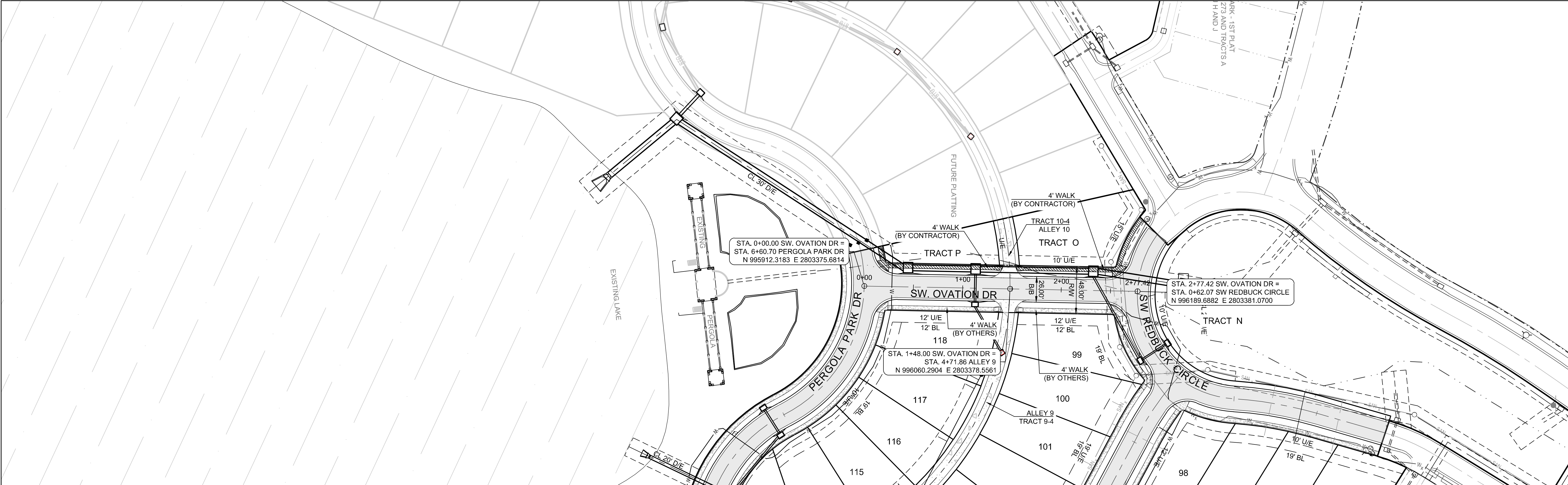
NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



PERGOLA PARK DR



I:\PROJECTS\2018\18-0023\0 DWG Plans\6 0 SS\18-002-SS-P&P.dwg, 4/19/2019 7:53:57 AM, 1:1

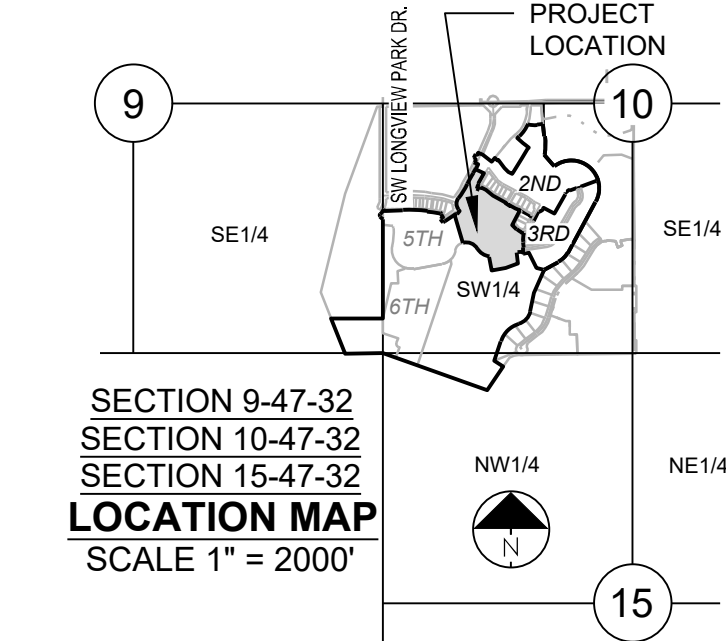


NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:
BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

PROJECT BENCHMARK:
CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



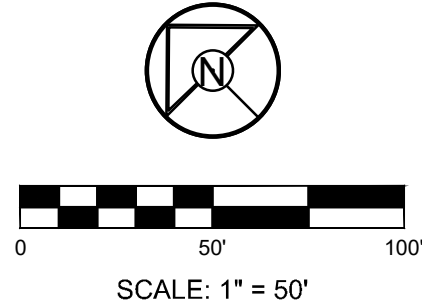
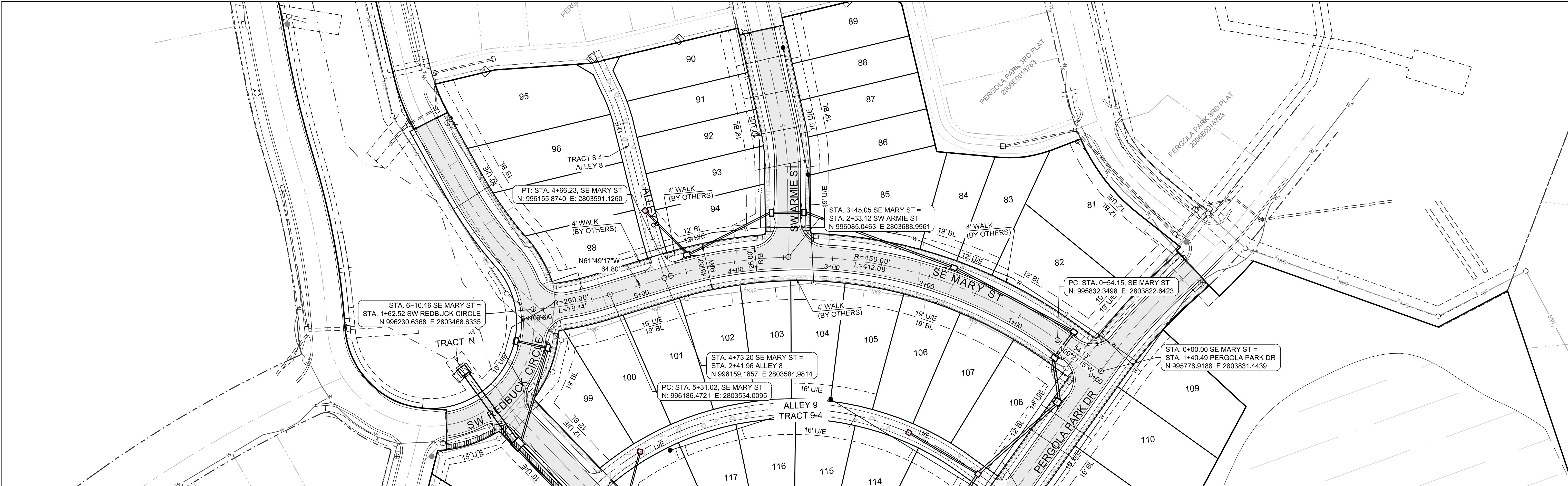
**PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI**

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

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	18-002

OVATION DR.

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-P&P.dwg, 4/19/2019 7:54:13 AM, 1:1



NOTE:

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

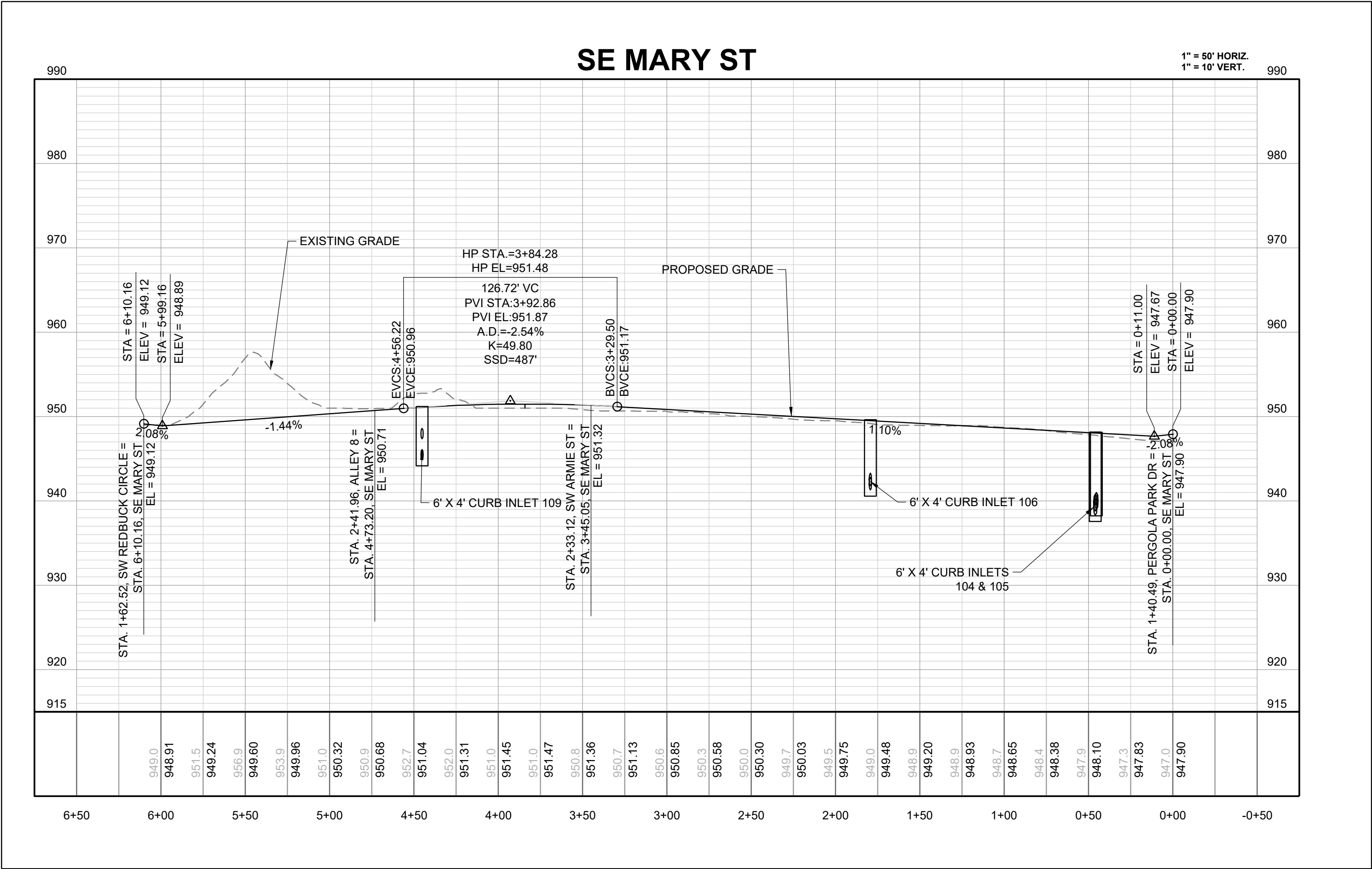
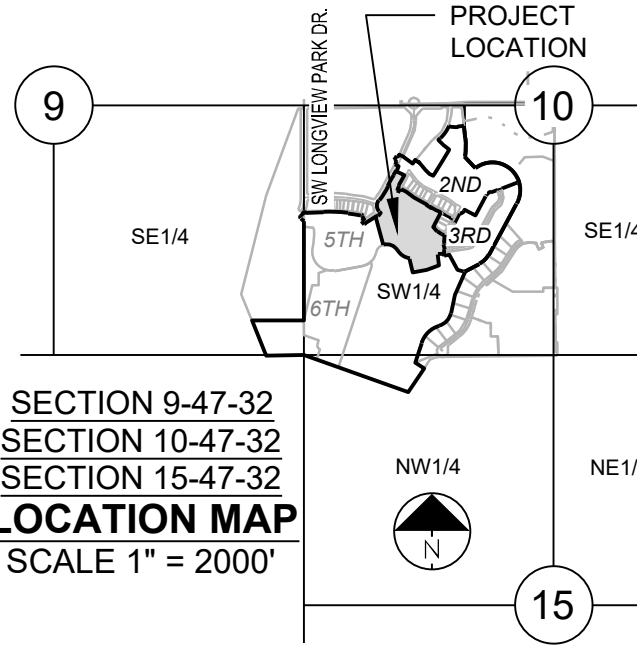
MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

PROJECT BENCHMARK:

