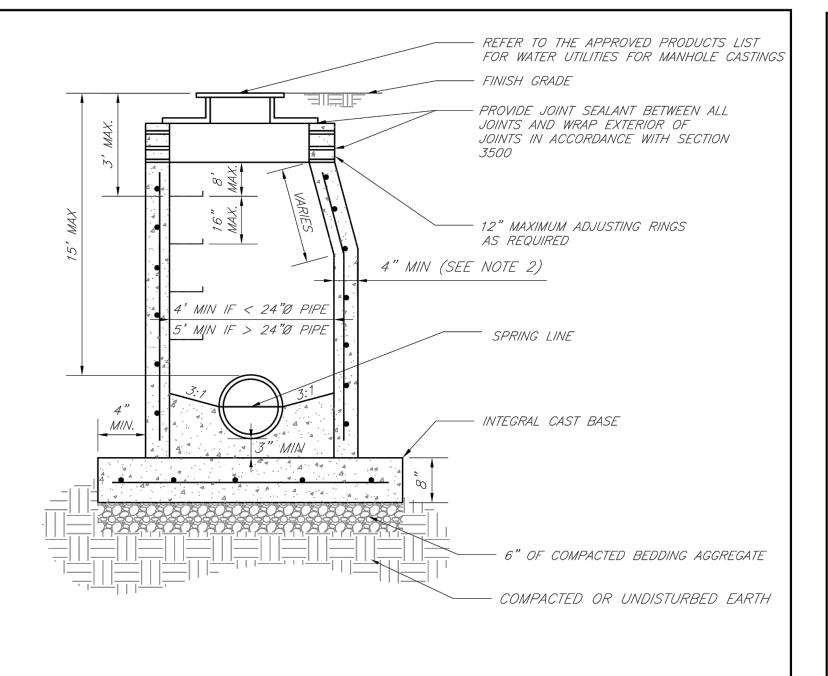


1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.

- 2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY 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.

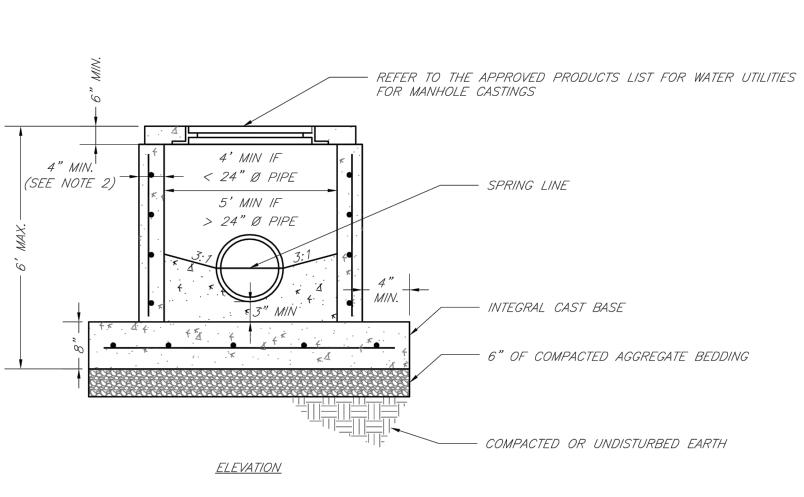
S	LEE'S SUMMIT	Date: 12/13
	LEE 3 30 IVIIVII I	Drawn By: SC
	MISSOURI	Checked By: DL
	PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063	FILE: SAN-1
	BUILDING SEWER STUB AND RISER	Rev: 10/15
	DUILDING SEWER STOD AND RISER	Rev: 12/15

<u>SAN-1</u>



- 1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS. 2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (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 FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION
- 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.

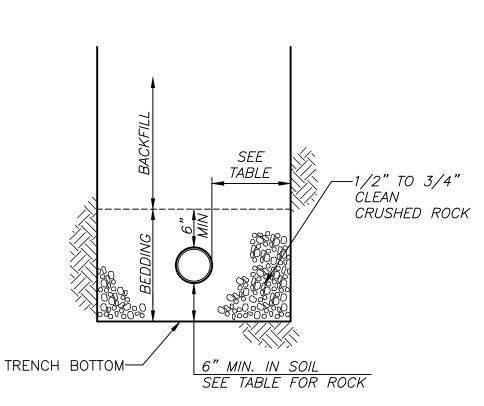
S	LEE'S SUMMIT	Date: 02/13
	FEE 2 20 MINIT	Drawn By: JN
	MISSOURI	Checked By: DL
	PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063	FILE: SAN-2
	STANDARD PRECAST MANHOLE - SANITARY SEWER	Rev: 1/14
	STANDARD FILEAST MANTIOLE - SANITART SEWER	Rev:



- 1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS. 2. A WALL THICKNESS NOT LESS THAN ONE—TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS
- GREATER SHALL BE USED. 3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THEN 14 MILS OF BITUMINOUS COATING.
- 4. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION
- 5. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR MANHOLE GASKET MODELS. 6. PROVIDE STEPS AS SHOWN ON THE APPROVED PRODUCTS LIST FOR MANHOLE DEPTHS GREATER THAN 4'.

