

# COUNTY OF SUFFOLK



**STEVEN BELLONE**  
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

**GREGSON H. PIGOTT, M.D., M.P.H.**  
Commissioner

January 20, 2023

Mr. Bennette D. Burks, P.E.  
3-Engineering, LLC  
Sent via e-mail: [burks@3-eng.com](mailto:burks@3-eng.com)



**Re: Fuji Clean CEN 10 Traffic Bearing Design and Method**

Dear Mr. Burks,

The Suffolk County Department of Health Services, Division of Environmental Quality, Office of Ecology has received and reviewed the design drawings and installation methods prepared by FujiClean USA, LLC, with your signature and seal and dated 1/20/2023 for the "12' DIA PRECAST DRAINAGE RING WITH FUJI CLEAN CEN10 AND H-20 CAST IRON LIDS AND RINGS FOR SUFFOLK COUNTY INSTALLATIONS".

Based on the information provided, the Department of Health Services approves the use of this design as the means and methods for allowing the Fuji Clean model CEN 10 to be installed in traffic areas. A copy of this letter and the signed and sealed design will remain on file in the Office of Wastewater Management for future reference. Additionally, the approved design will be incorporated into the Fuji Clean Vendor Guidance Document, maintained by the Office of Ecology.

If you have any questions, please do not hesitate to contact me at (631) 852-5811.

Sincerely,

Ken Zegel, P.E.  
Principal Public Health Engineer  
Chief, Office of Ecology

cc: Kevin McGowin (Advanced Wastewater Solutions)  
Bryan McGowin (Advanced Wastewater Solutions)  
Scott Samuelson (Fuji Clean USA)  
Mike Dunn (Fuji Clean USA)



DIVISION OF ENVIRONMENTAL QUALITY  
Office of Ecology  
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P:(631) 852-5750 F:(631) 852-5812