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

NORTHING: 998893.4148
EASTING: 2803316.5413
ELEV. 1004.09





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

PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL
- LEE'S SUMMIT, MISSOURI

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

DRAWN BY:
BAL

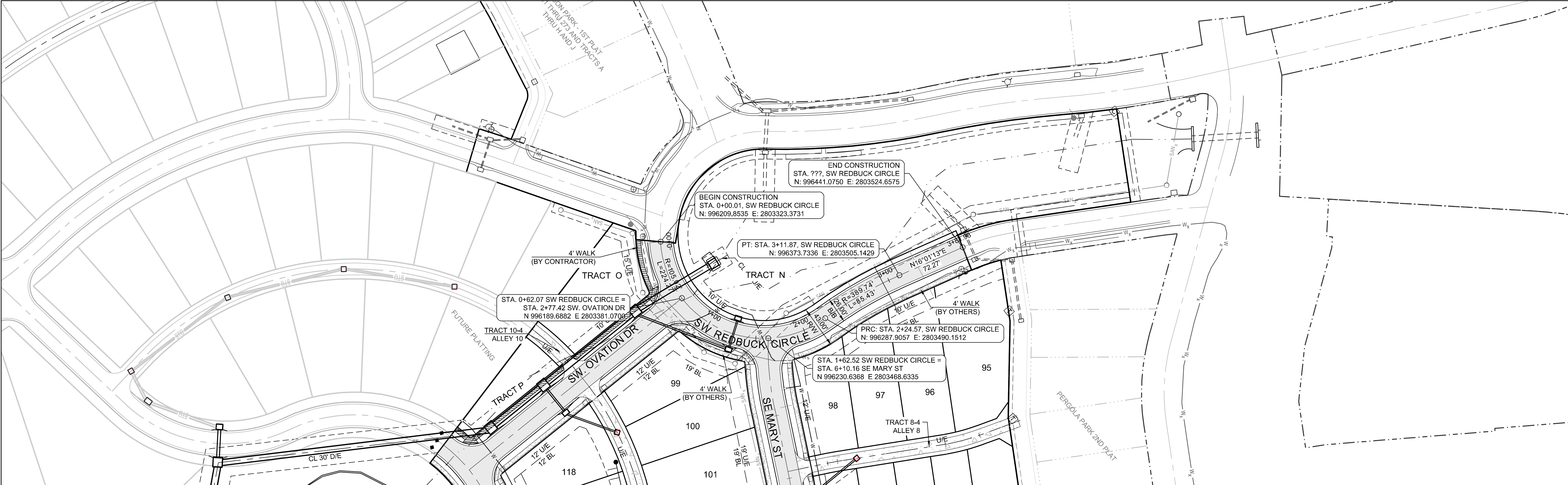
CHECKED BY:
MAB

DATE PREPARED:
4-15-19

PROJ. NUMBER:
19-002

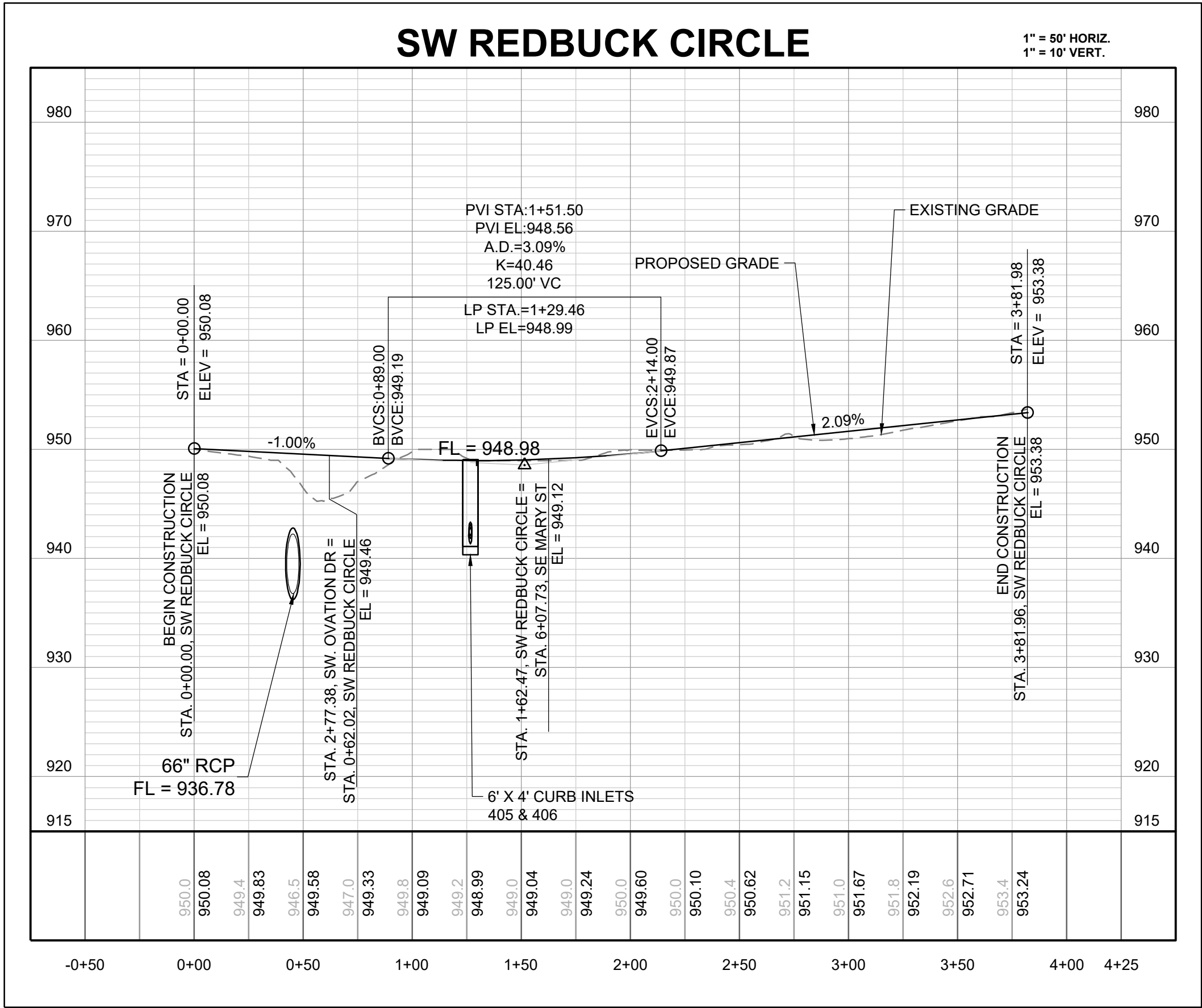
SE MARY ST

SHEET
13
OF 22



NOTE:

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



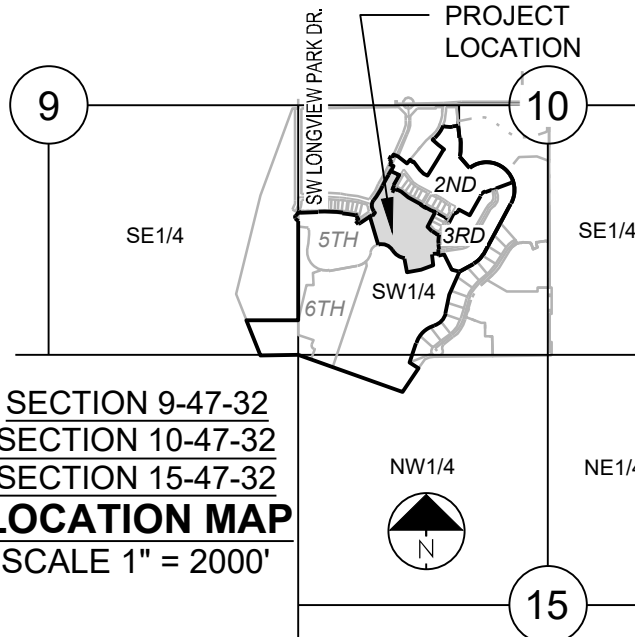
MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

PROJECT BENCHMARK:

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

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



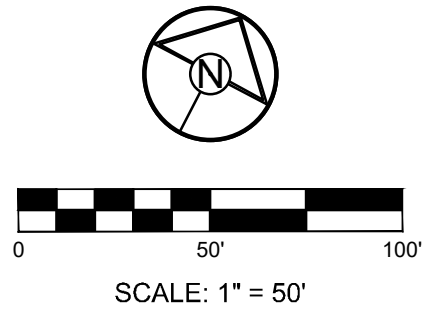
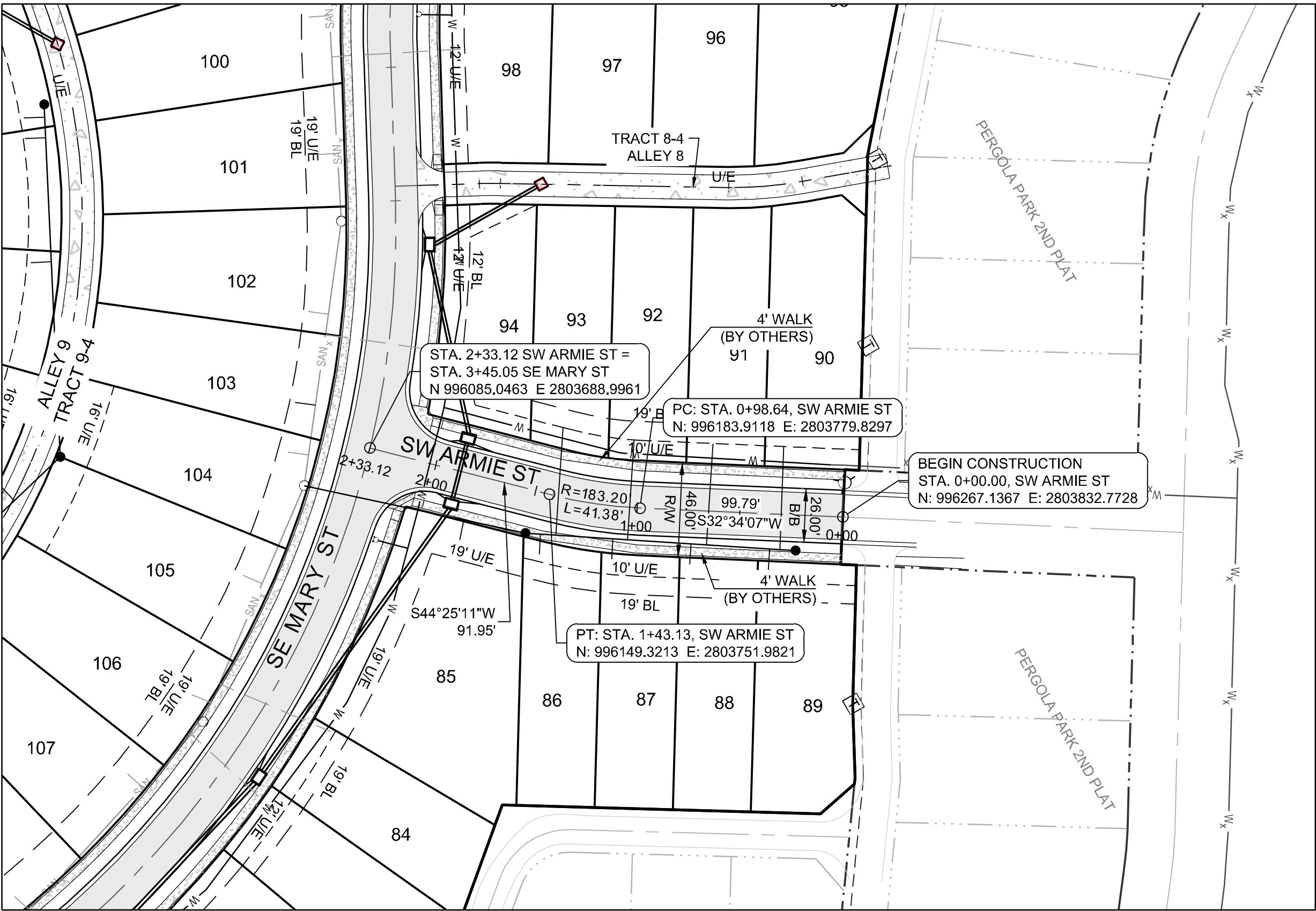
REVISION DATE	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	
9	

DRAWN BY: BAL	CHECKED BY: MAB	DATE PREPARED: 4-15-19	PROJ. NUMBER: 19-002
------------------	--------------------	---------------------------	-------------------------

SW REDBUCK CR

SHEET

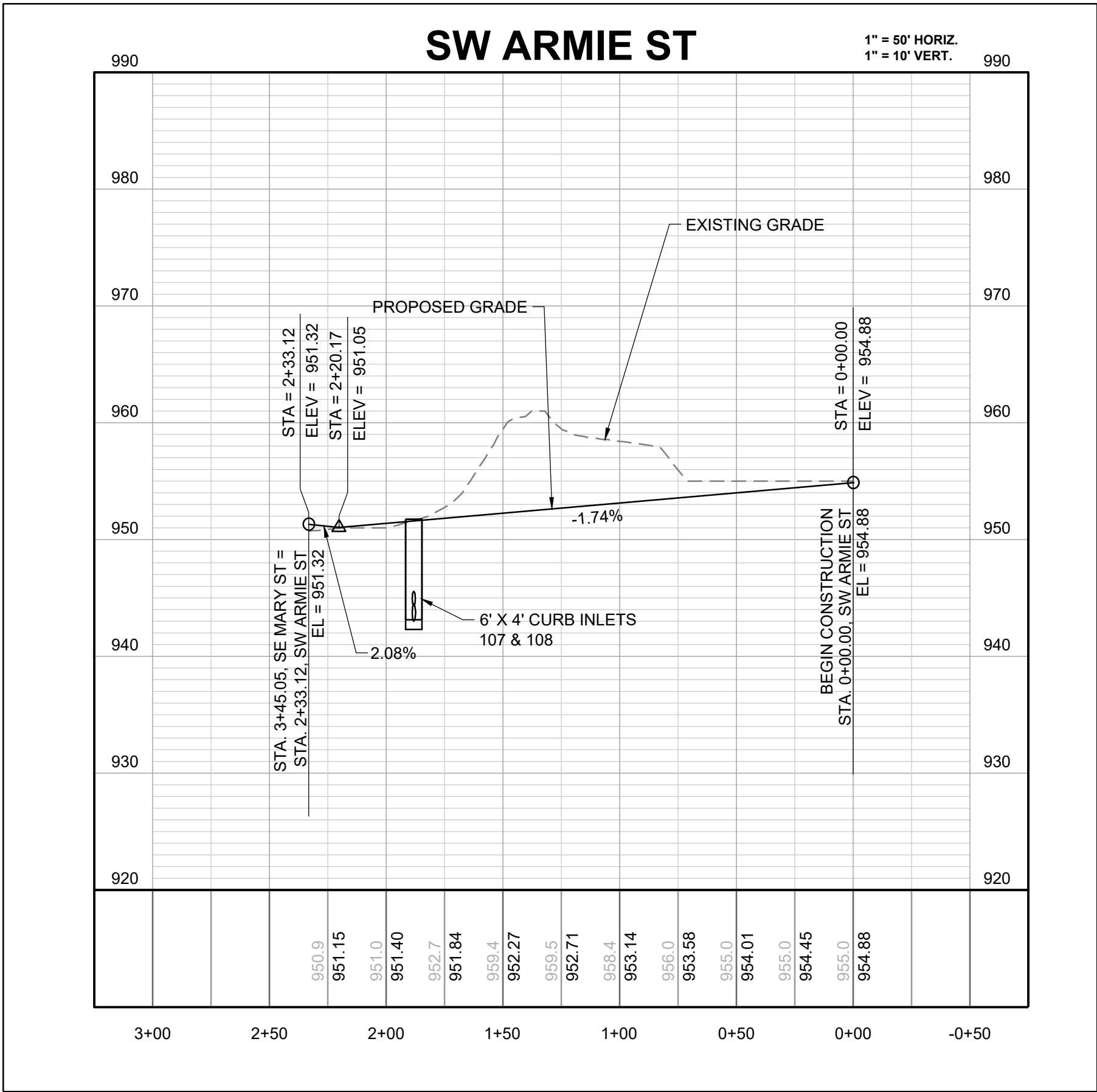
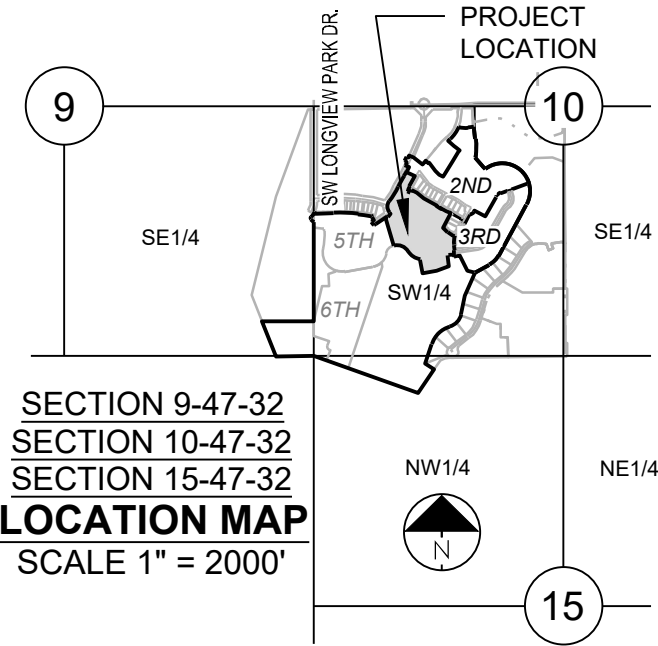
I:\PROJECTS\2018\18-0023\0 DWG Plans\6 0 SS\18-002-SS-P&P.dwg, 4/19/2019 7:54:39 AM, 1:1



NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:
BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

PROJECT BENCHMARK:
CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.
NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



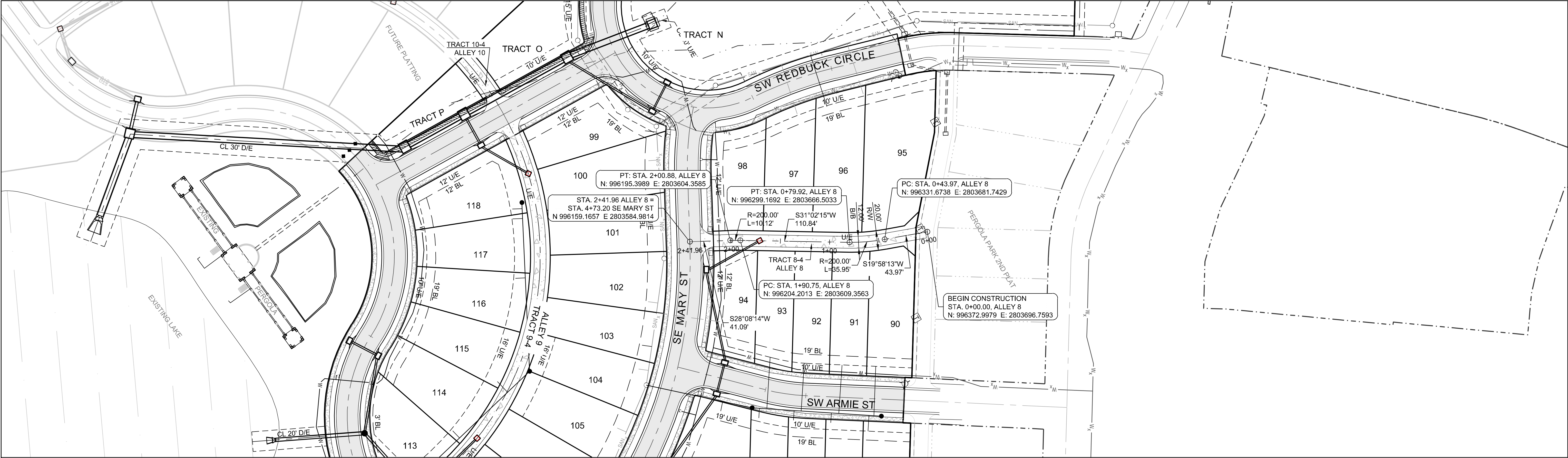
PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL
- LEE'S SUMMIT, MISSOURI

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

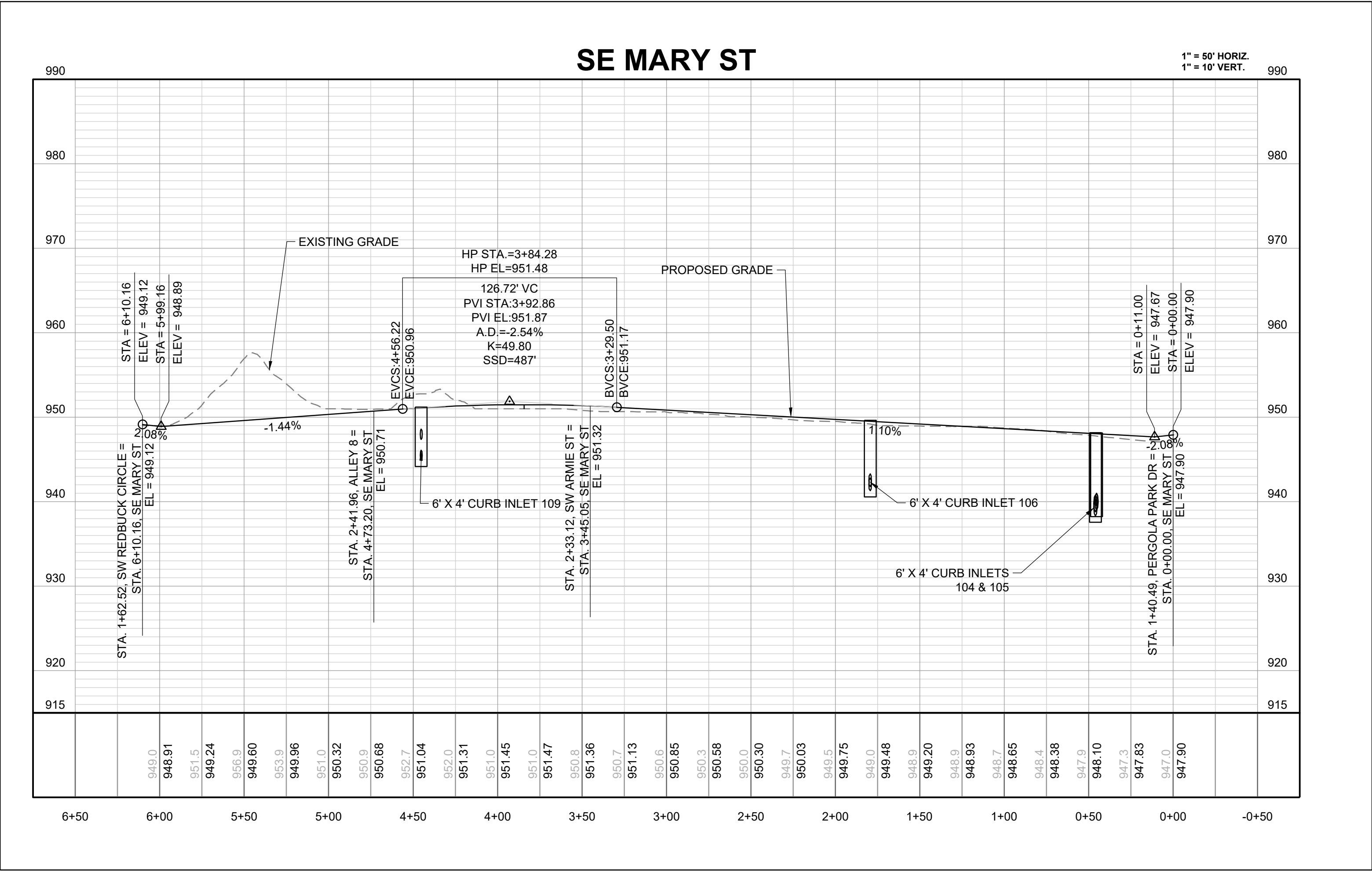
SW.ARMIE ST

SHEET

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-P&P.dwg, 4/19/2019 7:54:53 AM, 1:1



NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.



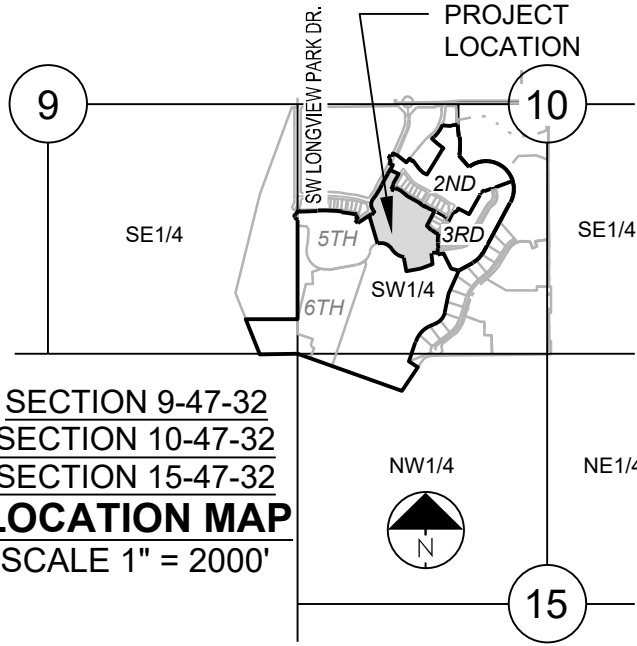
MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

PROJECT BENCHMARK:

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

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



REVISION DATE	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Storm Sewer Construction Notes		
Structure	Notes	
100	STA 0+00.00, LINE 100 INSTALL 41 X 72 X 24 INCH CMP RECTANGULAR END SECTION 245°32'19" N 995694.8511 E 2803548.9565	
101	STA 0+90.28, LINE 100 INSTALL STANDARD 5' DIA ECCENTRIC MANHOLE 64°18'24" N 995776.2064 E 2803588.0987	
102	STA 1+73.52, LINE 100 INSTALL 4 X 4 AREA INLET 3°50'59" N 995793.2103 E 2803669.5838	
103	STA 2+82.35, LINE 100 INSTALL 6 X 6 CURB INLET 9°57'32" N 995787.8967 E 2803778.2777	
104	STA 3+27.10, LINE 100 INSTALL 6 X 4 CURB INLET 97°24'23" N 995821.6253 E 2803807.6866	
105	STA 3+60.10, LINE 100 INSTALL 6 X 4 CURB INLET 280°10'20" N 995826.3378 E 2803840.3550	
106	STA 4+98.25, LINE 100 INSTALL 6 X 4 CURB INLET 118°45'35" N 995958.5759 E 2803800.3782	
107	STA 6+60.32, LINE 100 INSTALL 6 X 4 CURB INLET 44°50'34" N 996105.6524 E 2803732.2907	
108	STA 6+93.32, LINE 100 INSTALL 6 X 4 CURB INLET 44°41'25" N 996128.7494 E 2803708.7210	
109	STA 7+89.26, LINE 100 INSTALL 6 X 4 CURB INLET 150°45'35" N 996159.6705 E 2803617.9003	

Storm Sewer Construction Notes	
Structure	Notes
406	STA 6+91.91, LINE 400 INSTALL 6 X 4 CURB INLET 212°54'17" N 996220.2979 E 2803433.4418
501	STA 0+35.50, LINE 500 INSTALL 6 X 4 CURB INLET 45°44'53" N 995746.3024 E 2803179.5267
502	STA 0+76.93, FUTURE LINE 500 INSTALL 6 X 4 CURB INLET 193°25'14" N 995707.5662 E 2803113.0569
503	STA 1+12.08, FUTURE LINE 500 INSTALL 4 X 4 GRATE INLET 169°43'04" N 995713.8518 E 2803078.4775
504	STA 2+35.43, FUTURE LINE 500 INSTALL 4 X 4 GRATE INLET 72°05'54" N 995837.0622 E 2803084.2863
505	STA 3+56.69, FUTURE LINE 500 INSTALL 4 X 4 GRATE INLET 52°37'51" N 995945.8094 E 2803137.9371
506	STA 4+70.52, FUTURE LINE 500 INSTALL 4 X 4 GRATE INLET 50°25'10" N 996020.4745 E 2803223.8584
601	STA 0+36.00, LINE 600 INSTALL 6 X 4 CURB INLET 268°53'13" N 996024.7536 E 2803394.3688
602	STA 0+91.86, LINE 600 INSTALL 4 X 4 GRATE INLET 40°21'37" N 996051.9081 E 2803443.1821
701	STA 0+91.55, LINE 700 INSTALL 9 X 9 AREA INLET 86°40'01" N 996236.1436 E 2803368.0147

Storm Sewer Construction Notes	
Structure	Notes
110	STA 8+50.78, LINE 100 INSTALL 4 X 4 AREA INLET 88°27'08" N 996221.1611 E 2803619.5619
201	STA 0+79.83, LINE 200 INSTALL 6 X 4 AREA INLET 121°29'35" N 995827.6413 E 2803527.0512
202	STA 1+12.83, LINE 200 INSTALL 6 X 4 AREA INLET 302°29'18" N 995809.9160 E 2803499.2157
301	STA 0+81.86, LINE 300 INSTALL 4 X 4 AREA INLET 14°06'51" N 995872.6005 E 2803649.6217
400	STA 0+00.00, LINE 400 INSTALL INSTALL 99 X 108 X 72 INCH CMP RECTANGULAR END SECTION 315°13'27" N 995654.0896 E 2803262.8877
401	STA 0+88.99, LINE 400 INSTALL 9 X 9 CURB INLET 137°02'37" N 995722.1112 E 2803205.5082
402	STA 3+68.36, LINE 400 INSTALL 10 X 9 CURB INLET 0°00'00" N 995956.8083 E 2803357.0420
403	STA 4+37.01, LINE 400 INSTALL 10 X 9 CURB INLET 358°53'13" N 996025.4529 E 2803358.3756
404	STA 5+56.43, LINE 400 INSTALL 10 X 9 CURB INLET 0°26'17" N 996144.8345 E 2803360.6949
405	STA 6+58.91, LINE 400 INSTALL 6 X 4 CURB INLET 28°19'30" N 996192.5919 E 2803451.3689



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 #LAC201005237 #LS200200859-F

PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI

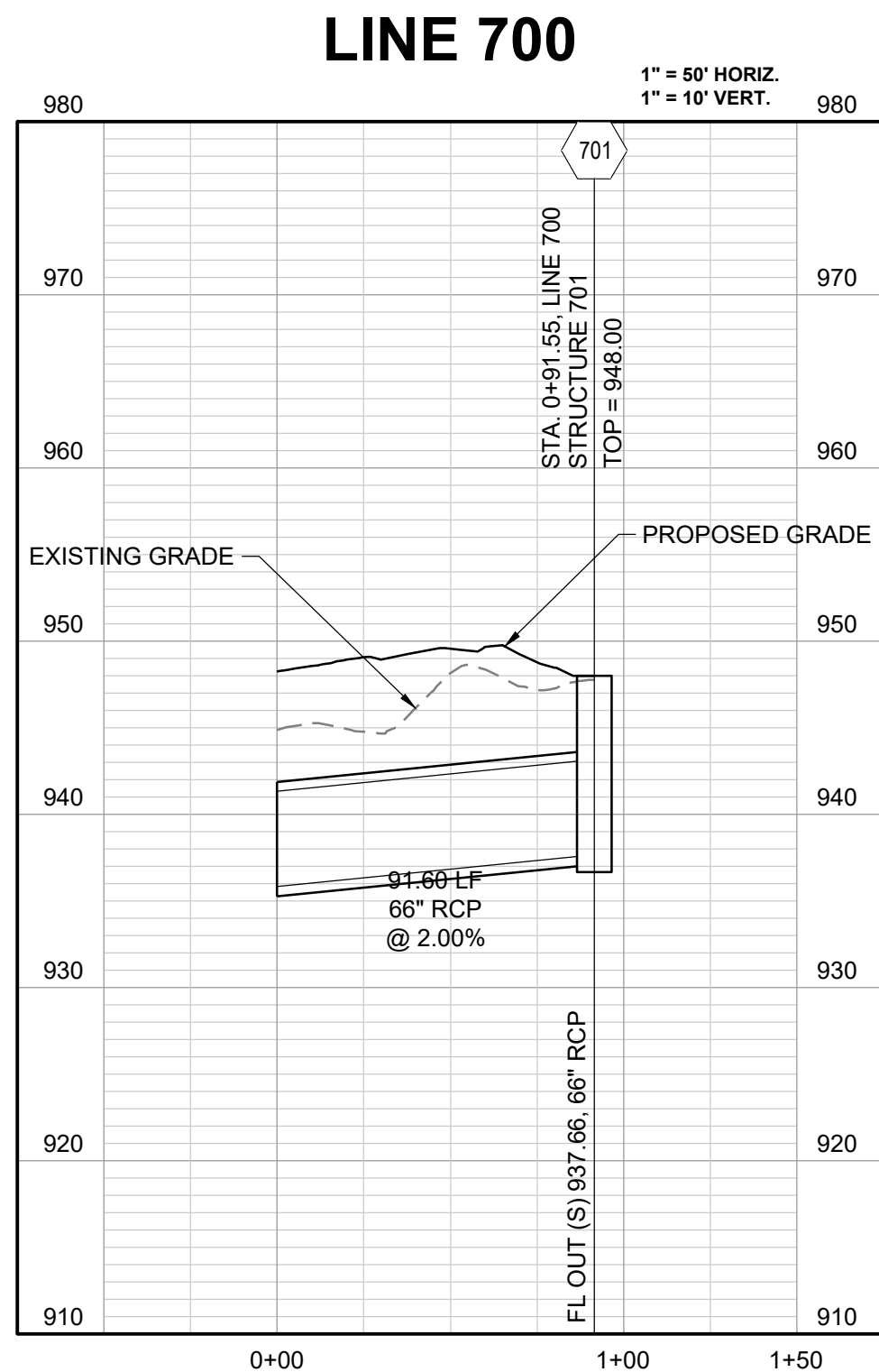
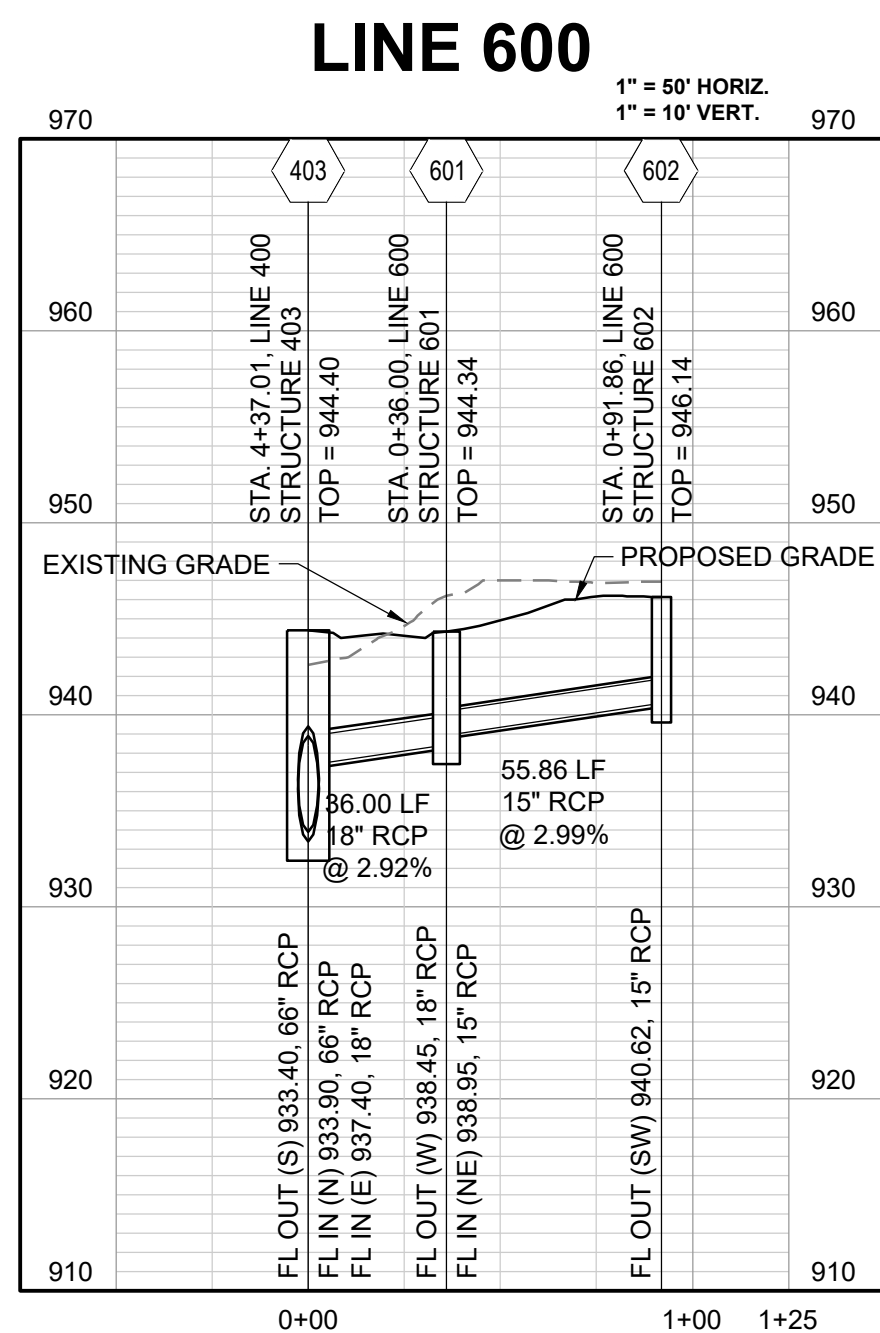
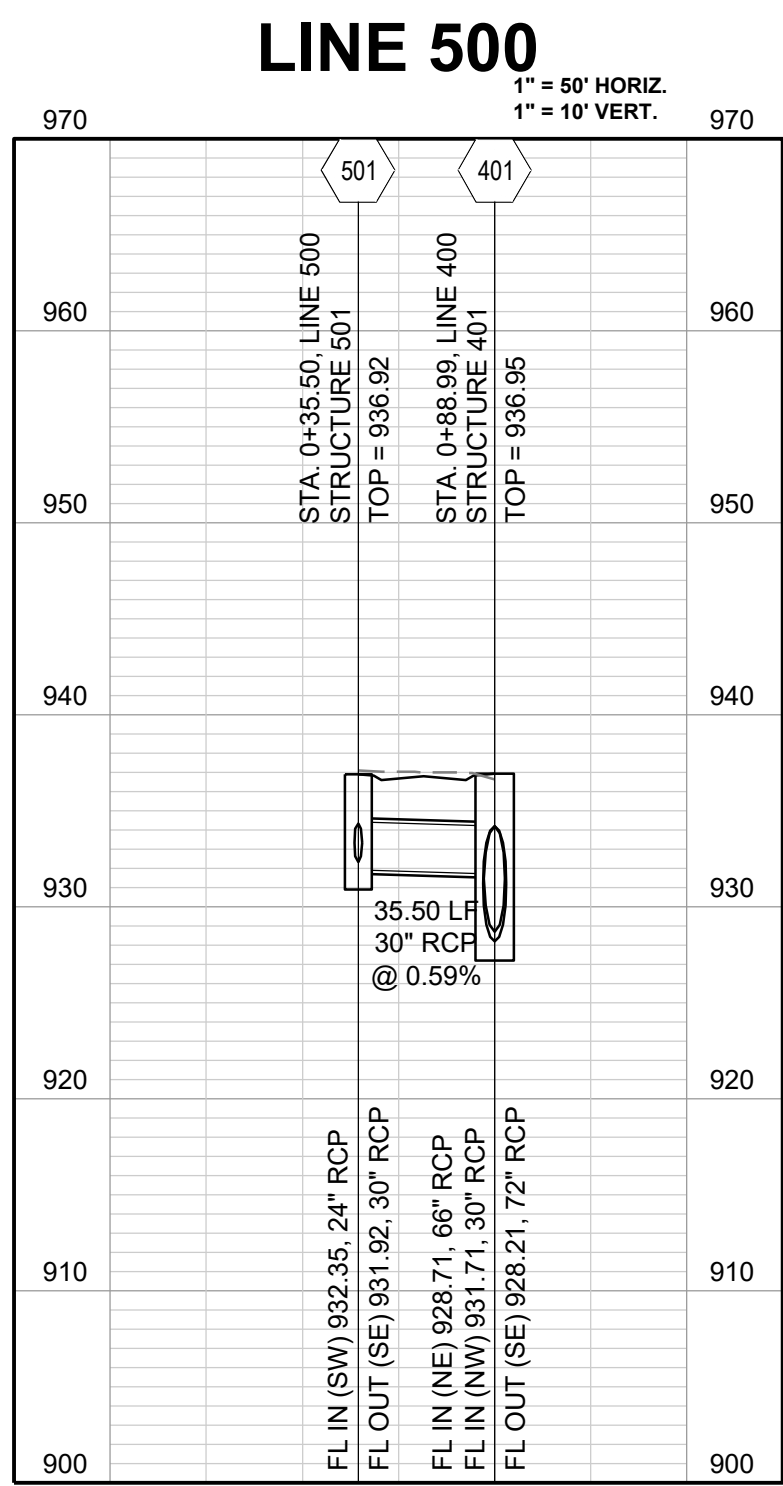
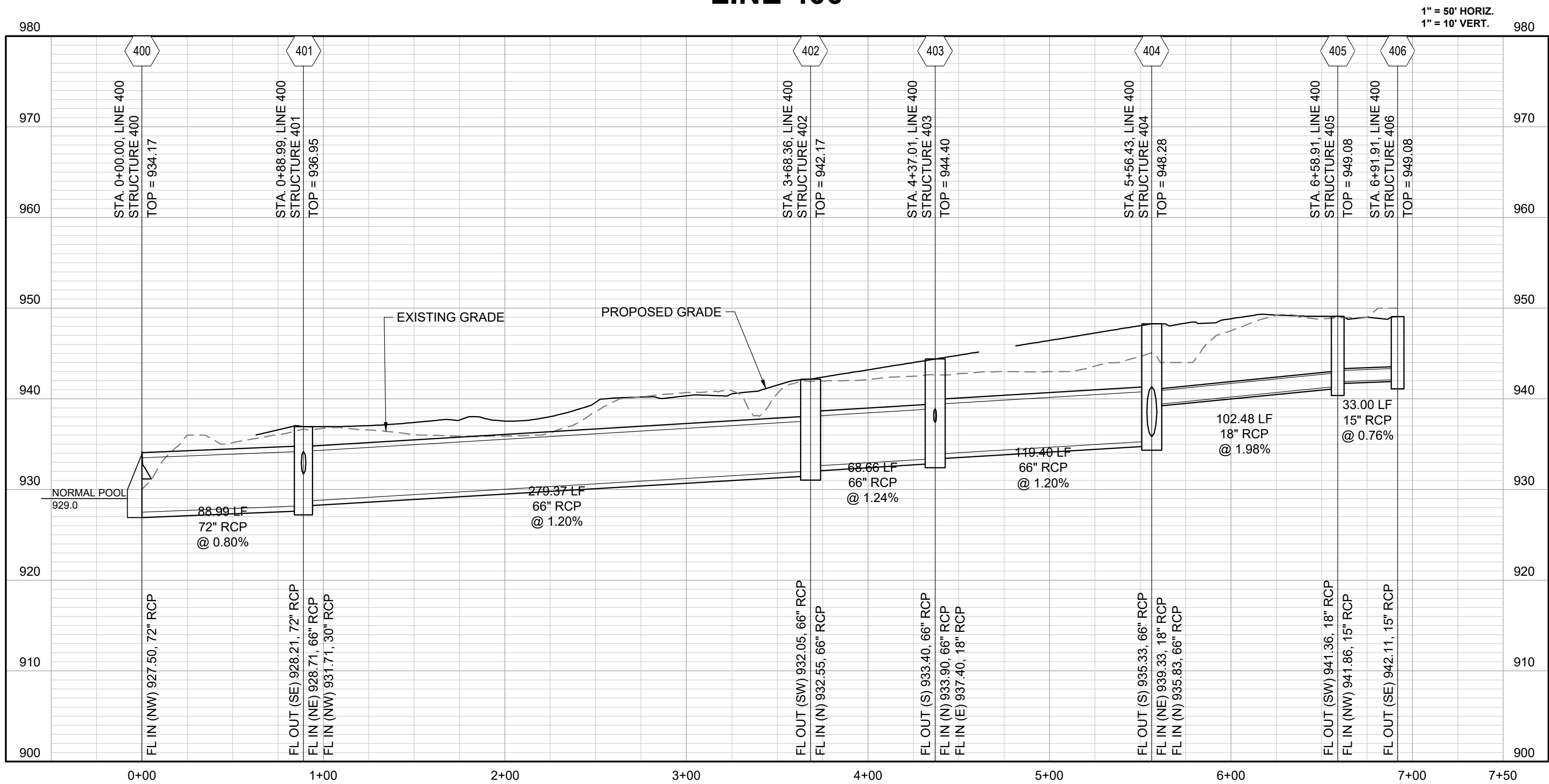
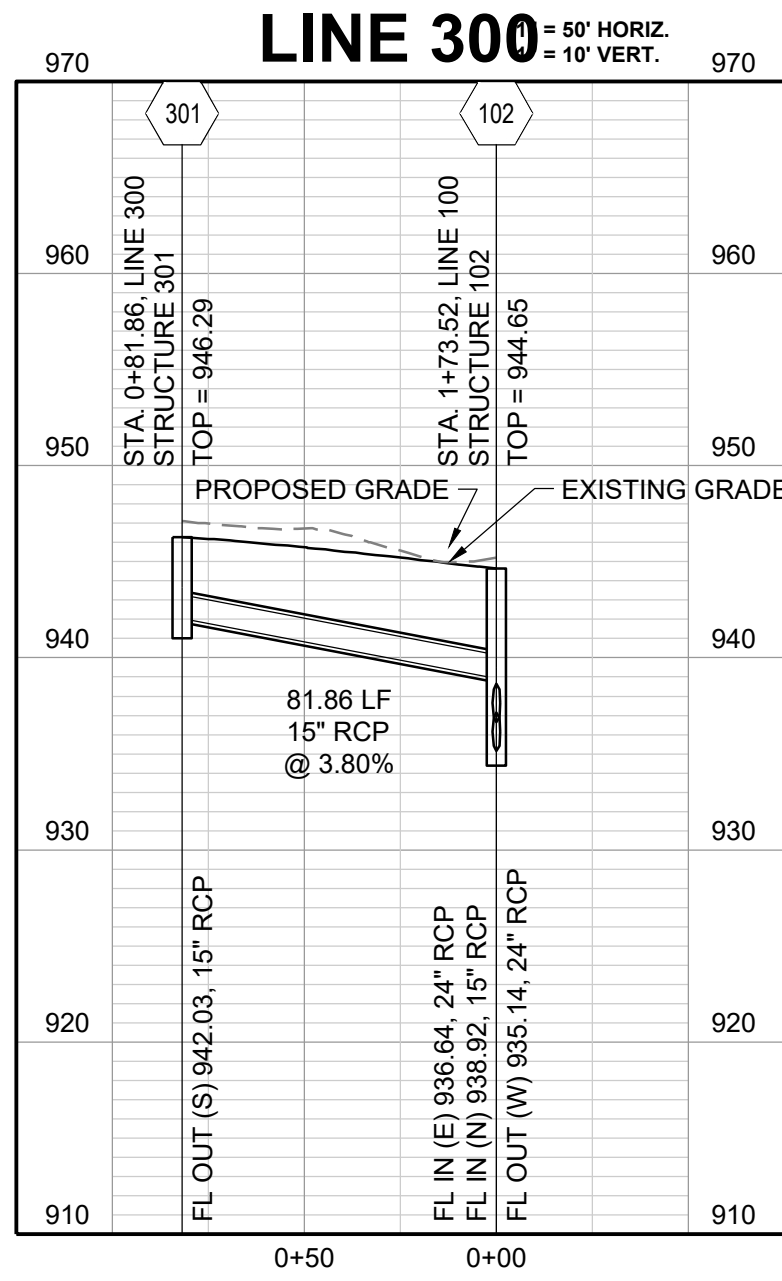
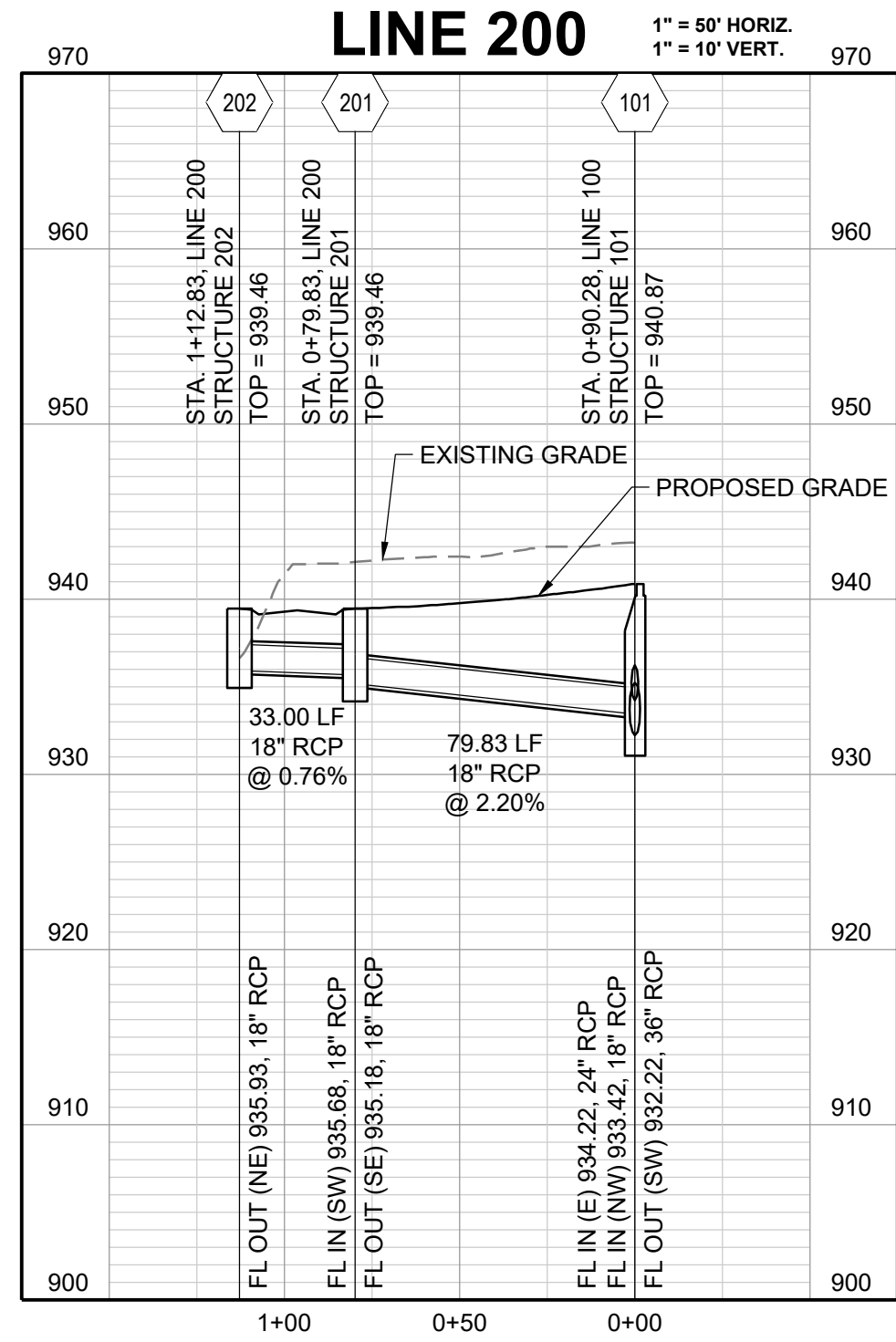
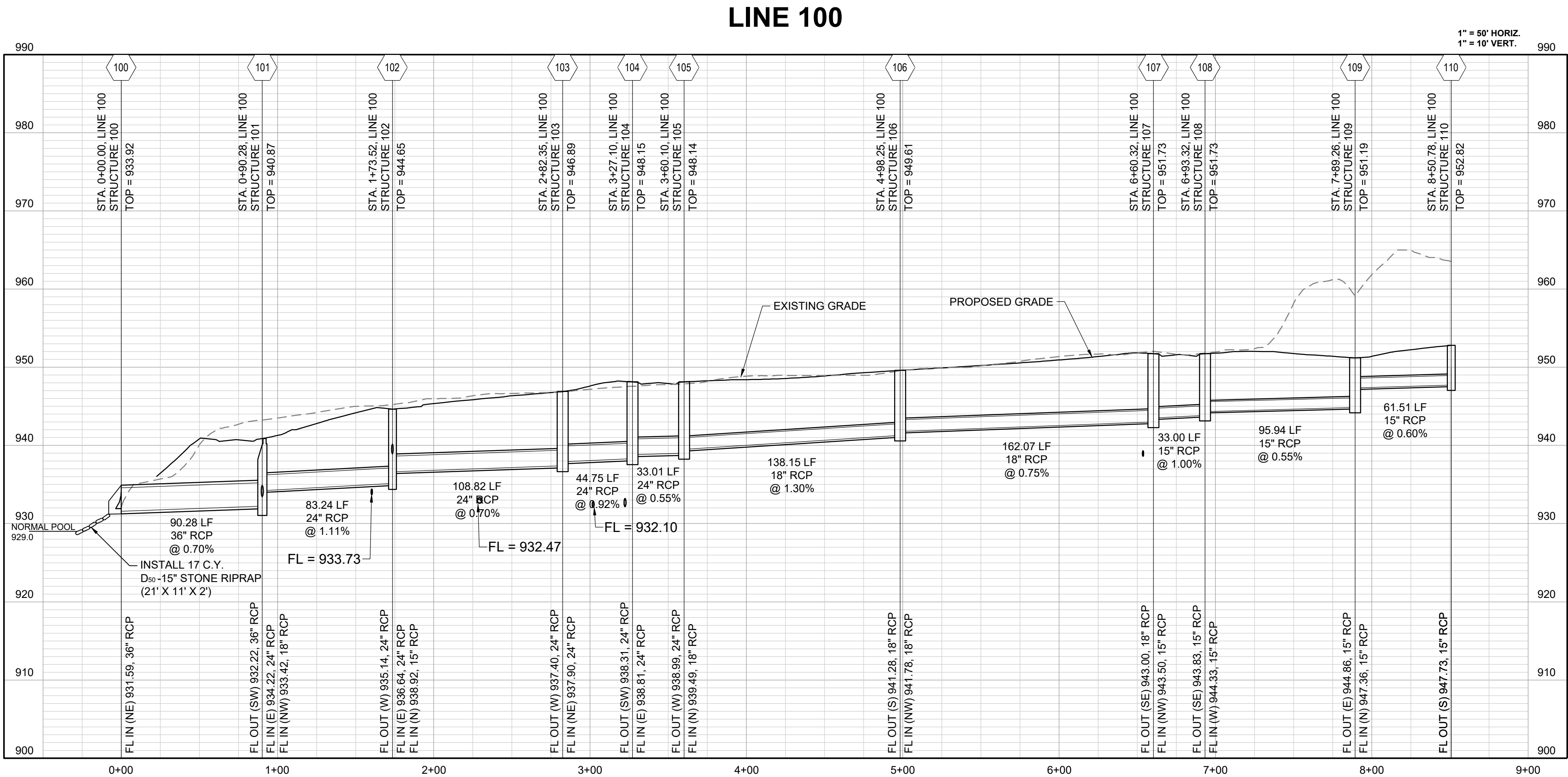
REVISION DATE	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	

