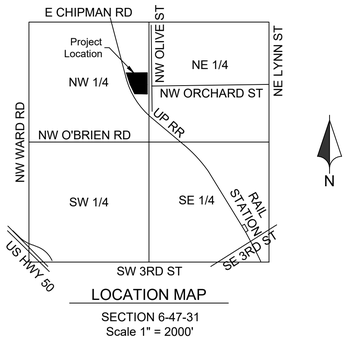


LOCATION MAP

SECTION 6-47-31
Scale 1" = 2000'

Public Street and Storm For

Sequoia Residential

Lee's Summit, Jackson County, Missouri
Total Project Area: 3.78 Acres (164,565.80 SF)

Sheet List Table

LEGAL DESCRIPTION

Lot 1, 2, and 3, EXCEPT the North 140 feet of the East 150 feet of Lot 3, HEARNE'S ADDITION, (aka/
HEARNES FIRST ADDITION) and the North Half of vacated Orchard Street lying South and adjacent, a
subdivision in Lee's Summit, Jackson County, Missouri.

Lot 22, and 23, HEARNE'S ADDITION, a subdivision in Lee's Summit, Jackson County, Missouri, EXCEPT the South 8 feet of the West 50 feet of Lot 22 and also EXCEPT, the South 8 feet of Lot 23, and
ALSO EXCEPT the South 88 feet of the East 150 feet of Lot 22, together with the South $\frac{1}{2}$ of vacated
Orchard Street lying North of and Adjacent to the said premises in question.

BENCHMARK:

BM-A: 1.0 mi NW along the Missouri Pacific Railroad from the station at Lee's Summit, at the crossing of Sheer Road, 86 ft southeast of the center line of Sheer Road, 36 ft northeast of the northwest rail, 28.4 ft southeast of a telephone pole, 697 ft southwest of a fence, 1.8 ft west of a witness post, set in the top of a concrete post which projects 0.3 ft above the ground.
Elev: 994.87

BM-B: 1.3 mi N along the Missouri Pacific Railroad from the station at Lee's Summit, Jackson County, at semaphore 2611, on the top of the concrete base, and 10 ft east of the track. A chiseled square.
Elev: 971.80

Oil / Gas Well Note:
There is no visible evident, this date, of abandoned oil or gas wells located within the property boundary, as identified in "Environmental Impact Study of Abandoned Oil and Gas Wells in Lee's Summit, Missouri."
(Figure B-4, pg. 91)

Flood Plain Note
We have reviewed the F.E.M.A. Flood Insurance Rate Map Number 29095C0417G, revised January 20, 2017, this tract graphically lies in OTHER AREAS, ZONE X, defined as areas determined to be outside the 0.2% annual chance floodplain.

UTILITIES

WATER & SANITARY SEWER
City of Lee's Summit Water Utilities
220 SE Green St
Lee's Summit, MO
Phone:816.969.1900

ELECTRICITY
Kansas City Power and Light
Phone: 816.471.5275

GAS
Missouri Gas Energy
PO Box 219255
Kansas City, Missouri 64141
Phone: 816.756.5252

TELEPHONE
AT&T
Phone: 800.288.2020

Time Warner Cable
Phone: 816.222.5952

CABLE TV
Comcast
Phone: 816.795.1100

Time Warner Cable
Phone: 816.358.8833

811 Know what's below. Call before you dig.

LEGEND

Existing Section Line	Proposed Right-of-Way
Existing Right-of-Way Line	Proposed Property Line
Existing Lot Line	Proposed Lot Line
Existing Easement Line	Proposed Easement
Existing Curb & Gutter	Proposed Curb & Gutter
Existing Sidewalk	Proposed Sidewalk
Existing Storm Sewer	Proposed Storm Sewer
Existing Storm Structure	Proposed Storm Structure
Existing Waterline (W/L)	Proposed Fire Hydrant
Existing Gas Main (GAS)	Proposed Waterline (WATER)
Existing Sanitary Sewer	Proposed Sanitary Sewer (SS)
Existing Sanitary Manhole	Proposed Sanitary Manhole
Existing Contour Major	Proposed Contour Major
Existing Contour Minor	Proposed Contour Minor
Proposed Asphaltic Pavement	Future Curb & Gutter

APPLICATION/OWNER:
Dick Burton
Cherokee Flight LLC
8 SW AA Highway
Kingsville, MO 64061
daburton@mail.com

CIVIL ENGINEER:
Mick Slutter, P.E.
1815 McGee St, #200
Kansas City, MO 64116
mslutter@ric-consult.com

LANDSCAPE ARCHITECT:
Andy Gabbert, PLA
5015 NW Canal St, #100
Riverside, MO 64150
agabbert@ric-consult.com

GENERAL NOTES

1. All construction shall follow the City of Lee's Summit Design and Construction Manual as adopted by Ordinance 5813. Where discrepancies exist between the Construction Document and the Design and Construction Manual, the Design and Construction Manual shall govern.
2. The contractor will be responsible for securing all bonds, and insurance required by the contract documents, City of Lee's Summit, Mo., and all other governing agencies (including local, county, state, and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all bonds, and insurance shall be the contractor's responsibility and shall be included in the bid for the work.
3. All existing utilities indicated on the drawings are according to the best information available to the engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All utilities, shown and un-shown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his/her expense.
4. The contractor will be responsible for all damages to existing utilities, pavement, fences, structures, and other features not designated for removal. The contractor shall repair all damages at his/her expense.
5. The demolition of existing pavement, curbs, structures, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state, and federal regulations.
6. By use of these construction documents the contractor hereby agrees that he shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses, or damages related to the project.
7. The contractor will be responsible for providing all signage, barricades, lighting, etc., as required for temporary traffic control during the construction of this project. Maintenance of the temporary traffic control devices will be the contractor's responsibility. All traffic control in conduction with construction in the right-of-way shall be in conformance with the City Traffic Control Requirements.
8. Contractor shall furnish evidence that his/her insurance meets the requirements of the City of Lee's Summit, Missouri Municipal Code.
9. Prior to installing, constructing, or performing any work on the public storm sewer line (including connecting private drainage systems to the storm sewer), contact Lee Summit Inspections.
10. Connections to the public storm sewers between structures will not be permitted.
11. Contractor shall verify and accept existing topography shown herein. Contractor shall notify Engineer if any discrepancies are found prior to any earthwork activities.
12. Planning and Codes Administration will require a retaining wall design by a registered engineer in the State of Missouri.
13. Geogrid, footings, or other elements of the retaining wall(s) cannot encroach into the right of way or public easements.
14. A Knox Box shall be provided for Each Building.
15. All building and life safety issues shall comply with the 2012 International Fire Code and local amendments as adopted by the City of Lee's Summit.

Sheet
01 of 20

Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Title Sheet

NO	BY	CD	DATE	REVISION
4	JGD	MES	12/07/20	WATERLINE REVISION
3	JGD	MES	10/01/20	PER CITY COMMENT
2	JGD	MES	09/15/20	PER CITY COMMENT
1	JDG	MES	06/11/20	PER CITY COMMENT
	JGD	MES	05/08/20	ORIGINAL SUBMISSION

Renaissance Infrastructure Consulting
1815 McGEE STREET, SUITE. 200
KANSAS CITY, MISSOURI 64108
816.800.0950
WWW.RIC-CONSULT.COM
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER

MITCHELL E. SLUTTER PE-2002003418

Dec 07, 2020-3:01pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDTTLS01.dwg

ADA ACCESSIBLE ROUTE NOTES

1. All Accessible route construction shall conform to the latest version of the ADA Standards for Accessible Design published by the Department of Justice and the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way published by the United States Access Board.
2. Other than ramps and ramp runs, wallking surfaces must have running slopes not steeper than 1:20.
3. The cross slope of walking surfaces shall not be steeper than 2%.
4. The minimum width for a linear segment of accessible route shall be 36 inches.
5. Where the accessible route makes a 180 degree turn around an element which is less than 48 inches wide, clear width shall be 42 inches minimum approaching the turn, 48 inches minimum at the turn and 42 inches leaving the turn.
6. An accessible route with a clear width less than 60 inches shall provide passing spaces at intervals of 200 feet maximum. Passing spaces shall be 60 inch by 60 inch minimum.
7. Ramp runs shall have a running slope not steeper than 1:12.
8. Ramp runs with a rise greater than 6 inches shall have handrails.
9. Ramp landings with a maximum slope of 1:48 shall be provided before and after ramp runs.
10. The maximum rise of a ramp run shall be 30 inches.
11. The maximum counter slope between the pavement and the curb at a curb ramp shall be 1:20.
12. Curb ramp landings with a maximum slope of 1:48 shall be provided at the top of curb ramps with a clear width of 60 inches.
13. Detectable warning surfaces complying with the latest ADA Standards shall be provided at pedestrian street crossings and refuge islands.
14. Passenger loading zones shall be provided adjacent to any ADA Accessible stall and have a 2% maximum slope in all directions.
15. Contractor to field verify existing site conditions and contact the engineer if field conditions do not match plan prior to construction.

GRADING NOTES

1. All construction shall conform to the City's minimum design standards.
2. Spot Grades shown herein shall govern over finished grades.
3. The contractor shall provide evidence that his insurance meets the requirements of the Project.
4. All traffic control shall be in conformance with the Manual of Uniform Traffic Control Devices (MUTCD).
5. The contractor is responsible for the protection of all property corners and section corners. Any property corners and/or section corners disturbed or damaged by construction activities shall be reset by a Registered Land Surveyor licensed in the State of Kansas, at the contractor's expense.
6. The contractor shall be responsible for the restoration of the right-of-way and for damaged improvements such as curbs, driveways, sidewalks, street light and traffic signal junction boxes, traffic signal loop lead ins, signal poles, irrigation systems, etc. Damaged improvements shall be repaired in conformance with the latest City standards and to the City's satisfaction.
7. The contractor is responsible for providing erosion and sediment control BMPs to prevent sediment from reaching paved areas, storm sewer systems, drainage courses and adjacent properties. In the event the prevention measures are not effective, the contractor shall remove any debris, silt, or mud and restore the right-of-way, or adjacent properties to original or better condition.
8. The contractor shall sod all disturbed areas within the public street right-of-way unless otherwise noted on the plans or if specific written approval is granted by the City.
9. All public street sidewalk ramps constructed will be required to comply with the Americans with Disabilities Act (ADA).
10. Excavation for utility work in public street right-of-way requires a Right-of-Way Work Permit from the Public Works Department, in addition to all other permits.
11. All work shall be confined within easements and/or construction limits as shown on the plans.
12. Curb stakes and hubs shall be provided at all high points, low points, ADA ramp openings, and on each side of all curb inlets when setting string line.
13. All National Pollution Discharge Elimination System(NPDES) standards shall be met.
14. Public and Private utility facilities shall be moved or adjusted as necessary by the owners to fit the new construction unless otherwise noted on the plans. The Contractor is responsible for the cost of utility relocations unless otherwise indicated on the plans.

SITE UTILITY NOTES

1. The contractor is specifically cautioned that the location and/or elevation of existing utilities as Shown on these plans is based on records of the various utility Companies, und where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate and/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
2. The construction of storm sewers on this project shall conform to the requirements of Jackson County, Lee's Summit Technical Specifications and Design Criteria.
3. The contractor shall field verify the exact location and elevation of the existing storm sewer locations and the existing elevations at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans. The contractor shall contact the design engineer. No pipes shall be laid until direction is received from the design engineer.
4. It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
5. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of the curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. spacing and at all bend points. Do not connect roof drains directly to storm sewer pipes.
6. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, back flow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system, if not furnished or installed by the Board of Public Utilities. Coordinate with the Board of Public Utilities. All costs associated with the complete water system for the building shall be the responsibility of the contractor. All work shall conform to the requirements of Jackson County, Lee's Summit.
7. The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the building to the public line. The contractor shall refer to the architectural plans for specific locations and elevations of the service lines of the building connection. All work shall conform to the requirements of Lee's Summit.
8. The contractor is responsible for securing all permits, bonds and insurance required by the contract documents, Lee's Summit, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by the construction documents. The cost for all permit bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
9. By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
10. The contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structure. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
11. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
12. Contractor shall notify the utility authorities inspectors 49 hours before connecting to any existing line.
13. Storm sewer roof drains(st) shall be as follows (unless otherwise shown on plans).
    -PVC SDR 35 per ASTM D3034, for pipes less than 12' deep.
    -PVC SDR 26 per ASTM D3034, for pipes 12' to 20' deep.
14. Waterlines shall be as follows (unless otherwise shown on plans):
    -for 8" and larger: ductile iron pipe per AWWA C150
    -between 2" and 6": copper tube Type "K" per ANSI 816.22 or ductile iron pipe per AWWA C150
    -For smaller than 2": copper tube Type "K" per ANSI 816.22
15. Minimum trench width shall be 2 feet.
16. Contractor shall maintain a minimum of 42" of cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to the Board of Public Utilities specifications for commercial services.
17. All waterlines shall be kept ten feet (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 18" vertical clearance (outside edge of pipe to outside edge of pipe) of the waterline above the sewer line is required.
18. Trench Drain shall be ACO S200K or approved equal.
19. Trench Drain shall be installed in accordance with the manufacturer's installation instructions and recommendations.
20. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of the crossing (or encased in concrete the same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 18" clearance. Meeting requirements ANSI A21.10 or ANSI 21.11 (AWWA C151)(Class 50).
21. All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
22. All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
23. refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place and tested prior to paving.
24. When a building utility Connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such utility terminations.

EARTHWORK NOTES:

1. CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one feet (1') contour intervals, unless otherwise noted. Proposed contours and elevations shown represent approximate finish grade.
2. CLEARING AND GRUBBING: Prior to the start of grading and earthwork, the areas to be graded shall be stripped of all vegetation, organic matter, and topsoil, to a minimum depth of four inches (4") or as otherwise directed by the Geotechnical Engineer. Stripping materials shall not be incorporated into structural fills. Topsoil materials shall not be used in building and pavement areas.
3. TOPSOIL: Prior to the start of grading, the contractor shall strip all topsoil from areas to be graded and stockpile at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping.
4. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.
5. PROOFROLLING: Prior to the placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer. Unsuitable areas identified by the proofrolling areas shall be undercut and replaced with controlled structural fill or treated with flyash per the Geotechnical report.
6. EARTHWORK:
   A. GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report.
   B. SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.
   C. FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil, and debris. All fill required for project shall be provided by the Contractor. Material Shall be pre-approved by the Engineer prior to placement.
   D. EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). Fill material shall be placed and compacted in horizontal lifts not exceeding nine inched (9") (loose fit measurement), unless otherwise approved by the Geotechnical Engineer.
   E. COMPACTION REQUIREMENTS: Earth fill material shall be placed and compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall be within a range of -2% to 3% above the optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.
7. TESTING AND INSPECTION: Testing and inspection services required to make tests required by the specifications and to observe the placement of fills and other work performed on this project shall be provided by a commercial testing laboratory (Geotechnical Engineer) selected by the owner. The cost of testing will be the owner's responsibility.
8. SEEDING: All areas disturbed by earthwork operations in the right-of-way shall be seeded.

