The Bungalows Proposed Residential Development

#1676 & #1688 Berlin Turnpike

(Connecticut Route #15)

Berlin, Connecticut

December 05, 2023

Revised December 13, 2023

Sheet

Title

Site Layout Plan Site Grading and Drainage Plan Site Utilities Plan Site Erosion & Sediment Control Plan Site Landscaping Plan Model Unit Landscaping Plan General Notes Erosion Control Details & Specifications Storm Water Details - Cultec R-180HD Storm Water Details - Cultec R-280HD Storm Water Details - Cultec Separator Row General Details Photometric Plan Photometric Details Emergency Services Turning Radius Analysis Sight Line Analysis Plan Connecticut Department of Transportation Details Improvement Location Map (Flynn & Cyr Land Surveying)



Site Location Map
Scale: 1'=1,000'

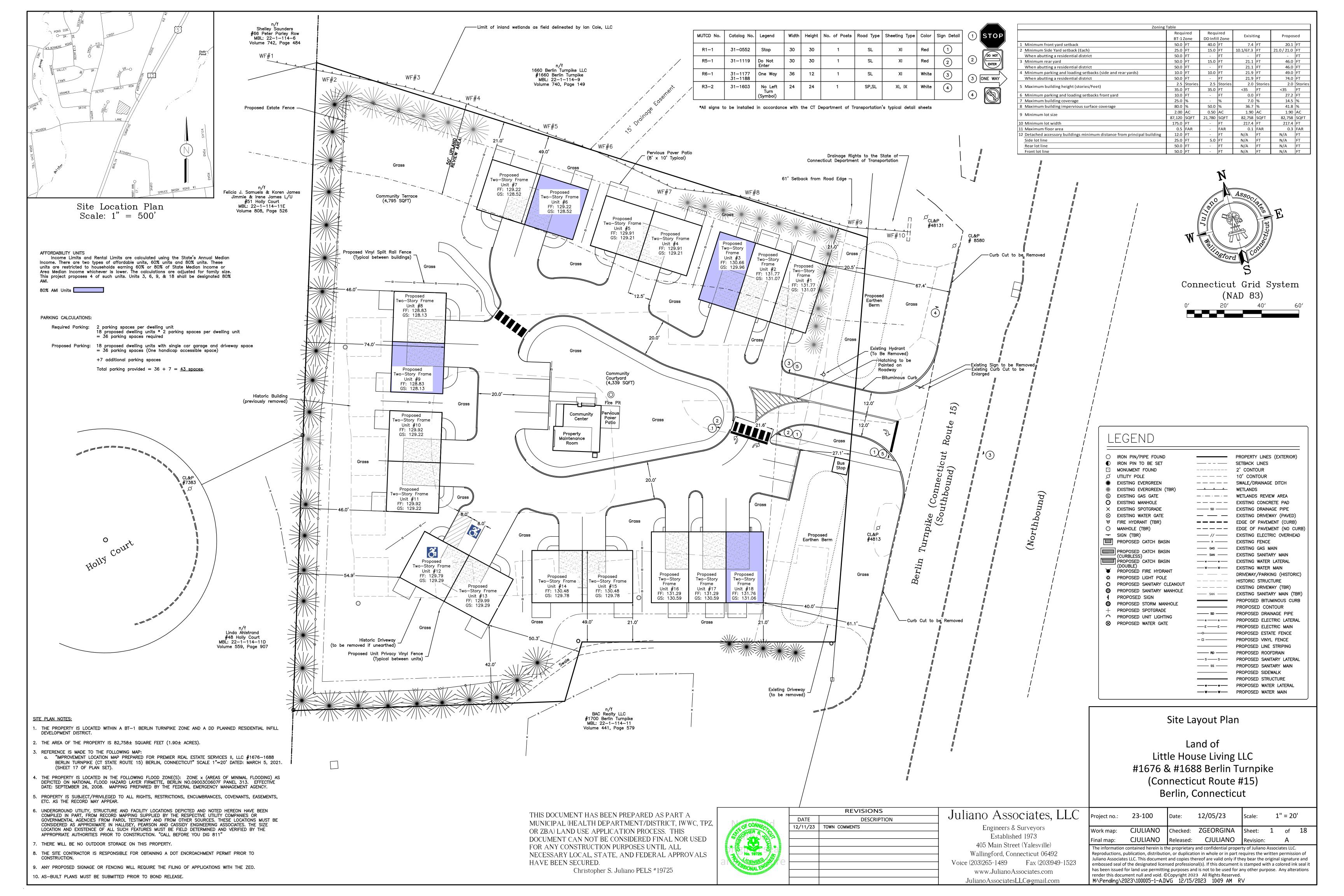
Applicant:
Patrick Snow
Premier Partners &
Associates, INC
#110 Court Street, Suite 1
Cromwell, Connecticut 06416

