### **CULTEC RECHARGER® 330XLHD PRODUCT SPECIFICATIONS**

## CULTEC RECHARGER 330XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND

- CHAMBER PARAMETERS 1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT, USA.
- 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE
- 3. THE CHAMBER SHALL BE ARCHED IN SHAPE.
- 4. THE CHAMBER SHALL BE OPEN-BOTTOMED.

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

- 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
- 6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 330XLHD SHALL BE 30.5 INCHES (775 mm) TALL, 52 INCHES (1321 mm) WIDE AND 8.5 FEET (2.59 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 330XLHD SHALL BE 7 FEET (2.13 m).
- 7. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 24 INCHES (600 mm) HDPE
- 8. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL DIMENSIONS OF EACH SIDE PORTAL SHALL BE 10.5 INCHES (267 mm) HIGH BY 11.5 INCHES (292 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 11.75 INCHES (298 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 (614
- 10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 330XLHD CHAMBER SHALL BE 7.459 FT3 / FT (0.693 m3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 330XLHD SHALL BE 52.213 FT³ / UNIT (1.478 m³ / UNIT) - WITHOUT
- 11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT<sup>3</sup> / FT (0.085 m<sup>3</sup> / m) - WITHOUT STONE.
- 12. THE RECHARGER 330XLHD CHAMBER SHALL HAVE FIFTY-SIX DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.

### 13. THE RECHARGER 330XLHD CHAMBER SHALL HAVE 16 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
- 15. THE RECHARGER 330XLRHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS.
- 16. THE RECHARGER 330XLSHD 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 14 INCHES (356 mm) HIGH
- 17. THE RECHARGER 330XLIHD 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 14 INCHES (356 mm) HIGH X 34.5 INCHES (876 mm) WIDE.
- 18. THE RECHARGER 330XLEHD 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 330XLHD AND ACT AS CROSS FEED CONNECTIONS.
- 20.CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN
- 21.THE CHAMBER SHALL HAVE A 6 INCH (152 mm) DIAMETER 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 9001:2015 CERTIFIED FACILITY. 24.MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m)
- 25.THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

- STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION. RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER
- CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER
  - 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE
  - 1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)

  - (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
  - 3. THE CHAMBER SHALL BE ARCHED IN SHAPE 4. THE CHAMBER SHALL BE OPEN-BOTTOMED.

MODEL 330XLHD STORMWATER CHAMBERS.

**CULTEC HVLV FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS** 

- 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  $0.913~\mathrm{FT^3}$  / FT  $(0.085~\mathrm{m^3}$  / m) -WITHOUT STONE.
- 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
- $9. \ \ \text{THE CHAMBER SHALL BE DESIGNED TO WITH STAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S}$ RECOMMENDED INSTALLATION INSTRUCTIONS.
- 10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 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
- 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

## **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.

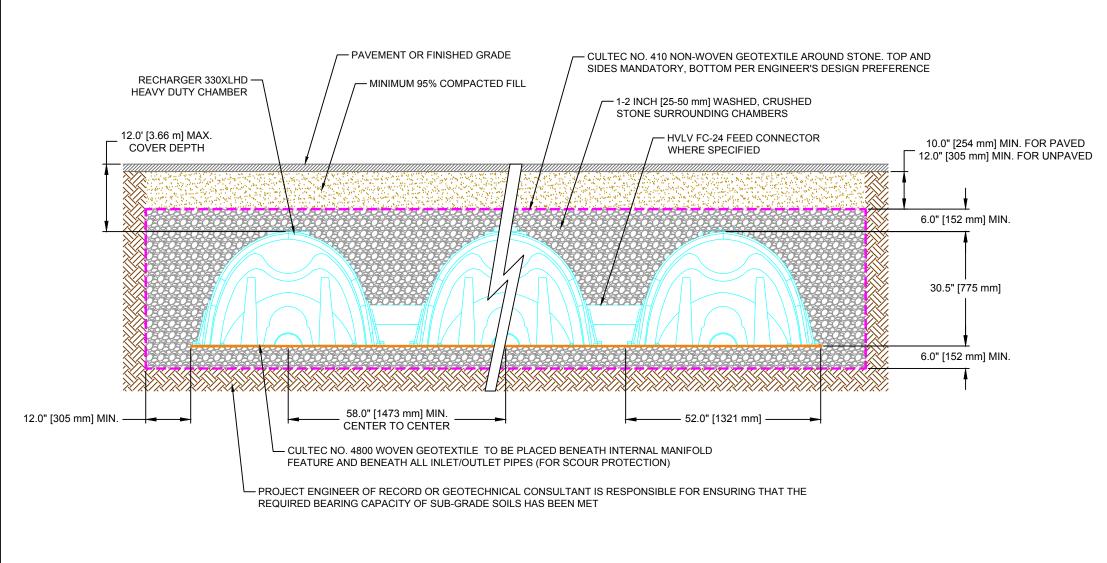
(74 X 74 KN/M) PER ASTM D4595 TESTING METHOD.