Summary of Quantities

Item	Description	Qty.	Unit
1	Clearing and Grubbing	1	LS
2	Demolition	1	LS
3	2" Asphaltic Concrete Surface	152	TONS
4	4" Asphaltic Concrete Base	305	TONS
5	6" MODOT Type 5 Base	226	CY
6	6" Chemical Subgrade Stabilization	226	CY
7	Curb and Gutter	755	LF
8	Sidewalk	2163	SF
9	ADA Ramp	2	EA
10	R8-3a NO PARKING SIGN (24" x 30")	10	LS
11	R1-1 STOP SIGN (30" x 30")	1	LS
12	4" Data Line Conduit	1,926	LF
13	4" Underground Power Conduit	1,920	LF
14	4' x 3' Curb Inlet	2	EA
15	12" RCP	100	LF
16	15" RCP	35	LF
17	18" HDPE	122	LF
18	End Section	3	EA
19	4' Dia. Sanitary Manhole	4	EA
20	8" (SDR-26) PVC	521	LF
21	Connection to Existing Manhole	1	LS
22	AWWA C900 PVC	510	LF
23	6" Tee	1	LF
24	6" x 11.25° Horizontal Bend	4	EA
25	6" x 22.5° Horizontal Bend	2	EA
26	6" x 45° Horizontal Bend	5	EA
27	6" Gate Valve	1	EA
28	Relocate Existing Fire Hydrant	1	LS
29	Fire Hydrant Assembly	1	EA
30	Erosion Control	1	LS

Note:
Quanitities are for Information only

Sheet
02 of 20

Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

General Notes & Quantities

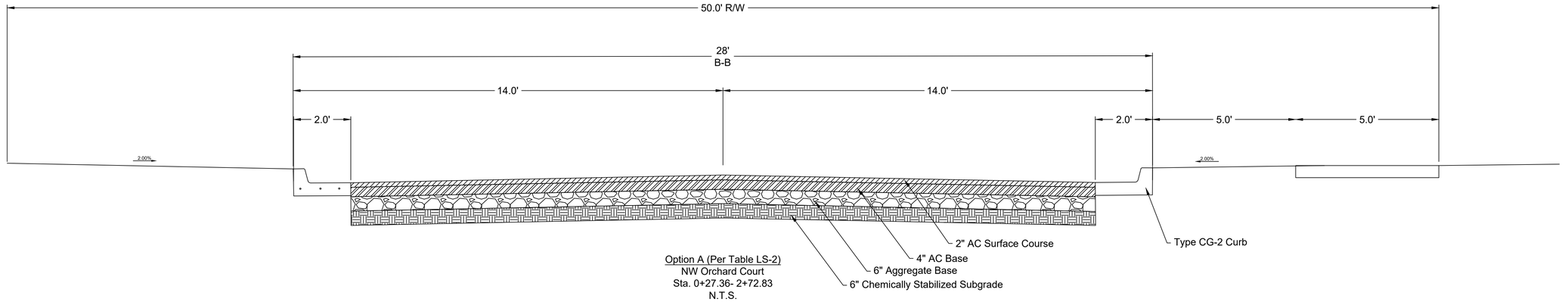
4	JGD	MES	12/07/20	WATERLINE REVISION	
3	JGD	MES	10/01/20	PER CITY COMMENT	
2	JGD	MES	09/15/20	PER CITY COMMENT	
1	JGD	MES	06/11/20	PER CITY COMMENT	
NO.	BY	CD	DATE	REVISION	

ORIGINAL SUBMISSION

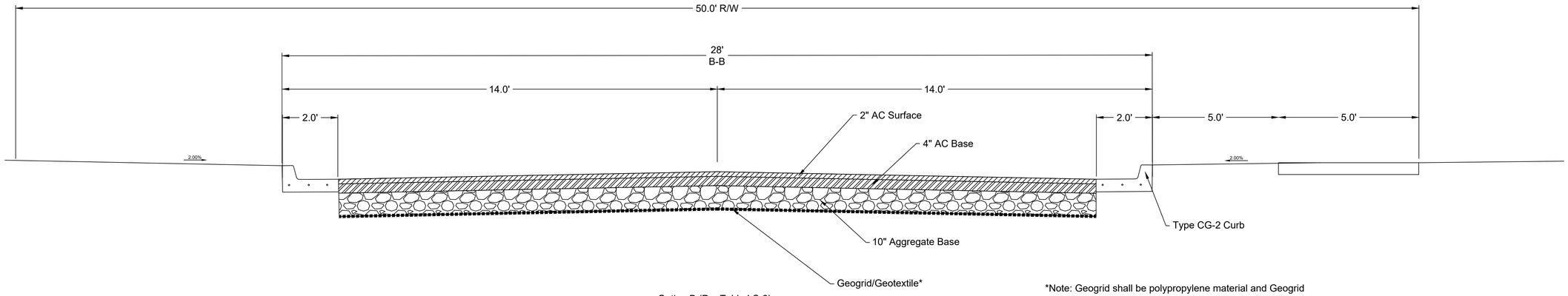
Renaissance Infrastructure Consulting
1815 McGee Street, Suite: 200
Kansas City, Missouri 64108
816.800.0950
www.RIC-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418

20



Option A (Per Table LS-2)
NW Orchard Court
Sta. 0+27.36- 2+72.83
N.T.S.



Option B (Per Table LS-2)
NW Orchard CourtSta. 0+27.36- 2+72.83
N.T.S.

*Note: Geogrid shall be polypropylene material and Geogrid shall be woven, polypropylene as shown in the City of Lee's Summit's Approved Product List.

Sheet
03 of 20

Public Street And Storm Plans

18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Roadway Typical Section

NO.	BY	DATE	REVISION
1	JDG	05/08/20	ORIGINAL SUBMISSION
2	JGD	06/11/20	PER CITY COMMENT
3	JGD	09/15/20	PER CITY COMMENT
⚠	JGD	10/01/20	PER CITY COMMENT
⚠	JGD	12/07/20	WATERLINE REVISION

Renaissance Infrastructure Consulting
1815 McGee Street, Suite. 200
Kansas City, Missouri 64108
816.800.0950
www.RIC-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL SCUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12-9-20
MITCHELL E. SLUTTER PE-2002003418

Public Street And Storm Plans

18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

General Layout

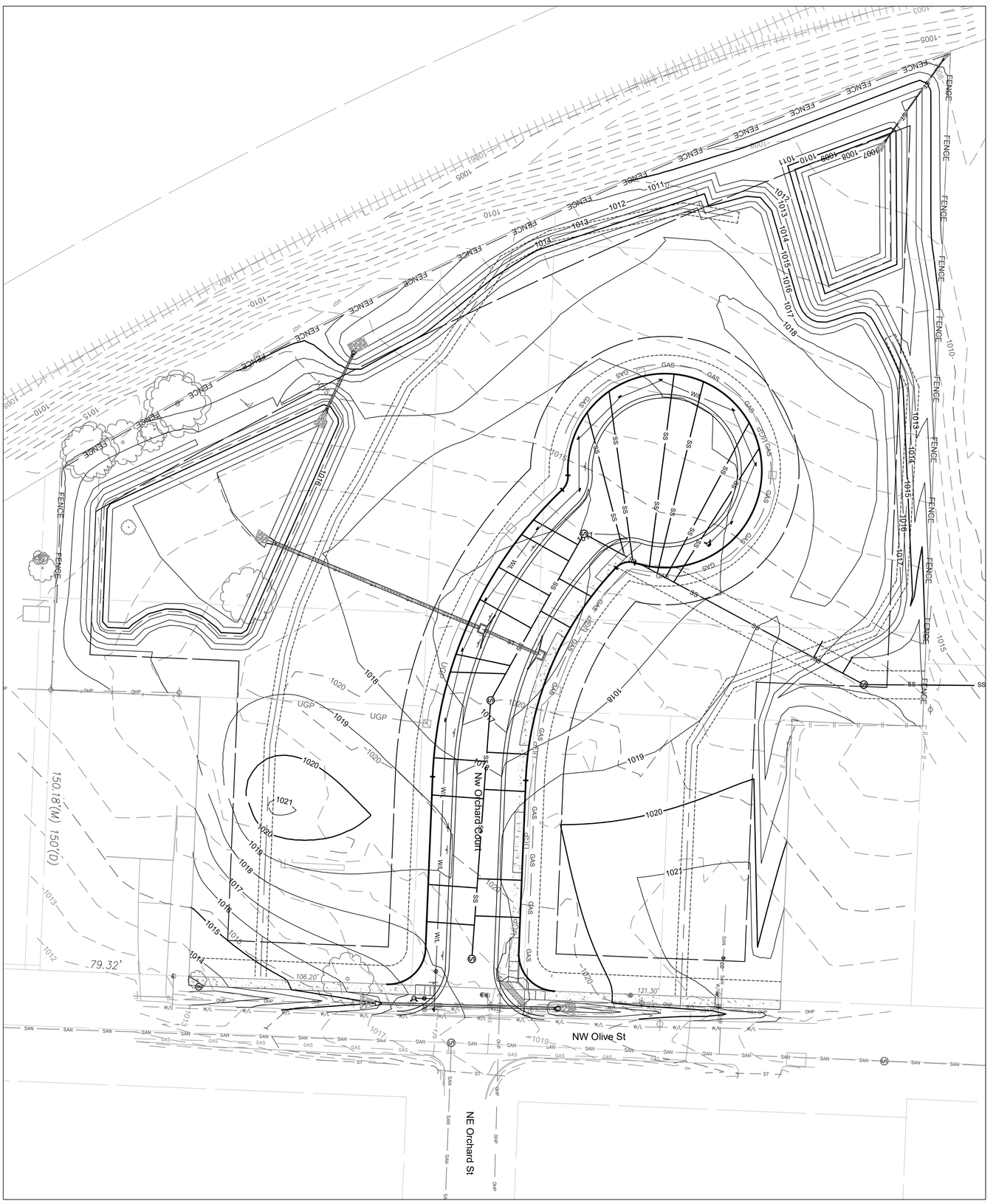
Proposed Basin
Proposed Sanitary Sewer
Existing Sanitary Sewer
Existing Overhead Power
Proposed Water Main
Proposed Sanitary Service Typ.
Proposed Underground Power (For Reference Only. See Evergy Plans For More Info.)
Proposed Data Line (For Reference Only)
R41.0'
20' Building Setback
Proposed Gas Main (For Reference Only. See Spire Plans For More Info.)
5.0' Sidewalk
Existing Water Main
NW Olive St
Proposed Storm Sewer
NW Orchard Court
R200.0'
28.0' B-B
50.0' R/W
NW Orchard St
Proposed "NO PARKING" Sign Typ.
10.0' Utility Easement
Existing Gas Main
Proposed Storm Sewer
Proposed Basin
106.20'
79.32'
150.18'(M) 150'(D)

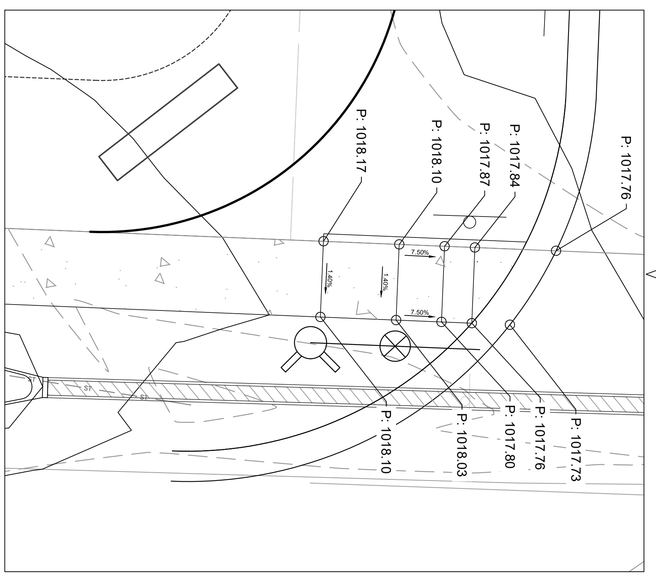
NORTH
1"=30'
0 15' 30'

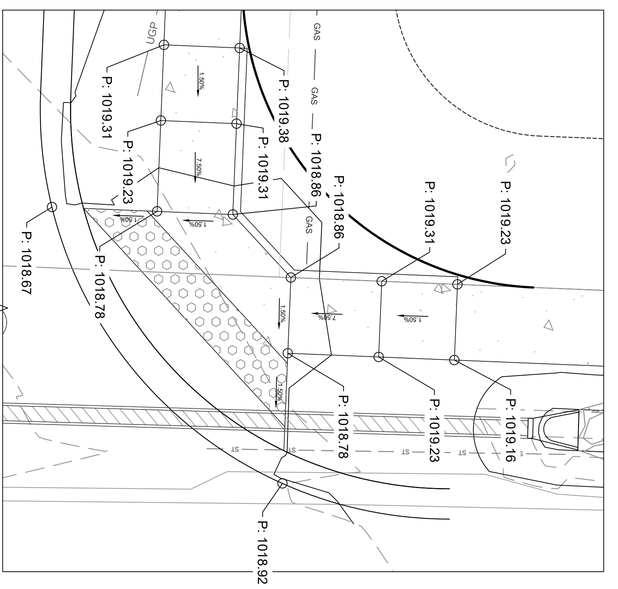
NO.	BY	DATE	REVISION
4	JGD	12/07/20	WATERLINE REVISION
3	JGD	10/01/20	PER CITY COMMENT
2	JGD	09/15/20	PER CITY COMMENT
1	JGD	06/11/20	PER CITY COMMENT
	JGG	05/08/20	ORIGINAL SUBMISSION

Renaissance Infrastructure Consulting
1815 McGee Street, Suite: 200
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418







Renaissance Infrastructure Consulting
1815 McGee Street, Suite. 200
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com

NO.	BY	QD	DATE	REVISION
5	JGD	MES	12/07/20	WATERLINE REVISION
4	JGD	MES	10/01/20	PER CITY COMMENT
3	JGD	MES	09/15/20	PER CITY COMMENT
2	JGD	MES	06/11/20	PER CITY COMMENT
1	JDG	MES	05/08/20	ORIGINAL SUBMISSION

Grading Plan

Public Street And Storm Plans

18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Sheet 05 of 20

MO Certificate of Authority: E-2010033630

Storm Line C (Private)
See Final Development Plans
for Details

Proposed Sanitary Sewer
See Sheets 11-12 For Details

Install 423 LF 2-4" Conduit For Data Line
(For Reference Only)

For Reference Only
See Approved Evergy
Plans for More Details

For Rerence Only
See Approved Spire
Plans for More Details

Storm Line D
See Sheet 10 for Details

Proposed Water Main
See Sheet 13 For Details

Storm Line B (Private)
See Final Development Plans
for Details

Storm Line A
See Sheet 10 for Details

Relocate Existing Hydrant
Install 8 LF C900 For Hydrant Relocation

For Reference Only
See Approved Evergy
Plans for More Details

Install 548 LF 2-4" Conduit For Data Line
(For Refence Only)

N O R T H

1"=30'

0 15' 30'

Sheet
06 of 20

Public Street And Storm Plans

18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

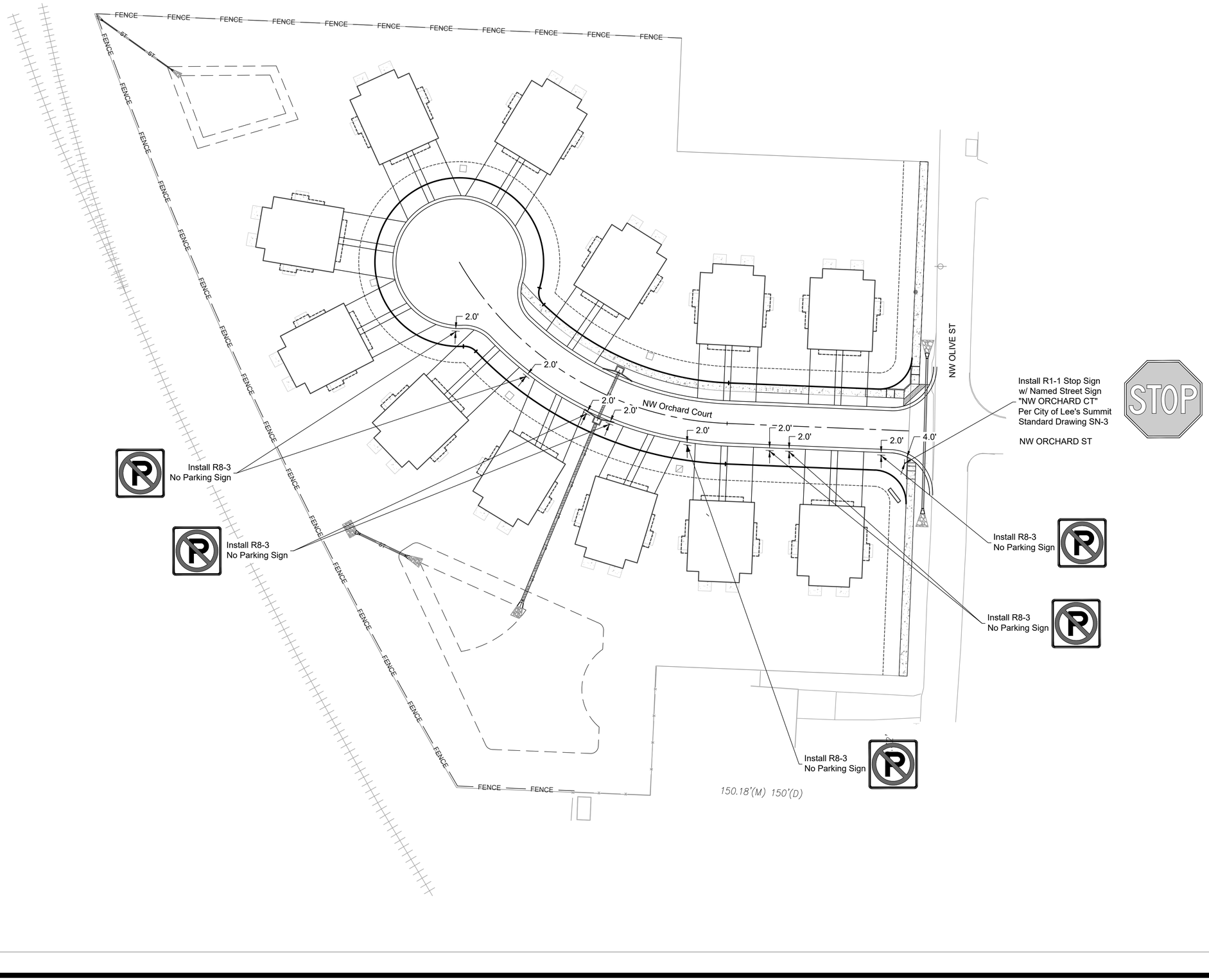
Utility Plan

NO.	BY	DATE	REVISION
4	JGD	12/07/20	WATERLINE REVISION
3	JGD	10/01/20	PER CITY COMMENT
2	JGD	09/15/20	PER CITY COMMENT
1	JGD	06/11/20	PER CITY COMMENT
	MES	05/08/20	ORIGINAL SUBMISSION

