ULTEC RECHARGER® 150XLHD SPECIFICATIONS

SENERAL CULTEC RECHARGER® 150XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND TORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION. RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER

HAMBER PARAMETERS

RUNOFF

- 1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
- 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR
- 3. THE CHAMBER SHALL BE ARCHED IN SHAPE.
- 4. THE CHAMBER SHALL BE OPEN-BOTTOMED.
- 5. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS OR SEPARATE END WALLS.
- 5. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 150XLHD SHALL BE 18.5 INCHES (470 mm) TALL, 33 INCHES (838 mm) WIDE AND 11 FEET (3.35 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 150XLHD SHALL BE 10.25 FEET (3.12 m).
- 7. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 12 INCHES (300 mm) HDPE OR 15" (375 mm) SMOOTH-WALL PVC.
- 3. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL INSIDE DIMENSIONS OF EACH SIDE PORTAL SHALL BE 8.5 INCHES (216 mm) HIGH BY 12 INCHES (304 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 10.25 INCHES (260 mm).
- 9. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV® FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (615 mm) LONG.
- 10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 150XLHD CHAMBER SHALL BE 2.650 FT³ / FT (0.246 m³ / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 150XLHD SHALL BE 27.16 FT3 / UNIT (0.77 m³ / UNIT) - WITHOUT STONE.
- 11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.
- 12. THE RECHARGER 150XLHD CHAMBER SHALL HAVE THIRTY DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER
- 13. THE RECHARGER 150XLHD CHAMBER SHALL HAVE 20 CORRUGATIONS.
- 14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, SHALL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT
- 15. THE RECHARGER 150XLRHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE ENDWALLS.
- 16. THE RECHARGER 150XLSHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 10 INCHES (254 mm) HIGH X 20.5 INCHES (521 mm) WIDE.
- 17. THE RECHARGER 150XLIHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 10 INCHES (254 mm) HIGH X 20.5 INCHES (521 mm) WIDE.
- 18. THE RECHARGER 150XLEHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE FULLY OPEN END WALL AND HAVING NO SEPARATE END PLATES OR END WALLS.
- 19. THE HVLV® FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE RECHARGER 150XLHD AND ACT AS CROSS FEED CONNECTIONS.
- 20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS.
- 21. THE CHAMBER SHALL HAVE A RAISED INTEGRAL CAP AT THE TOP OF THE ARCH IN THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN-OUT
- 22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
- 23. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY 24. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
- 25. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND STRUCTURAL REQUIREMENTS OF JAPMO PS 63-2019 INCLUDING RESISTANCE TO AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE WITH CULTEC'S INSTALLATION INSTRUCTIONS.
- 26. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATION OF NSAI IRISH AGREEMENT BOARD CERTIFICATE FOR CULTEC ATTENUATION AND INFILTRATION.
- 27. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.65 m).
- $\left(\frac{150 \text{XLHD}}{1.0}\right)$

GENERAL NOTES

- **CULTEC HVLV® FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS**
- CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER 150XLHD STORMWATER CHAMBERS.
- CHAMBER PARAMETERS
- 1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832) 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE
- (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR. 3. THE CHAMBER SHALL BE ARCHED IN SHAPE.
- 4. THE CHAMBER SHALL BE OPEN-BOTTOMED.
- 5. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 MM) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG.
- 6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT3 / FT (0.085 m³ / m) WITHOUT
- 7. THE HVLV FC-24 FEED CONNECTOR CHAMBER SHALL HAVE 2 CORRUGATIONS.
- 8. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL
- 9. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
- 10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

CULTEC NO. 410[™] NON-WOVEN GEOTEXTILE CULTEC NO. 410[™] NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

- 1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
- 2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE
- 3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M). 4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING
- METHOD.
- 5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
- 6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
- 7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
- 8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
- 9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
- 10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
- 11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
- 12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER ASTM D4491 TESTING METHOD.
- 13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