- 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
- 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.
- 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 D4751 TESTING METHOD.
- 12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING METHOD.
- 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

### 6.0" [152 mm] DIA. INSPECTION PORT 52.0" [1321 mm] — 102.0" [2591 mm] —— - MAXIMUM PIPE SIZE IN END WALL: INSTALLED LENGTH = 84.0" [2133 mm] — ► 24" [600 mm] HDPE 24" [600 mm] PVC LARGE RIB — 30.5" [775 mm] 14.0" [356 mm] 34.5" [876 mm] - SIDE PORTAL FOR OPTIONAL INTERNAL MANIFOLD (ACCOMMODATES CULTEC HVLV FC-24 52.0" [1321 mm] — **>** FEED CONNECTOR OR STORM PIPE) MAX. PIPE: 10" [250 mm] HDPE 12" [300 mm] PVC CULTEC RECHARGER 330XLHD CHAMBER STORAGE = 7.459 CF/FT [0.693 m³/m] INSTALLED LENGTH ADJUSTMENT = 1.5' [0.46 m] SIDE PORTAL ACCEPTS CULTEC HVLV FC-24 FEED CONNECTOR

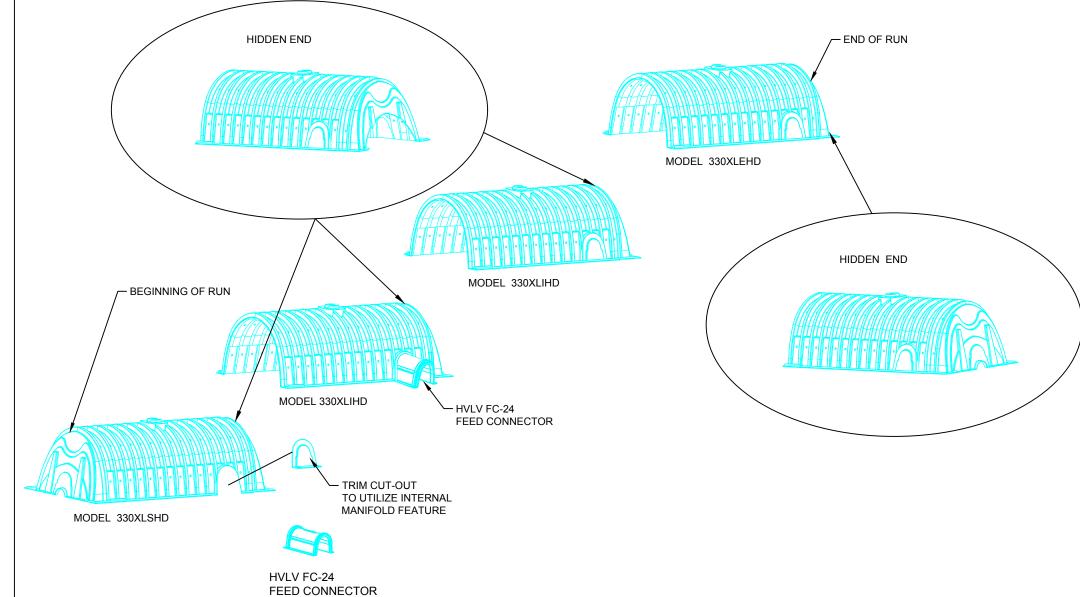
## **CULTEC RECHARGER 330XLHD HEAVY DUTY THREE VIEW**



**CULTEC RECHARGER 330XLHD HEAVY DUTY CROSS SECTION** 

## UNITS ARE USED AS SINGLE STAND ALONE SECTIONS. MODEL RHD MODEL 330XLSHD STARTER UNITS ARE USED **MODEL SHD** TO BEGIN A LINE MODEL 330XLIHD INTERMEDIATE **MODEL IHD** UNITS ARE USED AS MIDDLE SECTIONS TO EXTEND THE LENGTH OF A LINE. **MODEL EHD** MODEL 330XLEHD END UNITS ARE USED TO END THE LENGTH OF A LINE.

