CULTEC RECHARGER® 330XLHD PRODUCT SPECIFICATIONS CULTEC HVLV FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS 6.0" [152 mm] DIA. INSPECTION PORT CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER CULTEC RECHARGER 330XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND MODEL 330XLHD STORMWATER CHAMBERS. STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER 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. **CHAMBER PARAMETERS** 1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT, USA. 52.0" [1321 mm] MODEL 330XLRHD STARTER 3. THE CHAMBER SHALL BE ARCHED IN SHAPE. (203-775-4416 OR 1-800-428-5832) UNITS ARE USED AS SINGLE 4. THE CHAMBER SHALL BE OPEN-BOTTOMED **MODEL RHD** STAND ALONE SECTIONS. 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT 5. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE MODEL 330XLSHD STARTE 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 STONE. 3. THE CHAMBER SHALL BE ARCHED IN SHAPE. 7. THE HVLV FC-24 FEED CONNECTOR CHAMBER SHALL HAVE 2 CORRUGATIONS. 4. THE CHAMBER SHALL BE OPEN-BOTTOMED. 8. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND —— 102.0" [2591 mm] ——— HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE MODEL 330XLSHD STARTER 5. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNA UNITS ARE USED — MAXIMUM PIPE SIZE IN END WALL: **MODEL SHD** CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS. HAVING NO —— INSTALLED LENGTH = 84.0" [2133 mm] —— TO BEGIN A LINE. 24" [600 mm] HDPE SEPARATE COUPLINGS OR SEPARATE END WALLS 9. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. 24" [600 mm] PVC → 42.0" [1066 mm] — → → 42.0" [1066 mm] → 6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 330XLHD SHALL BE 10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY. 30.5 INCHES (775 mm) TALL, 52 INCHES (1321 mm) WIDE AND 8.5 FEET (2.59 m) LONG. SMALL RIB LARGE RIB — THE INSTALLED LENGTH OF A JOINED RECHARGER 330XLHD SHALL BE 7 FEET (2.13 m). **CULTEC NO. 410™ NON-WOVEN GEOTEXTILE** 7. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 24 INCHES (600 mm) HDPE. CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION 8 THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVI V® EC-24 INTO THE STONE. **MODEL IHD** 30.5" [775 mm] FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL DIMENSIONS UNITS ARE USED AS MIDDLE OF EACH SIDE PORTAL SHALL BE 10.5 INCHES (267 mm) HIGH BY 11.5 INCHES (292 mm) **GEOTEXTILE PARAMETERS** SECTIONS TO EXTEND THE WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 14.0" [356 mm] LENGTH OF A LINE. 1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832) 9. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR 2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE. SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 MODEL 330XLEHD END → 34.5" [876 mm] → 3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M). ✓ SIDE PORTAL FOR OPTIONAL INTERNAL MANIFOLD (ACCOMMODATES CULTEC HVLV FC-24 4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 52.0" [1321 mm] — **>** FEED CONNECTOR OR STORM PIPE) 10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 330XLHD CHAMBER SHALL BE TESTING METHOD. **MODEL EHD** MAX. PIPE: 7.459 FT3 / FT (0.693 m3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A 5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING MODEL 330XLEHD END UNITS 10" [250 mm] HDPE JOINED RECHARGER 330XLHD SHALL BE 52.213 FT3 / UNIT (1.478 m3 / UNIT) - WITHOUT ARE USED TO END THE LENGTH METHOD. 