Renaissance Infrastructure Consulting
1815 McGee Street, Suite. 200
Kansas City, Missouri 64108
816.800.0950
www.RIC-CONSULT.COM
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418

Page 7 of 20



Sheet
07 of 20

Public Street And Storm Plans

18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Signing Plan

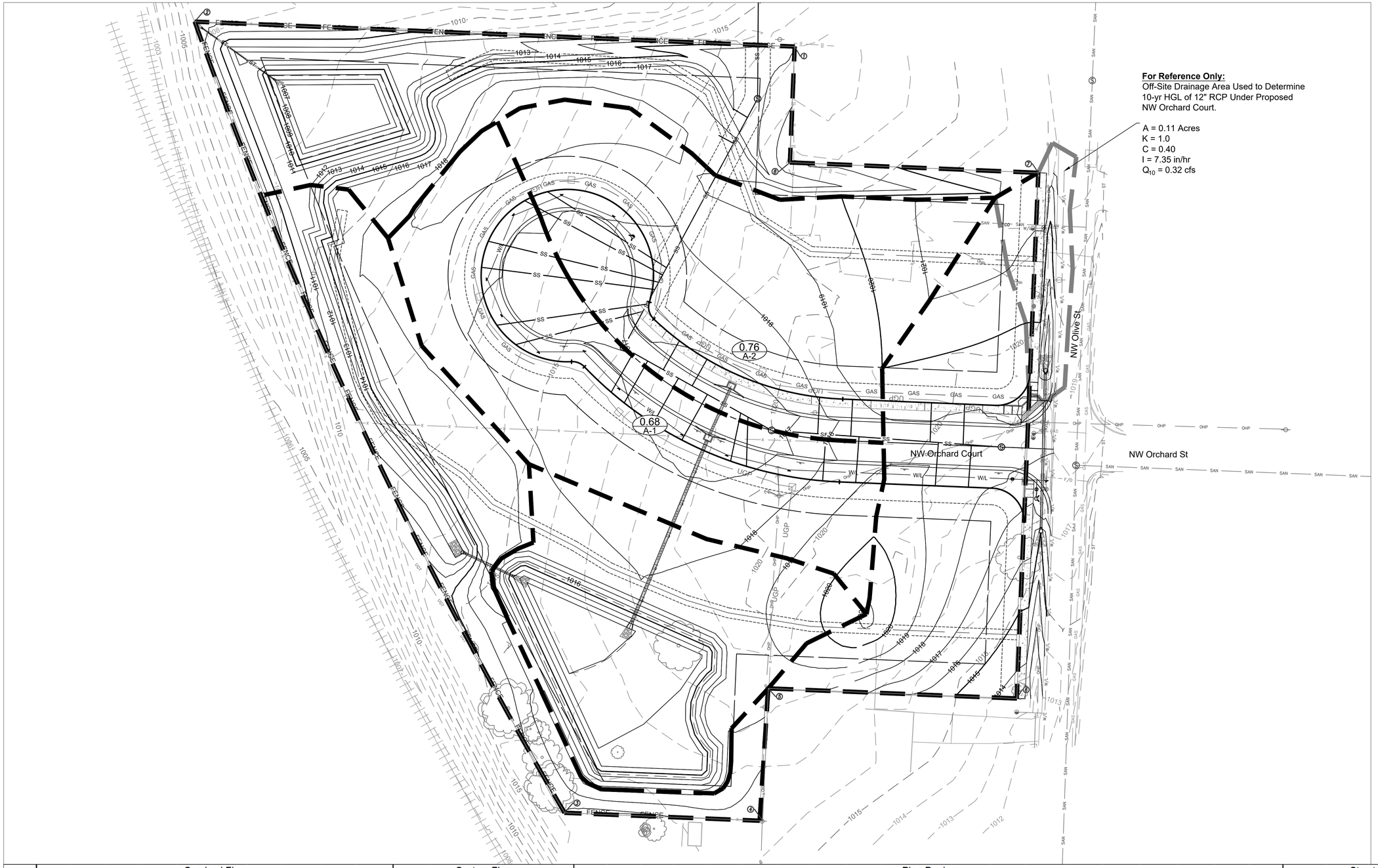
NO	BY	DATE	REVISION
1	JDG	05/08/20	ORIGINAL SUBMISSION
2	JGD	06/11/20	PER CITY COMMENT
3	JGD	09/15/20	PER CITY COMMENT
4	JGD	10/01/20	PER CITY COMMENT
5	JGD	12/07/20	WATERLINE REVISION

Renaissance Infrastructure Consulting
1815 McGee Street, Suite. 200
Kansas City, Missouri 64108
816.800.0950
www.RIC-consult.com

MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL SCUTTER
NUMBER
PE-2002003418
PROFESSIONAL ENGINEER
12-9-20
MITCHELL E. SLUTTER PE-2002003418

Dec 07, 2020-3:02pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDSIGN01.dwg



	Overland Flow										System Flow					Pipe Design															Structure Design			
Line	Point	Trib. Area (Ac.)	"C" Value	Design Storm	"K" Value	Time of Conc. (min.)	Intensity i (in./hr.)	Trib Runoff (cfs)	Bypass flow (cfs)	Total Runoff (cfs)	Total Area (Ac.)	Total (K*A*C)	Time of Conc. (min.)	Intensity i (in./hr.)	System Discharge (cfs)	U/S Node	D/S Node	Pipe Type	Pipe Shape	Pipe Diameter (in.)	Pipe Length (ft.)	Mannings "n" value	Pipe Slope (%)	Design Flow (cfs)	Pipe Capacity (cfs)	Full Flow Velocity (fps)	Design Flow Velocity (fps)	Depth of Flow (in.)	Flow Time (min.)	U/S Invert El.	U/S Crown El.	D/S Invert El.	D/S Crown El.	U/S Depth of Cover (ft.)	D/S Depth of Cover (ft.)	Headwater Inlet Elev. (EGL)	Headwater Outlet Elev. (EGL)	Inlet/Outlet Control	Top Elevation
A	A-2	0.760	0.66	25	1.1	5.00	7.35	4.06	0.00	4.06	0.760	0.55	5.00	7.35	4.06	A-2	A	RCP	Round	15	34.37	0.013	0.52	4.06	4.66	3.79	4.27	10.8	0.13	1013.05	1014.30	1012.87	1014.12	2.34	-2.51	1014.05	1014.05	I	1016.64
				100	1.25		10.32	6.47	1.82	8.29		0.63		10.32	6.47									6.47			3.79	15.0	0.15									
A	A-1	0.680	0.66	25	1.1	5.00	7.35	3.63	0.00	3.63	1.440	1.05	5.00	7.35	7.69	A-1	0	HDPE	Round	18	124.52	0.01	0.50	7.69	9.60	5.43	6.02	12.1	0.34	1012.62	1014.12	1012.00	1013.50	2.51	-1.50	1013.72	1013.57	I	1016.63
				100	1.25		10.32	5.79	2.66	8.45		1.19		10.32	12.26									12.26			5.43	18.0	0.38									
A	A																																					1013.50

Sheet
08 of 20

Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

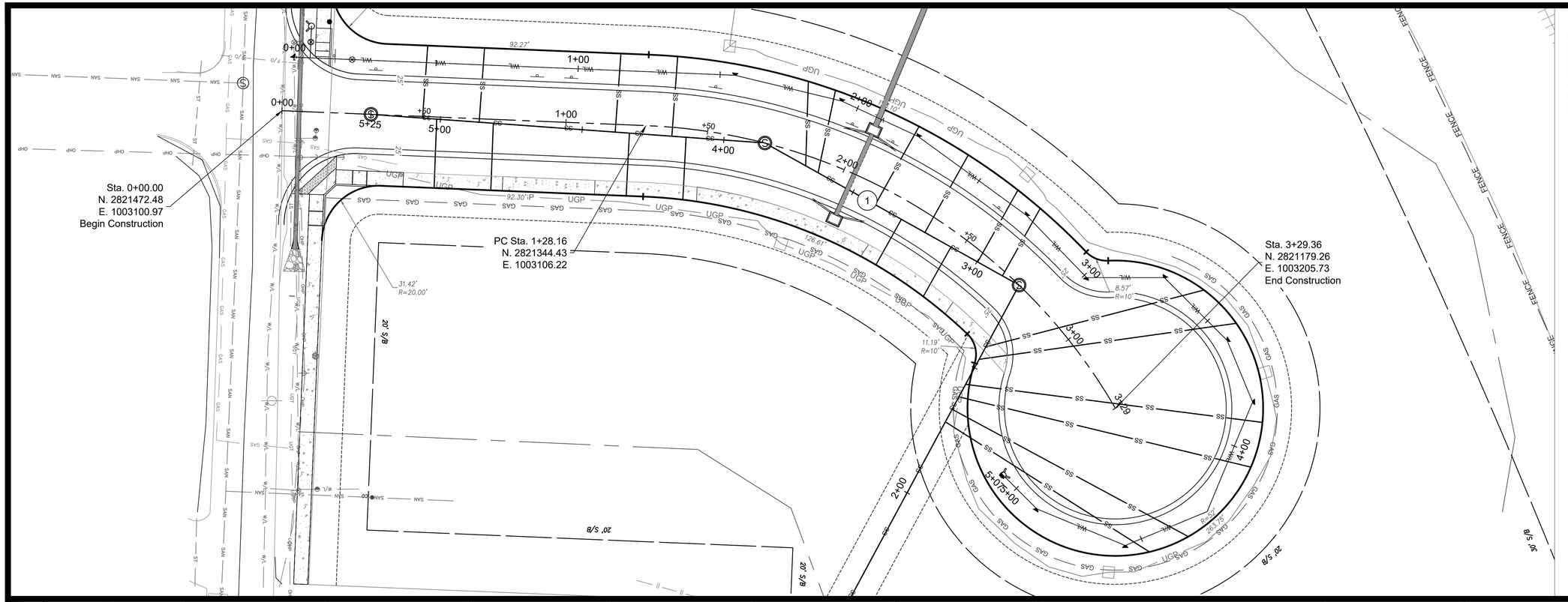
Drawing Title: Drainage Plan

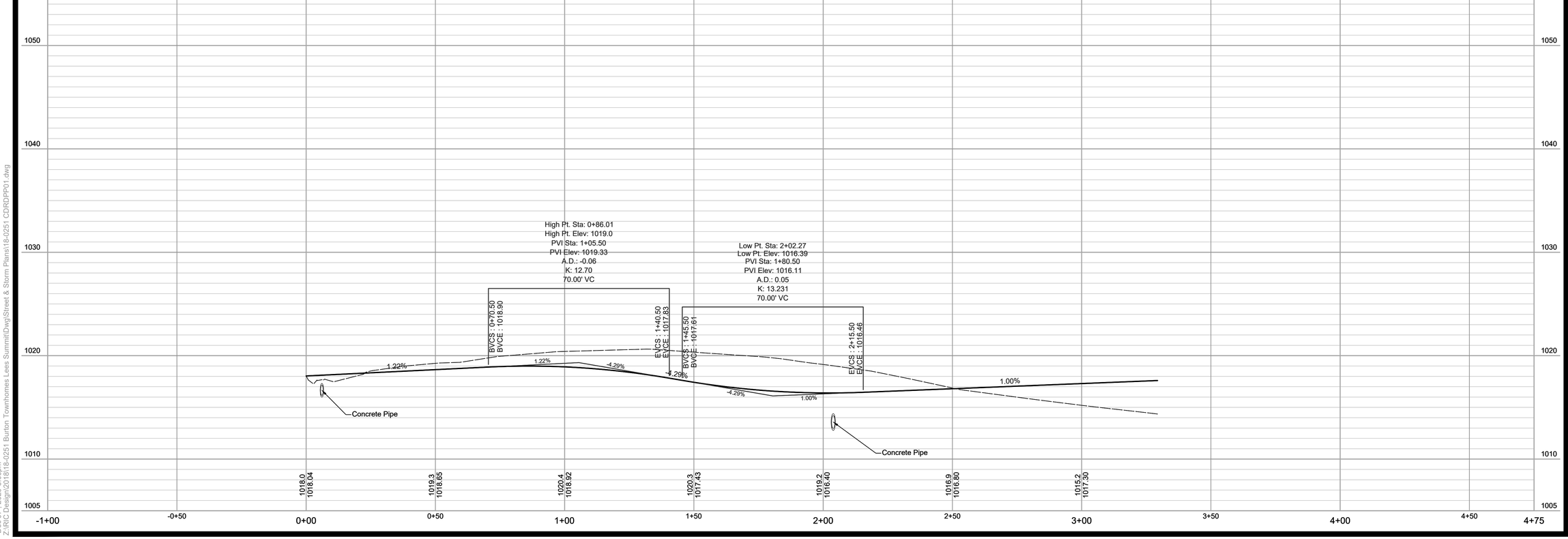
NO	BY	DATE	REVISION
3	JGD	12/07/20	WATERLINE REVISION
2	JGD	10/01/20	PER CITY COMMENT
1	JGD	09/15/20	PER CITY COMMENT
	JDG	06/11/20	PER CITY COMMENT
	MES	05/08/20	ORIGINAL SUBMISSION
	QD	DATE	REVISION

Renaissance Infrastructure Consulting
1815 McGee Street, Suite 200
Kansas City, Missouri 64108
816.800.0950
www.RIC-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12-9-20
MITCHELL E. SLUTTER PE-2002003418

Dec 07, 2020-3:02pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDDRNM01.dwg