# **CULTEC RECHARGER 330XLHD HEAVY DUTY END DETAIL INFORMATION**

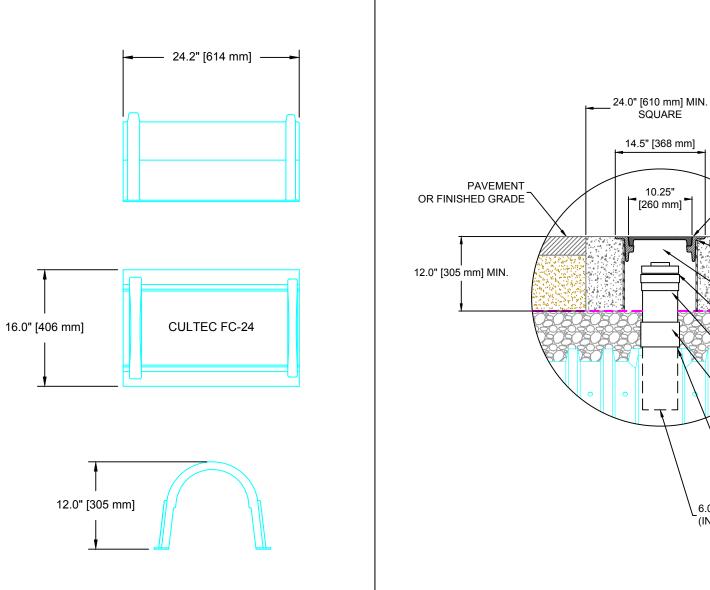


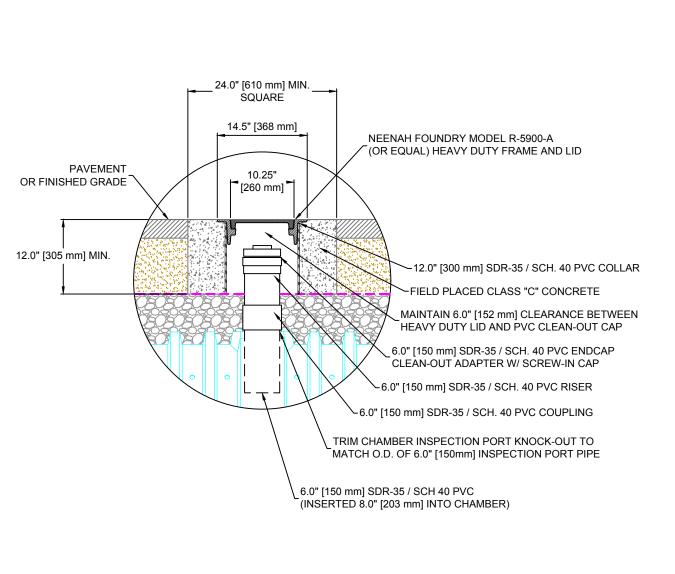
### PAVEMENT OR FINISHED GRADE PAVEMENT SUB-BASE (WHEN APPLICABLE) NATURALLY COMPACTED FILL CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY. BOTTOM PER ENGINEER'S DESIGN PREFERENCE CULTEC HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED - 6.0 INCH [152 mm] MIN. DEPTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE ABOVE CHAMBERS 7.5' [2.29 m] MIN. 6.0 INCH [152 mm] MIN. DEPTH OF CULTEC NO. 4800 WOVEN GEOTEXTILE 1-2 INCH [25-50 mm] WASHED, CRUSHED BENEATH FEED CONNECTORS STONE BENEATH CHAMBERS 10.0' [3.0 m] MIN CULTEC NO. 4800 WOVEN GEOTEXTILE CULTEC RECHARGER 330XLHD HEAVY-DUTY CHAMBER BENEATH INLET PIPES 12.0 INCH [305 mm] MIN. WIDTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE BORDER SURROUNDING ALL CHAMBERS PIPE TO BE INSERTED 12.0 INCHES [305 mm] MIN. INTO CHAMBER. MAXIMUM PIPE SIZE 24" [600 mm] HDPE

