



SUPER COVER™

COMPOSITE MANHOLE COVERS

A Solution to Your Sanitary Sewer Overflow Problems



Sanitary Sewer Overflow Series

Detail Sheet Submittal

SuperCover
P.O. Box 8084
Weslaco, Texas 78596
(956) 277-0354

WHAT IS A SUPERCOVER?

- ✓ SuperCover is a non-metallic, fiber reinforced composite manhole cover capable of withstanding traffic loading requirements that meet or exceed HS-20 & HS-25 rating at an economical value for all municipal budgets and projects.
- ✓ SuperCover is the solution to inflow of surface water and sanitary sewer overflow (SSO) of wastewater from manholes; designed by wastewater industry professionals to be the ultimate solution to inflow and exfiltration needs.
- ✓ SuperCover has been tried and tested through third party lab testing, university evaluation and implemented in municipalities across Texas.
- ✓ SuperCover has TXDoT approval for being placed outside the roadway/clear zone and within the roadway/clear zone.
- ✓ SuperCover is designed and distributed in Texas; and manufactured at a facility that is ISO certified by IQNet to conform to ISO 9000 and ISO 1400 standards.

Want to know more about SuperCover?

Follow the detail sheet submittal on the next pages for all there is to uncover about SuperCover



Sanitary Sewer Overflow Series

Submittal & Detail Sheet

Revision: December, 2021

Purpose: To provide leading inflow prevention technology in a manhole ring & cover with the capability to solve most municipal sanitary sewer overflow problems.

Description:

SuperCover is a polymer matrix, non-metallic, fiber reinforced, composite, manhole cover; capable of withstanding traffic loading requirements that meet or exceed H-20 & H-25 rating. SuperCover offers features such as: self-aligning design, antirotating construction, secure bolting into manhole, and compatibility with inner dish for maximum inflow and SSO prevention.

SuperCover has been approved for use by Texas Department of Transportation (TXDoT).

Specification:

SuperCover is offered in two sizes that are most common in municipal manholes; 24" and 30" clear opening. These two openings accommodate for 95% of requirements for new and/or existing construction today. OSHA has adopted 30" clear opening for human entry confined spaces. SuperCover fully meets and complies with the requirements for OSHA for entry confined spaces. Supercover non-hinged SSO series ring and covers are bolted down into place with double gasket and seal for maximum locking, inflow and SSO protection. All SuperCover units are compatible with our fully composite SureSeal inner dish and double gasketed for complete inflow and SSO prevention.

Strength & Durability:

SuperCover has been tested by Trenchless Technology Center at Louisiana Tech University and signed off by a US registered licensed professional engineer. The US Department of Transportation requires manhole ring and covers to be tested for load ratings under AASHTO M-306-10. In order to be classified H-20 Heavy Duty Product must withstand 16,000 lbs. for 60 seconds without cracking or breaking. A 2.5 times safety factor is required which brings the total proof load to 40,000 lbs. SuperCover was able to average 76,000lbs total force weight before initial signs of cracking or destruction. SuperCover is able to perform 60,000lbs over the requirement for HS-20 & HS-25 rating; and 0.0 gallons per hour in leak testing.

Installation:

SuperCover is installed using conventional methods as classic manhole covers. Only SuperCover approved tooling should be used when assembling and disassembling the ring and cover. Supercover bolts must only be hand tightened to fasten in place cover to ring.

The bottom of the composite manhole cover shall sit flush with the top of the manhole cone or the adjustment riser ring. Since the composite manhole cover is water tight the top of the cover should be flush and level with the ground, street, sidewalk, or paved area. A concrete pad is recommended to secure and anchor the composite manhole cover in place. A detail sheet shall be furnished as part of construction drawings (see detail sheet portion of submittal).

In the event that the composite manhole cover is being installed on an elevated raised manhole, concrete anchor bolts, J-hooks, and grout/concrete may be used to secure the composite cover to the manhole top.