		LEE'S SUMMIT	Date: 02/13
		LEE 3 30 MINIT	Drawn By: JN
		MISSOURI	Checked By: DL
		PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063	FILE: SAN-3
		SHALLOW PRECAST MANHOLE - SANITARY SEWER	Rev: 1/14
		SHALLOW PRECAST MAINHOLE - SAINHART SEWER	Rev:

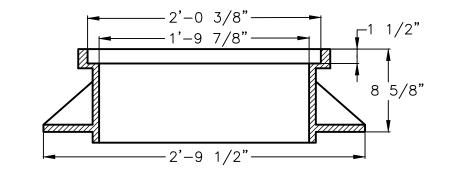
<u>SAN-3</u> <u>SAN-2</u>



TYP PIPE ENVELOPE (PVC)

MINIMUM TRENCH WIDTHS AND PIPE CLEARANCES (IN) PIPE BOTTOM PIPE SIDE CLEARANCE CLEARANCE NOMINAL PIPE TRENCH (SOIL/ROCK) (SOIL/ROCK) DIAMETER WIDTH 22 6/6 6/6 6 8 22 6/6 6/6 10 24 6/6 6/6 12 27 6/6 6/6

- 1. BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 2100 OF THE KCMETRO APWA SPECIFICATIONS.
- 2. BEDDING MATERIAL SHALL BE 1/2" TO 3/4" CLEAN CRUSHED ROCK.
- 3. TRENCH BANKS SHALL BE CUT BACK ON SLOPES IN ACCORDANCE WITH CURRENT OSHA REGULATIONS. SLOPES MUST NOT EXTEND BELOW 7 TOP OF BEDDING.
- 4. ALL PUBLIC SANITARY SEWER MAINS SHALL BE 8" PVC, SDR-26, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 5. ALL PRIVATE SANITARY SEWER LATERALS SHALL BE 4" PVC, SDR-26.
- 6. ALL WATER LINES SHALL HORIZONTALLY CLEAR STORM SEWER STRUCTURES BY 5' AND SANITARY SEWER STRUCTURES BY 10'. WATER MAINS SHALL VERTICALLY CLEAR STORM SEWER STRUCTURES AND SANITARY SEWER STRUCTURES BY 18".
- MAXIMUM TRENCH WIDTH SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATIONS. MAXIMUM TRENCH WIDTH IS DEFINED AS THE HORIZONTAL PLANE MEASURED 6" ABOVE THE TOP OF PIPE, PERPENDICULAR TO THE SEWER ALIGNMENT.

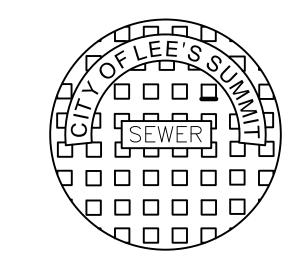


STANDARD 24" MANHOLE FRAME LEE'S SUMMIT PART NO.: LS101A MINIMUM WEIGHT = 250 LB MATCHING COVER: LS101B

<u>NOTE</u>:

REFER TO WATER UTILITIES LIST OF APPROVED MANUFACTURER'S.





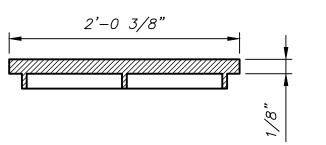
NOT TO SCALE

LEE'S SUMMIT PART NO.: LS101B MINIMUM WEIGHT = 160 LB MATCHING FRAME: LS101A NOTE: PICK HOLES NOT SHOWN.

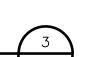
STANDARD 24" MANHOLE COVER

<u>NOTE</u>:

REFER TO WATER UTILITIES LIST OF APPROVED MANUFACTURER'S.



24" MANHOLE COVER





04/20/2017

03/08/2017

MARK

PROJECT NUMBER

PROJECT MANAGER

PROJECT ENGINEER

ORIGINAL ISSUE

**3741 NE TROON DR** 

**AUTHORITY #000856** 

816.347.1100

PROJECT FOR

LEE'S SUMMIT, MO 64064

MO STATE CERTIFICATE OF

LANDROCK

**DEVELOPMENT, LLC** 

**CREEKSIDE AT RAINTREE** 

LOTS 1 THRU 31

LEE'S SUMMIT, MISSOURI

CITY RESUBMITTAL

10028825-276408

MARCH 7, 2017

SIMON SUN

WILL NEDS, E.I.T.

CITY SUBMITTAL

DESCRIPTION

SHEET NAME

**SANITARY SEWER DETAILS** 

SCALE NO SCALE

SHEET NUMBER

01C-CR-SS-05

FILE NAME 01C-CR-SS-05.dwg

PERMIT REVIEW DRAWINGS

NOT TO SCALE

UNDERGROUND PIPE INSTALLATION FOR SANITARY SEWER LINES