12" [300 mm] PVC OF A LINE. 6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE TESTING METHOD. CULTEC RECHARGER 330XLHD CHAMBER STORAGE = 7.459 CF/FT [0.693 m³/m] 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE. 7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 INSTALLED LENGTH ADJUSTMENT = 1.5' [0.46 m] SIDE PORTAL ACCEPTS CULTEC HVLV FC-24 FEED CONNECTOR 12. THE RECHARGER 330XLHD CHAMBER SHALL HAVE FIFTY-SIX DISCHARGE HOLES 8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER. TESTING METHOD 9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 **CULTEC RECHARGER 330XLHD HEAVY DUTY END DETAIL INFORMATION CULTEC RECHARGER 330XLHD HEAVY DUTY THREE VIEW** 13. THE RECHARGER 330XLHD CHAMBER SHALL HAVE 16 CORRUGATIONS. TESTING METHOD. 14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, SHALL BE AN INTEGRAL PART OF 10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH METHOD. 11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING 15. THE RECHARGER 330XLRHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE 12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO HIDDEN END SEPARATE END PLATES OR SEPARATE END WALLS. 13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 — PAVEMENT OR FINISHED GRADE — CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND 16. THE RECHARGER 330XLSHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER TESTING METHOD. SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED RECHARGER 330XLHD -INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH - MINIMUM 95% COMPACTED FILL **CULTEC NO. 4800™ WOVEN GEOTEXTILE** HEAVY DUTY CHAMBER X 34.5 INCHES (876 mm) WIDE. - 1-2 INCH [25-50 mm] WASHED, CRUSHED CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING STONE SURROUNDING CHAMBERS CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE 17. THE RECHARGER 330XLIHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW CHAMBER HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED 12.0' [3.66 m] MAX - HVLV FC-24 FEED CONNECTOR 10.0" [254 mm] MIN. FOR PAVED TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH COVER DEPTH MODEL 330XLEHD WHERE SPECIFIED FOR MAINTENANCE 12.0" [305 mm] MIN. FOR UNPAVED X 34.5 INCHES (876 mm) WIDE. GEOTEXTILE PARAMETERS 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 1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. AND HAVING NO SEPARATE END PLATES OR END WALLS. (203-775-4416 OR 1-800-428-5832) 6.0" [152 mm] MIN. 2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE. 19. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING 3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END D4632 TESTING METHOD. WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE RECHARGER 330XLHD 4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 MODEL 330XLIHD AND ACT AS CROSS FEED CONNECTIONS. BEGINNING OF RUN TESTING METHOD. 30.5" [775 mm] 20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN 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 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 (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD. 6.0" [152 mm] MIN. INSPECTION PORT OR CLEAN-OUT. 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. 22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY MODEL 330XLIHD CORRUGATION. 8. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X FEED CONNECTOR 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD. 58.0" [1473 mm] MIN. 23.THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY 12.0" [305 mm] MIN. 52.0" [1321 mm] — 9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM CENTER TO CENTER D6241 TESTING METHOD. 24.THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL OTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD. AND STRUCTURAL REQUIREMENTS OF IAPMO PS 63-2019, INCLUDING RESISTANCE TO THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION) PER ASTM D4533 TESTING METHOD. AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE TRIM CUT-OUT WITH CULTEC'S INSTALLATION INSTRUCTIONS. 