



Industrial/Commercial (I/C) Permit Application Submittal Requirements

An Industrial/Commercial Permit Application must be submitted to Four Rivers Sanitation Authority (Four Rivers) for review and approval prior to performing any sanitary sewer plumbing work, which includes, but is not limited to, all direct and indirect connections to the public sanitary sewer system. The current I/C Permit Application review fee is **\$425.00**, which must be paid at the time of submittal. Submittals must include the following items:

1. A Completed & Signed I/C Connection Permit Application

- The I/C Permit Application must be signed/dated by both the Landlord/Property Owner, Tenant/User and applicable Plumbing Contractor (Interior/Exterior) who is registered and bonded with Four Rivers. The signature page must have the signatures of all applicable parties. Digitally scanned copies are acceptable.
- The Plumbing Contractor's signature will serve to acknowledge that they will be fully responsible for adhering to all Four Rivers requirements and that they will agree to inform the Landlord/Tenant/User of all Four Rivers requirements and procedures.

2. Engineered Site Plan

- The Site plan must show and label all parcel(s), all surface features, existing and proposed structures on the site, parking spaces, landscaping, adjacent streets, easements and all other utilities.
- The proposed sanitary and water services must be labeled and shown in their entirety, from the building foundation wall, to the point of connection at the public sanitary sewer main. All sanitary sewer labels must include the service diameter, pipe material, length, slope and rim/invert and riser elevations, where applicable. All external appurtenances must be shown and labeled.
- A four-foot (4') diameter Sampling Manhole must be installed on all Industrial and Commercial services. It must be labeled and shown on the private property portion of the sanitary service, at a location where it will receive all of the building discharge. A minimum of ten (10) pipe diameters of straight pipe must be provided, upstream and downstream of the proposed sampling manhole. The Sampling Manhole must be located in a turf or landscaped area, where there is no possibility of vehicle or pedestrian traffic. If no such area is available, Four Rivers Staff will recommend a location.

3. Engineered Plumbing Drawings

- Submit one (1) complete set of plumbing drawings, including a schematic showing all pipe networks and appurtenances. Note: The drawings must be signed and sealed by a licensed Illinois Architect/Engineer. All manufacturer's technical datasheet/s must be provided for all proposed appurtenances (i.e. grease interceptor, grease trap, oil/water separator, sampling basin, etc).

4. Sampling Manhole Application & Detail

- All Industrial and Commercial sanitary service connections must include the installation of a Sampling Manhole. This applies to all new Industrial and Commercial service lines, as well as all existing Industrial and Commercial services that are not in compliance with current Code. A Sampling Manhole Application must be completed and submitted, and a Four Rivers Sampling Manhole Detail Sheet must be signed, dated and all sections dimensioned by Four Rivers - approved Plumbing Contractor. Only the Four Rivers Sampling Manhole Detail will be accepted.

5. Detailed Wastewater Discharge Calculations

- The I/C Permit Application must include the projected daily average wastewater discharge flows, in gallons per day for the proposed connection, in accordance with the IEPA Title 35 Section 370 Usage Table (where hard usage data cannot be obtained). Fixture count calculations or Water Service Fixture Units (W.S.F.U.) are not be accepted. The projected discharges must be supported with a detailed breakdown from an Illinois licensed Architect/Engineer. The calculations must be signed and sealed on their letterhead.



3501 Kishwaukee Street
Rockford, Illinois 61109
Telephone: 815-387-7555
Engineering Fax: 815-387-7665

Date Received: _____

Receipt No: _____

Received By: _____

Application No: _____

LUC No: _____

NAICS No: _____

PERMIT No: _____

ACCOUNT No: _____

Industrial/Commercial Permit Application For Sewer Connection

(Sections I-III and Supplemental Schedules A & B to be completed by the Applicant)

SECTION I - GENERAL

- A. New facility requiring permit: _____
- B. Address of facility requiring permit: _____
- C. County: _____
- D. Current mailing address: _____
- E. Property code/s: _____
- F. Legal description/Parcel size: _____
- G. Owner/User: _____
- H. Name of person completing this application: _____
Title: _____ Phone No: _____ Email: _____
Company: _____
- I. Potable water source:
Rockford _____ Loves Park _____ North Park _____ Cherry Valley _____
Rockton _____ Village of Winnebago _____ Winnebago County _____
Well _____ Other (specify) _____