24" [600 mm] PVC

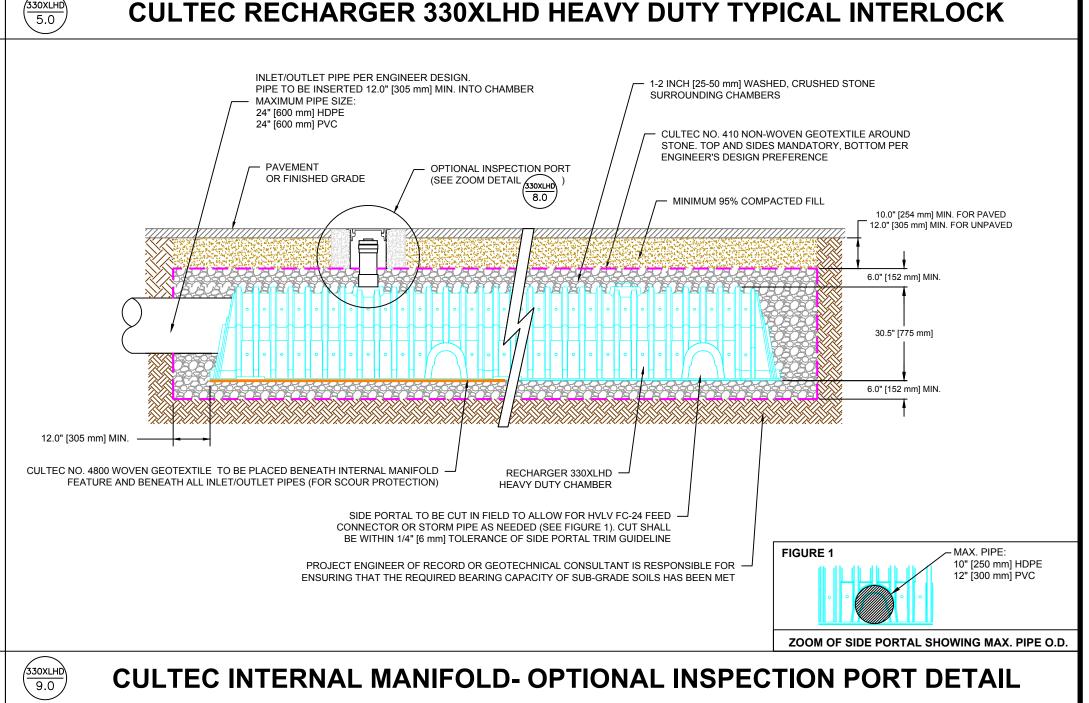
**CULTEC RECHARGER 330XLHD HEAVY DUTY PLAN VIEW** 

**GENERAL NOTES** 





**OPTIONAL INSPECTION PORT- ZOOM DETAIL** 



## CULTEC, Inc.

Subsurface Stormwater Management Systems P.O. Box 280

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THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE CULTEC SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE PROJECT ENGINEER OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

**CULTEC HVLV FC-24** 

**FEED CONNECTOR THREE VIEW** 

330XLHD 4.0

**RECHARGER 330XLHD DETAIL SHEET** TRAFFIC APPLICATION

**CULTEC STORMWATER CHAMBER** 2019 PROJECT NO: DESIGNED BY: CULTEC, INC CHECKED BY: TECH SCALE: N.T.S. SHEET NO: 1 OF 1

### **CULTEC RECHARGER® 330XLHD PRODUCT SPECIFICATIONS**

## CULTEC RECHARGER 330XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND

STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION. RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER

#### CHAMBER PARAMETERS

- 1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT, USA. (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
- 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
- 6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 330XLHD SHALL BE 30.5 INCHES (775 mm) TALL, 52 INCHES (1321 mm) WIDE AND 8.5 FEET (2.59 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 330XLHD SHALL BE 7 FEET (2.13 m).
- 7. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 24 INCHES (600 mm).
- 8. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL DIMENSIONS OF EACH SIDE PORTAL SHALL BE 10.5 INCHES (267 mm) HIGH BY 11.5 INCHES (292 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 11.75 INCHES (298 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 (614
- 10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 330XLHD CHAMBER SHALL BE 7.459 FT3 / FT (0.693 m3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 330XLHD SHALL BE 52.213 FT³ / UNIT (1.478 m³ / UNIT) - WITHOUT
- 11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT<sup>3</sup> / FT (0.085 m<sup>3</sup> / m) - WITHOUT STONE.
- 12. THE RECHARGER 330XLHD CHAMBER SHALL HAVE FIFTY-SIX DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.