Sheet
09 of 20

Public Street And Storm Plans

18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Street Plan & Profile

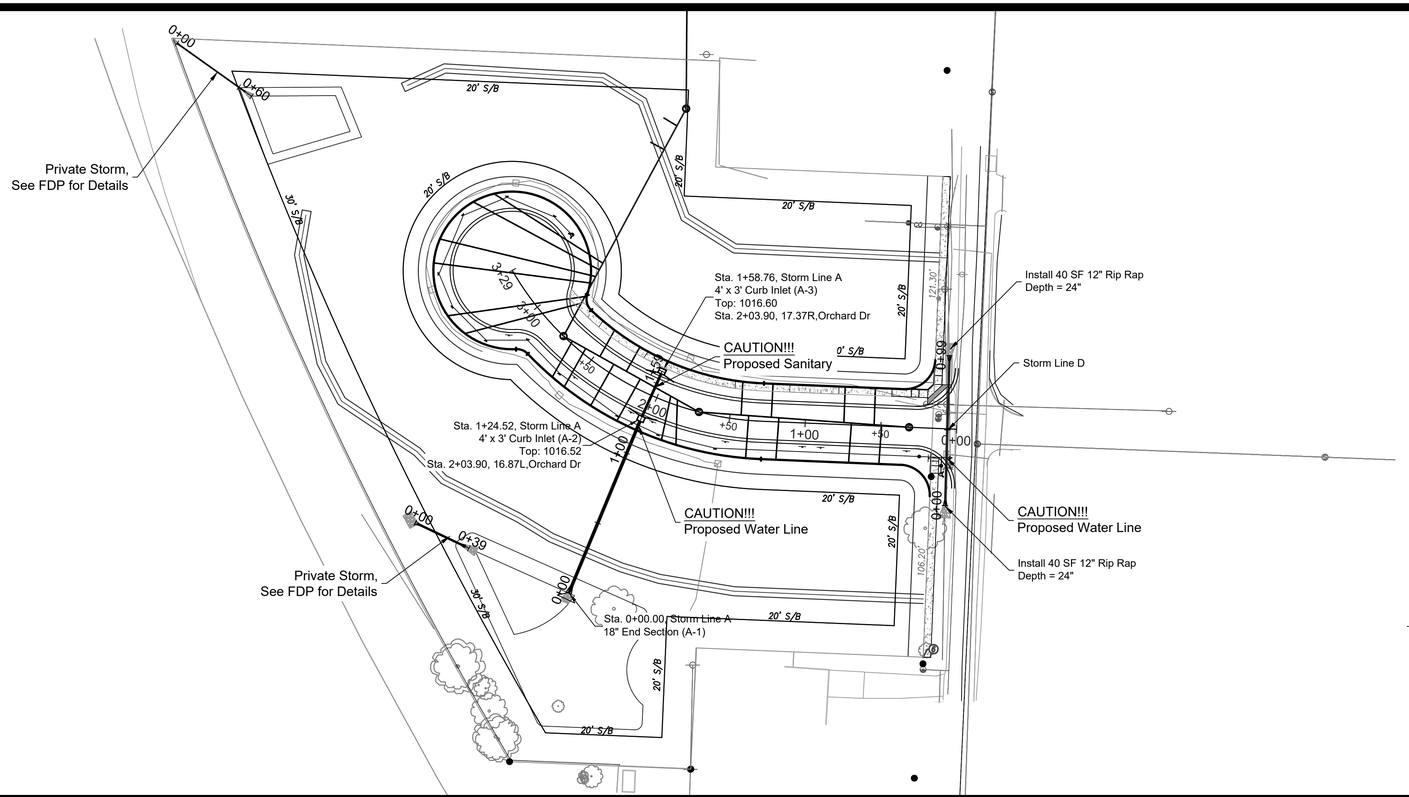
NO	BY	CD	DATE	REVISION
4	JGD	MES	12/07/20	WATERLINE REVISION
3	JGD	MES	10/01/20	PER CITY COMMENT
2	JGD	MES	09/15/20	PER CITY COMMENT
1	JGD	MES	06/11/20	PER CITY COMMENT
			05/08/20	ORIGINAL SUBMISSION

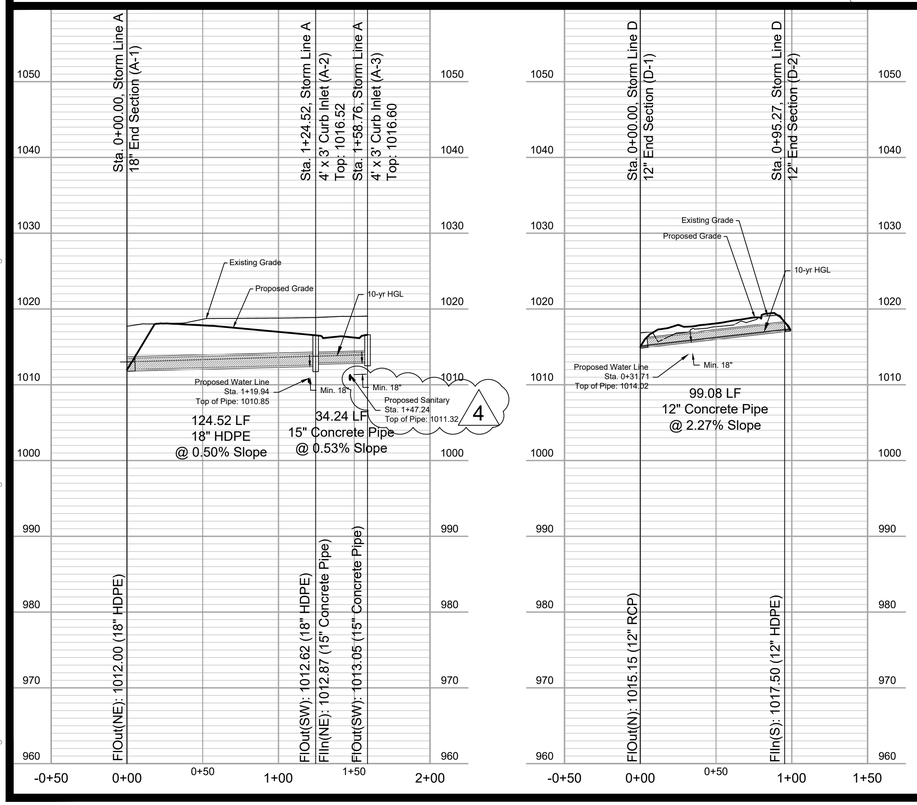
Renaissance Infrastructure Consulting
1815 McGee Street, Suite: 200
Kansas City, Missouri 64108
816.800.0950
WWW.RIC-CONSULT.COM
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418

7 of 20

Dec 07, 2020-3:03pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDRDPP01.dwg





Sheet
10 of 20

Public Street And Storm Plans

18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Storm Plan & Profile

NO.	BY	DATE	REVISION
3	JGD	09/15/20	PER CITY COMMENT
2	JGD	08/11/20	PER CITY COMMENT
1	JDG	05/08/20	ORIGINAL SUBMISSION
3	JGD	10/01/20	PER CITY COMMENT
2	JGD	12/07/20	WATERLINE REVISION

Renaissance Infrastructure Consulting
1815 McGee Street, Suite 200
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12-7-20
MITCHELL E. SLUTTER PE-2002003418

Dec 07, 2020-3:03pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDSTPP01.dwg

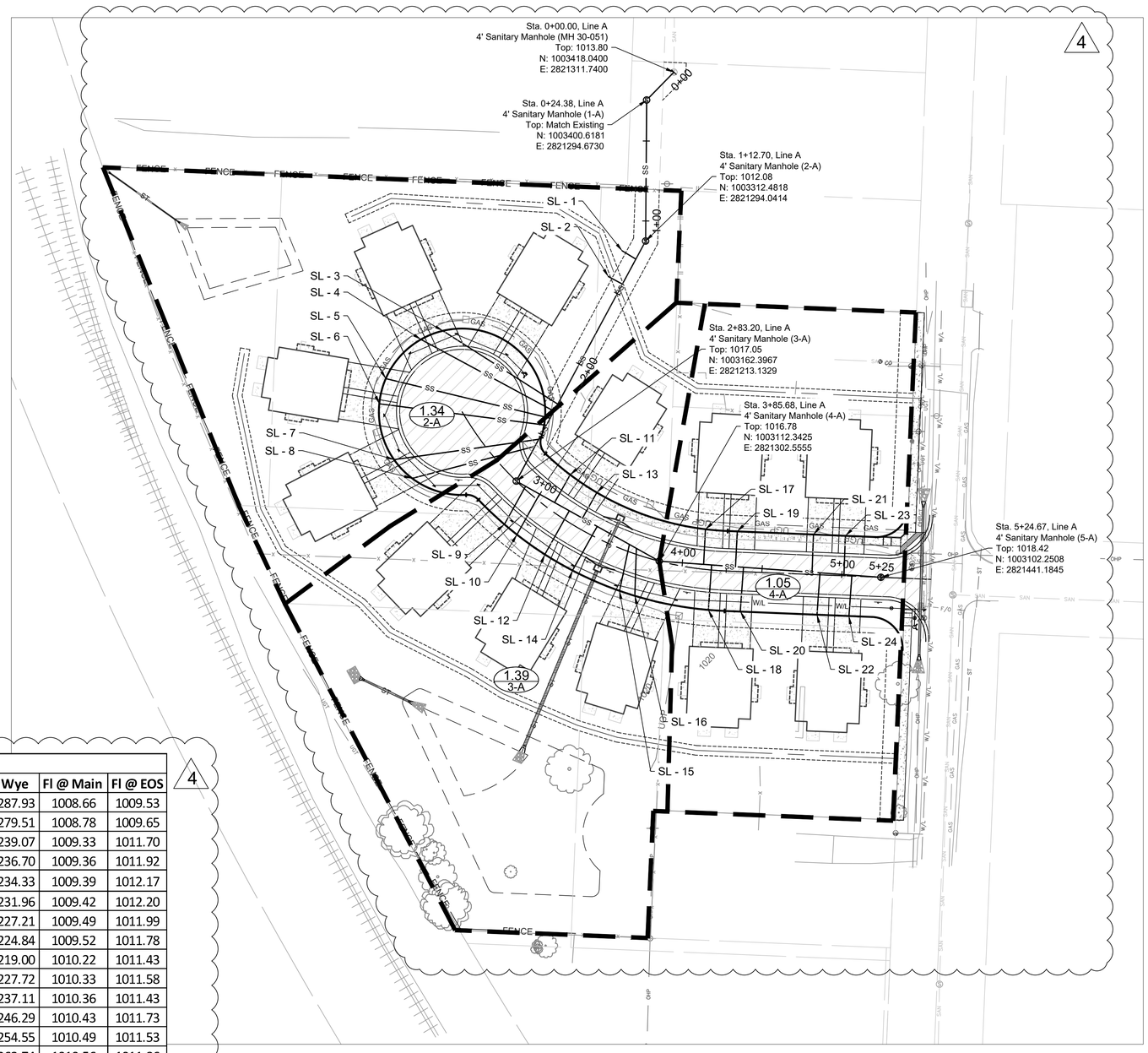
GENERAL NOTES

1. All construction materials and procedures on this project shall conform to the following requirements:
   A. City of Lee's Summit, Missouri Standard Specifications: Section 3500 - Sanitary Sewers
2. The contractor will be responsible for securing all bonds, and insurance required by the Final Development Plans, City of Lee's Summit, and all other governing agencies (including local, county, state, and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all bonds, and insurance shall be the contractor's responsibility and shall be included in the bid for the work.
3. All existing utilities indicated on the drawings are according to the best information available to the engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All utilities, shown and un-shown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.
4. The contractor will be responsible for all damages to existing utilities, pavement, fences, structures, and other features not designated for removal. The contractor shall repair all damages at his expense.
5. The demolition of existing pavement, curbs, structures, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state, and federal regulations.
6. By use of these Final Development Plans the contractor hereby agrees that he shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses, or damages related to the project.
7. The contractor will be responsible for providing all signage, barricades, lighting, etc., as required for temporary traffic control during the construction of this project. Maintenance of the temporary traffic control devices will be the contractor's responsibility. All traffic control in conduction with construction in the right-of-way shall be in conformance with the City Traffic Control Requirements.
8. Contractor shall furnish evidence that his/her insurance meets the requirements of the City of Lee's Summit Municipal Code.
9. Prior to installing, constructing, or performing any work on the public storm sewer line (including connecting private drainage systems to the storm sewer), contact Inspections.
10. The Developer (not the contractor) to pick up all permits.

4

Summary of Quantities

Item	Description	Qty.	Unit
1	8" (SDR-26)PVC	525	LF
2	4" (SDR-26) PVC	1000	LF
3	4" Dia. Concrete Manhole	5	EA
4	8" x 4" PVC Wye	24	EA
5	Erosion Control	1	LS



4

Proposed Service Line Design Table

Service Line	Sta @ Main (ft)	D.D.S (ft)	Install Pipe (LF)	N @ EOS	E @ EOS	N @ Wye	E @ Wye	Fl @ Main	Fl @ EOS
SL-1	1+25.05	12.87	10.00	1003306.35	2821279.37	1003301.15	2821287.93	1008.66	1009.53
SL-2	1+43.31	30.62	10.00	1003290.28	2821270.71	1003285.53	2821279.51	1008.78	1009.65
SL-3	2+28.53	115.84	85.19	1003256.32	2821167.25	1003210.52	2821239.07	1009.33	1011.70
SL-4	2+33.53	120.84	94.45	1003250.93	2821153.56	1003206.12	2821236.70	1009.36	1011.92
SL-5	2+38.53	125.84	105.69	1003226.47	2821131.58	1003201.71	2821234.33	1009.39	1012.17
SL-6	2+43.53	130.84	105.31	1003210.72	2821127.50	1003197.31	2821231.96	1009.42	1012.20
SL-7	2+53.53	140.84	91.37	1003175.82	2821136.72	1003188.51	2821227.21	1009.49	1011.99
SL-8	2+58.53	145.84	79.32	1003164.12	2821148.08	1003184.11	2821224.84	1009.52	1011.78
SL-9	2+89.92	6.72	27.23	1003135.36	2821205.70	1003159.12	2821219.00	1010.22	1011.43
SL-10	2+99.92	16.72	29.00	1003128.92	2821213.55	1003154.23	2821227.72	1010.33	1011.58
SL-11	3+10.68	27.48	19.94	1003166.37	2821246.85	1003148.98	2821237.11	1010.36	1011.43
SL-12	3+21.20	37.99	31.28	1003116.54	2821231.00	1003143.84	2821246.29	1010.43	1011.73
SL-13	3+30.66	47.46	18.36	1003155.24	2821263.52	1003139.21	2821254.55	1010.49	1011.53
SL-14	3+41.20	58.00	31.57	1003106.52	2821248.32	1003134.07	2821263.74	1010.56	1011.86
SL-15	3+64.26	81.06	29.67	1003093.77	2821277.72	1003122.80	2821283.87	1010.71	1011.97
SL-16	3+69.26	86.06	29.72	1003090.66	2821287.28	1003120.36	2821288.23	1010.74	1012.00
SL-17	4+13.30	27.84	22.02	1003132.31	2821331.45	1003110.32	2821330.32	1011.23	1012.34
SL-18	4+18.52	32.84	28.16	1003081.87	2821333.26	1003109.96	2821335.31	1011.26	1012.49
SL-19	4+33.50	47.82	22.11	1003130.95	2821351.39	1003108.87	2821350.25	1011.36	1012.47
SL-20	4+38.50	52.82	27.74	1003080.84	2821353.23	1003108.51	2821355.24	1011.39	1012.61
SL-21	4+81.51	95.83	23.63	1003129.00	2821399.01	1003105.38	2821398.13	1011.67	1012.81
SL-22	4+86.51	100.83	26.22	1003078.87	2821401.21	1003105.02	2821403.12	1011.70	1012.89
SL-23	5+01.49	115.82	24.27	1003128.12	2821418.96	1003103.93	2821418.07	1011.80	1012.96
SL-24	5+06.50	120.82	25.59	1003078.05	2821421.19	1003103.57	2821423.05	1011.83	1013.01

4

Segment		Peak Base Flow (Residential)			Peak Infiltration			Peak Inflow				Design Peak	Pipe Full	Pipe Dia.	Pipe	Pipe	Vel Full	Design
U/S MH	D/S MH	Area, acres	PDWF, gpd/ac	Flow, cfs	Area, acres	Infiltration Rate, gpd/ac	Flow, cfs	Tributary Area, acres	Rainfall Intensity, iph	Inflow Factor	Flow, cfs	Flow, cfs	Capacity, cfs	Inches	Length, ft	Slope, %	fps	Vel, fps
5-A	4-A	0.000	1500	0.000	0.000	500.000	0.000	0.000	5.490	0.006	0.000	0.000	0.907	8.000	139.000	0.650	2.599	0.000
4-A	3-A	1.050	1500	0.002	1.050	500.000	0.001	0.000	5.490	0.006	0.000	0.003	0.907	8.000	102.480	0.650	2.599	0.577
3-A	2-A	1.390	1500	0.003	1.390	500.000	0.001	1.040	5.490	0.006	0.034	0.039	0.907	8.000	170.500	0.650	2.599	1.287
2-A	1-A	1.340	1500	0.003	1.340	500.000	0.001	2.440	5.490	0.006	0.080	0.119	0.907	8.000	88.140	0.650	2.599	1.779
1-A	Existing	1.300	1500	0.003	1.300	500.000	0.001	3.780	5.490	0.006	0.125	0.209	0.914	8.000	24.390	0.660	2.619	2.105
Existing	Existing	0.000	1500	0.000	0.000	500.000	0.000	3.780	5.490	0.006	0.125	0.249	0.900	8.000	323.770	0.470	2.578	2.173

4

NORTH
1"=40'
0 20' 40'