Submittal:

1. Fiber Reinforced Ring & Cover:
 - ✓ Ring & Cover shall be comprised of non-metallic materials. The composite shall not consist of metallic components imbedded in the polymer matrix and there should be no structural materials made of metal inside the body of the frame or the cover. Materials used to produce a composite manhole frame and cover shall be thermosetting resins, fibers, plastics, recycled plastics, and/or additives that enhance physical properties such as UV, strength, impact resistance, and durability. The ring and cover should be a solid, uniformed, non-porous, capable of withstanding the conditions and corrosive environment found in sanitary sewer and heavy traffic loading.
2. Gasket & Seal:
 - ✓ Ring & cover must have two gaskets, one gasket sealing the cover to the manhole, and one gasket that seals the insert dish to the frame to prevent water from leaking through the ring and cover. Water leak testing of the units must yield a leak rate no more than 1 gallon in a 24-hour period. Leak testing shall be conducted by a qualified 3rd party testing lab or by project owner.
3. Anti-Rotation alignment tabs:
 - ✓ Ring & covers shall have anti-rotation alignment tabs. These tabs allow the user to align the bolt holes uniformly so that they may tighten the securing bolts properly without damage and able to prevent free rotation of cover.
4. SureSeal Inner Dish:
 - ✓ Ring and cover must include inner dish for double barrier protection from inflow and SSOs. Inner dish must be supplied by same manufacturer as composite ring and cover. Inner dish shall be constructed of non-metallic structural components and same rigid composite material as ring and cover. Inner dish shall be bolted down to ring with independent gasket and seal connected to the ring and must be bolted and fixed to inner diameter of ring.
5. Bolt & Nut Threading:
 - ✓ Bolt and nut threading must be able to removed and replaced in the event of threading becoming damaged. Must be able to be remove damaged nut/threading from interior diameter of ring.
6. Certifications & Approvals:
 - ✓ Manhole Ring & Cover must be approved by TXDoT and must be tested by a third-party testing facility and signed by a professional engineer.

SuperCover not only meets the required submittal specifications in most municipalities, but exceeds specification requirements in composition and performance.

Testing Reports Available on Request

Approval & 3rd Party Testing:

SuperCover has been approved for use in Texas by

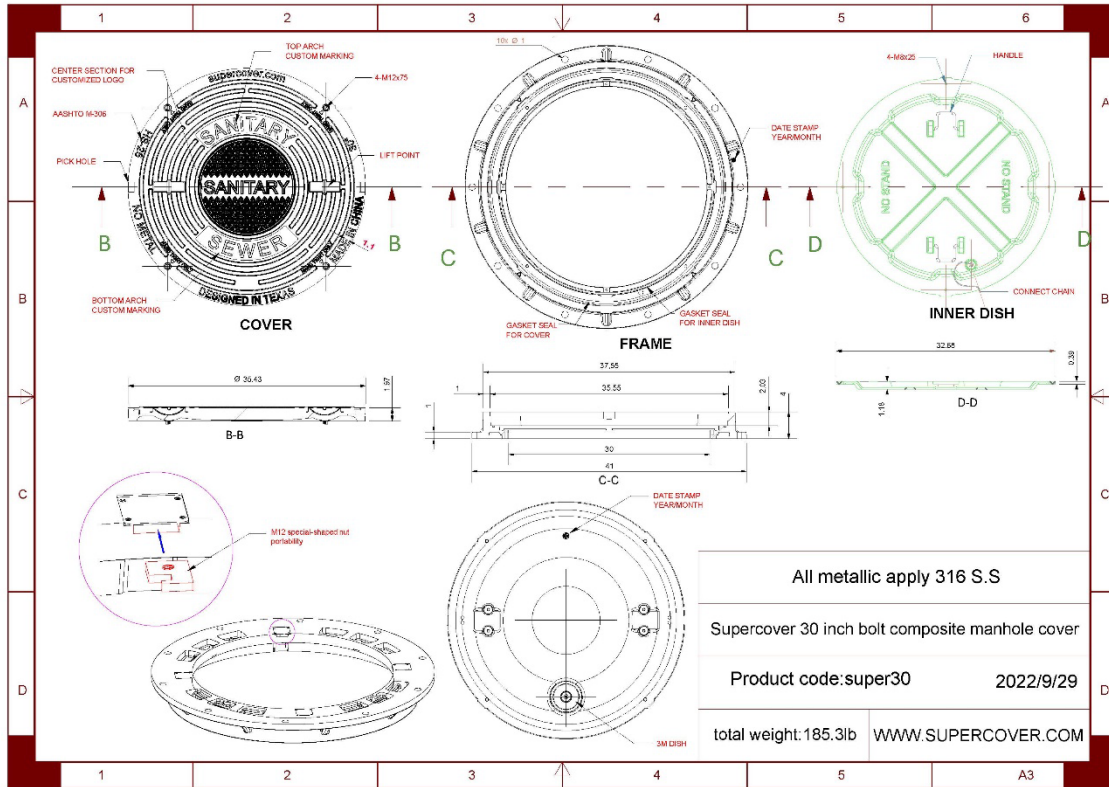


*NOT AN ENDORSEMENT

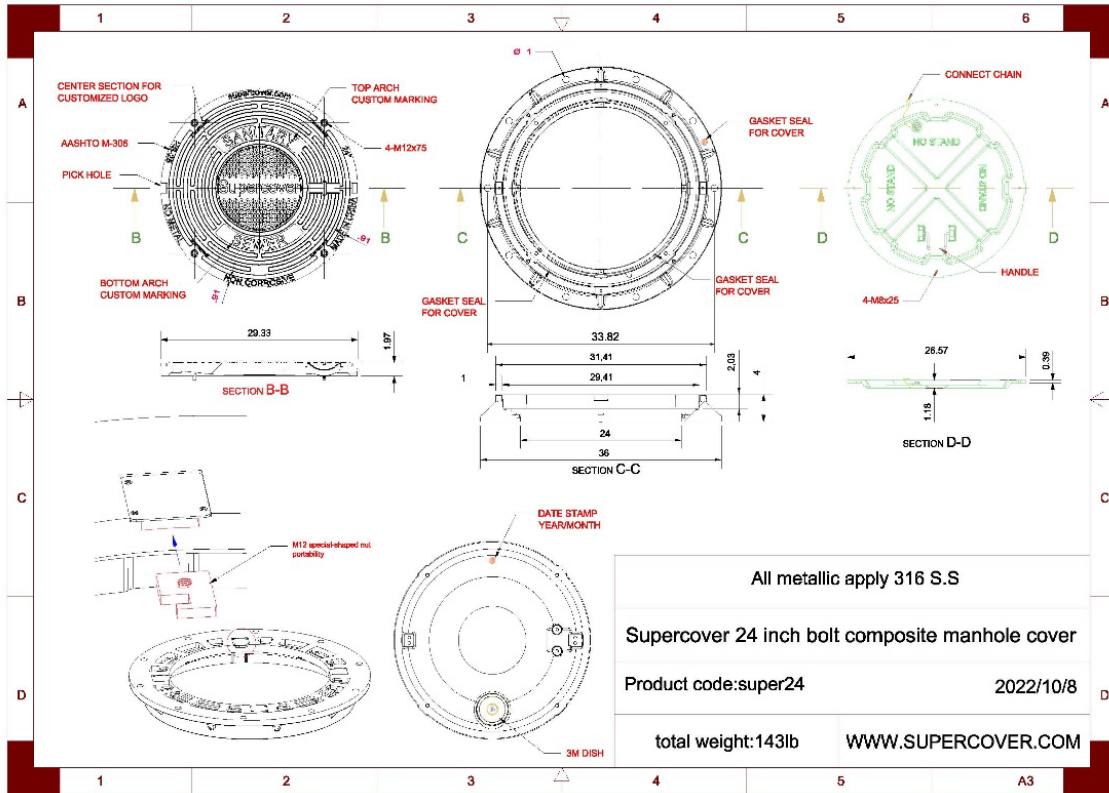
SuperCover has been 3rd party tested & certified by



SuperCover Non-Hinged SSO 30"



SuperCover Non-Hinged SSO 24"



	ID	OD	Rim Thickness	Inner Dish	Ring	Cover	Ring & Cover
NH SSO 24"	24"	36"	4.0"	8.6 lb.	61.8 lb.	72.6 lb.	143.0 lb.
NH SSO 30"	30"	42"	4.0"	13.3 lb.	81.0 lb.	91.0 lb.	185.3 lb.