J. Flow Metering (please check all that apply):

Water Meter _____ Wastewater Flow Meter _____ Well Meter _____

Lawn Sprinkler Meter _____ Other Credit Meter (describe) _____

Provide the estimated wastewater discharge volume: _____ gallons per day*

***Until the Four Rivers Sanitation Authority receives water meter consumption records from the water provider, the detailed wastewater discharge calculations stated in this application will be used to estimate wastewater treatment bills.**

Connection fees will be calculated using projected flows provided in this Industrial/Commercial form. Supplemental connection (surcharge) fees may be imposed if actual flows (or wastewater pollutant strengths) exceed the projected flows (or wastewater pollutant strengths) pursuant to Title 5 of Four Rivers Code of Ordinances; this includes flow or wastewater pollutant changes due to changes in property use. Surcharge fees shall be calculated annually. Connection fee rates are subject to change pursuant to Four Rivers Board action.

The Four Rivers Sanitation Authority (Four Rivers) bills on metered water; owner may install a credit meter or wastewater flow meter to more accurately measure wastewater discharge for sewer billing purposes. Surcharge fees will be based solely on information available at the time of the surcharge calculation.

K. Number of fixture/s – type/s: _____

L. Number of floor drain/s – type/s: _____

M. Previous Industrial/Commercial User operations address and Four Rivers Account No. (If applicable):

Address/s: _____ Account Number/s: _____

N. TYPE OF WASTEWATER DISCHARGED

_____ Chemicals
_____ Food Processing
_____ Domestic
_____ Grease, Oil
_____ Other (Specify): _____

Is food prepared at this establishment? Yes _____* No _____

***If “Yes”, the User must also complete the Supplemental Schedule B of this application.**

O. METER INFORMATION

Is this facility currently, or will it be, located in a multi-use building? Yes _____ No _____

If yes, will this facility have a separate flow meter to measure its discharge independently from the other tenants in the building? Yes _____ No _____ N/a _____

SECTION II – BUILDING AND SITE PLUMBING PLAN

Provide an engineered, to scale, site drawing showing all existing and proposed site features, required appurtenances, including but not limited to, all utilities/sanitary sewer service connections; sampling manholes, water meters, building footprint(s), north arrow, property lines, etc. The plumbing plan(s) and plumbing schematic(s) must include the exterior service and interior plumbing in its entirety. Required special service features, including but not limited to, grease traps, grease interceptors, oil/water separators, sand catch basins, etc., must be shown on the engineered site drawing and interior plumbing schematic.

SECTION III– CERTIFICATION

I/We have personally examined and are familiar with the information submitted in this application. Moreover, based on our inquiry of those individuals immediately responsible for obtaining the information reported herein, we believe that the submitted information is true, accurate and complete.

As Owner/User, I also understand that should the type of process use as indicated in Supplemental Schedule A, change because of additions, expansions, or deletions, I am to report such changes to the Four Rivers Sanitation Authority – Plant Operations Department at 815-387-7635.

Landlord/Property Owner

Name: _____
Signature: _____
Title: _____
Company: _____
Email: _____
Phone: _____
Date: _____

Interior Plumber/Contractor

Name: _____
Signature: _____
Title: _____
Company: _____
Email: _____
Phone: _____
Date: _____

Tenant/User

Name: _____
Signature: _____
Title: _____
Company: _____
Email: _____
Phone: _____
Date: _____

Exterior Plumber/Contractor

Name: _____
Signature: _____
Title: _____
Company: _____
Email: _____
Phone: _____
Date: _____

SUPPLEMENTAL SCHEDULE A

Please indicate the processes/activities/uses that will occur at the proposed facility by checking all of the applicable following items:

MANUFACTURING

- _____ Apparel & Other Textile Products (Men's & Women's Clothing, Fur Goods, Misc., Fabricated Textile Products)
- _____ Chemical & Allied Products (Industrial Inorganic Chemicals, Plastic Materials & Synthetics, Drugs, Paints & Allied Products, Industrial Organic Chemicals)
- _____ Electrical & Electronic Equipment (Household Appliances, Electric Distributing Equipment, Communication Equipment)
- _____ Fixtures and Furniture
- _____ Food & Kindred Products (Meat Products, Fish Products, Poultry Products, Dairy Products, Bakery Products, Beverages, Dog Food)
- _____ Leather & Leather Products
- _____ Lumber & Wood Products (Wood Containers, Wood Kitchen Cabinets, Sawmills and Planing Mills)
- _____ Machinery (Engines & Turbines, Farm & Garden Machinery, Construction and Related Machinery, Metalworking Machinery, Special Industry Machinery, Office & Computing Machines)
- _____ Miscellaneous Manufacturing Industries (Jewelry, Silverware, Musical Instruments, Toys, and Sporting Goods)
- _____ Fabricated Metal Products (Metal Cans & Shipping Containers, Cutlery, Hand Tools & Hardware, Screw Machine Products, Bolts, Etc., Metal Forging and Stamping)
- _____ Primary Metal Industries (Iron & Steel Foundries, Primary Nonferrous Metals, Secondary Nonferrous Metals, Nonferrous Rolling & Drawing, Nonferrous Foundries)
- _____ Paper & Allied Products (Pulp Mills, Paper Mills, Paperboard Mills, Converted Paper Products, Paperboard Containers & Boxes)
- _____ Printing & Publishing (Books, Commercial Printing, Greeting Card Publishing)
- _____ Rubber & Misc. Plastic Products
- _____ Stone, Clay & Glass Products (Flat Glass, Glassware, Cement Hydraulic, Pottery & Related Products.
- _____ Textile Mill Products
- _____ Truck Terminal with Vehicular Wash
- _____ Other (Specify): _____

COMMERCIAL

Wholesale Trade:

- _____ Apparel, Piece Goods & Notions
- _____ Groceries & Related Products
- _____ Beverages
- _____ Hardware, Plumbing & Heating Equipment
- _____ Drugs
- _____ Lumber & Construction Materials
- _____ Electrical Goods
- _____ Paper Products
- _____ Furniture & Home Furnishings
- _____ Sporting Goods, Toys & Hobby Goods
- _____ Other (Specify): _____

	Apparel & Accessory Stores
	Furniture & Home Furnishings
	Auto & Home Supplies
	Gasoline Service Stations
	Building Materials & Garden Supplies
	General Merchandise Stores
	Liquor Stores
	Eating & Drinking Places
	Gaming Parlors/Bars
	Food Stores
	New & Used Car Dealers
	Other (Specify): _____

_____ Clinics
 _____ Educational Facilities
 _____ Health Services (Doctors, Dental, Hospitals, Nursing, Etc.)
 _____ Retirement Centers
 _____ Other (Specify): _____

_____	Banks
_____	Credit Agencies Other Than Bank
_____	Insurance Services
_____	Real Estate
_____	Securities, Commodity Brokers & Services
_____	Other (Specify): _____

_____ Advertising	_____ Diaper Service
_____ Amusement & Recreation Service	_____ Auto Repair, Service & Garage
_____ Hotels & Other Lodging Places	_____ Legal Service
_____ Barber Shop	_____ Misc. Repair (Watches, Clocks,
_____ Beauty Shop	_____ Electrical)
_____ Car Wash W/New Water	_____ Mobile Home Park/RV Park (Transient)
_____ Car Wash W/Recycled Water	_____ Photographic Studio
_____ Club Organization	_____ Veterinary Service
_____ Coin Operated Laundry	
_____ Other (Specify): _____	

SUPPLEMENTAL SCHEDULE B INTERCEPTORS AND SEPARATORS

A. Grease Interceptor

The use of any property serviced by a sanitary sewer shall install separators, as necessary, for the proper handling of liquid wastes containing grease, sand, oil, or any other materials that may violate the provisions of Article 2, Section 1 of the Code of Ordinances. Such separators shall be installed by the User and shall be accessible for Four Rivers maintenance purposes.

1. Exterior Grease Interceptors

Any new or altered food service establishment that introduces fats, oils, or greases (FOG) into the drainage and sewage system in quantities large enough to cause line blockages or hinder the sewage treatment process, shall install a grease interceptor outside of the building (1,000 gallons minimum). Multi-Tenant Strip Malls shall install an exterior grease interceptor, sized in accordance with Title 2., Article II., Section 8.A.5. In no case will any grease interceptor for a Multi-Tenant Strip Mall be less than 1,500 gallons.