11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER TO UTILIZE INTERNAL - PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET 25.THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE MODEL 330XLSHD 12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING SPECIFICATIONS OF NSAI IRISH AGREEMENT BOARD CERTIFICATE FOR CULTEC METHOD. ATTENUATION AND INFILTRATION. 13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM D4491 TESTING METHOD 26.MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m) HVLV FC-24 14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING 27.THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED FEED CONNECTOR ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS 330XLHD 4.0 **GENERAL NOTES CULTEC RECHARGER 330XLHD HEAVY DUTY TYPICAL INTERLOCK CULTEC RECHARGER 330XLHD HEAVY DUTY CROSS SECTION** INLET/OUTLET PIPE PER ENGINEER DESIGN. - 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE - PAVEMENT OR FINISHED GRADE PIPE TO BE INSERTED 12.0" [305 mm] MIN. INTO CHAMBER SURROUNDING CHAMBERS 24" [600 mm] HDPE - PAVEMENT SUB-BASE (WHEN APPLICABLE) 24" [600 mm] PVC - CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND 24.0" [610 mm] MIN. STONE. TOP AND SIDES MANDATORY, BOTTOM PER NATURALLY COMPACTED FILL **ENGINEER'S DESIGN PREFERENCE** SQUARE - PAVEMENT OPTIONAL INSPECTION PORT (SEE ZOOM DETAIL 330XLHD OR FINISHED GRADE 14.5" [368 mm] CULTEC NO. 410 NON-WOVEN GEOTEXTILE NEENAH FOUNDRY MODEL R-5900-A - MINIMUM 95% COMPACTED FILL AROUND STONE, TOP AND SIDES MANDATORY (OR EQUAL) HEAVY DUTY FRAME AND LID BOTTOM PER ENGINEER'S DESIGN PREFERENCE PAVEMENT OR FINISHED GRADE [260 mm] · CULTEC HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED - 6.0 INCH [152 mm] MIN. DEPTH OF 12.0" [305 mm] MIN. 1-2 INCH [25-50 mm] WASHED, CRUSHED -12.0" [300 mm] SDR-35 / SCH. 40 PVC COLLAR STONE ABOVE CHAMBERS -FIELD PLACED CLASS "C" CONCRETE 7.5' [2.29 m] MIN. 6.0 INCH [152 mm] MIN. DEPTH OF CULTEC NO. 4800 WOVEN GEOTEXTILE CULTEC FC-24 16.0" [406 mm] MAINTAIN 6.0" [152 mm] CLEARANCE BETWEEN 1-2 INCH [25-50 mm] WASHED, CRUSHED BENEATH FEED CONNECTORS HEAVY DUTY LID AND PVC CLEAN-OUT CAP STONE BENEATH CHAMBERS 6.0" [150 mm] SDR-35 / SCH. 40 PVC ENDCAP 10.0' [3.0 m] MIN CLEAN-OUT ADAPTER W/ SCREW-IN CAP - CULTEC RECHARGER 330XLHD CULTEC NO. 4800 WOVEN GEOTEXTILE 12.0" [305 mm] MIN. —— BENEATH INLET PIPES HEAVY-DUTY CHAMBER -6.0" [150 mm] SDR-35 / SCH. 40 PVC RISER CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD — RECHARGER 330XLHD -~6.0" [150 mm] SDR-35 / SCH. 40 PVC COUPLING FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION) HEAVY DUTY CHAMBER - 12.0 INCH [305 mm] MIN. WIDTH OF 1-2 INCH [25-50 mm] TRIM CHAMBER INSPECTION PORT KNOCK-OUT TO WASHED, CRUSHED STONE BORDER SURROUNDING SIDE PORTAL TO BE CUT IN FIELD TO ALLOW FOR HVLV FC-24 FEED -MATCH O.D. OF 6.0" [150mm] INSPECTION PORT PIPE CONNECTOR OR STORM PIPE AS NEEDED (SEE FIGURE 1), CUT SHALL BE WITHIN 1/4" [6 mm] TOLERANCE OF SIDE PORTAL TRIM GUIDELINE 12.0" [305 mm] 6.0" [150 mm] SDR-35 / SCH 40 PVC - PIPE PER ENGINEER DESIGN. PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR — (INSERTED 8.0" [203 mm] INTO CHAMBER) PIPE TO BE INSERTED 12.0 INCHES [305 mm] MIN. INTO CHAMBER ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET 24" [600 mm] HDPE 24" [600 mm] PVC ZOOM OF SIDE PORTAL SHOWING MAX. PIPE O. 330XLHD 8.0 **CULTEC HVLV FC-24 OPTIONAL INSPECTION PORT-ZOOM DETAIL CULTEC INTERNAL MANIFOLD- OPTIONAL INSPECTION PORT DETAIL**