NH SSO: Non-Hinged Sanitary Sewer Overflow

ID: Inner Diameter (Opening)

OD: Outer Diameter

I&I: Infiltration & Inflow



Sanitary Sewer Overflow Series

Detail Sheet Submittal

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Features:



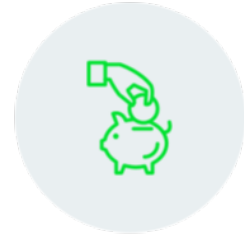
Exceeds 50,000lb Proof Load Test AASHTO



Water Tight



Anti-Corrosive Inert Composite Materials



No Scrap Metal Value



Locate with: 3M™ iD Disk Marker 1414-XR/iD



Self-Extinguishing



Odor-Eliminating



Bolted Down to Frame, Cover & Inner Dish



Manufactured at an ISO 9000 Certified Plant



NO Unlawful Entry: Bolt & Locking System



Anti-Theft



5 Year Warranty

FEATURE	SUPERCOVER	LEADING COMPETITOR
ANTI-ROTATING	✓	
BOLTED DOWN INFLOW DISH	✓	
DOUBLE GASKET	✓	
ODOR PREVENTION	✓	✓
FALL PROTECTION INNER DISH	✓	
SELF ALIGNING	✓	
HS-25 LOAD RATED	✓	✓

Reference Standards:

Product submittal must list these testing procedures at minimum to be in compliance with submittal standard:

- A. AASHTO M306-10 Proof Load Proof Load Testing HS-25
- B. ASTM C 1028-07 e1 Static Coefficient of Friction
- C. ASTM D 790-17 Flexure Testing
- D. ASTM D 790-17 Flexure Testing After UV Exposure
- E. ASTM D 256-10 Izod Pendulum Impact
- F. ASTM D 635-18 Burning Rate
- G. ASTM D 4060-14 Taber Abrasion (10,000 Cycles)
- H. ASTM D 570-98 Water Absorption
- I. ASTM G 154-16 UV (1,000 Hours)

Performance Data:

ASTM D790-17 Flexure Strength Cover	20,393 psi
ASTM D790-17 Flexure Strength Retention After UV Exposure Cover	Pass, >85% Retention
ASTM D790-17 Flexure Strength Frame	19,728 psi
ASTM D790-17 Flexure Strength Retention After UV Exposure Cover	Pass, >85% Retention
ASTM C1028-07e1 Static Coefficient of friction	0.674
ASTM D256-10 Izod Impact Testing	1,473 J/m
ASTM D635-18 Rate of Burning in Horizontal	Pass, Samples Self-Extinguish
ASTM D4060-14 Taber Abrasion Testing 10,000 cycles Cover	60.2 mg
ASTM D4060-14 Taber Abrasion Testing 10,000 Cycles Frame	72.3 mg
ASTM C501-84 Wear & Abrasion Testing 1,000 cycles Cover	Pass, <300
ASTM C501-84 Wear & Abrasion Testing 1,000 cycles Frame	Pass, <300
ASTM D570-98 Water Absorption	0.37%
ASTM G154-16 UV Testing Cover & Frame 1,000 Hours	No deformation
AASHTO Proof Load Testing 40,000 lbs.	Pass, no cracking
AASHTO Proof Load Testing 50,000 lbs.	Pass, no cracking
Leak Test 24-Hrs	0.0

*SuperCover sets the standard in performance, durability, inflow and SSO protection in the composite manhole industry. Testing results were conducted with Sureseal inner dish in unit.