DRAWN BY: BAL	CHECKED BY: MAB	DATE PREPARED: 4-15-19	PROJ. NUMBER: 19-002
------------------	--------------------	---------------------------	-------------------------

STORM PLAN

SHEET
17
OF 22

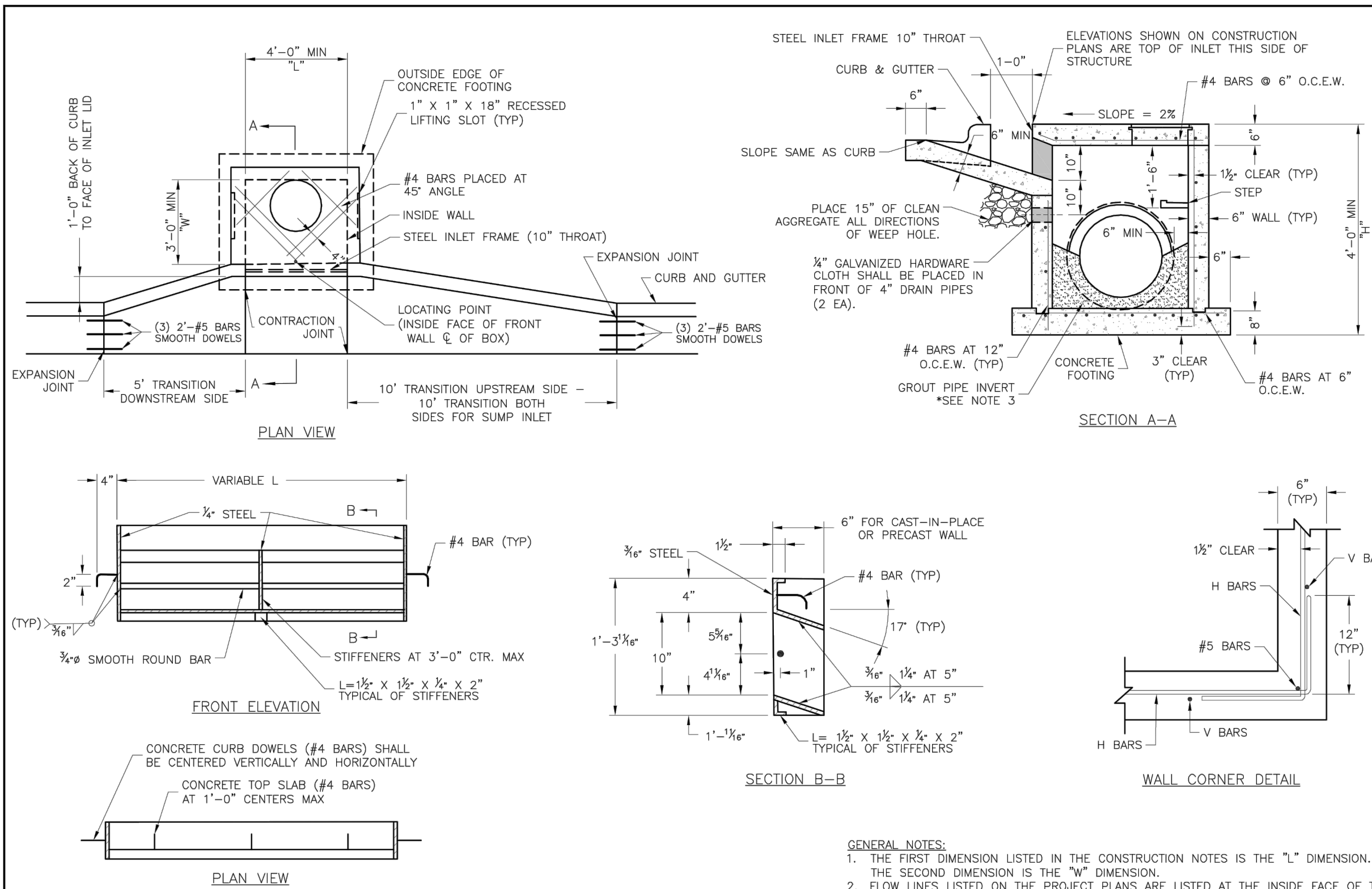
I:\PROJECTS\2019\19-00233.0 DWG Plans\6.0 SS\19-002-SS-STORM-P&P.dwg, 4/19/2019 7:55:38 AM, 1:1



REVISION DATE	DESCRIPTION
1/1/20	1
2/1/20	2
3/1/20	3
4/1/20	4
5/1/20	5
6/1/20	6
7/1/20	7
8/1/20	8

STORM
PROFILES

I:\PROJECTS\2019\19-0023\0 Design\0.0 DWG Plans\6.0 SS\19-002-SS-DET.dwg, 4/19/2019 7:55:47 AM, 1:1