CULTEC NO. 4800[™] WOVEN GEOTEXTILE

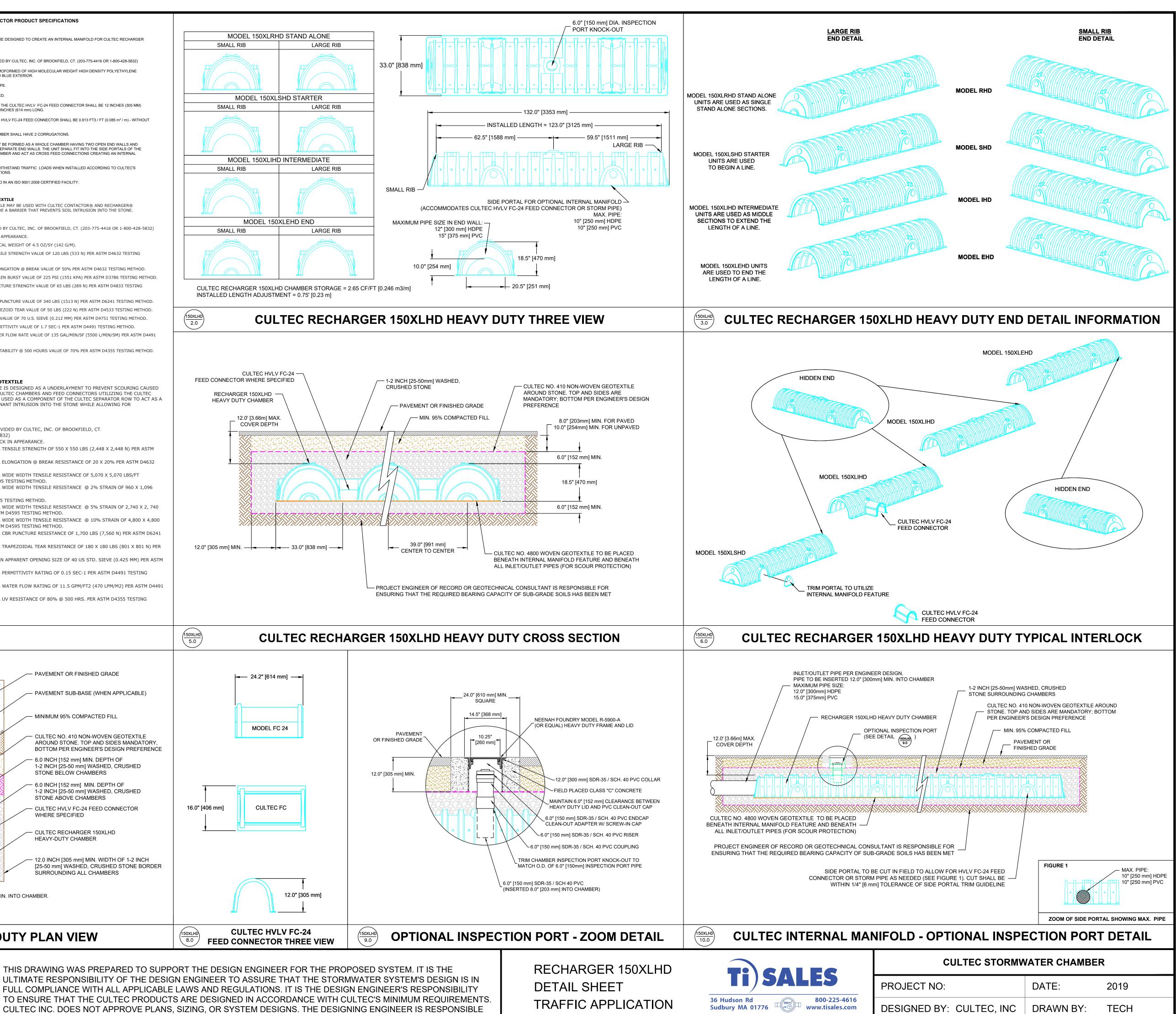
CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

GEOTEXTILE PARAMETERS

- 1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
- 2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
- 3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD 4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632
- **TESTING METHOD**
- 5. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD.
- 6. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,096 LBS/FT (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD.
- 7. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2, 740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD.
- 8. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD.
- 9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM D6241 TESTING METHOD. 10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER
- ASTM D4533 TESTING METHOD 11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER ASTM
- 12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING
- 13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM D4491 TESTING METHOD
- 14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING METHOD