**3rd party testing provided by Trenchless Technology Center at Louisiana Tech University
& Metallurgical engineering Services, INC.**

Testing Reports Available on Request

Manufacturing Process:

SuperCover is designed and distributed by Wastewater Rehabilitation Professionals. Supercover is produced using Sheet Molding Compounding (SMC) in order to meet the stringent manufacturing standards that municipalities demand. SuperCover is molded using state of the art machine and tool technology in a manufacturing facility that is ISO certified by IQNet to conform to ISO 9000 and ISO 1400 standards. SuperCover's non-metallic unique composition is fiber reinforced to ensure maximum strength and durability SuperCover is also enhanced by the compatibility with Sureseal inner dish for maximum inflow and SSO protection. Before the finished product is promoted to the quality assurance phase it is meticulously analyzed for imperfections.

Quality Assurance Process:

Each composite manhole cover must be individually inspected for defects or deformations. One out of ten composite manhole covers must have live load testing to ensure load rating prior to delivery from manufacturer.

Packaging:

SuperCover comes stacked with five covers to a pallet, shrink-wrapped and banded for extra protection.

Warranty:



SuperCover comes with a 5-year fabrication defect warranty. If SuperCover is delivered with defects contact Supercover for warranty information.

Precautions:

SuperCover weights range from 117 to 185 lbs. always proceed with caution when lifting or moving supercovers. Do not attempt to lift a supercover without assistance; or improper handling of weight distribution. Supercover is not responsible for injuries when installing or transporting SuperCover.

In accordance with C.F.R 1910.1200, this product is an "article" and therefore not subject to the HCS 2012 SDS labeling and Requirements.

TXDOT & Third-Party Certification:

Testing reports and client testimonials available upon request. All client testimonials and endorsements have been authorized by the client for publication and reference.



Texas Department of Transportation

6230 E Stassney Ln | AUSTIN, TEXAS 78744 | (512) 463-8700 | WWW.TXDOT.GOV

11/17/2022

SuperCover
1200 W. Expressway 83
LaFeria, Texas 78559

Re: RTI New Product Evaluation Tracking #20-3140
"SuperCover Non Corrosive manhole frame and cover"

Dear SuperCover:

Thank you for submitting the SuperCover Non Corrosive manhole frame and cover for evaluation.

The Texas Department of Transportation's (TxDOT) Bridge (BRG) Division has reviewed your request and approves the use of the SuperCover Non Corrosive manhole frame and cover.

A Special Specification will be required for the TxDOT District's use, to include, at a minimum, addressing measurement and payment, materials, loading, wear and abrasion, UV exposure, friction, and bolting/locking mechanisms.

This product shall be added to the Approved Product List under the TxDOT Product Evaluation page and expires three years from the date of this letter and shall need to be recertified at that time.

This letter shall not be considered a product endorsement, nor shall it be used for promotional purposes.

Thank you for contacting the Texas Department of Transportation. If you have further questions, please contact us at 512-416-4738.

Sincerely,

Martin Dassi
Research Project Manager, RTI

cc Taya Retterer

OUR GOALS

MAINTAIN A SAFE SYSTEM ▪ ADDRESS CONGESTION ▪ CONNECT TEXAS COMMUNITIES ▪ BEST IN CLASS STATE AGENCY
An Equal Opportunity Employer

Tested & Certified

Third Party Tested & Certified

by

The Trenchless Technology Center (TTC) at Louisiana Tech University

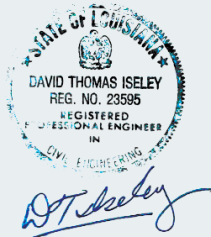
SuperCover™

Name

Complies with the requirements of section 6.1

Proof-Load Test H-25 as specified in AASHTO Standard M

306-2, CERTIFIED TO M-306 H-20 & H-25



The Trenchless Technology Center (TTC) at Louisiana Tech University

is an independent source of knowledge, research and education for both government entities and the private sector in the field of Trenchless Technology.

www.supercover.com