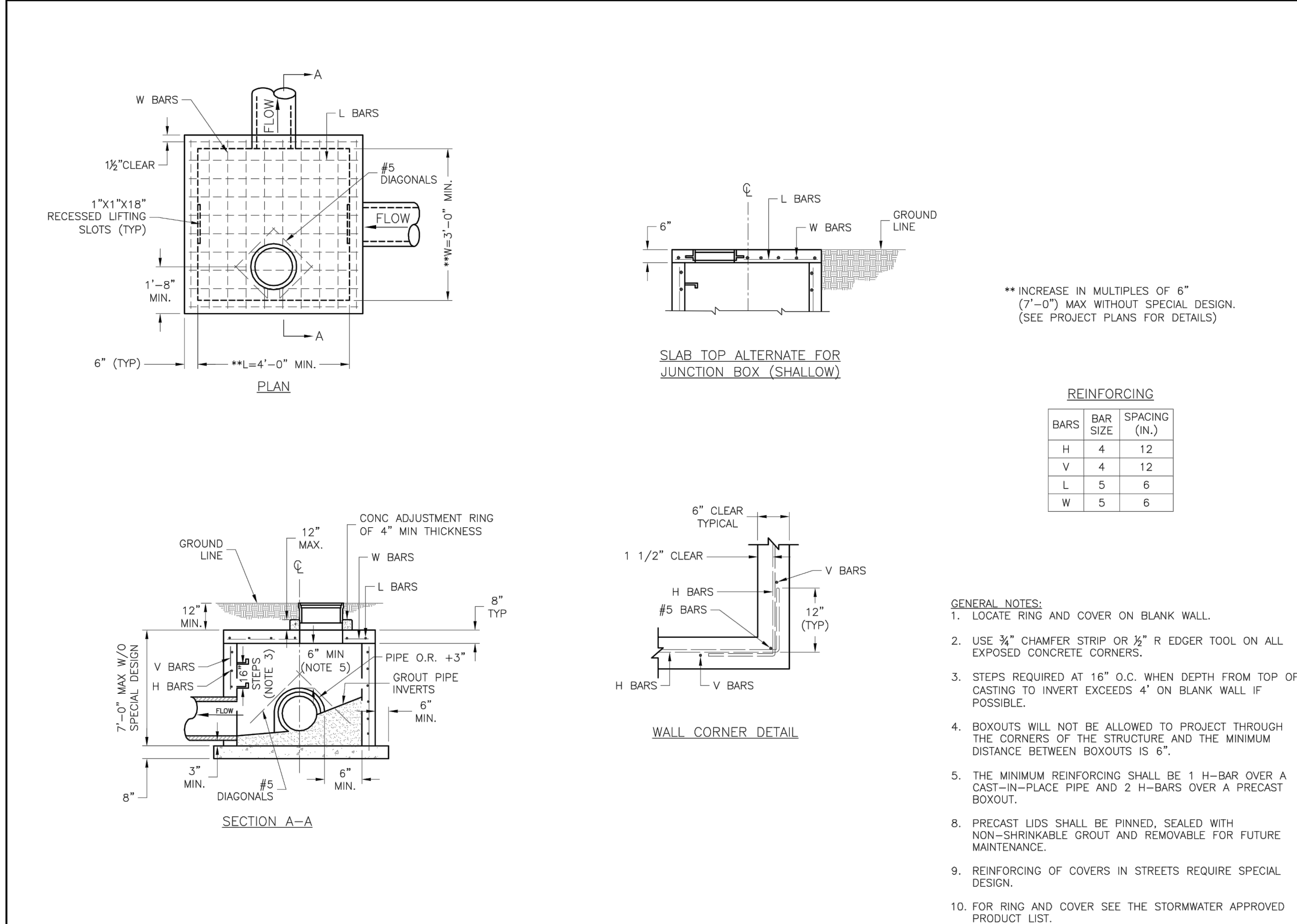


- STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
 2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
 3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM-PRIME #37H-78 PRIMER (GRAY) OR EQUAL.
- GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
 2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
 3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
 4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
 5. STEPS SHALL BE SPACED AT 1'-4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
 6. BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER OR 1/2" TOOLED EDGE.
 7. ON-GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
 8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
 9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON-SHRINKABLE GROUT
 10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT
MISSOURI

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

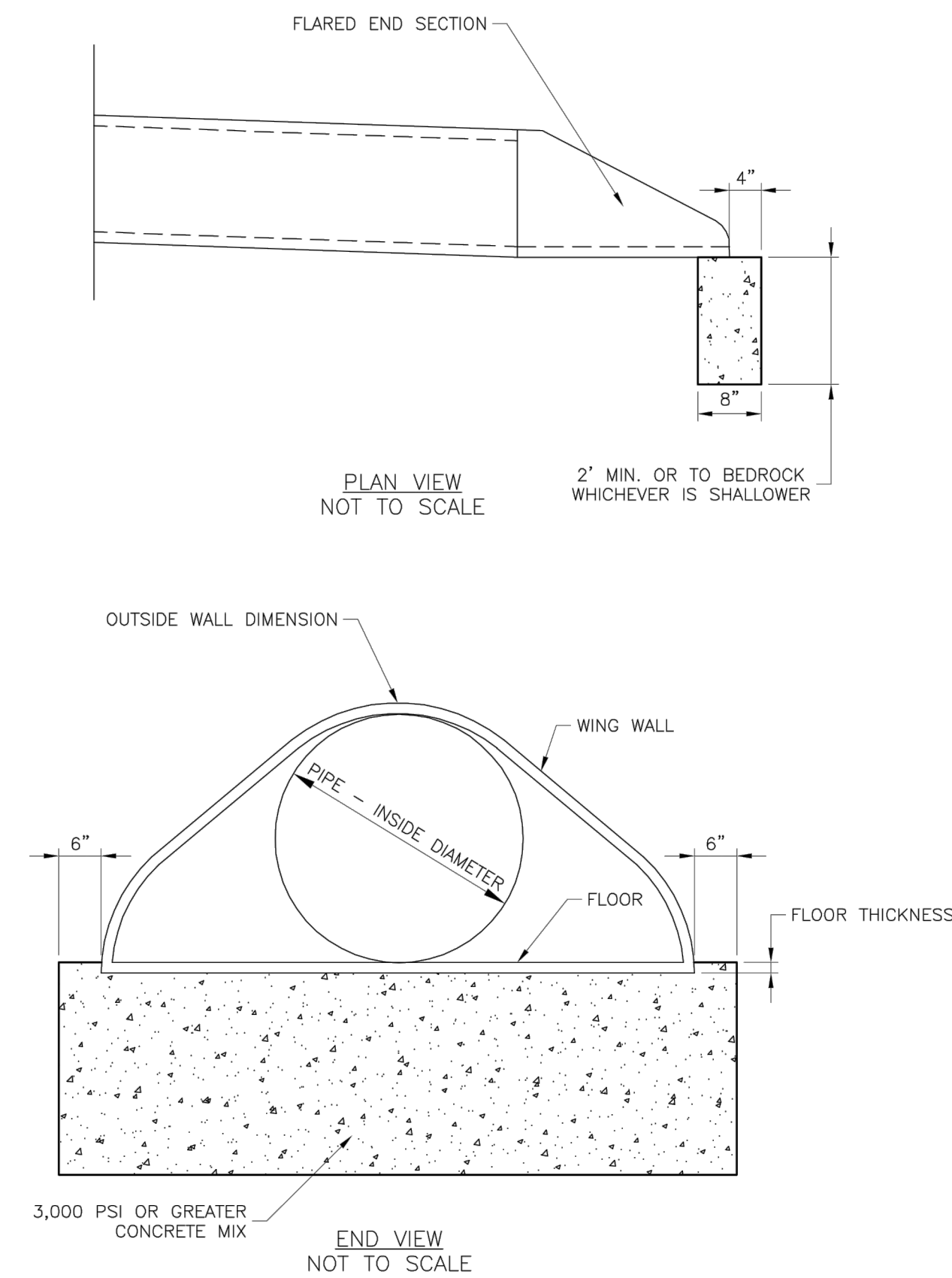
Drawn By: MIF
Checked By: DL
Date: 04/17
Proj. #
STM-1



LEE'S SUMMIT
MISSOURI

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

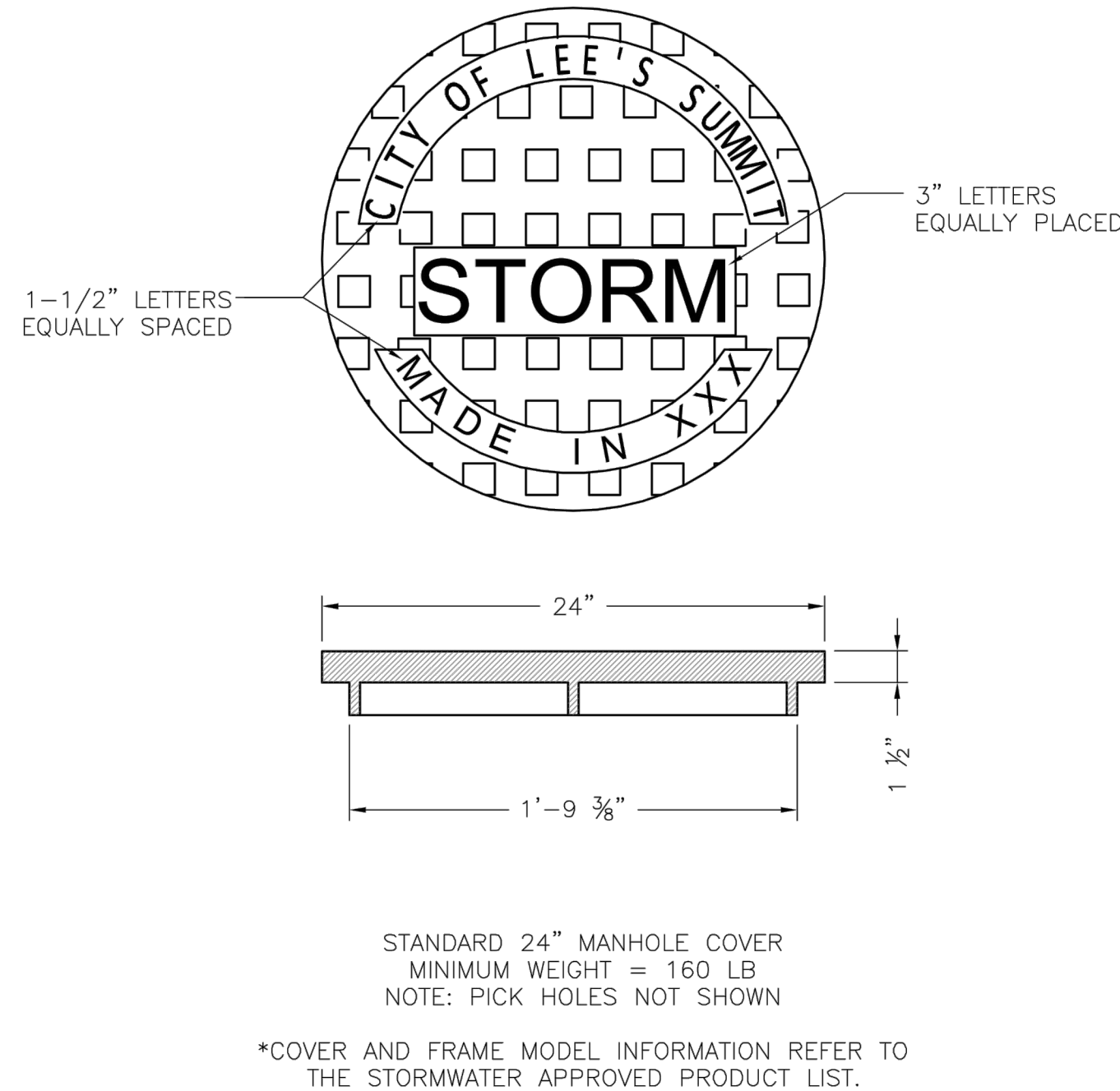
Drawn By: MIF
Checked By: DL
Date: 04/17
Proj. #
STM-3



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

STM-5



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

STM-6

PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL, MISSOURI
- LEE'S SUMMIT, MISSOURI