- PAVEMENT OR FINISHED GRADE · Þ · Å · PAVEMENT SUB-BASE (WHEN APPLICABLE) MINIMUM 95% COMPACTED FILL · CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY. BOTTOM PER ENGINEER'S DESIGN PREFERENCE 6.0 INCH [152 mm] MIN. DEPTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE BELOW CHAMBERS 10.0' [3.0m] MIN. - 6.0 INCH [152 mm] MIN. DEPTH OF CULTEC NO. 4800 WOVEN GEOTEXTILE 1-2 INCH [25-50 mm] WASHED, CRUSHED PLACED BENEATH INLET PIPES STONE ABOVE CHAMBERS CULTEC HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED - CULTEC RECHARGER 150XLHD 7.5' [2.29m] MIN. HEAVY-DUTY CHAMBER CULTEC NO. 4800 WOVEN GEOTEXTILE PLACED BENEATH FEED CONNECTORS 12.0 INCH [305 mm] MIN. WIDTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE BORDER SURROUNDING ALL CHAMBERS \sim - PIPE PER ENGINEER DESIGN. PIPE TO BE INSERTED 12.0 INCHES [305 mm] MIN. INTO CHAMBER MAXIMUM PIPE SIZE: 12.0" [300 mm] HDPE 15.0" [375 mm] PVC 150XLHD **CULTEC RECHARGER 150XLHD HEAVY DUTY PLAN VIEW** CULTEC, Inc. Subsurface Stormwater Management Systems PH: (203) 775-4416 P.O. Box 280 PH: (800) 4-CULTEC 878 Federal Road FX: (203) 775-1462 Brookfield, CT 06804 FOR ALL DESIGN DECISIONS. CULTEC www.cultec.com tech@cultec.com

- - D4751 TESTING METHOD.
 - METHOD



	PROJECT NO:		DATE:	2019
	DESIGNED BY:	CULTEC, INC	DRAWN BY:	TECH
	SCALE:	N.T.S.	SHEET NO:	1 OF 1

(203-775-4416 OR 1-800-428-5832)

HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR

- 18.5 INCHES (470 mm) TALL, 33 INCHES (838 mm) WIDE AND 11 FEET (3.35 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 150XLHD SHALL BE 10.25 FEET (3.12 m).
- 15" (375 mm) SMOOTH-WALL PVC
- FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL INSIDE (304 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 10.25 INCHES (260 mm).
- SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (615 mm) LONG
- JOINED RECHARGER 150XLHD SHALL BE 27.16 FT3 / UNIT (0.77 m³ / UNIT) WITHOUT
- 0.913 FT³ / FT (0.085 m³ / m) WITHOUT STONE.
- INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER
- THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT
- CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE ENDWALLS.
- HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 10 INCHES (254 mm) HIGH X 20.5 INCHES (521 mm) WIDE.
- CHAMBER HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED X 20.5 INCHES (521 mm) WIDE.
- AND HAVING NO SEPARATE END PLATES OR END WALLS.
- HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE RECHARGER 150XLHD AND ACT AS CROSS FEED CONNECTIONS
- THE RIBS.
- THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN-OUT
- CORRUGATION.
- 24. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN
- 25. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE
- THE SPECIFICATION OF NSAI IRISH AGREEMENT BOARD CERTIFICATE FOR CULTEC ATTENUATION AND INFILTRATION

- TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG.