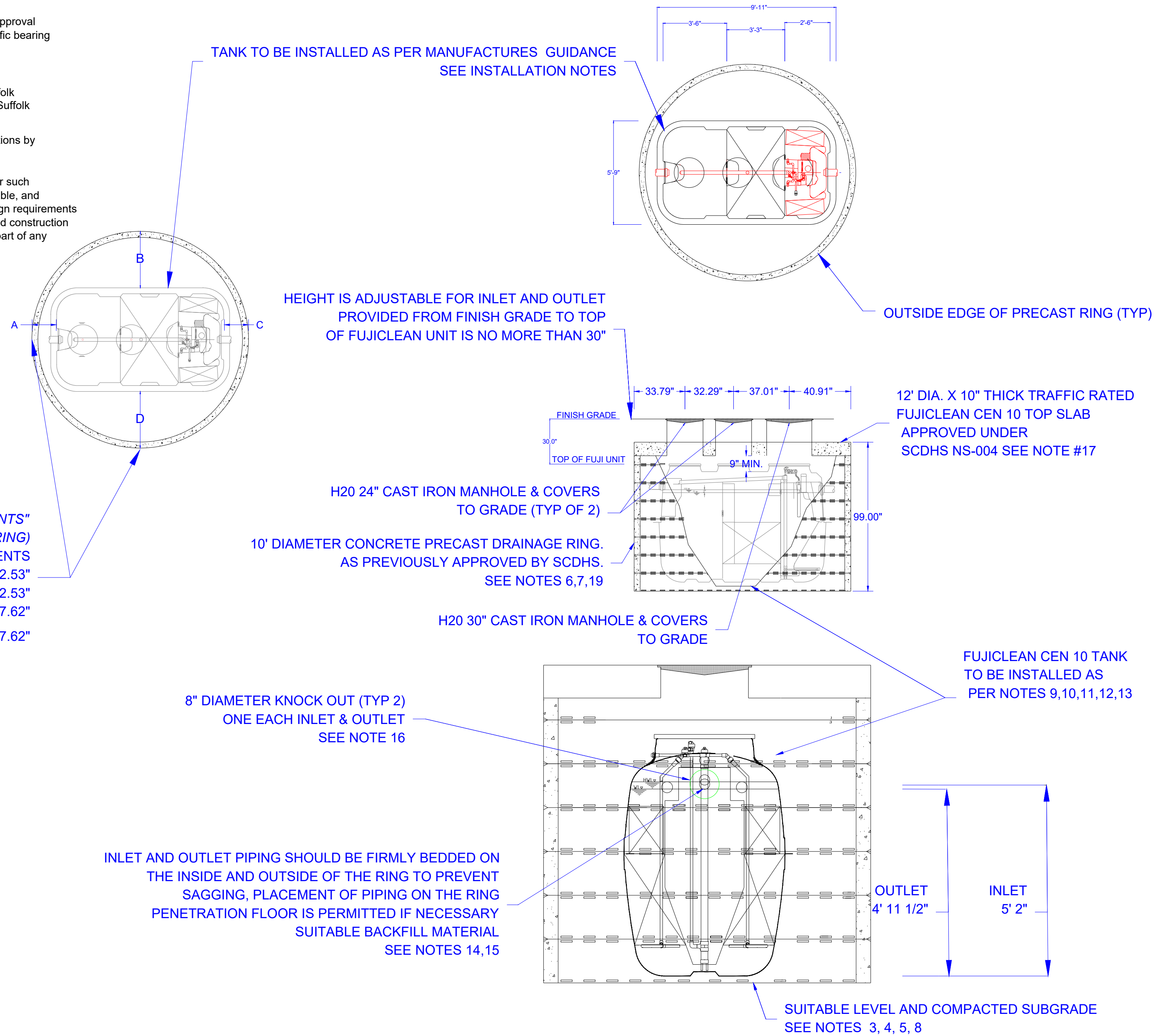


**Installation Guidance FujiClean units with HS20 Loading Precast Rings & Lids**

1. Make sure that the ring diameter ordered are the proper sizing for the FujiClean unit being installed. CEN 5 & CEN 7 units utilize 10-ft diameter rings as a minimum, CEN 10 units utilize 12-ft rings at a minimum. Additionally, make sure that the rings and covers are SCDHS approved for your project.
2. The excavation for the sidewalls/perimeter should be an over-dig of the overall ring diameter by a minimum of 18 inches and not more than 36 inches, soil and site conditions being favorable. If the engineered designed and approved plan call for more, or site conditions warrant a larger excavation then such situations shall take precedent.
3. Excavation depth should be a minimum of 6 inches additional from top of ring covers at final finish grade, to bottom of overall depth and no more than 12 inches. This is provided suitable stable ground is found at such depths. If the engineered designed and approved plan calls for more, or site conditions warrant a deeper excavation then such situations shall take precedent. The final maximum distance from finished grade to the top of the FujiClean unit is 2.5 feet below land surface, as required in the SCDHS construction standards.
4. Suitable shoring or other approved excavation stabilization methods shall be followed to always ensure the safety of all workers and jobsite personnel, especially in such excavation activities.
5. A compacted base material shall be used for leveling and readying the excavation for the placement of the first precast ring. Compaction should be utilized and leveling should be within ¼-inch overall in all directions. Suitable materials can be but are not limited to sand, screenings, suitable NYSDOT stone materials, native bank run, or other compactable materials as deemed appropriate by the site-specific design engineer. Compaction should be at least to an 85% proctor density on up to 95% if achievable, and should be by mechanical means such as Rammex, Viberplate, Jumping Jack Tamper, Hoe Ram, or other suitable acceptable method.
6. The base course ring shall be situated in a level position not deviating more than ¼-inch in any direction once final placement has been established. Ring positioning is critical as placement of the FujiClean unit will depend upon proper positioning. It is recommended that any critical measurements or final inlet and outlet positions be carefully considered before placement in the excavation of the first ring.
7. Additional rings can be stacked until final height has been achieved but prior to setting of any lids or covers. The use of butyl mastic sealant is not required between layers but can be helpful to seal layers together, this is at the installer's discretion or engineers' direction and maybe called for on the approved design. It is recommended that all rings be set in place prior to placement of the Fuji Clean unit to minimize the likelihood of any damage to the unit but this is entirely under the installer's discretion to do so.
8. Once rings are set, any bedding material for the selected FujiClean unit can be placed and compacted, measurements should be checked, and the base should not be deviating more than 1/8-inch in any direction. Compaction should be at least to an 85% proctor density on up to 95% if achievable, and should be by mechanical means such as Rammex, Viberplate, Jumping Jack Tamper, Hoe Ram, or other suitable acceptable method. Suitable materials can be but are not limited to sand, screenings, suitable NYSDOT stone materials, native bank run, or other compactable materials as deemed appropriate by the site-specific design engineer.