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

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	19-002

DETAIL SHEET

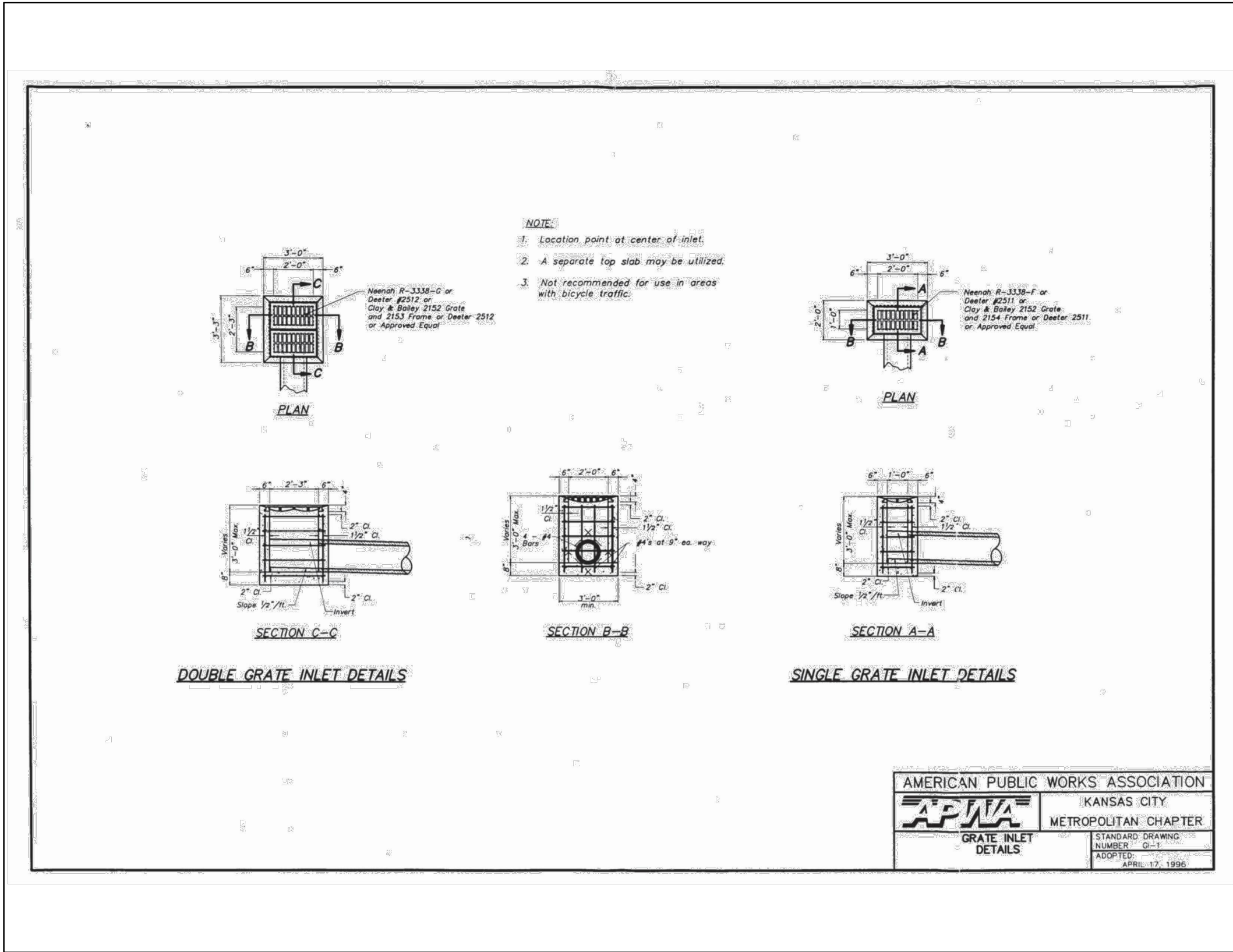
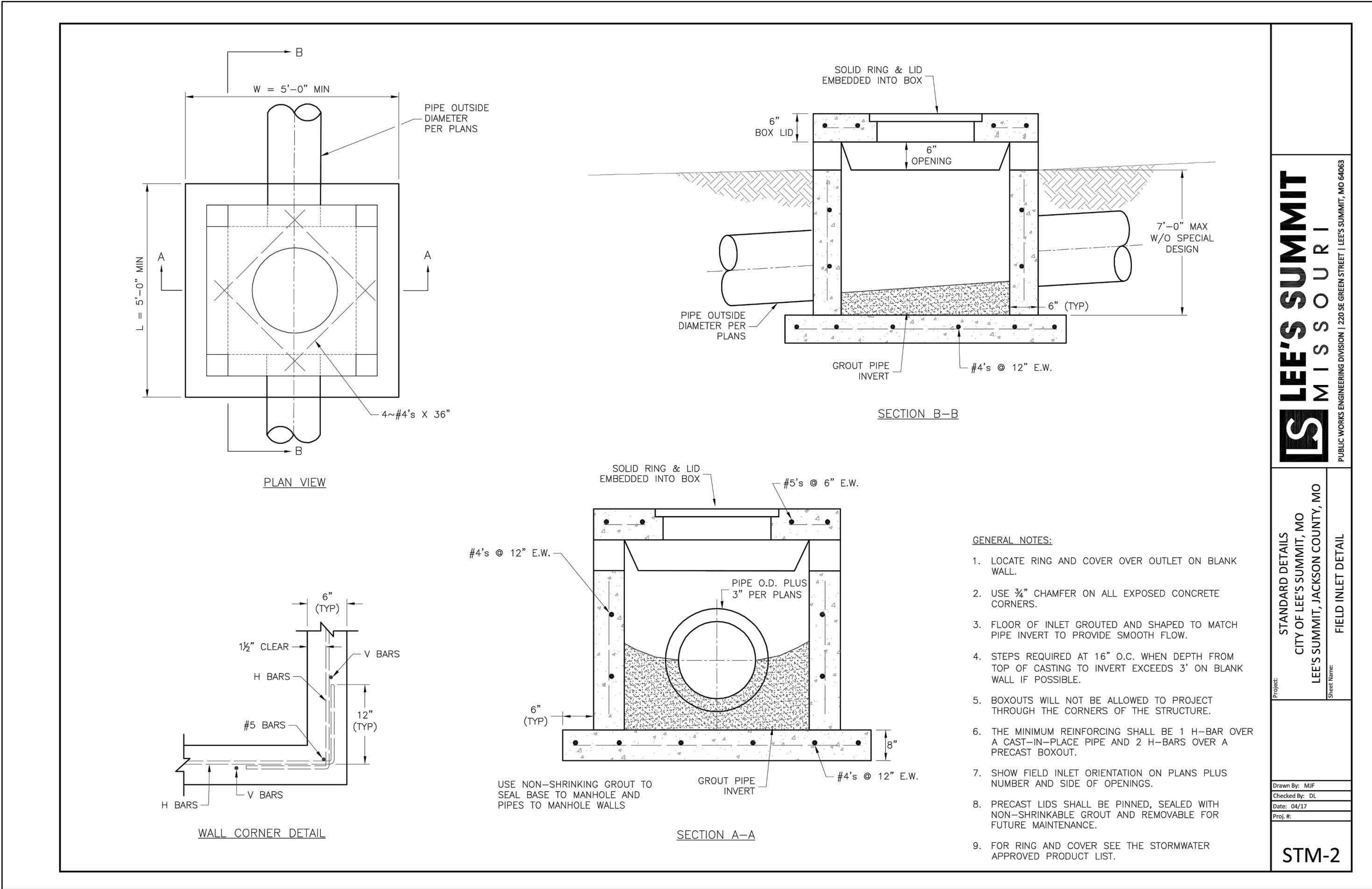
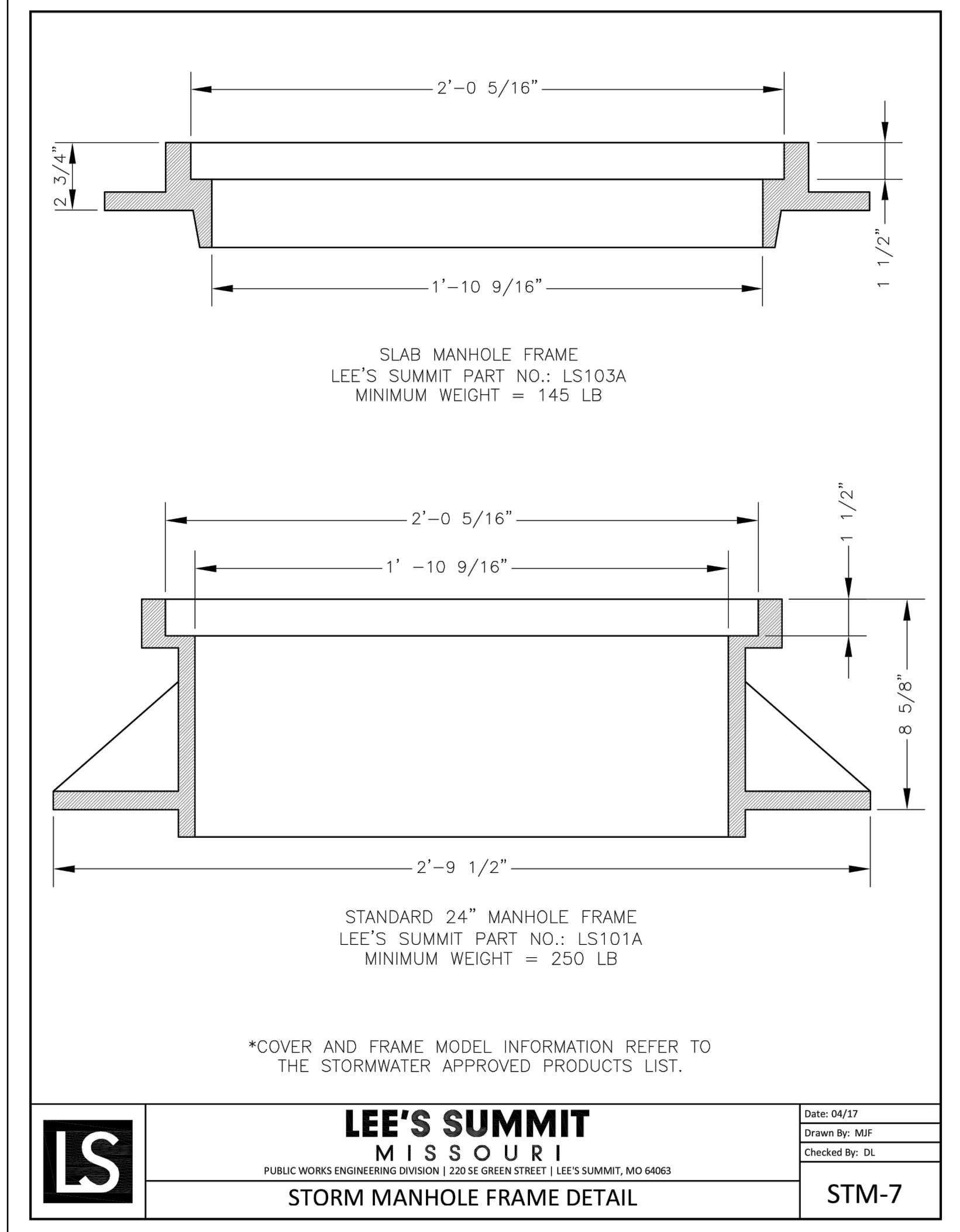
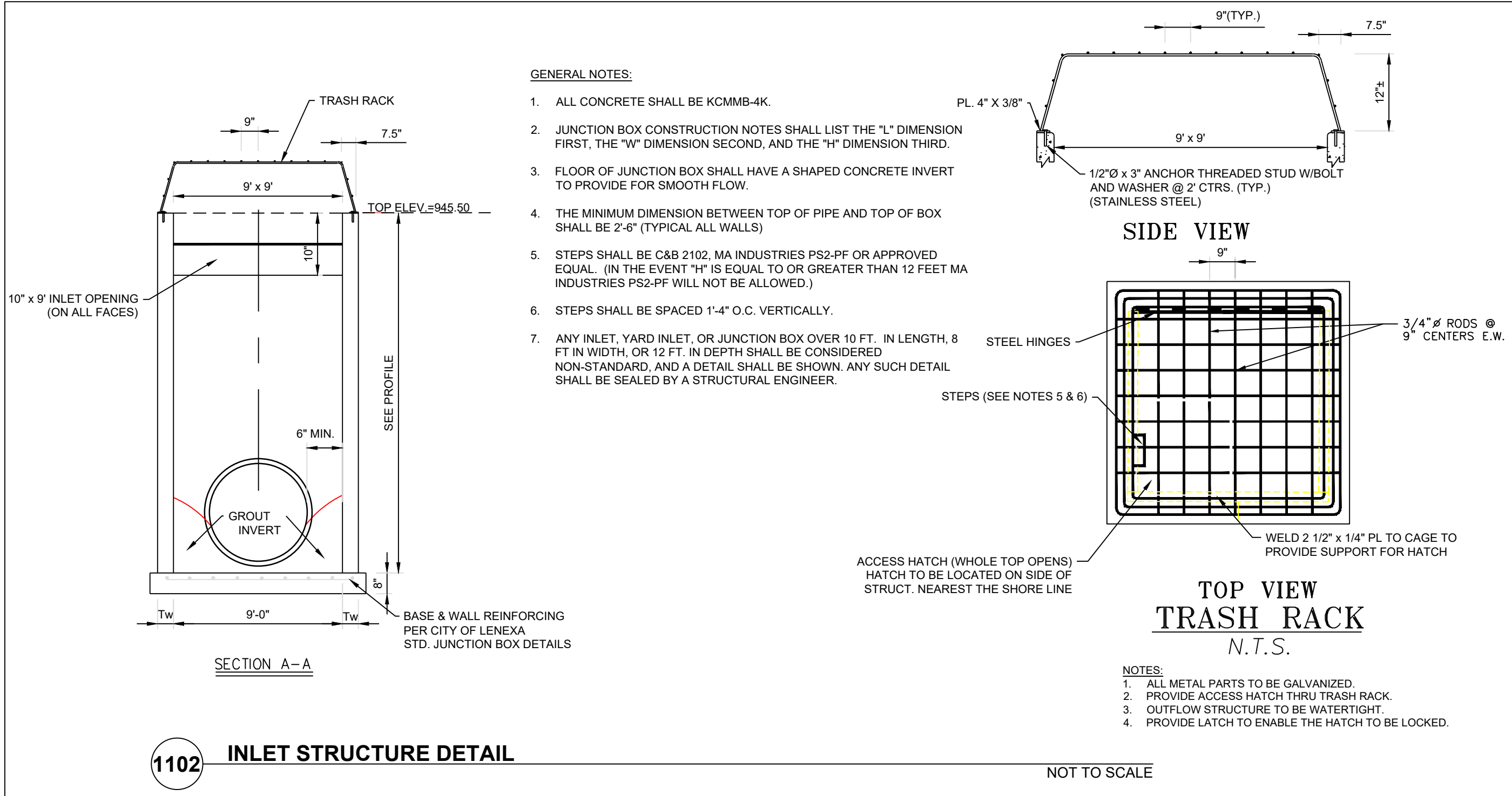
SHEET