### 13. THE RECHARGER 330XLHD CHAMBER SHALL HAVE 16 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
- 15. THE RECHARGER 330XLRHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS.
- 16. THE RECHARGER 330XLSHD 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 14 INCHES (356 mm) HIGH
- 17. THE RECHARGER 330XLIHD 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 14 INCHES (356 mm) HIGH
- 18. THE RECHARGER 330XLEHD 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 330XLHD AND ACT AS CROSS FEED CONNECTIONS.
- 20.CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN
- 21.THE CHAMBER SHALL HAVE A 6 INCH (152 mm) DIAMETER 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 9001:2015 CERTIFIED FACILITY.
- 24.MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m)
- 25.THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

#### **CULTEC HVLV FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS**

MODEL 330XLHD STORMWATER CHAMBERS.

4. THE CHAMBER SHALL BE OPEN-BOTTOMED.

CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER

### 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
- 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  $0.913~\mathrm{FT^3}$  / FT  $(0.085~\mathrm{m^3}$  / m) -WITHOUT STONE.
- 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 9001:2015 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
- 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

### **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

D4491 TESTING METHOD.

- 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.
- 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 D4751 TESTING METHOD.
- 12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING
- METHOD. 13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM
- 14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING

## 6.0" [152 mm] DIA. INSPECTION PORT 52.0" [1321 mm] — 102.0" [2591 mm] ——— - MAXIMUM PIPE SIZE IN END WALL: |**─** INSTALLED LENGTH = 84.0" [2133 mm] — ► 24" [600 mm] HDPE \ 24" [600 mm] PVC 42.0" [1066 mm] — 42.0" [1066 mm] -LARGE RIB — 30.5" [775 mm] → 34.5" [876 mm] → igspace SIDE PORTAL FOR OPTIONAL INTERNAL MANIFOLD (ACCOMMODATES CULTEC HVLV FC-24 → 52.0" [1321 mm] — **→** FEED CONNECTOR OR STORM PIPE) MAX. PIPE: 10" [250 mm] HDPE 12" [300 mm] PVC CULTEC RECHARGER 330XLHD CHAMBER STORAGE = 7.459 CF/FT [0.693 m³/m] INSTALLED LENGTH ADJUSTMENT = 1.5' [0.46 m] SIDE PORTAL ACCEPTS CULTEC HVLV FC-24 FEED CONNECTOR