2. Interior Grease Traps

Small volume food service establishments, which have limited menus, minimum dishwashing, and/or minimal seating, shall provide a grease trap built into the wastewater piping in close proximity to the grease producing fixture(s). The location and capacity of the grease trap(s) shall be approved by the Director of Plant Operations. The minimum grease trap capacity may be determined using the Equipment Checklist calculation below:

Equipment Checklist

Fixture dimensions (Cu. Ft.): Length (in.) x Depth (in.) x Width (in.) = Cu. Ft.
1,728

Fixture 1: _____

Fixture 2: _____

Fixture 3: _____

Fixture 4: _____

Total Capacity (ft³) _____ x 7.48 gal/ft³ x [0.50] = _____ gallons.

3. Design Criteria

- a. Interior grease traps and exterior grease interceptors shall be constructed in accordance with Four Rivers Standards.
- b. Grease traps and interceptors shall have a minimum of two (2) compartments with fittings designed for grease retention.

- c. There shall be an adequate number of manholes on an exterior grease interceptor to provide access for cleaning all areas of the interceptor. Gas-tight manhole covers shall be provided with a minimum diameter of twenty-four inches (24").
- d. Grease interceptors shall have two (2) compartments. It is recommended that the inlet compartment be two-thirds (2/3) the total capacity of the interceptor with a minimum liquid volume of 666 gallons. The outlet compartment shall have a minimum capacity of one-third (1/3) the total capacity of the interceptor.
- e. The inlet and outlet shall have a baffle tee or similar flow device with a minimum cross-sectional area equal to the cross-sectional area of the inlet. Each baffle shall extend from at least four inches (4") above the liquid level to within at least twelve inches (12") of the inside floor of the interceptor.
- f. Adequate partitions or baffles of durable material shall be constructed between compartments of the grease interceptor and shall extend at least six inches (6") above the liquid level. Flow from the inlet compartment to outlet compartment shall be through a quarter bend, or similar device equivalent in cross-sectional area to the inlet into the interceptor and shall extend downward to within twelve inches (12") of the inside floor. *Wooden baffles are prohibited.*

4. Total capacity (in gallons) of grease the Trap/Interceptor/s: _____

B. Gasoline, Oil and Flammable Liquid Interceptors

- 1. Commercial Vehicle Repair Garages, Gasoline Stations with Grease Racks or Pits and Oil Change Facilities.

Any Commercial vehicle repair garage, gasoline station with a grease rack or pit and oil change facility shall be provided with floor drains or a trench drain connected to a gas and oil/water separator.

The minimum size of the interceptor shall be six (6) cubic feet (45-gallons) for the first 500 square feet of floor area plus one cubic foot per each additional 500 square feet drained to the interceptor.

- 2. Commercial and Residential Vehicle Storage:

Commercial and Residential vehicle storage areas greater than 1,000 square feet shall comply with the requirements of Section B-3 below.

- 3. Other Facilities:

All facilities, other than those discussed in Section B-1 above that generate fuel, oil or flammable waste shall meet one of the following requirements:

- a. Provide floor or trench drains connected to a gas and oil/water interceptor.
- b. Provide an alternative system approved by the IDPH (i.e., an oil reclamation system or containment area).

The minimum size interceptor for these facilities shall be six (6) cubic feet (45 gallons) for the first 3,000 gross square feet plus 1 cubic foot per each additional 1,000 square feet to be drained to the interceptor.

C. Catch Basins

Sand catch basins or similar interceptors for heavy solids shall be so designed and installed to be accessible for cleaning and shall be sized to meet the following criterion:

1. Motor Vehicle Wash Racks.

All motor vehicle wash racks, drainage shall discharge into a water-tight catch basin at least 36 inches in diameter, or three (3) feet by two and one half (2-1/2) feet (rectangular shape). The bottom shall not be less than 27 inches below the invert of the outlet pipe.

2. Commercial Laundries

Commercial laundries shall be equipped with an interceptor/strainer having a removable wire basket or similar device that will prevent any unwanted material from entering the Four Rivers' sanitary sewer collection system.

D. Approval

Work must be completed in accordance with all applicable State, County and Local Plumbing Codes. All installed equipment must meet all aforementioned and Public Health Code requirements.