Sheet
11 of 20

Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

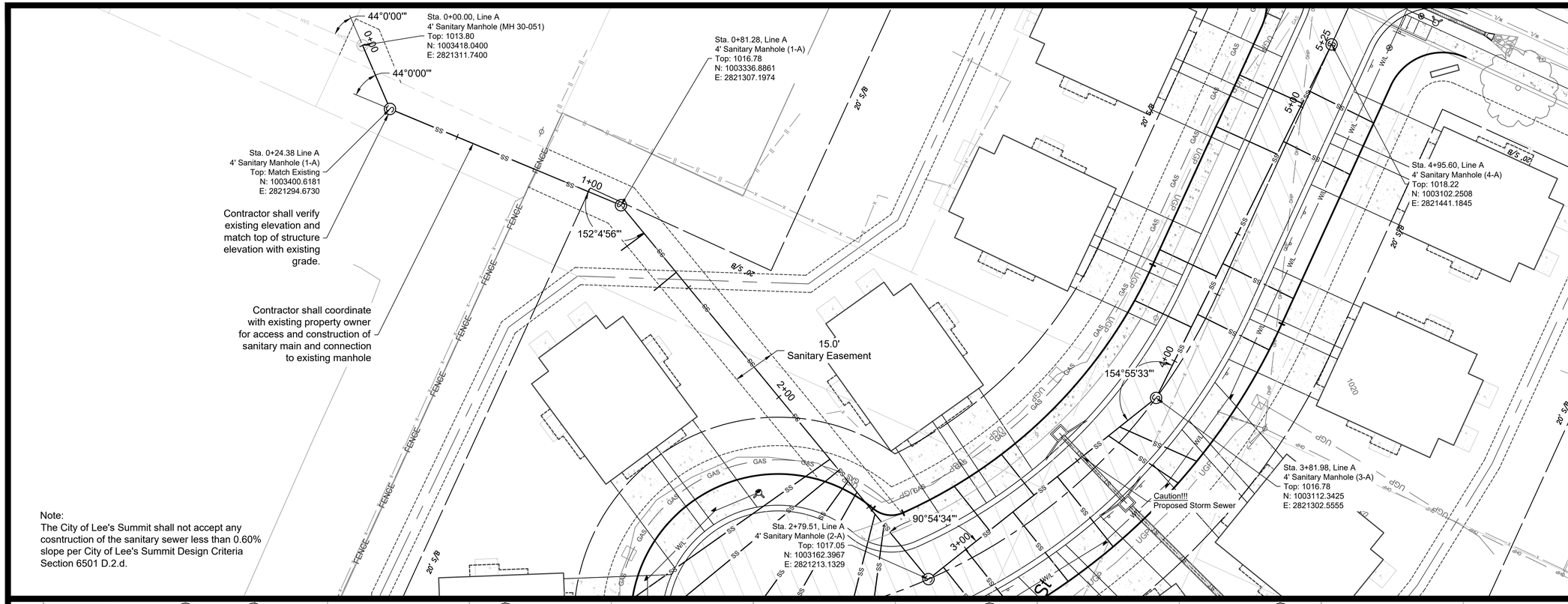
Sanitary Plan

NO.	BY	DATE	REVISION
5	JGD MES	12/07/20	WATERLINE REVISION
4	JGD MES	10/01/20	PER CITY COMMENT
3	JGD MES	09/15/20	PER CITY COMMENT
2	JGD MES	06/11/20	PER CITY COMMENT
1	JDG MES	05/08/20	ORIGINAL SUBMISSION

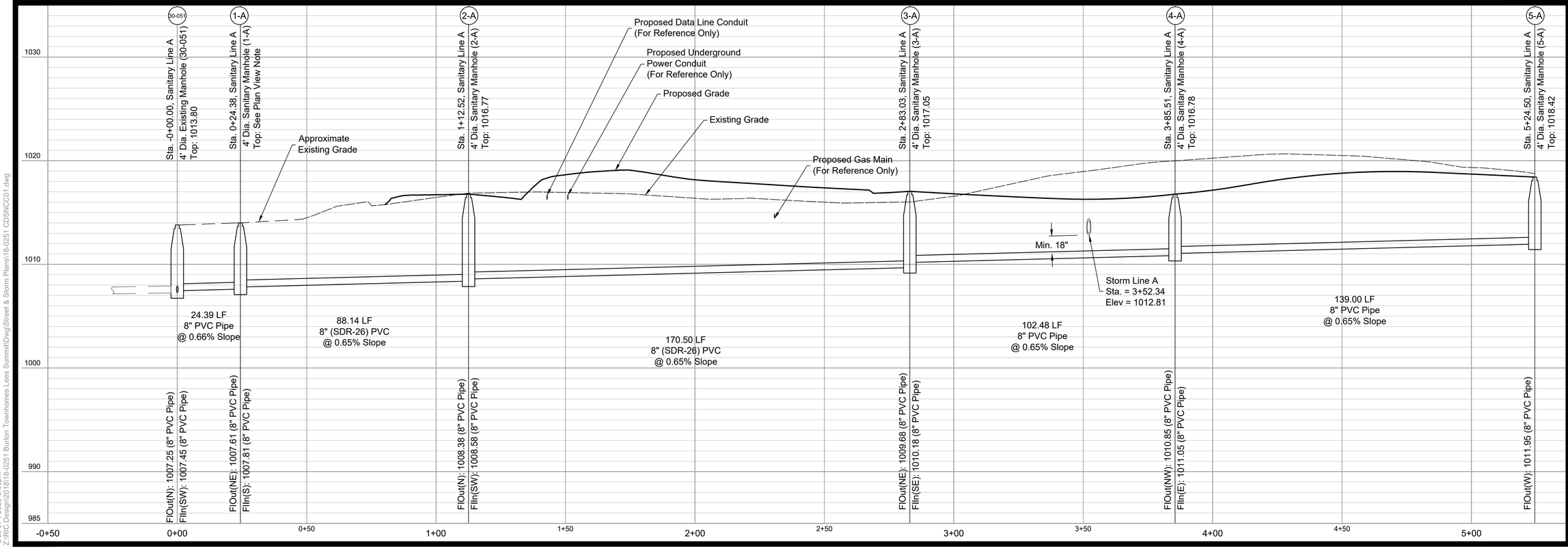
Renaissance Infrastructure Consulting
1815 McGee Street, Suite. 200
Kansas City, Missouri 64108
816.800.0950
www.RIC-CONSULT.COM
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418

Dec 07, 2020-3:03pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDSNCC01.dwg



Note:
The City of Lee's Summit shall not accept any cosntruction of the sanitary sewer less than 0.60% slope per City of Lee's Summit Design Criteria Section 6501 D.2.d.



Sheet
12 of 20

Public Street And Storm Plans

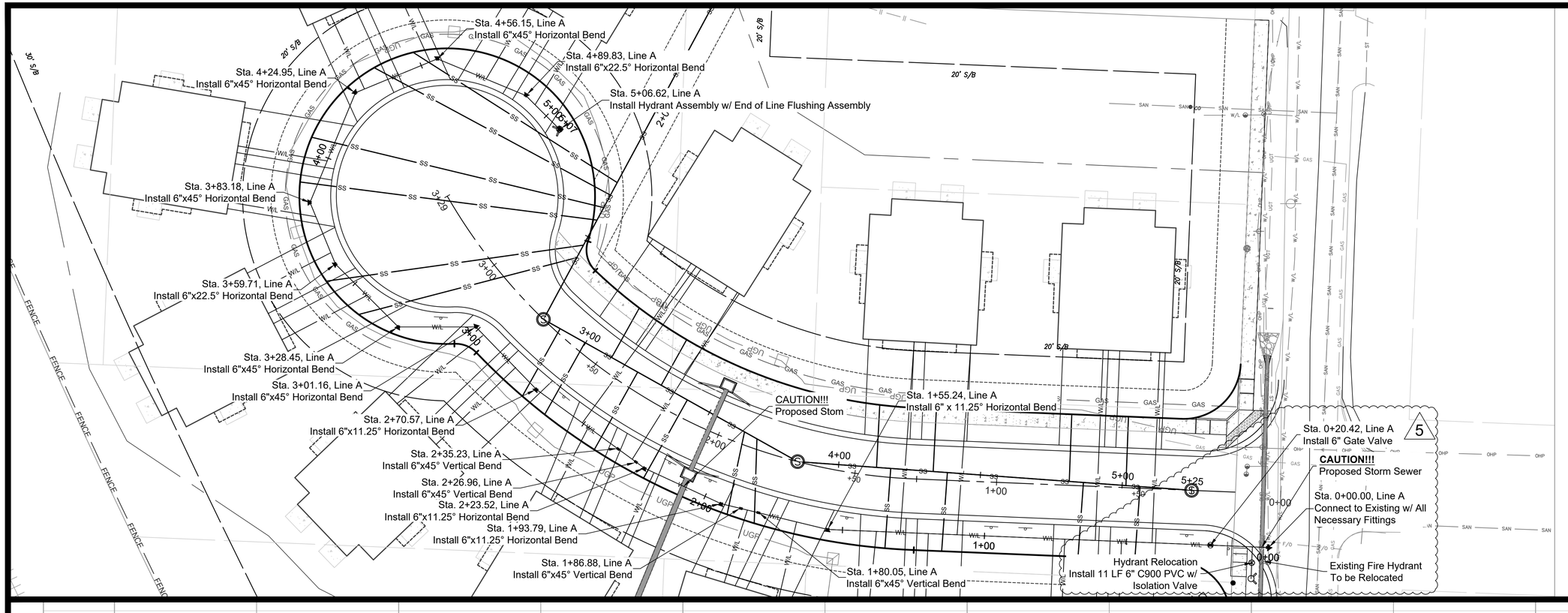
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

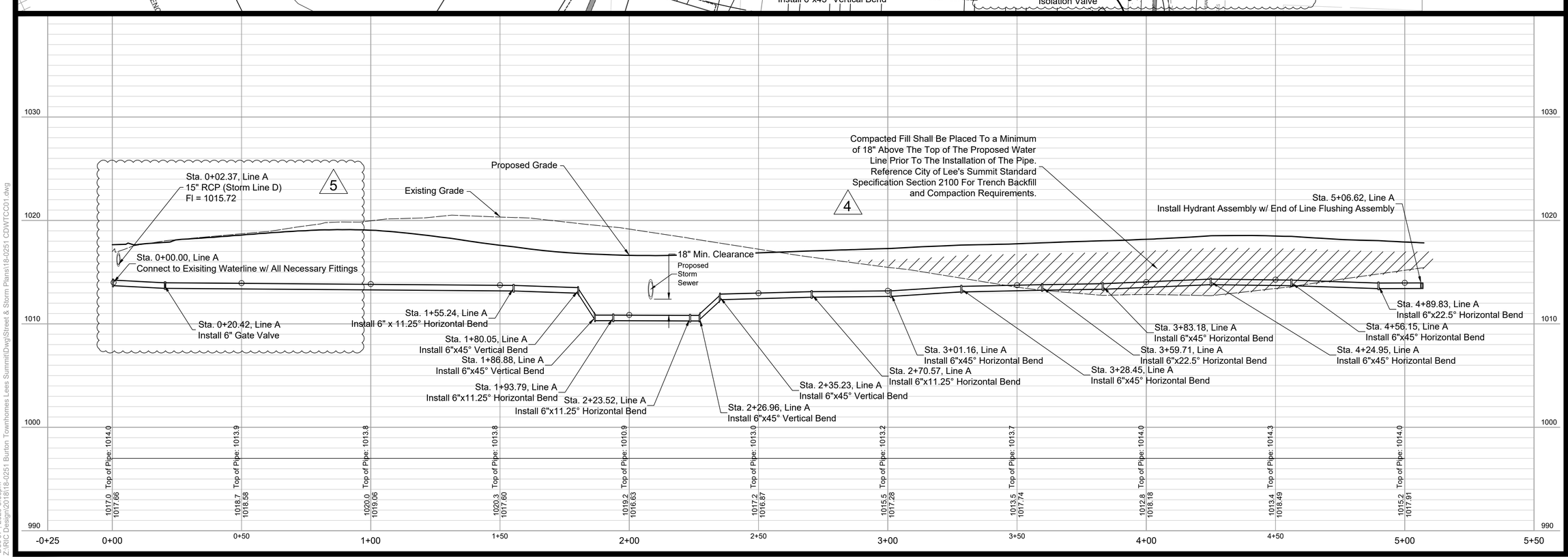
Sanitary Plan & Profile

NO	BY	DATE	REVISION
1	JDG	05/08/20	ORIGINAL SUBMISSION
2	JGD	06/11/20	PER CITY COMMENT
3	JGD	09/15/20	PER CITY COMMENT
4	JGD	10/01/20	PER CITY COMMENT
5	JGD	12/07/20	WATERLINE REVISION

Renaissance Infrastructure Consulting
1815 McGee Street, Suite. 200
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033830

STATE OF MISSOURI
MITCHELL SCUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12-20
MITCHELL E. SLUTTER PE-2002003418





Sheet
13 of 20

Public Street And Storm Plans

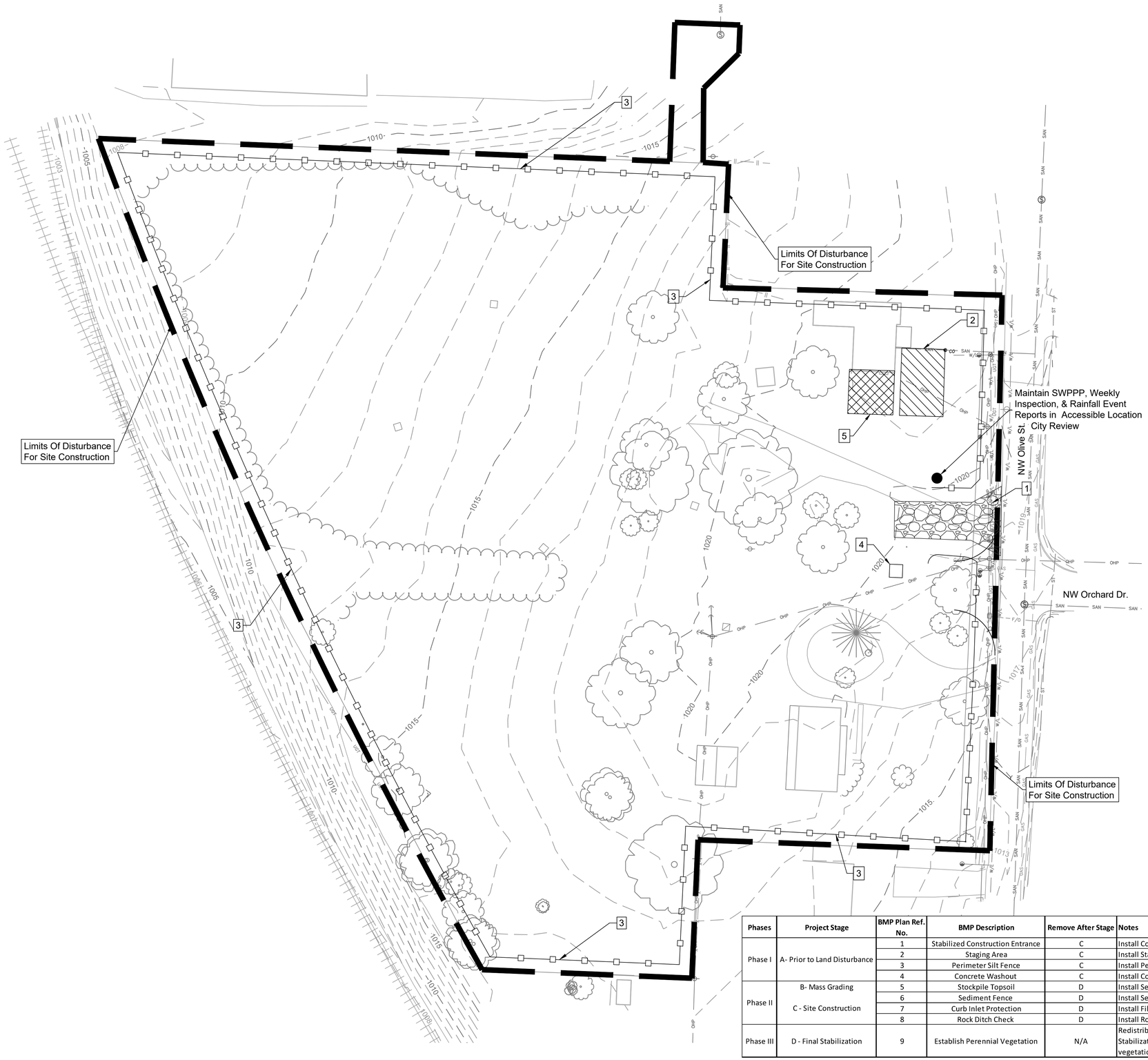
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Waterline Plan & Profile

NO	BY	CD	DATE	REVISION
3	JGD	MES	12/07/20	WATERLINE REVISION
2	JGD	MES	10/01/20	PER CITY COMMENT
1	JGD	MES	09/15/20	PER CITY COMMENT
	JGD	MES	06/11/20	PER CITY COMMENT
	JGD	MES	05/08/20	ORIGINAL SUBMISSION

Renaissance Infrastructure Consulting
1815 McGee Street, Suite. 200
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418



EROSION CONTROL LEGEND

- Stabilized Construction Entrance
- Staging Area
- Stockpile Area
- Concrete Washout
- Limits of Disturbance
- Perimeter Silt Fence
- Inlet Protection
- Rock Ditch Check

WRITTEN SEQUENCING

1. Implement Pre-Clearing Plan:
   All temporary structural BMP's shown on the pre-clearing plan must be in place before the general clearing operations. Clearing necessary to place temporary structural BMP's is the minimum required for installation. Coordinate clearing necessary to place temporary structural BMP's with local weather forecast so that clearing and placement may be completed within a forecast dry period. Stabilize all erosion control measures after installation. Temporary Barrier Fence shall be in Place, around areas not to be disturbed, prior to any construction activities. This area includes Stream Corridor.
2. Clear and Stabilize Work Areas:
   Grade contractor areas and place all-weather surface on contractor areas.
3. Clearing and Grubbing:
   After Phase I BMP's are installed, contractor may clear, grub, and demo required areas as necessary.