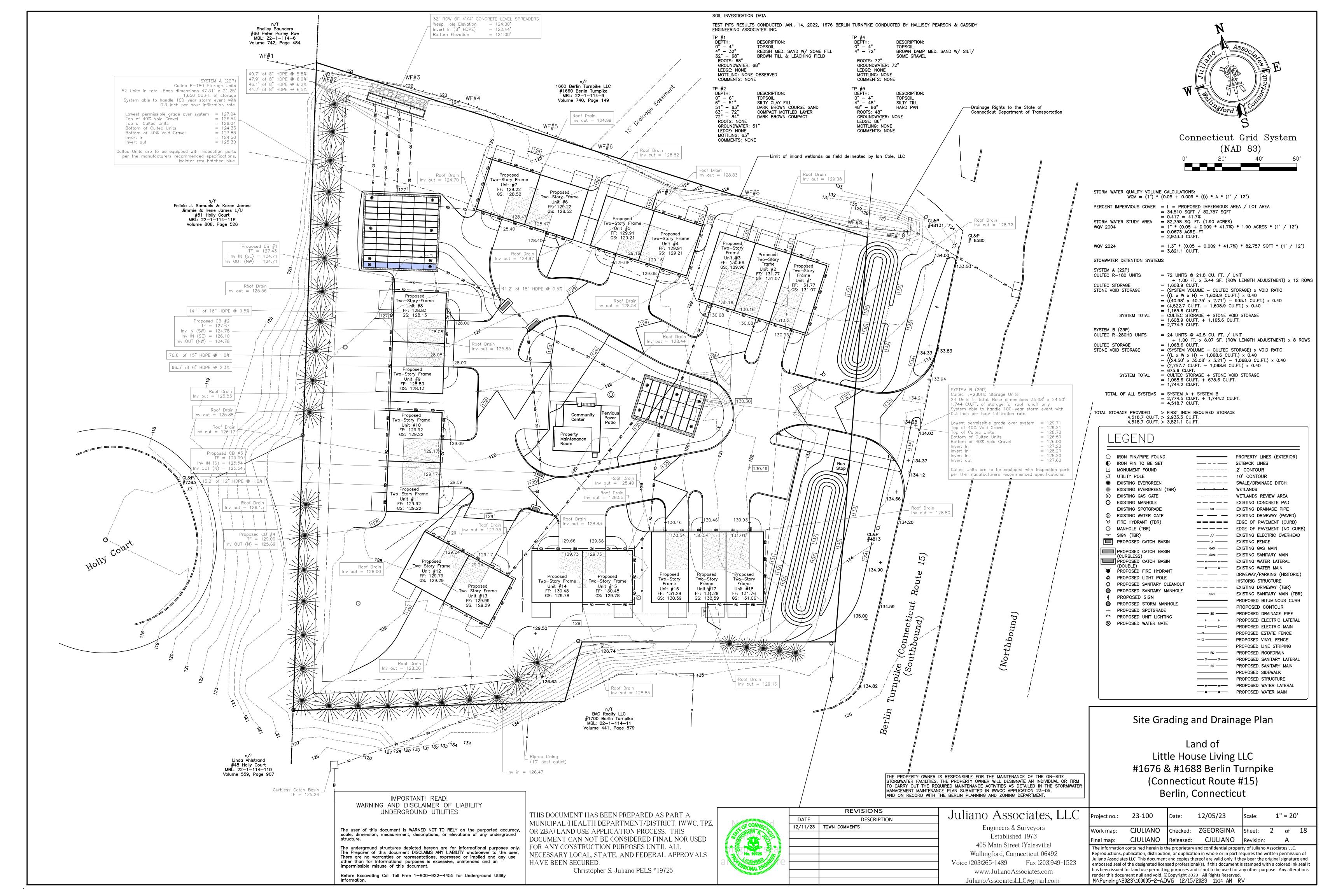
Owner:
Little House Living, LLC
#110 Court Street, Suite 1
Cromwell, Connecticut 06416