SECTION IV (to be completed by Four Rivers Staff only)

- A. Permits Required
_____ IEPA Construction/Operation Permit
_____ RRWRD Industrial Wastewater Discharge Permit
_____ Connection Permit from Engineering Department
- B. Equipment Installation
_____ Gas and Oil Separator
_____ Grease Interceptor (_____ Capacity in gallons)
_____ Grease Trap (_____ Capacity in gallons)
_____ Pretreatment System
_____ Sand Catch Basin
_____ 4' Diameter Sampling Manhole
_____ Alternate Sampling Basin (Type _____)
_____ Monitoring Manhole W/Flume
_____ 4' diameter _____ 5' diameter
_____ Enhanced Monitoring Manhole (5' diameter)
(with electrical power, flume and flow meter)
_____ Well Water Meter
_____ Wastewater Flow Meter
_____ Credit Water Meters
_____ Other (Specify): _____
- C. Specific instructions given by Supporting Services for connections, manholes, etc: _____

- D. This operation is similar to _____ Account No. _____
(This example was used to forecast flows and charges.)
- E. Has the downstream sewer been accepted for permits? Yes _____ No _____
The downstream sewer is: _____
- F. General
_____ IEPA Class K Operator _____ Inspection by I.W.S.
- G. Total Fee Owed: _____
Plant Buy In (PBI) fee apply? Y N _____ Plant Buy In (PBI) fee credit apply? Y N _____
Basin Fee apply? Y N (Name): _____ Basin Fee credit apply? Y N _____
Payback Fee apply? Y N (Name): _____
Credit applied (Account name/Address): _____
Calculated Flow and LUC Credit: _____
PBI ERUs: _____ Less Credit PBI ERUs: _____ Chargeable PBI ERUs: _____
Basin ERUs: _____ Less Credit Basin ERUs: _____ Chargeable Basin ERUs: _____
Calculation of Charges:
PBI: _____ Basin: _____ Payback: _____

Four Rivers Sanitation Authority Signatures:

CS Maintenance Div. Manager: _____ *Approval Date:* _____

Assistant Director of Engineering: _____ *Approval Date:* _____

Director of Plant Operations: _____ *Approval Date:* _____

Director of Engineering: _____ *Approval Date:* _____

Comments: _____

H. Standard Terms and Conditions

_____ A Sampling Manhole (5' minimum depth) in accordance with Four Rivers Standards.

_____ Requires a Private Property Plumbing Contractor, registered and bonded with Four Rivers, to schedule inspections with the Engineering Department for service connection at the defined point of connection and any required devices.

_____ Requires a Public Property Plumbing Contractor, registered and bonded with Four Rivers, to schedule inspections of the new service cut-in and the service extension to the defined point of connection.

_____ Provide detail drawings of _____ (device/s).

_____ Provide signed Multi-Tenant Developer Agreement for multiple tenant buildings without food service establishments.

_____ Provide detailed flow calculations signed and stamped by a Licensed Illinois Architect or Engineer) to support the estimated wastewater discharge stated on the I/C Application.

_____ An Industrial/Commercial Permit Application must be submitted for any new tenant that has a wastewater discharge of non-domestic characteristics.

_____ All deficiencies and required documentation must be satisfactorily completed and received by Four Rivers and the Service Connection Permit issued within sixty (60) days of the initial Industrial/Commercial Connection Review Letter.

_____ After the sanitary service connection (including all appurtenances) inspection has been completed and all plumbing fixtures have been installed, please contact Brett Ladd - Wastewater Pretreatment Coordinator at 815-387-7633, to obtain the required General Industrial/Commercial Wastewater Discharge Permit for Food Service Establishment

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Application for Sampling/Monitoring Manhole Installation

Section I - General Information

Facility Name: _____

Facility Address: _____

Address of Proposed Manhole: _____

Facility Owner/Contact Person: _____ Telephone #: _____

Plumber/Contractor: _____ Telephone #: _____

Date: _____

Section II - Manhole Detail Drawing (Contact the Engineering Permit Clerk for Requirements).