9. Placement of the FujiClean unit within the rings should be done carefully so as not to rub the unit on the inside walls of the concrete rings. This should be done by suitable lifting means that utilizes the (4) lifting lugs on the Fuji Clean unit, that lifts and sets the unit level to avoid any damage.
10. Placement and orientation of the unit is critical, inlet and outlet as well as overall unit height are all set at this time and should be checked at various times throughout the process from here on to ensure no movement of the unit that will affect final installation hook ups. The inlet/outlet pipes shall be inserted through 8-inch diameter knockouts in the sidewall of the precast ring. The inlet and outlet piping should be firmly bedded on the inside and outside of the ring to prevent sagging. Placement of piping on the ring penetration floor is permitted if necessary. If inlet/outlet inverts and/or the grade depicted on engineered plans vary from conditions on site, installer will adjust the height of the tank accordingly to ensure the FujiClean inlet/outlet heights are correct and match up with the precast rings and waste line as required. Installer must ensure that FujiClean unit is level and centered within the precast rings.
11. Water should be introduced into the unit in a manner consistent with the FujiClean Installation manual to a depth of approximately 12 inches in all three compartments. This will serve as to set the unit in place and detect any defect should one have occurred during transport or handling.
12. After the unit has been set and settled and no problems encountered, we encourage that a good check of orientation and measurements be once again obtained and verified.
13. Now the backfilling process can begin, make sure that the lids are on the FujiClean unit while any materials are being handled overhead, they will need to be periodically removed and replaced as the unit is filled with water to match backfill levels.
14. The backfilling process involves three separate actions: (1) filling the FujiClean unit with water; (2) backfilling inside of the ring; and (3) backfilling outside of the ring. It is best if all three are accomplished in unison. We recommend lifts of 12 inches and no more than 16 inches, in this way appropriate compaction can be achieved. The preferred method is to place via machine and hand level via shovel the material first around the unit inside the ring, then place a similar level outside the ring, and then fill the tank to the same level with water. After all the levels are achieved compaction should take place. Care and discretion must be observed inside the ring and around the FujiClean unit so as not to disturb the unit's height or orientation or cause damage to the unit. Approved suitable backfill materials should be used, again inside the ring we do not want any materials that might damage the unit but will supply adequate stabilization for the unit inside the ring. Heavy compaction is not required inside the ring, but installer must ensure good stabilization so the unit will not move or shift throughout its lifespan. Outside the ring good proctor density of about 85-95% should be the goal so that traffic will not affect the rings and so no settlement will occur. Outside the ring suitable materials can be but are not limited to sand, screenings, suitable NYSDOT stone materials, native bank run, or other compactable materials as