EROSION CONTROL NOTES

1. Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.
2. The retention of access controls and sediment controls shall be required for areas where seed has not established 70% cover.
3. The contractor shall temporarily seed and mulch all disturbed areas if there has been no construction activity on them for a period of fourteen (14) calendar days.
4. Install "J' Hooks on silt fence every 100 LF

Phases	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage	Notes
Phase I	A- Prior to Land Disturbance	1	Stabilized Construction Entrance	C	Install Construction Entrance, as shown on Plans.
		2	Staging Area	C	Install Staging Area
		3	Perimeter Silt Fence	C	Install Perimeter Silt Fence, as Shown on Plans.
		4	Concrete Washout	C	Install Concrete Washout as shown on plans prior to pouring any concrete
Phase II	B- Mass Grading	5	Stockpile Topsoil	D	Install Sediment Fence a Minimum of 5' Beyond Toe of Slope
	C - Site Construction	6	Sediment Fence	D	Install Sediment Fence, as Shown on Plans
		7	Curb Inlet Protection	D	Install Filter Bags around Proposed Curb Inlets
		8	Rock Ditch Check	D	Install Rock Ditch Check, as Shown on Plans
Phase III	D - Final Stabilization	9	Establish Perennial Vegetation	N/A	Redistribute topsoil and seed and mulch all disturbed areas. Sod right-of-way. Stabilization complete when 100% disturbed area is established with perennial vegetation with a density of 70%.

NORTH
1"=30'
0 15' 30'

Sheet
14 of 20

Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

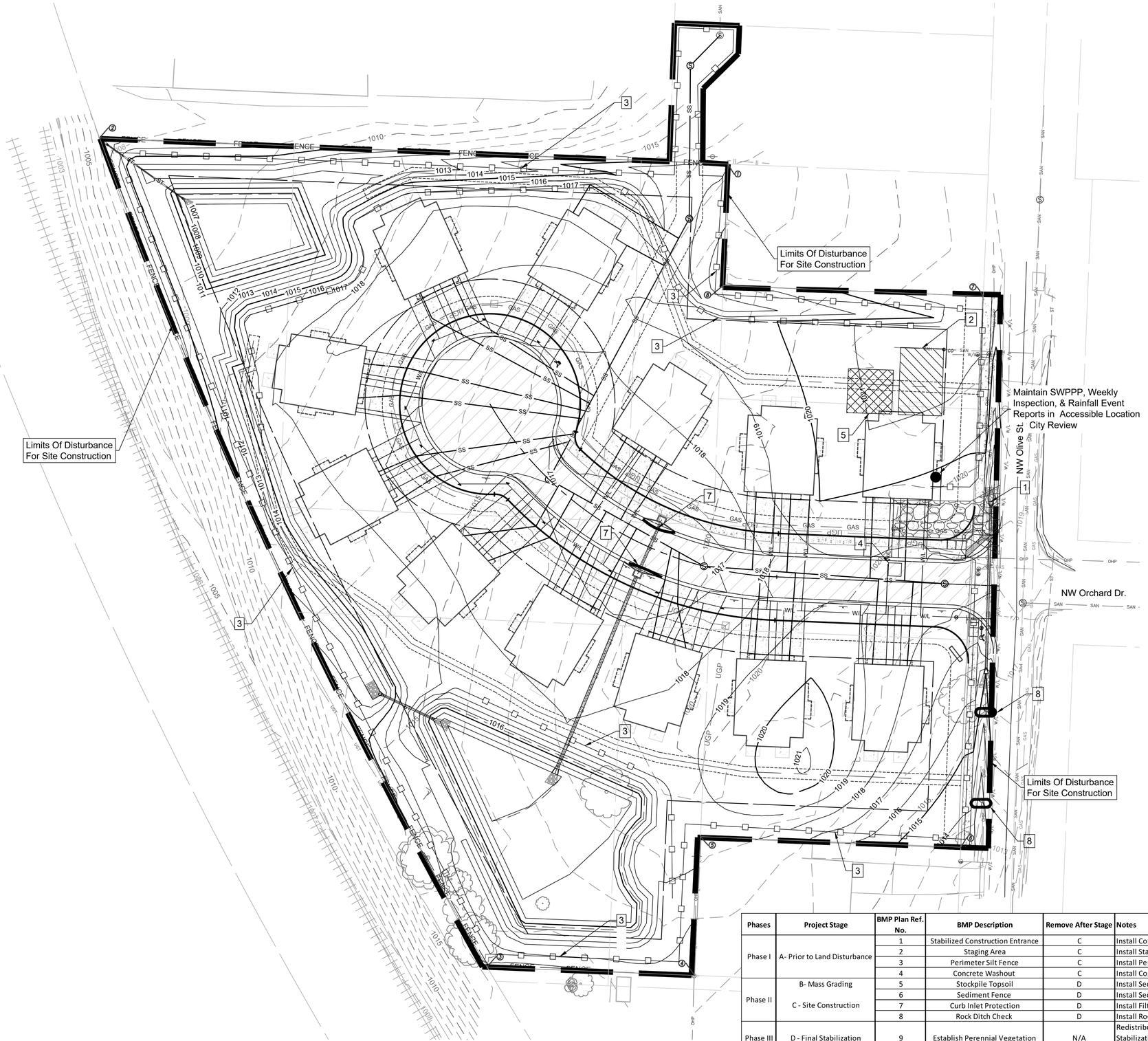
Erosion Control
Phase I

NO.	BY	DATE	REVISION
4	JGD	12/07/20	WATERLINE REVISION
3	JGD	10/01/20	PER CITY COMMENT
2	JGD	09/15/20	PER CITY COMMENT
1	JDG	06/11/20	PER CITY COMMENT
	MES	05/08/20	ORIGINAL SUBMISSION

Renaissance Infrastructure Consulting
1815 McGee Street, Suite. 200
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418

Dec 07, 2020-3:03pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDESCP01.dwg



EROSION CONTROL LEGEND

- Stabilized Construction Entrance
- Staging Area
- Stockpile Area
- Concrete Washout
- Limits of Disturbance
- Perimeter Silt Fence
- Inlet Protection
- Rock Ditch Check

WRITTEN SEQUENCING

1. Implement Pre-Clearing Plan:
   All temporary structural BMP's shown on the pre-clearing plan must be in place before the general clearing operations. Clearing necessary to place temporary structural BMP's is the minimum required for installation. Coordinate clearing necessary to place temporary structural BMP's with local weather forecast so that clearing and placement may be completed within a forecast dry period. Stabilize all erosion control measures after installation. Temporary Barrier Fence shall be in Place, around areas not to be disturbed, prior to any construction activities. This area includes Stream Corridor.
2. Clear and Stabilize Work Areas:
   Grade contractor areas and place all-weather surface on contractor areas.
3. Clearing and Grubbing:
   After Phase I BMP's are installed, contractor may clear, grub, and demo required areas as necessary.

EROSION CONTROL NOTES

1. Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.
2. The retention of access controls and sediment controls shall be required for areas where seed has not established 70% cover.
3. The contractor shall temporarily seed and mulch all disturbed areas if there has been no construction activity on them for a period of fourteen (14) calendar days.
4. Install "J' Hooks on silt fence every 100 LF

Phases	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage	Notes
Phase I	A- Prior to Land Disturbance	1	Stabilized Construction Entrance	C	Install Construction Entrance, as shown on Plans.
		2	Staging Area	C	Install Staging Area
		3	Perimeter Silt Fence	C	Install Perimeter Silt Fence, as Shown on Plans.
		4	Concrete Washout	C	Install Concrete Washout as shown on plans prior to pouring any concrete
Phase II	B- Mass Grading C - Site Construction	5	Stockpile Topsoil	D	Install Sediment Fence a Minimum of 5' Beyond Toe of Slope
		6	Sediment Fence	D	Install Sediment Fence, as Shown on Plans
		7	Curb Inlet Protection	D	Install Filter Bags around Proposed Curb Inlets
		8	Rock Ditch Check	D	Install Rock Ditch Check, as Shown on Plans
Phase III	D - Final Stabilization	9	Establish Perennial Vegetation	N/A	Redistribute topsoil and seed and mulch all disturbed areas. Sod right-of-way. Stabilization complete when 100% disturbed area is established with perennial vegetation with a density of 70%.

NORTH
1"=30'
0 15' 30'

Sheet
15 of 20

Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

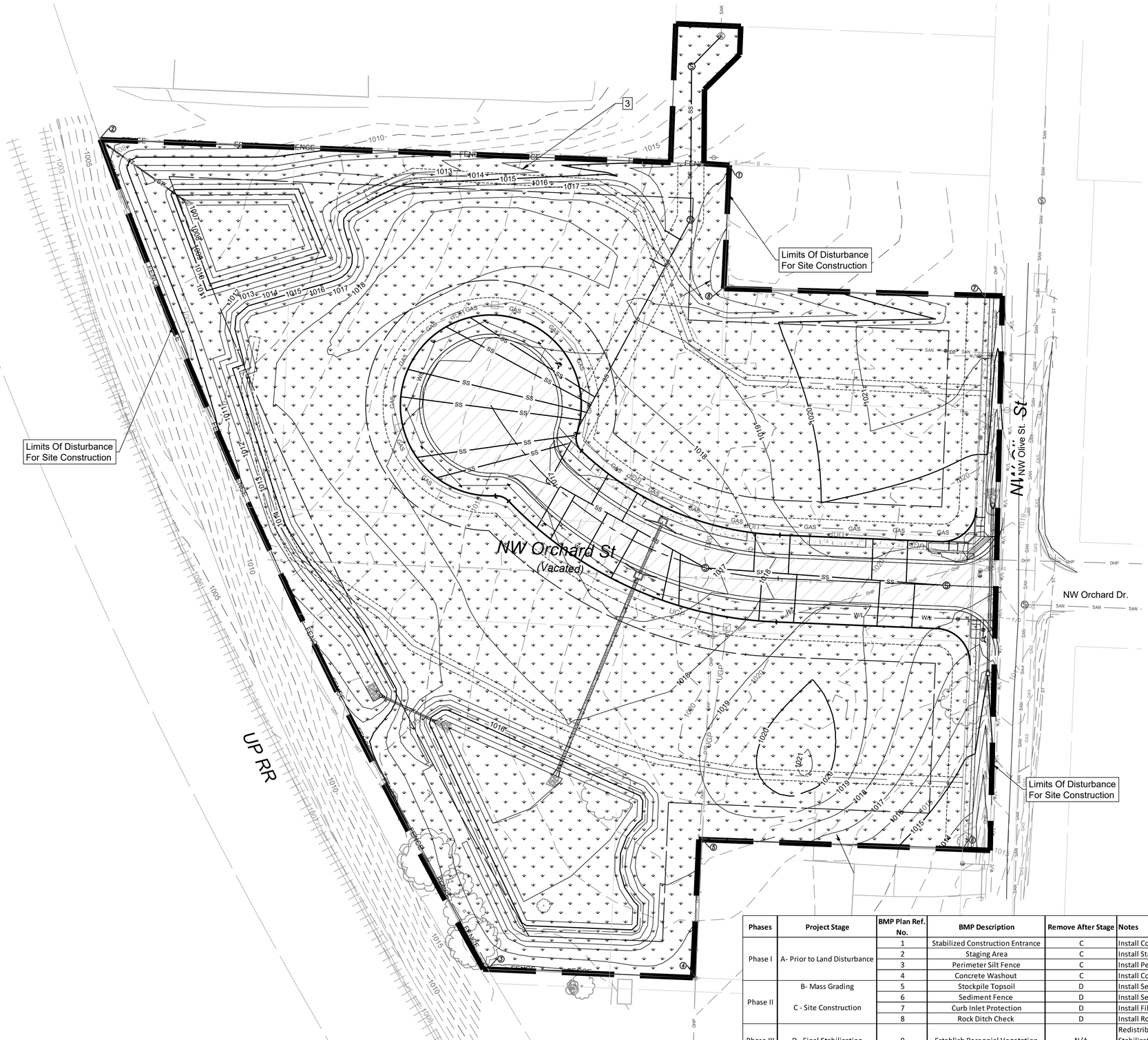
Erosion Control
Phase II

NO	BY	QD	DATE	REVISION
4	JGD	MES	12/07/20	WATERLINE REVISION
3	JGD	MES	10/01/20	PER CITY COMMENT
2	JGD	MES	09/15/20	PER CITY COMMENT
1	JGD	MES	06/11/20	PER CITY COMMENT
	JGD	MES	05/08/20	ORIGINAL SUBMISSION

Renaissance Infrastructure Consulting
815 McGee Street, Suite. 200
Kansas City, Missouri 64106
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033830

STATE OF MISSOURI
MITCHELL SCUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418

Dec 07, 2020-3:03pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDESCP01.dwg



EROSION CONTROL LEGEND

Establish Perennial Vegetation

WRITTEN SEQUENCING

1. Implement Pre-Clearing Plan:
   All temporary structural BMP's shown on the pre-clearing plan must be in place before the general clearing operations. Clearing necessary to place temporary structural BMP's is the minimum required for installation. Coordinate clearing necessary to place temporary structural BMP's with local weather forecast so that clearing and placement may be completed within a forecast dry period. Stabilize all erosion control measures after installation. Temporary Barrier Fence shall be in Place, around areas not to be disturbed, prior to any construction activities. This area includes Stream Corridor.
2. Clear and Stabilize Work Areas:
   Grade contractor areas and place all-weather surface on contractor areas.
3. Clearing and Grubbing:
   After Phase I BMP's are installed, contractor may clear, grub, and demo required areas as necessary.

EROSION CONTROL NOTES

1. Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.
2. The retention of access controls and sediment controls shall be required for areas where seed has not established 70% cover.
3. The contractor shall temporarily seed and mulch all disturbed areas if there has been no construction activity on them for a period of fourteen (14) calendar days.
4. Install "J' Hooks on silt fence every 100 LF

Phases	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage	Notes
Phase I	A- Prior to Land Disturbance	1	Stabilized Construction Entrance	C	Install Construction Entrance, as shown on Plans.
		2	Staging Area	C	Install Staging Area
		3	Perimeter Silt Fence	C	Install Perimeter Silt Fence, as Shown on Plans.
		4	Concrete Washout	C	Install Concrete Washout as shown on plans prior to pouring any concrete
Phase II	B- Mass Grading	5	Stockpile Topsoil	D	Install Sediment Fence a Minimum of 5' Beyond Toe of Slope
	C - Site Construction	6	Sediment Fence	D	Install Sediment Fence, as Shown on Plans
		7	Curb Inlet Protection	D	Install Filter Bags around Proposed Curb Inlets
		8	Rock Ditch Check	D	Install Rock Ditch Check, as Shown on Plans
Phase III	D - Final Stabilization	9	Establish Perennial Vegetation	N/A	Redistribute topsoil and seed and mulch all disturbed areas. Sod right-of-way. Stabilization complete when 100% disturbed area is established with perennial vegetation with a density of 70%.