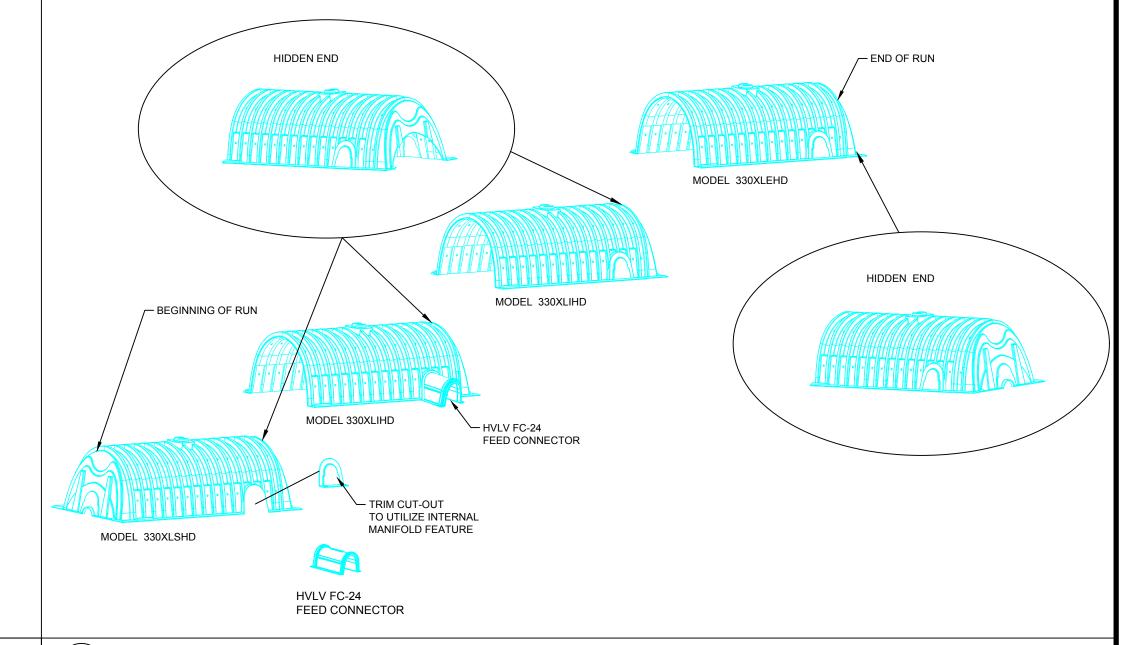
## **CULTEC RECHARGER 330XLHD HEAVY DUTY THREE VIEW**

### - CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE RECHARGER 330XLHD -- 1-2 INCH [25-50 mm] WASHED, CRUSHED MATURALLY COMPACTED FILL HEAVY DUTY CHAMBER STONE SURROUNDING CHAMBERS FINISHED GRADE 12.0' [3.66 m] MAX — 6.0" [152 mm] MIN. WHERE SPECIFIED COVER DEPTH 6.0" [152 mm] MIN. 30.5" [775 mm] 6.0" [152 mm] MIN. 58.0" [1473 mm] MIN 12.0" [305 mm] MIN. **CENTER TO CENTER** - CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION) PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET

**CULTEC RECHARGER 330XLHD HEAVY DUTY CROSS SECTION** 

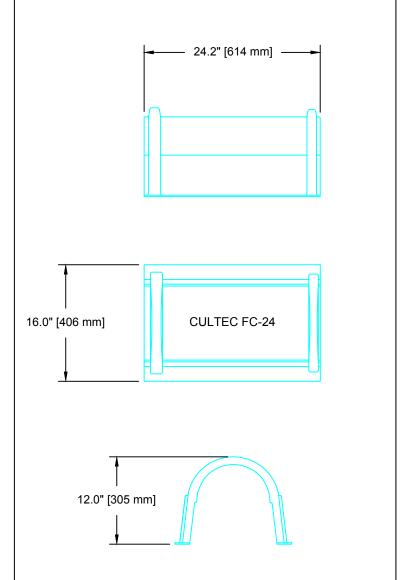
## UNITS ARE USED AS SINGLE STAND ALONE SECTIONS. MODEL RHD MODEL 330XLSHD STARTER UNITS ARE USED **MODEL SHD** TO BEGIN A LINE MODEL 330XLIHD INTERMEDIATE **MODEL IHD** UNITS ARE USED AS MIDDLE SECTIONS TO EXTEND THE LENGTH OF A LINE. **MODEL EHD** MODEL 330XLEHD END UNITS ARE USED TO END THE LENGTH OF A LINE.