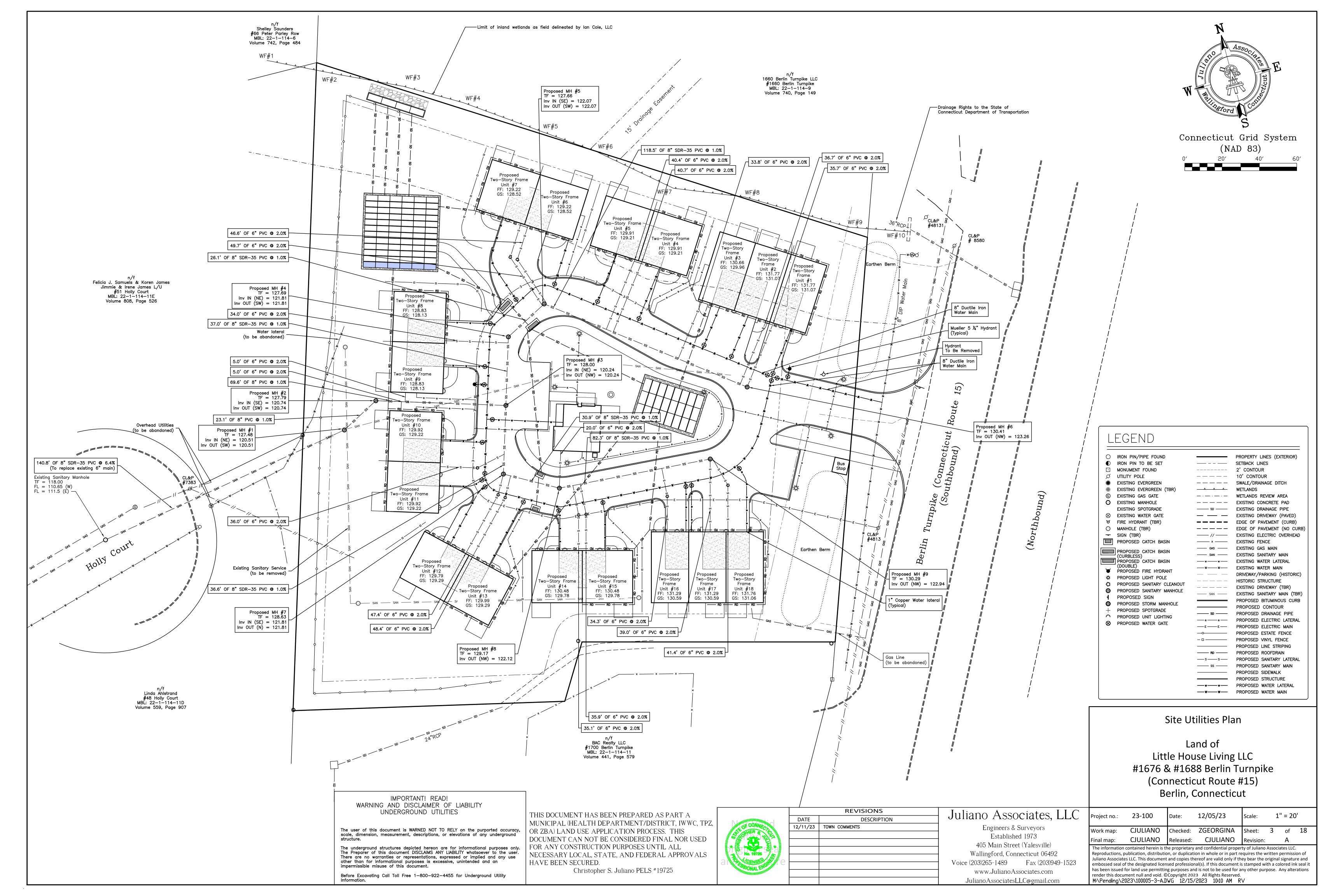
Civil Engineer:
Juliano Associates
405 Main Street (Yalesville)
Wallingford, Connecticut 06492