NORTH
1"=30'
0 15' 30'

Sheet
16 of 20

Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

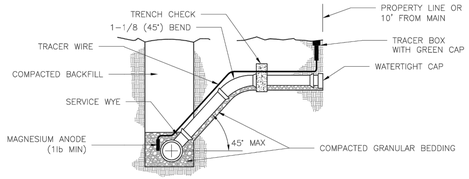
Erosion Control
Phase III

NO	BY	QD	DATE	REVISION
4	JGD	MES	12/07/20	WATERLINE REVISION
3	JGD	MES	10/01/20	PER CITY COMMENT
2	JGD	MES	09/15/20	PER CITY COMMENT
1	JGD	MES	08/11/20	PER CITY COMMENT
	JDG	MES	05/08/20	ORIGINAL SUBMISSION

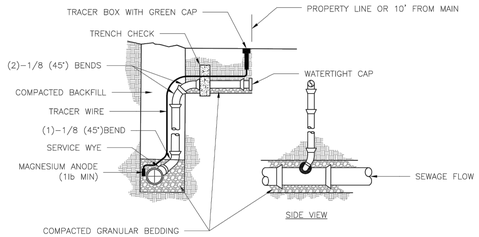
Renaissance Infrastructure Consulting
1816 McGee Street, Suite. 200
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12-9-20
MITCHELL E. SLUTTER PE-2002003418

Dec 07, 2020-3:04pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDESCP01.dwg



STANDARD INSTALLATION
NOT TO SCALE



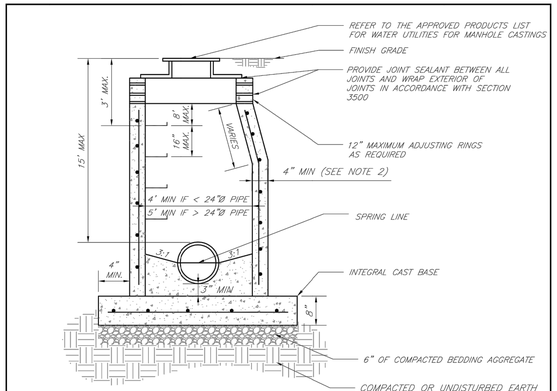
VERTICAL RISER
NOT TO SCALE

NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

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

BUILDING SEWER STUB AND RISER

Date:	12/13
Drawn By:	SC
Checked By:	DL
FILE:	SAN-1
Rev:	10/15
Rev:	12/15

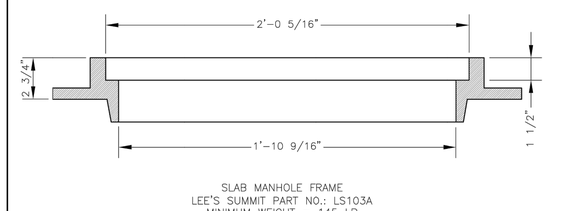


NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH ($\frac{1}{12}$) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE TILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

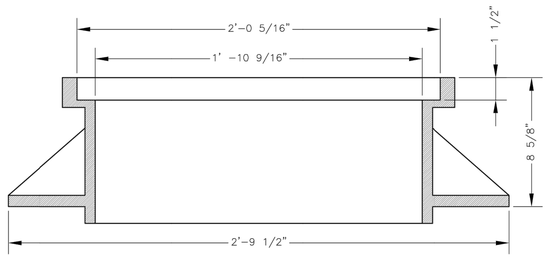
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD PRECAST MANHOLE – SANITARY SEWER

Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	SAN-2
Rev:	1/14
Rev:	



SLAB MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS103A
MINIMUM WEIGHT = 145 LB



STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB

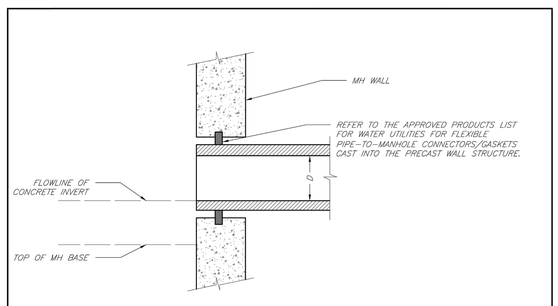
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

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

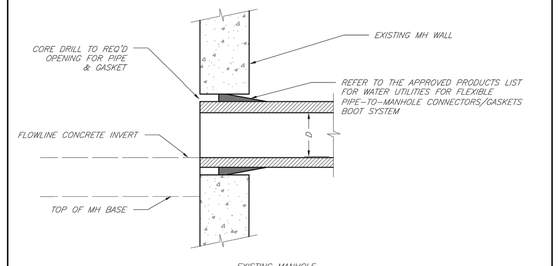
STORM MANHOLE FRAME DETAIL

Date:	04/17
Drawn By:	MJF
Checked By:	DL

STM-7



NEW MANHOLE

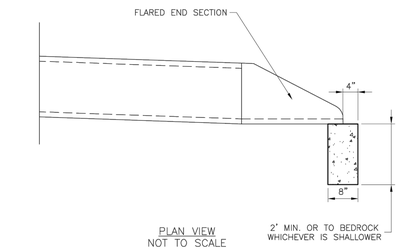


EXISTING MANHOLE

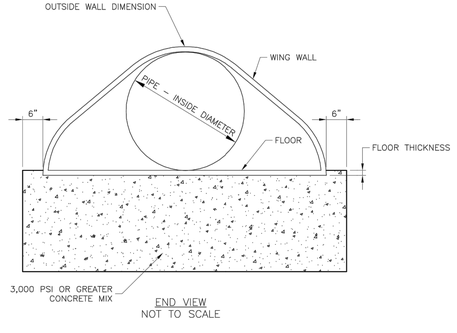
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

MANHOLE WALL CONNECTIONS

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



PLAN VIEW
NOT TO SCALE



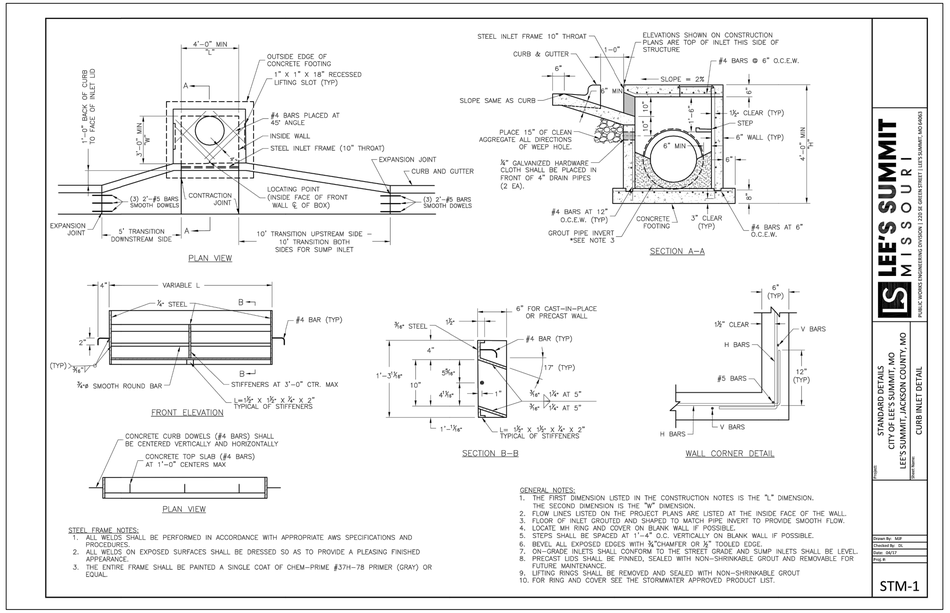
END VIEW
NOT TO SCALE

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

FLARED END SECTION SUPPORT DETAIL

Date:	04/17
Drawn By:	MJF
Checked By:	DL

STM-5



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 ¾"CHAMFER OR ½" 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
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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

Drawn By:	MJF
Checked By:	DL
Date:	04/17
Proj. #	

STM-1

Sheet
17 of 20

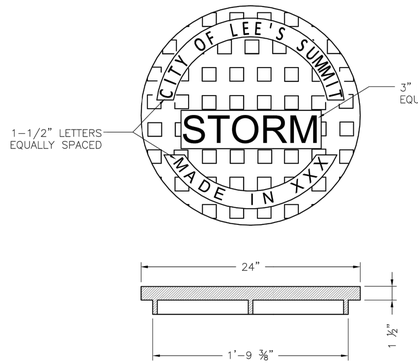
Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Standard Details

NO.	BY	DATE	REVISION
6	JGD	12/07/20	WATERLINE REVISION
5	MES	10/01/20	PER CITY COMMENT
4	MES	09/15/20	PER CITY COMMENT
3	MES	08/11/20	PER CITY COMMENT
2	MES	05/08/20	ORIGINAL SUBMISSION
1	MES	05/08/20	REVISION

Renaissance Infrastructure Consulting
8815 McGee Street, Suite 200
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418



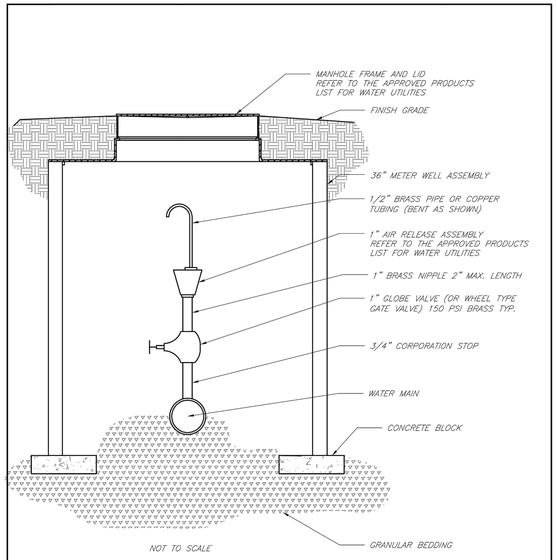
STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

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

STORM MANHOLE COVER DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL
STM-6



NOT TO SCALE

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

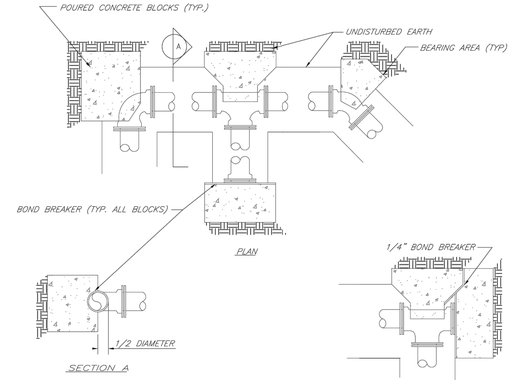
AIR RELEASE ASSEMBLY

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-10
Rev: 1/14
Rev:

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

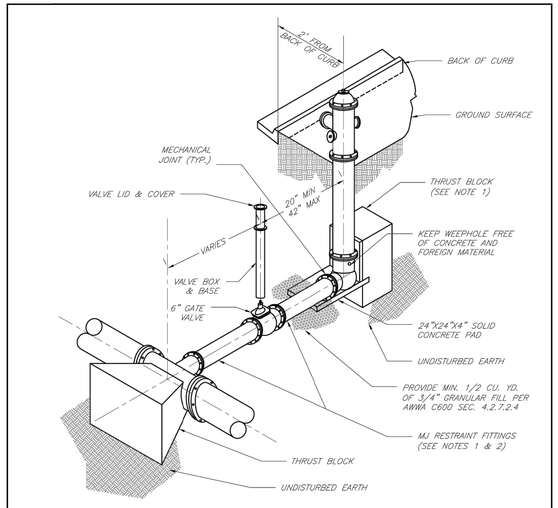
NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



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

HORIZONTAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-1
Rev: 1/14
Rev:

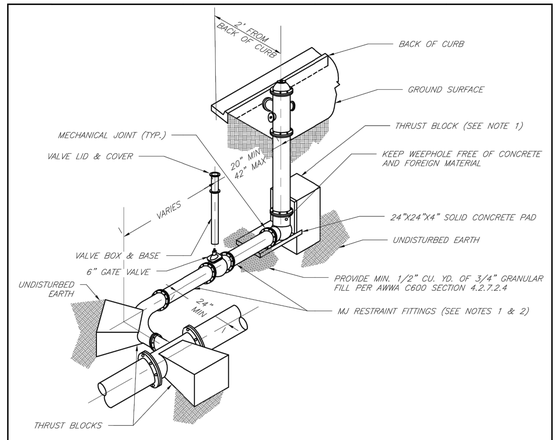


NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

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

HYDRANT INSTALLATION – STRAIGHT SET

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-7
Rev: 1/14
Rev:



NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

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

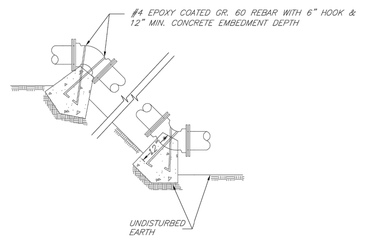
HYDRANT WITH 90 DEGREE BEND

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-8
Rev: 1/14
Rev:

REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.1	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4

NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



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

VERTICAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-2
Rev: 1/14
Rev:

Sheet
18 of 20

Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Standard Details

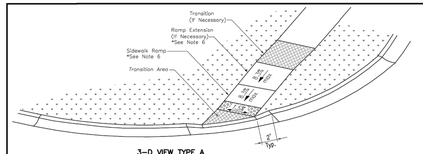
NO.	BY	DATE	REVISION
4	JGD	MES	12/07/20	WATERLINE REVISION
3	JGD	MES	10/01/20	PER CITY COMMENT
2	JGD	MES	09/15/20	PER CITY COMMENT
1	JDG	MES	06/11/20	PER CITY COMMENT
0	JGD	MES	05/08/20	ORIGINAL SUBMISSION

Renaissance Infrastructure Consulting
1815 McGEE STREET, SUITE: 200
KANSAS CITY, MISSOURI 64108
816.800.0950
WWW.RIC-CONSULT.COM
MO Certificate of Authority: E-2010033630

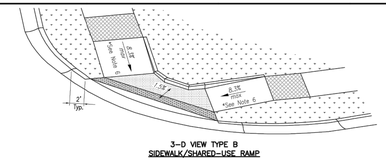
STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418

20

Dec 07, 2020-3:04pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDSTDT01.dwg

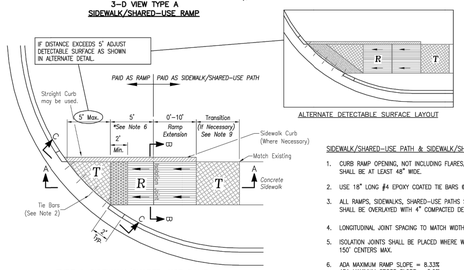


3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP



3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

LEGEND
- R — SIDEWALK RAMP
- TS — TURNING SPACE
- DETECTABLE WARNING SURFACE
- T — TRANSITION

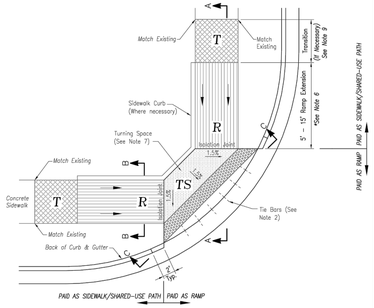


TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

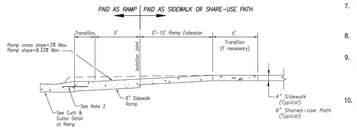
ALTERNATE DETECTABLE SURFACE LAYOUT

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

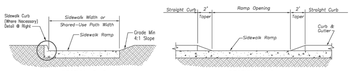
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale



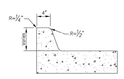
SECTION A-A



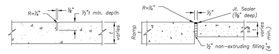
SECTION B-B

SECTION C-C

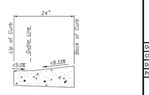
TYPE A & B SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale



JOINT DETAILS
Not to Scale



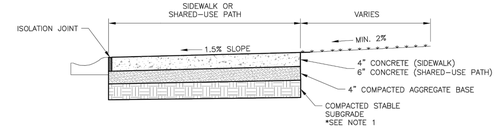
CURB & GUTTER DETAIL AT RAMP
Not to Scale