CULTEC, Inc.

Subsurface Stormwater Management Systems

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CULTEC RECHARGER 330XLHD HEAVY DUTY PLAN VIEW

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.

FEED CONNECTOR THREE VIEW

RECHARGER 330XLHD DETAIL SHEET TRAFFIC APPLICATION

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

- END OF RUN

HIDDEN END

10.0" [254 mm] MIN. FOR PAVED

10" [250 mm] HDPE

6.0" [152 mm] MIN.

30.5" [775 mm]

6.0" [152 mm] MIN.

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 FT³ / FT (0.085 m³ / 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 X 34.5 INCHES (876 mm) WIDE. 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. INSPECTION PORT OR CLEAN-OUT. 23.THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY. ATTENUATION AND INFILTRATION. ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS

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

22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY

24.THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND STRUCTURAL REQUIREMENTS OF IAPMO PS 63-2019, INCLUDING RESISTANCE TO AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE WITH CULTEC'S INSTALLATION INSTRUCTIONS.

25.THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS OF NSAI IRISH AGREEMENT BOARD CERTIFICATE FOR CULTEC

26.MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m) 27 THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED

CULTEC HVLV FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 330XLHD STORMWATER CHAMBERS.

> 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 STONE. 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 9001:2015 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.

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 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

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 12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER

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

(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

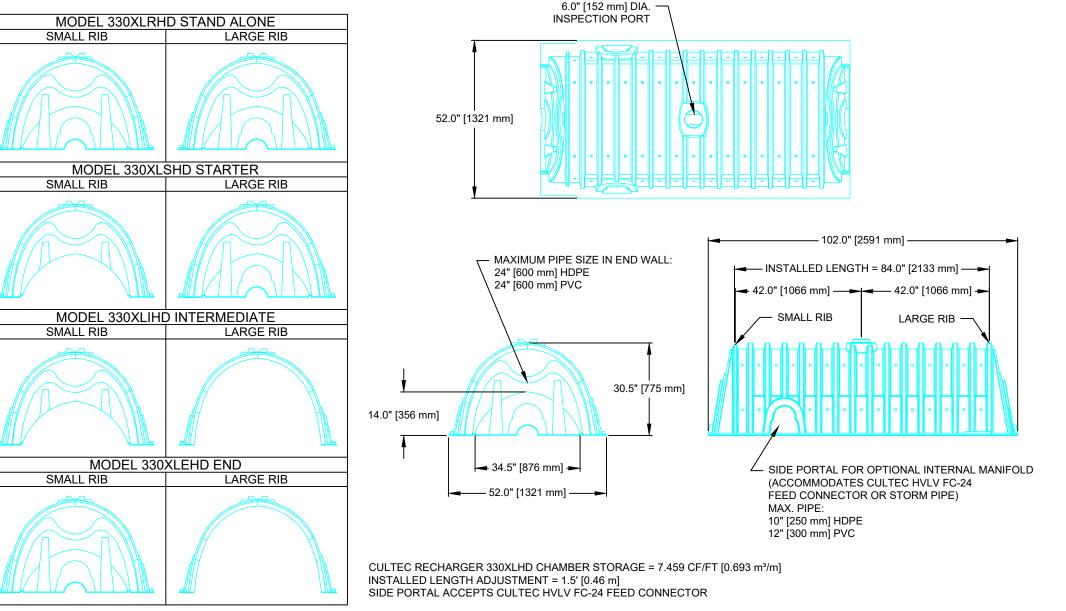
D6241 TESTING METHOD. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N)

PER ASTM D4533 TESTING METHOD. 11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER

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



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 -- NATURALLY COMPACTED FILL - 1-2 INCH [25-50 mm] WASHED, CRUSHED HEAVY DUTY CHAMBER STONE SURROUNDING CHAMBERS - FINISHED GRADE — HVLV FC-24 FEED CONNECTOR 12.0' [3.66 m] MAX. - 6.0" [152 mm] MIN. COVER DEPTH 6.0" [152 mm] MIN. 30.5" [775 mm] 6.0" [152 mm] MIN.