1. Indicate type of manhole:

☐ Sampling Manhole ☐ Monitoring Manhole

☐ Enhanced Monitoring Manhole ☐ Alternate Sampling Device (Variance Request Required)

2. Manhole Detail drawing attached ☐ Yes ☐ No

Section III - Site Plan

1. ☐ New Industrial/Commercial User ☐ Existing Industrial/Commercial User

2. Site Plan Attached: ☐ Yes ☐ No

Section IV - Flow Meter Detail

1. Sanitary sewer service size _____ inches

2. Sanitary sewer service slope _____ percent

3. Expected flow volume:

Daily average flow _____ (GPD); Daily max flow _____ (GPD)

4. Primary device type and size:

- A. Palmer Bowlus Flume _____, size _____ inches
B. Parshall Flume _____, size _____ inches
C. Weir, Type _____, size _____ inches
D. Leopold - Lagco Flume _____, size _____ inches
E. Other _____, size _____ inches

Note: Catalog sheet/s for primary device/s must be submitted

5. Flow Meter Type:

- A. Float _____ Mfg _____
B. Electrical _____ Mfg _____
C. Ultrasonic _____ Mfg _____
D. Bubbler _____ Mfg _____
E. Submerged Pressure
Transducer _____ Mfg _____
F. Other _____ Mfg _____

Section V - Installation

1. What is the estimated date of installation? _____

(Four Rivers Use Only)

Section VI - Comments/Requirements

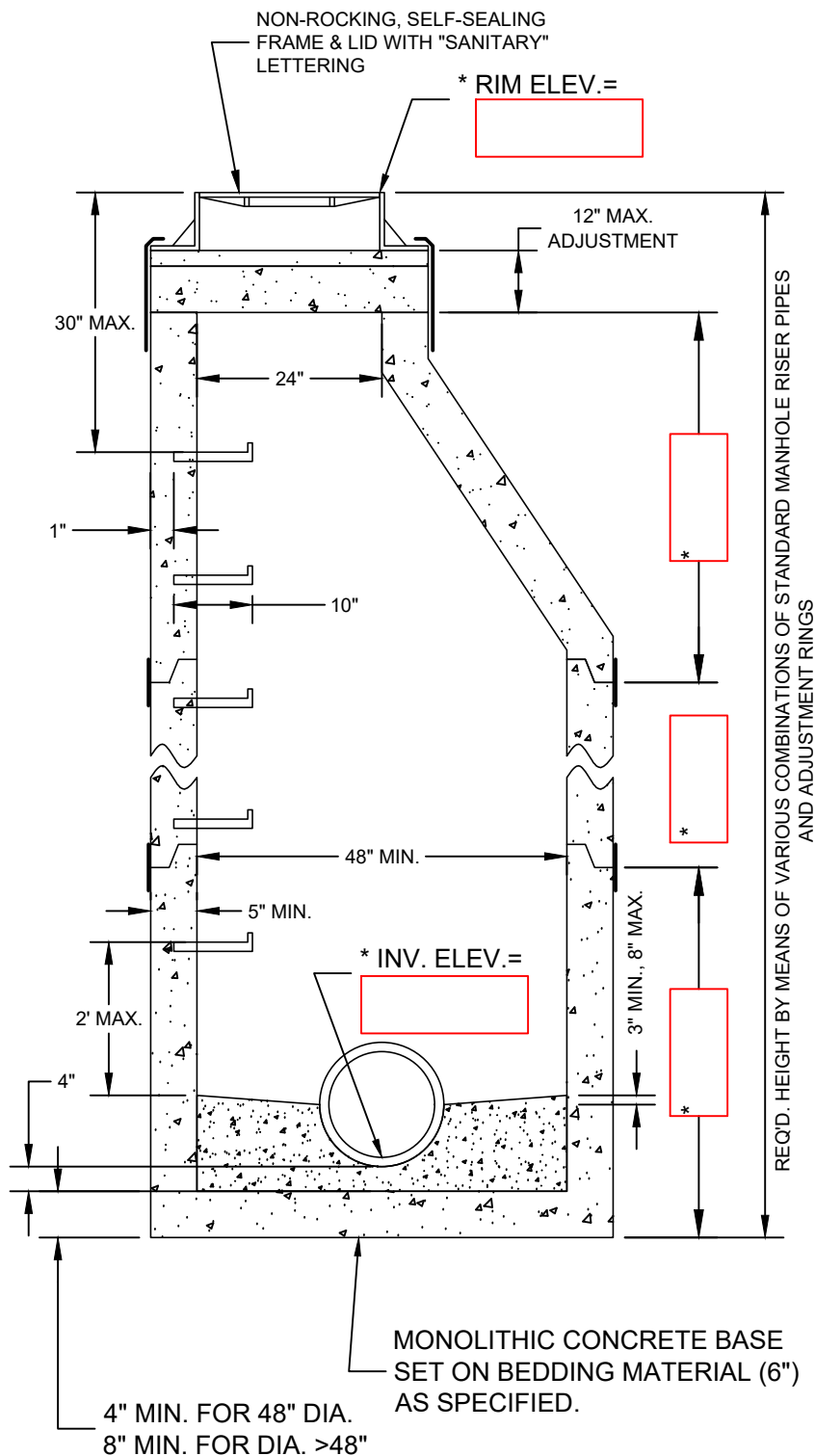
Four Rivers Sanitation Authority Staff Signatures:

CS Maintenance Div. Manager: _____ Approval Date: _____

Assistant Director of Engineering: _____ Approval Date: _____

Director of Plant Operations: _____ Approval Date: _____

Director of Engineering: _____ Approval Date: _____



NOTES:

1. ALL BARREL JOINTS SHALL BE SEALED WITH $3\frac{1}{2}$ " x $\frac{3}{8}$ " PRE-FORMED RUBBER BUTYL JOINT SEALANT ON THE LOWER SHIPLAP.
2. ALL BARREL JOINTS SHALL BE SEALED WITH AN EXTERNAL BARREL SEAL CENTERED ON THE JOINT (MAR MAC MACWRAP, OR APPROVED EQUAL)
3. MANHOLE STRUCTURE SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE MANHOLE RISER SECTIONS IN ACCORDANCE WITH A.S.T.M. C478-90 OR THE LATEST DESIGNATION.
4. PRECAST FLAT TOPS ARE NOT APPROVED FOR USE.
5. SAMPLING AND PRIVATE MANHOLE LIDS SHALL BE NON-ROCKING, SELF-SEALING, AND SHALL HAVE "SANITARY" LETTERING.
6. ALL ADJUSTMENT RING JOINTS SHALL BE SEALED ACCORDING TO MANUFACTURERS INSTRUCTIONS, RESPECTIVE OF THE TYPE OF ADJUSTMENT RING USED.
7. ONLY ONE 2" RING ALLOWED PER MANHOLE. MAXIMUM ADJUSTMENT IS 12". MINIMUM ADJUSTMENT IS 4" UNLESS OFF-ROAD OR IN CURB & GUTTER ROADWAY.
8. PIPE CONNECTIONS TO NEW MANHOLES SHALL BE MADE BY MEANS OF EITHER RUBBER GASKET SEAL (A-LOK OR APPROVED EQUAL) CONFORMING TO ASTM F-477 CAST INTEGRALLY IN MANHOLE WALL, OR RUBBER GASKET SEAL AND STAINLESS STEEL CLAMP (PSX SERIES SIX OR APPROVED EQUAL) CONFORMING TO ASTM C-923. FOR PIPE CONNECTIONS WITH A DEPTH OF >20 FT., A RUBBER GASKET SEAL (A-LOK OR APPROVED EQUAL) CONFORMING TO ASTM F-477 CAST INTEGRALLY IN MANHOLE WALL SHALL BE USED.
9. PIPE CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY MEANS OF CORE DRILLING MANHOLE WALL AND INSTALLING RUBBER GASKET SEAL AND STAINLESS STEEL CLAMP (PSX SERIES SIX OR APPROVED EQUAL) CONFORMING TO ASTM C-923.
10. THE MAXIMUM DISTANCE FROM ANY INLET PIPE INVERT TO THE OUTLET PIPE INVERT SHALL BE 2'. DISTANCES GREATER THAN 2' WILL REQUIRE AN INSIDE DROP CONNECTION PER 'INSIDE DROP MANHOLE DETAIL'.
11. MANHOLE STEPS SHALL BE NEENAH R-1982-F OR M.A. IND. PS-1 OR APPROVED EQUAL INSTALLED AT 16" CENTERS, AND SHALL BE ORIENTED ABOVE THE OUTLET PIPE UNLESS OTHERWISE SPECIFIED.
12. THE MAXIMUM DISTANCE FROM ANY INLET PIPE INVERT TO THE OUTLET PIPE INVERT SHALL BE 2'.
13. THE MAX. DROP FROM THE INVERT OF ANY PIPE TO THE CONCRETE CHANNEL UNDER THAT PIPE SHALL BE 8".