Drawn By: MJF	
Checked By: DL	
Date: 04/17	
Proj. #	

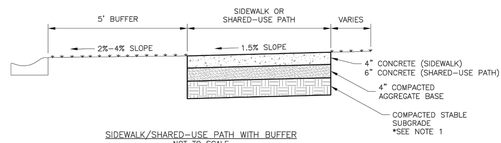
GEN-3A

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

Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE



SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

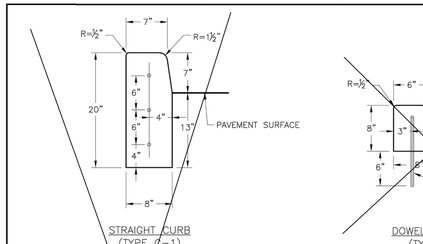
GENERAL NOTES:

1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. 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.
6. SHARED-USE PATH WIDTH SHALL BE 10 FT. WIDE.
7. SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

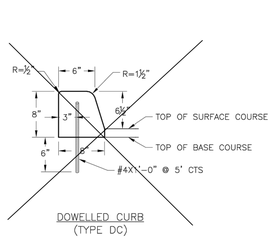
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SIDEWALK/SHARED-USE PATH DETAIL

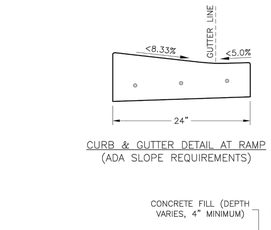
Date: 04/17	
Drawn By: MJF	
Checked By: DL	
GEN-2	



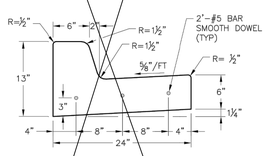
STRAIGHT CURB
(TYPE C-1)



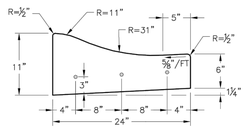
DOWELLED CURB
(TYPE DC)



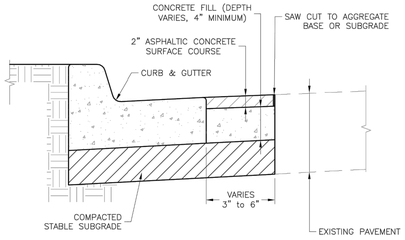
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



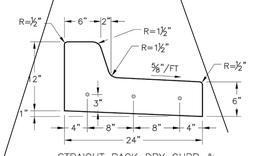
STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



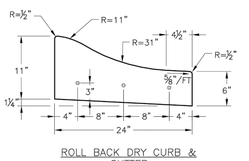
ROLL BACK CURB & GUTTER
(TYPE CG-2)



CURB REPLACEMENT DETAIL



STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)



ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

GENERAL NOTES

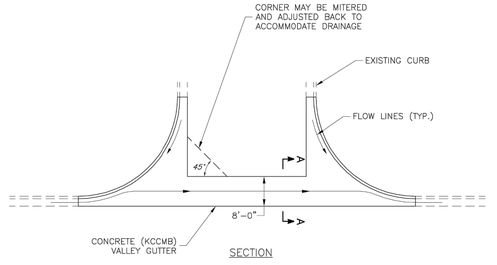
1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

Drawn By: MJF	
Checked By: DL	
Date: 04/17	
Proj. #	

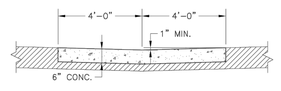
GEN-4

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

Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL



SECTION



SECTION
Scale: 1" = 1'-0"

VALLEY GUTTER DETAIL
Intersection of Two Public Streets

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

VALLEY GUTTER DETAIL

Date: 04/17	
Drawn By: MJF	
Checked By: DL	
GEN-7	

Sheet 19 of 20

Public Street And Storm Plans
18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

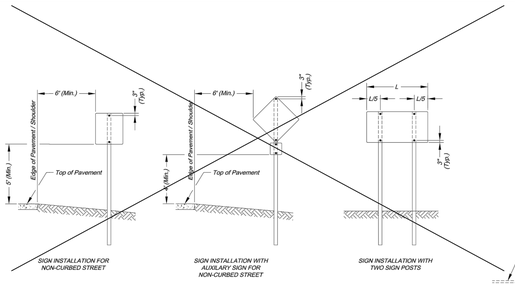
Standard Details

NO.	BY	DATE	REVISION
3	JGD	09/15/20	WATERLINE REVISION
2	JGD	06/11/20	PER CITY COMMENT
1	JGD	05/08/20	PER CITY COMMENT
	MES	12/07/20	PER CITY COMMENT
	MES	10/01/20	PER CITY COMMENT
	MES	09/15/20	ORIGINAL SUBMISSION

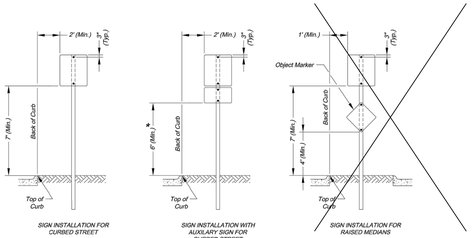
Renaissance Infrastructure Consulting
1815 McGEE STREET, SUITE: 200
KANSAS CITY, MISSOURI 64108
816.800.0950
WWW.RIC-CONSULT.COM
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER

MITCHELL E. SLUTTER PE-2002003418



SIGN INSTALLATION FOR NON-CURBED STREET | SIGN INSTALLATION WITH AUXILARY SIGN FOR NON-CURBED STREET | SIGN INSTALLATION WITH TWO SIGN POSTS

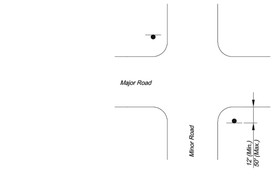


SIGN INSTALLATION FOR CURBED STREET | SIGN INSTALLATION WITH AUXILARY SIGN FOR CURBED STREET | SIGN INSTALLATION FOR RAISED MEDIANS

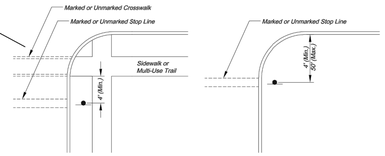
SIGN MOUNTING DETAILS

* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.

NOTE:
1. Generally, the sign mounting height should not be more than 1' greater than the minimum mounting height.



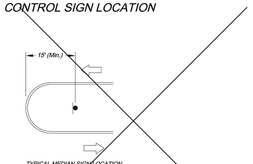
NON-CURBED INTERSECTION INSTALLATION



INTERSECTION WITH SIDEWALK / MULTI-USE TRAIL INSTALLATION

CURBED INTERSECTION INSTALLATION

CONTROL SIGN LOCATION



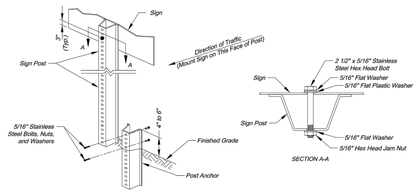
TYPICAL MEDIAN SIGN LOCATION

MEDIAN SIGN LOCATION

NOTES:
1. 4.4" P.V.C. sleeve shall be installed in new concrete medians at each location where a sign is to be installed.
2. For existing concrete medians, a 4" hole shall be cored into the concrete.

Project:	SIGN MOUNTING DETAILS
Sheet Name:	STANDARD DRAWING SN-1
Drawn By: AS	
Checked By: JW	
Date: 08/26/2009	
Project#	
1 OF 3	
1	

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

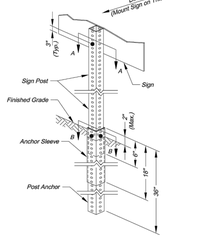


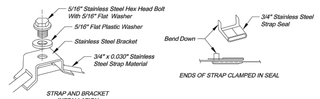
U-STEEL POST DETAILS

U-STEEL POST NOTES:
1. Splice shall be positioned entirely between finished grade line and 18" above finished grade line. Only one splice will be allowed per post.
2. U-Steel post shall be 3 lb./ft., galvanized according to ASTM A123.
3. U-Steel post can be used for installation of signs with an area of less than 2.5 square feet.
4. All posts shall be embedded a minimum of 3 feet.

PERMANENT SIGNING GENERAL NOTES:
1. All signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
2. The Contractor is responsible for avoiding any and all utilities when installing sign posts, whether the utility is indicated on the plans or not.
3. All workmanship and materials shall be subject to the inspection and approval of the Public Works Department of the City of Lee's Summit.
4. The Contractor shall stake the location of all sign posts to be installed. The City Inspector shall inspect the staking prior to installation. Minor relocation to avoid conflicts may be allowed with the approval of the City Traffic Engineer or designee.
5. Signs shown to be installed on the side of metal poles shall be mounted with stainless steel straps or wing brackets as detailed. No signs are to be installed on wood poles. See Traffic Signal Standard Drawings for the installation of signs on mast arms.
6. All post mounted signs shall be installed with breakaway anchors according to the Standard Drawings.
7. All existing signs will be used in place during construction and protected from damage unless otherwise indicated in the plans. If the Contractor damages any existing sign or posts during construction, the Contractor will be required to replace the damaged materials with new signs or posts of the same type and size at the Contractor's expense. The Contractor shall be responsible for removing and storing any signs that are to be reinstalled on the project. All equipment shall be reinstalled in good condition.
8. Existing permanent signs and posts removed by the Contractor for construction purposes which are not to be reinstalled shall be delivered to the City's Public Works Maintenance Facility (1971 SE Hamblen Road). The Contractor shall be responsible for removing and storing equipment in good condition and is fully responsible for the equipment until it is delivered.
9. All Stop, Yield, or street name signs shall be maintained in a conspicuous location for the driving public. All Stop and Yield signs removed for construction purposes can be temporarily erected in reflectorized drums (no less than 7 feet above the pavement surface) until they can be reinstalled. Any temporary Stop or Yield sign installation to be left in place overnight will require prior approval from the City Inspector.

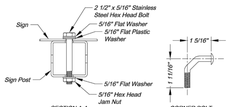
SQUARE STEEL POST INSTALLATION SEQUENCE:
1. Sign post anchor driven partially into the ground using a drive cap with a sledge or power equipment.
2. Anchor sleeve slipped over anchor and drive into the ground together with the sign post anchor.
3. Insert sign post into the post anchor and bolt in place.

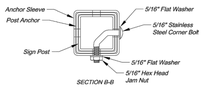




STRAP TYPE SIGN SUPPORT DETAILS

METAL POLE SIGN MOUNTING NOTES:
1. Signs on metal poles shall be attached with two brackets and stainless steel bands.
2. Holes in sign for attachment to the mounting brackets shall be offset a minimum of 2 inches from the edge of the sign.
3. Holes in sign shall be located such that the sign is level.
4. All strap, bracket, and seal materials should be Type 201 stainless steel.





SQUARE STEEL POST DETAILS

SQUARE STEEL POST NOTES:
1. Square steel sign posts and break-away anchor shall consist of the following materials:
   Sign Post - 14 Ga. 2"x 2" Square Steel Post
   Post Anchor - 12 Ga. 2 ½"x 2 ½" x 36" Square Steel Post
   Anchor Sleeve - 12 Ga. 2 ½"x 2 ½" x 18" Square Steel Post
2. 14 Gauge posts must meet a certified minimum yield strength of 60,000 psi.
3. In all installations the first hole above the finished grade line on the sign post, anchor, and anchor sleeve must be in line for the insertion of the corner bolt.
4. The maximum area for one sign post is 9.0 square feet. A sign or combination of signs with an area greater than 9.0 square feet will require two posts. Also, signs with a width greater than 36" (not including 36" x 36" diamond shaped signs) will require two posts.

Project:	SIGN POST DETAILS
Sheet Name:	STANDARD DRAWING SN-2
Drawn By: AS	
Checked By: JW	
Date: 08/26/2009	
Project#	
2 OF 3	
2	

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

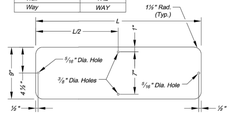
STANDARD ABBREVIATION LISTS

Named Streets	
Avenue	AVE
Boulevard	BLVD
Circle	CIR
Creek	CR
Court	CT
Crossing	XING
Drive	DR
Highway	HWY
Lane	LN
Parkway	PKWY
Place	PL
Road	RD
Street	ST
Terrace	TER
Trail	TRL
Way	WAY

Numbered Streets	
First	ST
Second	ND
Third	RD
Fourth to Tenth	TH

STREET NAME SIGN QUANTITIES

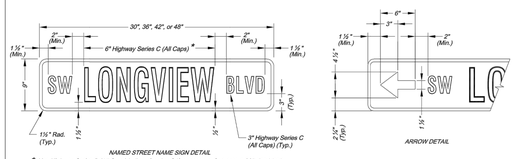
Sign Designation	Sign Size	Sign Area (Sq. Ft.)	Number	Quantity (Sq. Ft.)
D3-1 (SP-1)	9" x	Sq. Ft.	1	1
D3-1 (SP-2)	9" x			
D3-1 (SP-3)	9" x			
D3-1 (SP-4)	9" x			
D3-1 (SP-5)	9" x			
D3-1 (SP-6)	9" x			



STREET NAME SIGN BLANK DETAILS

For Mounting on Square Steel Posts

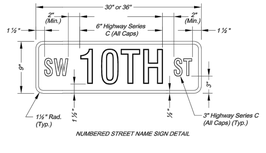
PROJECT SIGN DETAILS



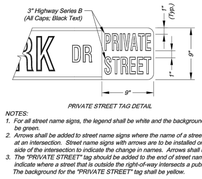
NAMED STREET NAME SIGN DETAIL

* Use Highway Series B (All Caps) in lieu of series C if necessary to fit text on a 36" sign blank.

ARROW DETAIL



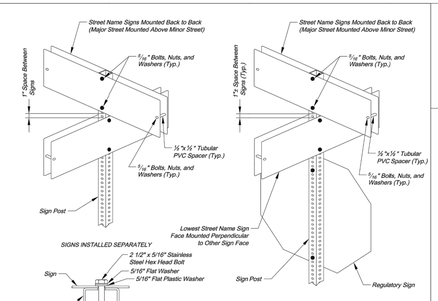
NUMBERED STREET NAME SIGN DETAIL



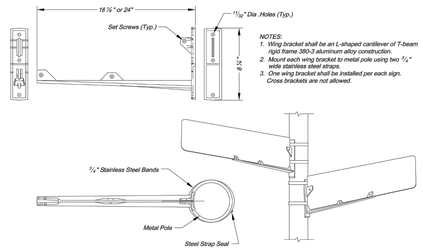
PRIVATE STREET TAG DETAIL

NOTES:
1. For all street name signs, the legend shall be white and the background shall be green.
2. Arrows shall be added to street name signs where the name of a street changes at an intersection. Street name signs with arrows are to be installed on each side of the intersection to indicate the change in names. Arrows shall be white.
3. The "PRIVATE STREET" tag should be added to the end of street name signs to indicate where a street that is outside the right-of-way intersects a public street. The background for the "PRIVATE STREET" tag shall be yellow.

STREET NAME SIGN FACE DETAILS



SQUARE STEEL POST MOUNTING DETAILS



NOTES:
1. Wing bracket shall be an L-shaped cantilever of T-beam rigid frame 380-3 aluminium alloy construction.
2. Mount each wing bracket to metal pole using two ¾" wide stainless steel straps.
3. One wing bracket shall be installed per each sign. Cross brackets are not allowed.

WING BRACKET MOUNTING DETAILS

Project:	STREET NAME SIGN DETAILS
Sheet Name:	STANDARD DRAWING SN-3
Drawn By: AS	
Checked By: JW	
Date: 08/26/2009	
Project#	
3 OF 3	
3	

NO.	BY	DATE	
3	JGD	MES	12/07/20	WATERLINE REVISION
2	JGD	MES	10/01/20	PER CITY COMMENT
1	JGD	MES	09/15/20	PER CITY COMMENT
0	JGD	MES	06/11/20	PER CITY COMMENT
	JGD	MES	05/08/20	ORIGINAL SUBMISSION

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Sheet
20 of 20

Public Street And Storm Plans

18-0251
Sequoia Residential
Lee's Summit, Jackson County, MO

Standard Details

Renaissance Infrastructure Consulting
8345 McGEE STREET, SUITE: 200
KANSAS CITY, MISSOURI 64108
816.800.0950
WWW.RIC-CONSULT.COM
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER

MITCHELL E. SLUTTER PE-2002003418

Dec 07, 2020-3:04pm
Z:\RIC Design\2018\18-0251 Burton Townhomes Lees Summit\Dwg\Street & Storm Plans\18-0251 CDSTDT01.dwg