→ 52.0" [1321 mm]
→

OPTIONAL INSPECTION PORT-ZOOM DETAIL

58.0" [1473 mm] MIN

CENTER TO CENTER

330XLHD 8.0

REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET

- CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD

- PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE

CULTEC RECHARGER 330XLHD HEAVY DUTY CROSS SECTION

FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION)

HIDDEN END BEGINNING OF RUN

ZOOM OF SIDE PORTAL SHOWING MAX. PIPE O.D

MODEL 330XLRHD STARTER UNITS ARE USED AS SINGLE **MODEL RHD** STAND ALONE SECTIONS. MODEL 330XLSHD STARTER UNITS ARE USED **MODEL SHD** TO BEGIN A LINE **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

- END OF RUN MODEL 330XLEHD HIDDEN END MODEL 330XLIHD MODEL 330XLIHD FEED CONNECTOR TRIM CUT-OUT TO UTILIZE INTERNAL MODEL 330XLSHD HVLV FC-24 FEED CONNECTOR

- 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 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 PER ENGINEER DESIGN. PIPE TO BE INSERTED 12.0 INCHES [305 mm] MIN. INTO CHAMBER MAXIMUM PIPE SIZE 24" [600 mm] HDPE

GENERAL NOTES

6.0" [150 mm] SDR-35 / SCH. 40 PVC ENDCAP CLEAN-OUT ADAPTER W/ SCREW-IN CAP - FINISHED GRADE 6.0" [150 mm] SDR-35 / SCH. 40 PVC RISER CULTEC FC-24 16.0" [406 mm] 6.0" [150 mm] SDR-35 / SCH. 40 PVC TRIM CHAMBER INSPECTION PORT KNOCK-OUT TO MATCH O.D. OF 6.0" [150 mm] INSPECTION PORT PIPE 6.0" [150 mm] SDR-35 / SCH 40 PVC (INSERTED 8.0" [203 mm] INTO CHAMBER) 12.0" [305 mm]

 INLET/OUTLET PIPE PER ENGINEER DESIGN. PIPE TO BE INSERTED 12.0" [305 mm] MIN. INTO CHAMBER - 1-2 INCH [25-50 mm] WASHED, CRUSHED MAXIMUM PIPE SIZE: STONE SURROUNDING CHAMBERS 24" [600 mm] HDPE 24" [600 mm] PVC - OPTIONAL INSPECTION PORT - CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND (SEE ZOOM DETAIL SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE FINISHED GRADE NATURALLY COMPACTED FILL - 6.0" [152 mm] MIN 6.0" [152 mm] MIN. 30.5" [775 mm] 6.0" [152 mm] MIN. 12.0" [305 mm] MIN. -CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD — RECHARGER 330XLHD -FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION) HEAVY DUTY CHAMBER SIDE PORTAL TO BE CUT IN FIELD TO ALLOW FOR HVLV FC-24 FEED -CONNECTOR OR STORM PIPE AS NEEDED (SEE FIGURE 1). CUT SHALL BE WITHIN 1/4" [6 mm] TOLERANCE OF SIDE PORTAL TRIM GUIDELINE PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET 10" [250 mm] HDPE 12" [300 mm] PVC

CULTEC RECHARGER 330XLHD HEAVY DUTY TYPICAL INTERLOCK

CULTEC INTERNAL MANIFOLD- OPTIONAL INSPECTION PORT DETAIL

RECHARGER 330XLHD DETAIL SHEET NON-TRAFFIC APPLICATION

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

CULTEC, Inc.

Subsurface Stormwater Management Systems

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CULTEC RECHARGER 330XLHD HEAVY DUTY PLAN VIEW

THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE

CULTEC HVLV FC-24

FEED CONNECTOR THREE VIEW

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.

12.0" [305 mm] MIN.

330XLHD 4.0