- deemed appropriate by the site-specific design engineer. Outside the rings compaction methods should be by mechanical means such as Rammex, Viberplate, Jumping Jack Tamper, Hoe Ram, or other suitable acceptable method.
15. The backfilling process should continue in this manner until operational mechanical levels are obtained for the inlet, outlet, airline and float electrical line. At this point all piping and mechanical should be hooked into the FujiClean unit and tested & inspected prior to any more backfilling. Doing so ensures proper operation of the FujiClean unit and will avoid any future issues after installation when the system components are not so readily accessible.
  16. Upon successful installation, testing & inspection, backfilling and compaction can again commence until desired levels are achieved in accordance with the plan as designed, approved, and permitted. Extra care should be utilized when filling or compacting around pipes or conduit so as not to damage them in anyway.
  17. Finally, if there are no issues with the FujiClean unit the precast cover can be set on the rings and finish height verified as correct.
  18. Final verification of all heights inside and outside the rings can be obtained and the project proceed to finish and final grading.
  19. All precast concrete structures without an indicated SCDHS New Structure (NS) approval number shall be as previously approved by SCDHS, SCDPW, or NYSDOT for traffic bearing standards.
  20. See SCDHSW Approval NS-004 for top slab structural design.
  21. These guidelines were developed in coordination with the SCDHS and reflect Suffolk County policies and regulations in effect of the date of sealing. Amendments to Suffolk County policies and regulations shall take precedence.
  22. The unit is not be installed in groundwater w/o the appropriate design and calculations by the project specific engineer in accordance with SCDHS requirements.

It should be once again noted that this is FujiClean USA's best recommended practice for such installations. Conditions and procedures may vary due to site conditions, materials available, and acceptable installation & safety practices already approved or in place. Site-specific design requirements determined by the projects design engineer and/or SCDHS requirements for the approved construction plans would supersede our recommendations and should be sought and considered as part of any installation.



**"TANK POSITIONING MEASUREMENTS"  
(MEASUREMENTS ARE FROM OUTSIDE OF PRECAST RING)  
INSTALLATION MEASUREMENTS**  
**"A" OUTSIDE TO TANK FACE 12.53"**  
**"C" OUTSIDE TO TANK FACE 12.53"**  
**"B" OUTSIDE TO TANK EDGE 37.62"**  
**"D" OUTSIDE TO TANK EDGE 37.62"**

**THIS DOCUMENT HAS BEEN PREPARED BY**

**FUJICLEAN USA, LLC  
41 GREENWOOD ROAD, SUITE 2  
BRUNSWICK, ME 04011**

**FOR THE EXPRESSED USE OF DISTRIBUTORS, DEALERS, DESIGNERS, AND INSTALLERS OF THE FUJICLEAN CEN-SERIES WASTEWATER TREATMENT PRODUCTS IN SUFFOLK COUNTY, NEW YORK. THIS DOCUMENT IS NOT VALID FOR ANY OTHER USE.**



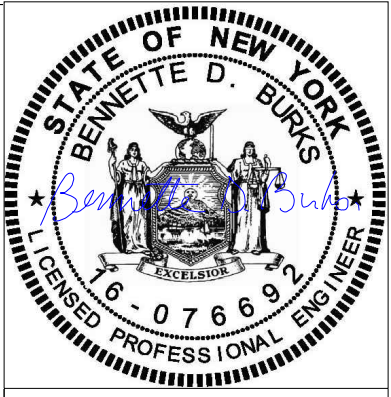
ACCEPTED BY THE SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES  
(DEPARTMENT) BASED ON INFORMATION PROVIDED BY ENGINEER.

The Department has reviewed this submittal for completeness and is hereby approved for use in Suffolk County. This approval is solely for the model(s), units(s) and/or structure(s) included in the engineering design drawings and calculations provided by the licensed design professional. Any changes or modifications to the approved design must be submitted for review and approval by the Department prior to its use in Suffolk County. The Department is not responsible for any errors, omissions, failures, construction defects or installation errors that may occur due to design professional, manufacturer, distributor or installer oversight or negligence.

**1/20/2023**

APPROVAL DATE

**Ken Zegel, P.E.**



IT IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE STATE EDUCATION LAW FOR ANY PERSON TO ALTER THIS DOCUMENT.

DATE: 01/20/2023

DRAWN BY: MD  
REVIEWED BY: BDB

REVISIONS:  
ORIGINAL

DATE: 01/20/2023  
REVISE CALLOUTS AND TITLE BLOCK

**12" DIA PRECAST DRAINAGE RING WITH FUJI CLEAN  
CEN10 AND H-20 CAST IRON LIDS AND RINGS FOR  
SUFFOLK COUNTY INSTALLATIONS**