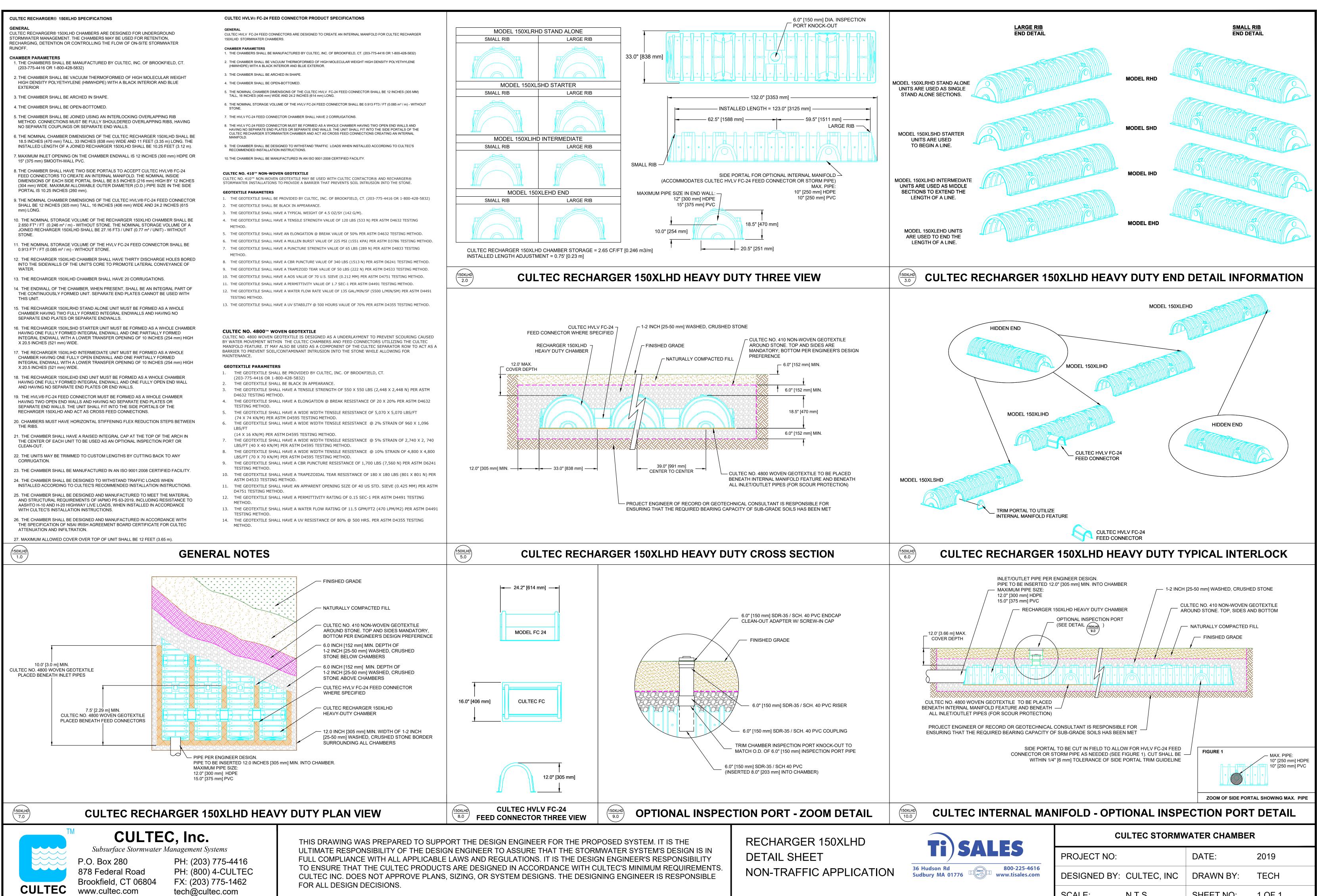
- CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL
- RECOMMENDED INSTALLATION INSTRUCTIONS.

- METHOD

- TESTING METHOD.

GEOTEXTILE PARAMETERS

- D4632 TESTING METHOD
- TESTING METHOD.
- LBS/FT
- LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD.
- LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD.
- TESTING METHOD.
- ASTM D4533 TESTING METHOD
- METHOD
- TESTING METHOD
- METHOD



	CULTEC STORMWATER CHAMBER				
) SALES	PROJECT NO:		DATE:	2019	
800-225-4616 01776 www.tisales.com	DESIGNED BY:	CULTEC, INC	DRAWN BY:	TECH	
	SCALE:	N.T.S.	SHEET NO:	1 OF 1	