# **CULTEC RECHARGER 330XLHD HEAVY DUTY END DETAIL INFORMATION**

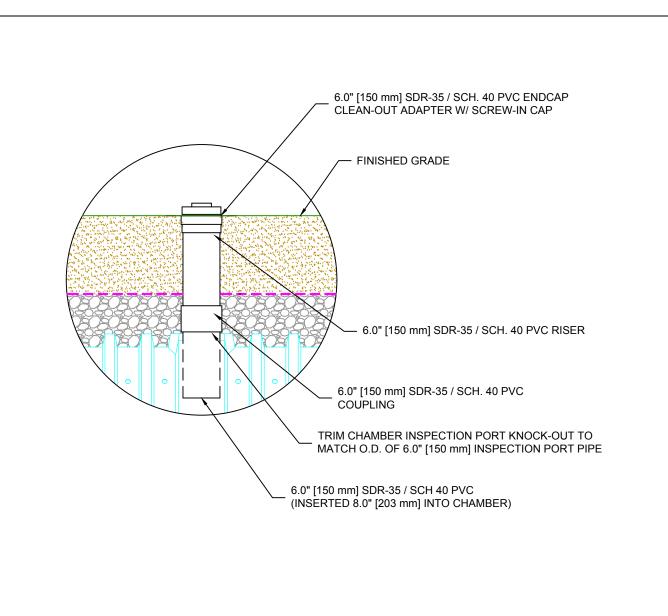


### - FINISHED GRADE - MIN. 95% COMPACTED FILL CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE - CULTEC HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED - 6.0 INCH [152 mm] MIN. DEPTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE ABOVE CHAMBERS 7.5' [2.29 m] MIN. 6.0 INCH [152 mm] MIN. DEPTH OF CULTEC NO. 4800 WOVEN GEOTEXTILE 1-2 INCH [25-50 mm] WASHED, CRUSHED BENEATH FEED CONNECTORS STONE BENEATH CHAMBERS 10.0' [3.0 m] MIN. - CULTEC RECHARGER 330XLHD CULTEC NO. 4800 WOVEN GEOTEXTILE BENEATH INLET PIPES HEAVY-DUTY CHAMBER 12.0 INCH [305 mm] MIN. WIDTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE BORDER SURROUNDING ALL CHAMBERS PIPE PER ENGINEER DESIGN. PIPE TO BE INSERTED 12.0 INCHES [305 mm] MIN. INTO CHAMBER. MAXIMUM PIPE SIZE 24" [600 mm] HDPE

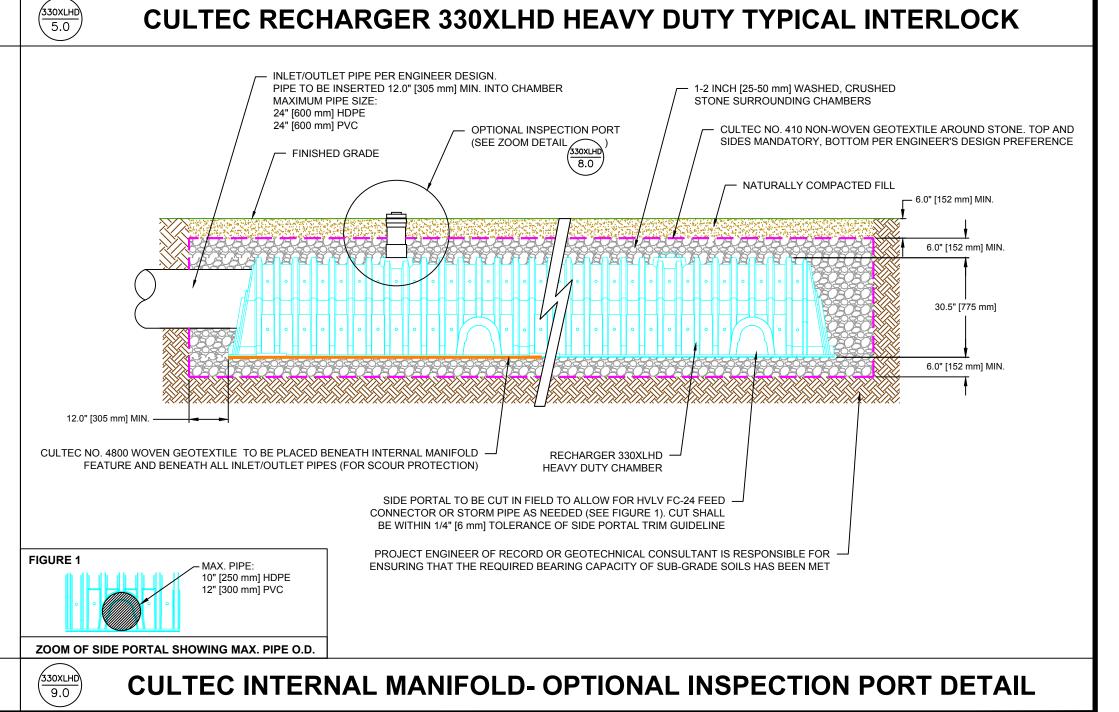
**GENERAL NOTES** 



330XLHD 4.0



**OPTIONAL INSPECTION PORT- ZOOM DETAIL** 



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THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE CULTEC SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE PROJECT ENGINEER OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

**CULTEC HVLV FC-24** 

**FEED CONNECTOR THREE VIEW** 

**RECHARGER 330XLHD DETAIL SHEET** NON-TRAFFIC APPLICATION

### **CULTEC STORMWATER CHAMBER** 2019 PROJECT NO: DESIGNED BY: CULTEC, INC CHECKED BY: TECH SCALE: N.T.S. SHEET NO: 1 OF 1

# CULTEC, Inc.

Subsurface Stormwater Management Systems

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24" [600 mm] PV

**CULTEC RECHARGER 330XLHD HEAVY DUTY PLAN VIEW**