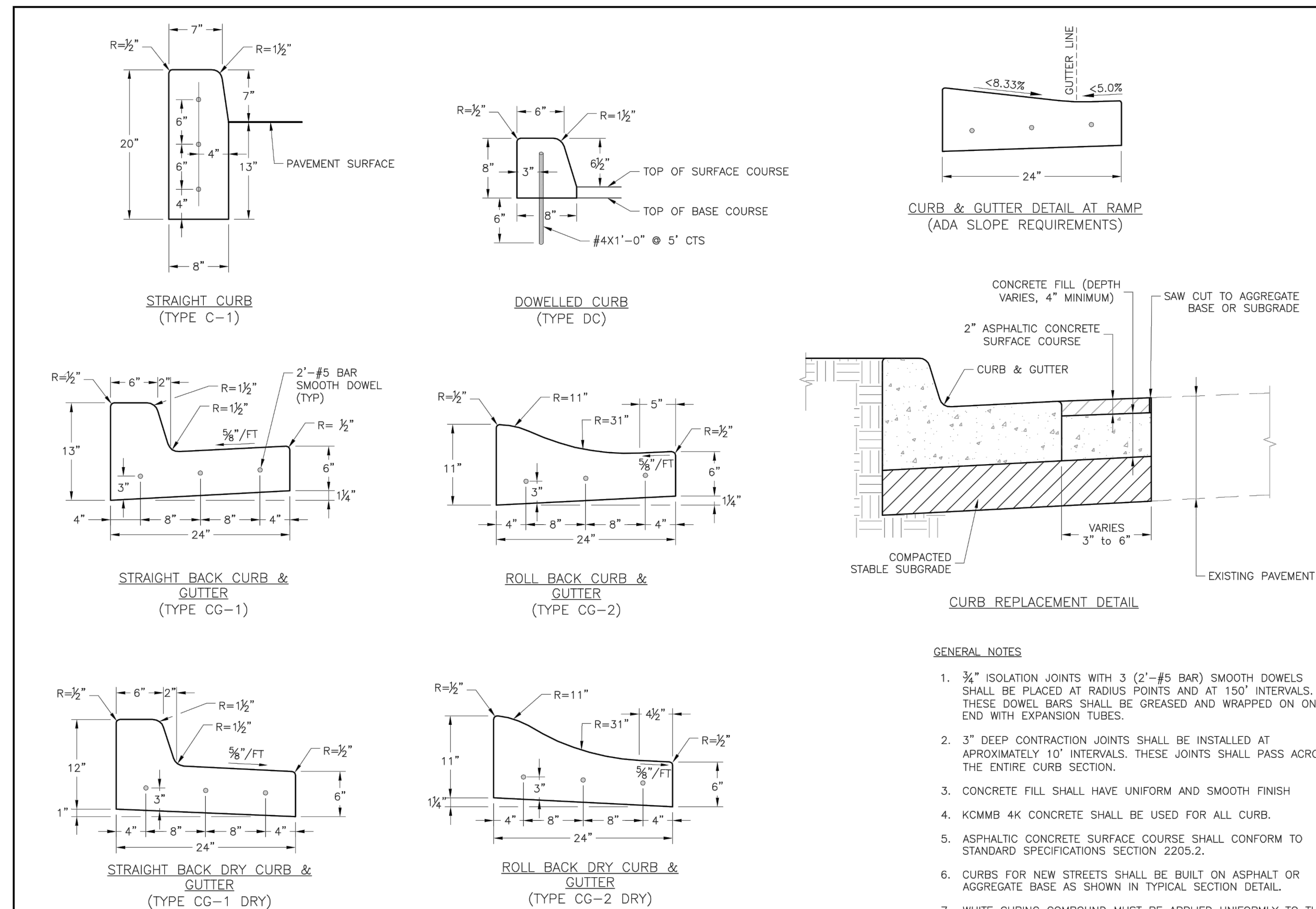
19
OF 22



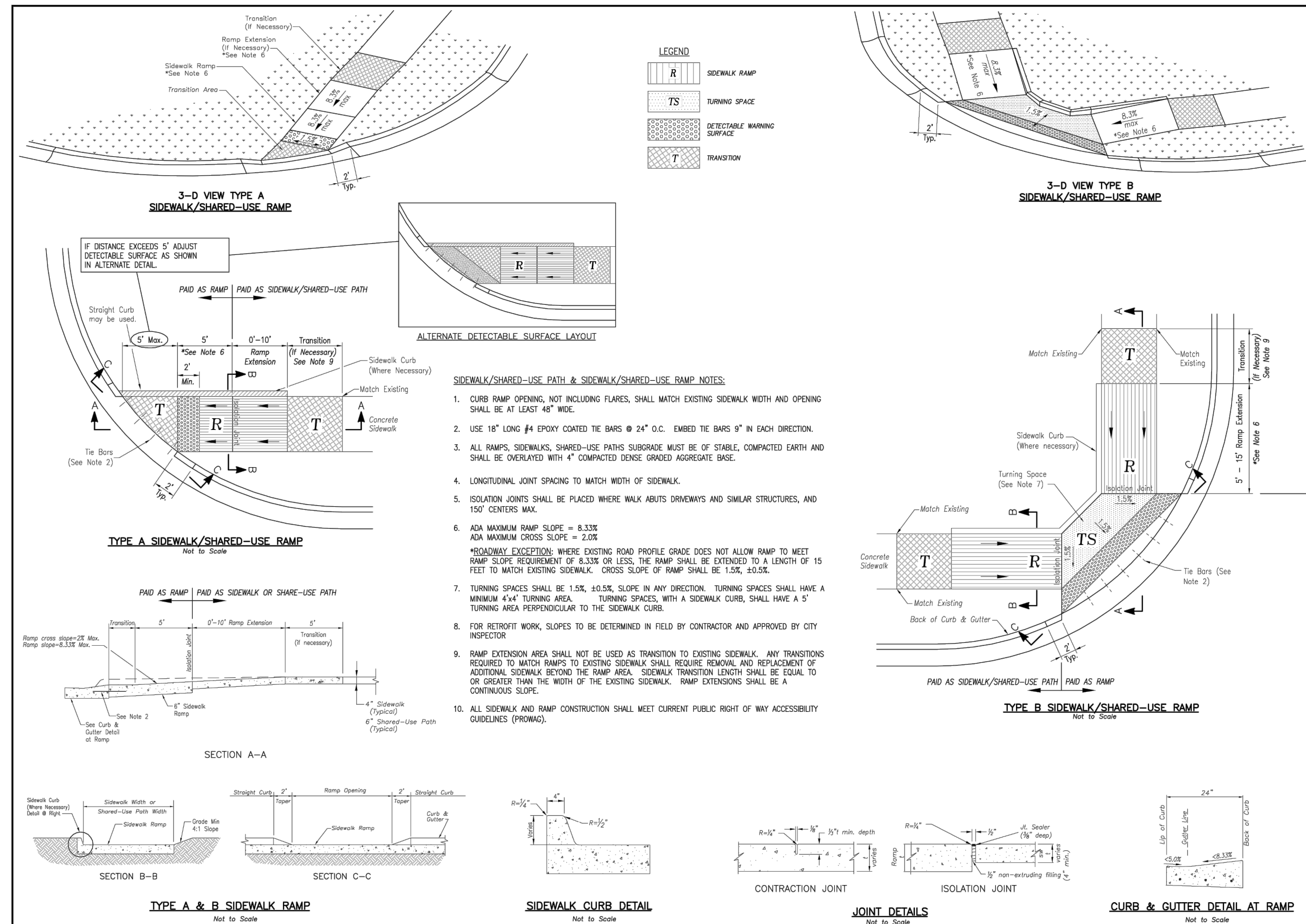
SCHLAGEL & ASSOCIATES, P.A.
Engineers-Planners-Surveyors-Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC201002637 #LS200200859-F

I:\PROJECTS\2018\18-0023-0 DWG Plans\6 0 SS\18-002-SS-DET.dwg, 4/19/2019 7:55:50 AM, 1:1



**LEE'S SUMMIT**
MISSOURISTANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAILDrawn By: MJP
Checked By: DL
Date: 04/17
Proj #: 19-002

GEN-4

**LEE'S SUMMIT**
MISSOURISTANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
ADA RAMP RETROFIT DETAILDrawn By: MJP
Checked By: DL
Date: 04/17
Proj #: 19-002

GEN-3A

PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL - 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 #LAC201005237 #LS200200859-F

REVISION DATE	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	

DETAIL SHEET

SHEET

21
OF 22**LEE'S SUMMIT**
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
TRENCHING/PATCHING ROADWAYS DETAILDate: 04/17
Drawn By: MJP
Checked By: DL

GEN-5

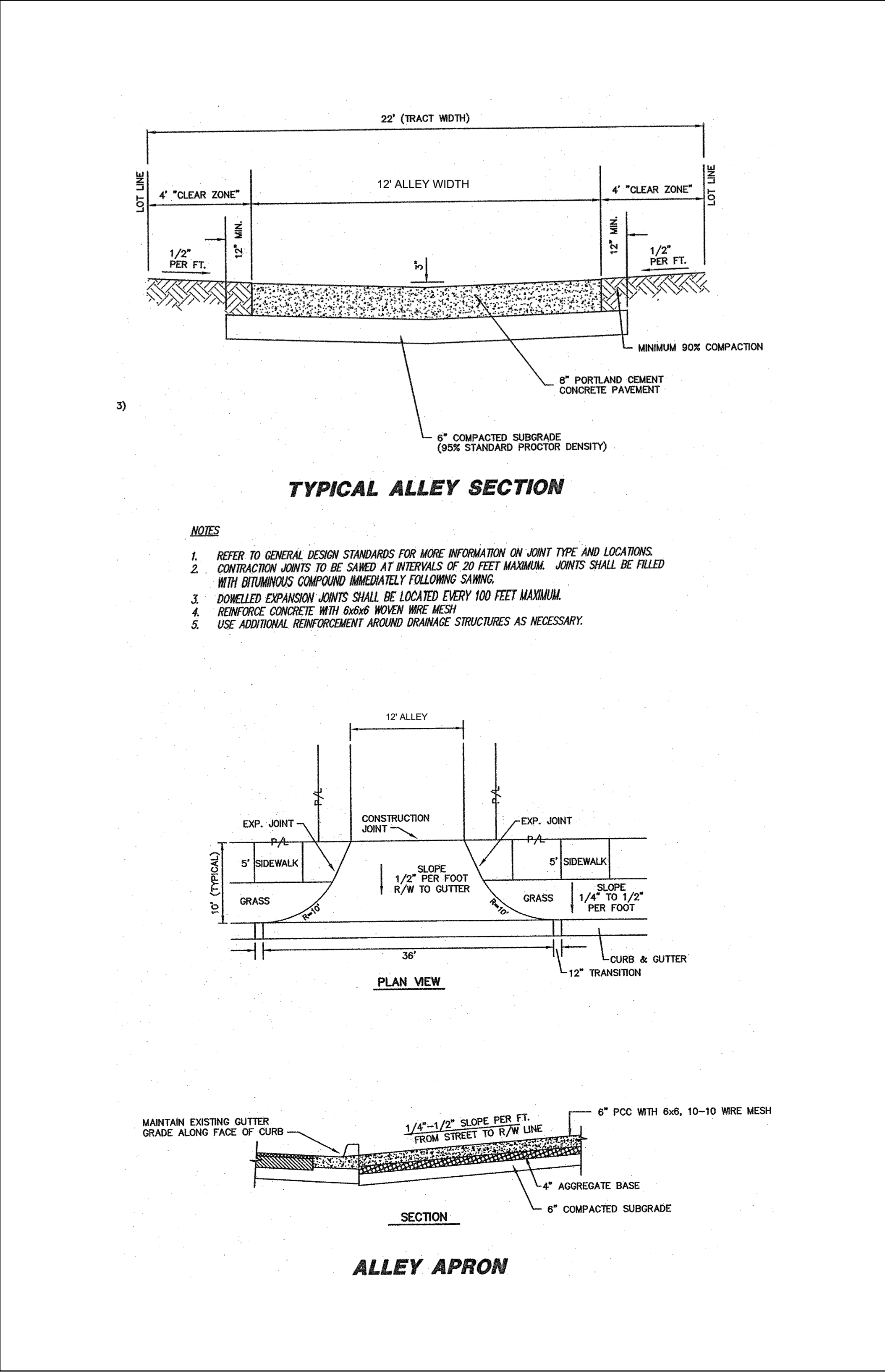
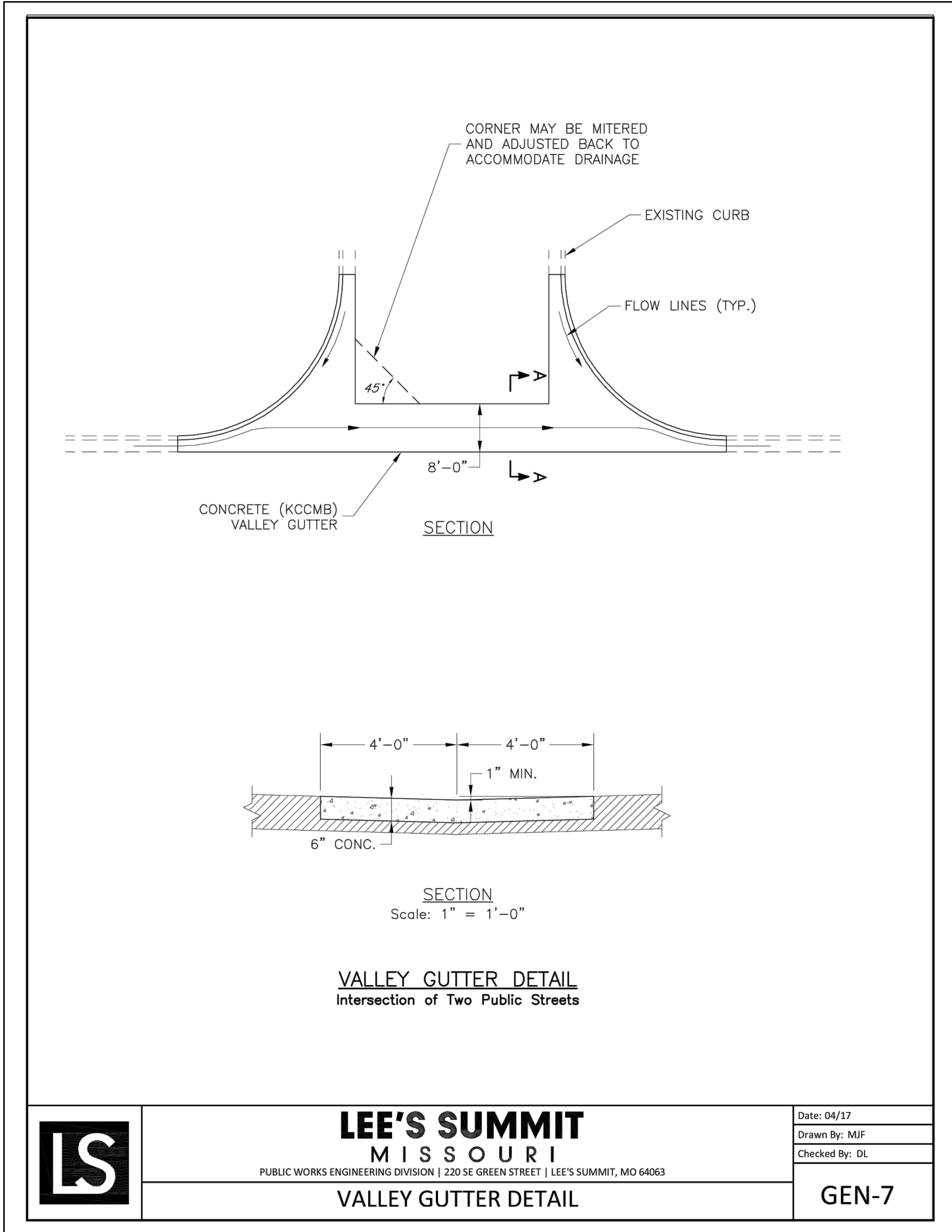
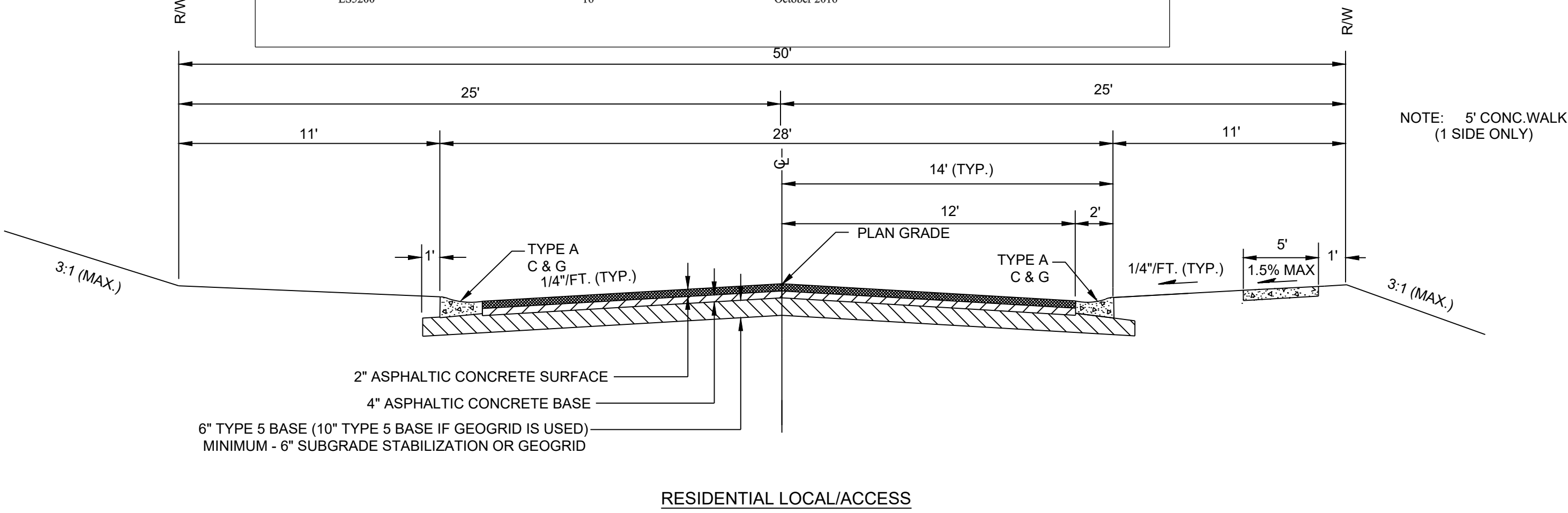


TABLE LS-2: MINIMUM ASPHALT PAVEMENT THICKNESSES						
Street Classification	Pavement Option	AC Surface (in.)	AC Base (in.)	MoDOT Type 5 Base (in.)	Geogrid(1)	Chemical Subgrade Stabilization(2) (in.)
Residential Local/Access	A	2	4	6	--	6
	B	2	4	10	Geogrid	--
Residential Collector	A	2	5.5	6	--	9
	B	2	5.5	12	Geogrid	--
Commercial Industrial Local/Collector	A	2	7.5	6	--	9
	B	2	7.5	12	Geogrid	--

TABLE LS-3: MINIMUM PCC PAVEMENT THICKNESSES			
Street Classification	PCC (in.)	Aggregate Base (in.)	Subgrade Stabilization ⁽¹⁾ (in.)
Residential Local/Access	6	4	--
Residential Collector	6	4	6
Commercial Industrial Local/Collector	8	4	9

(1) Subgrade Stabilization and 4" aggregate base may be replaced by approved geogrid and 6" of aggregate base



REVISION DATE	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	19-002