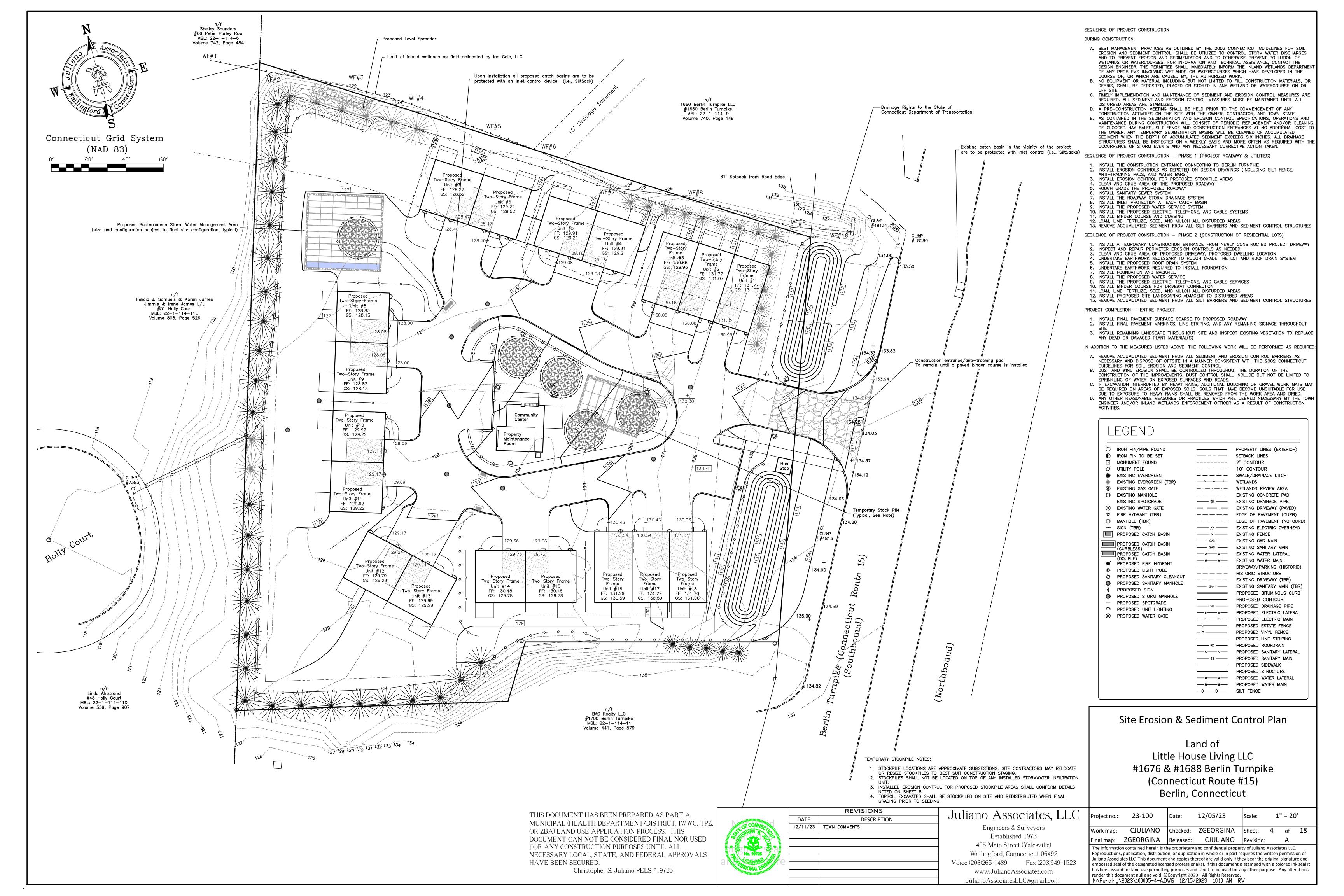
Civil Engineer

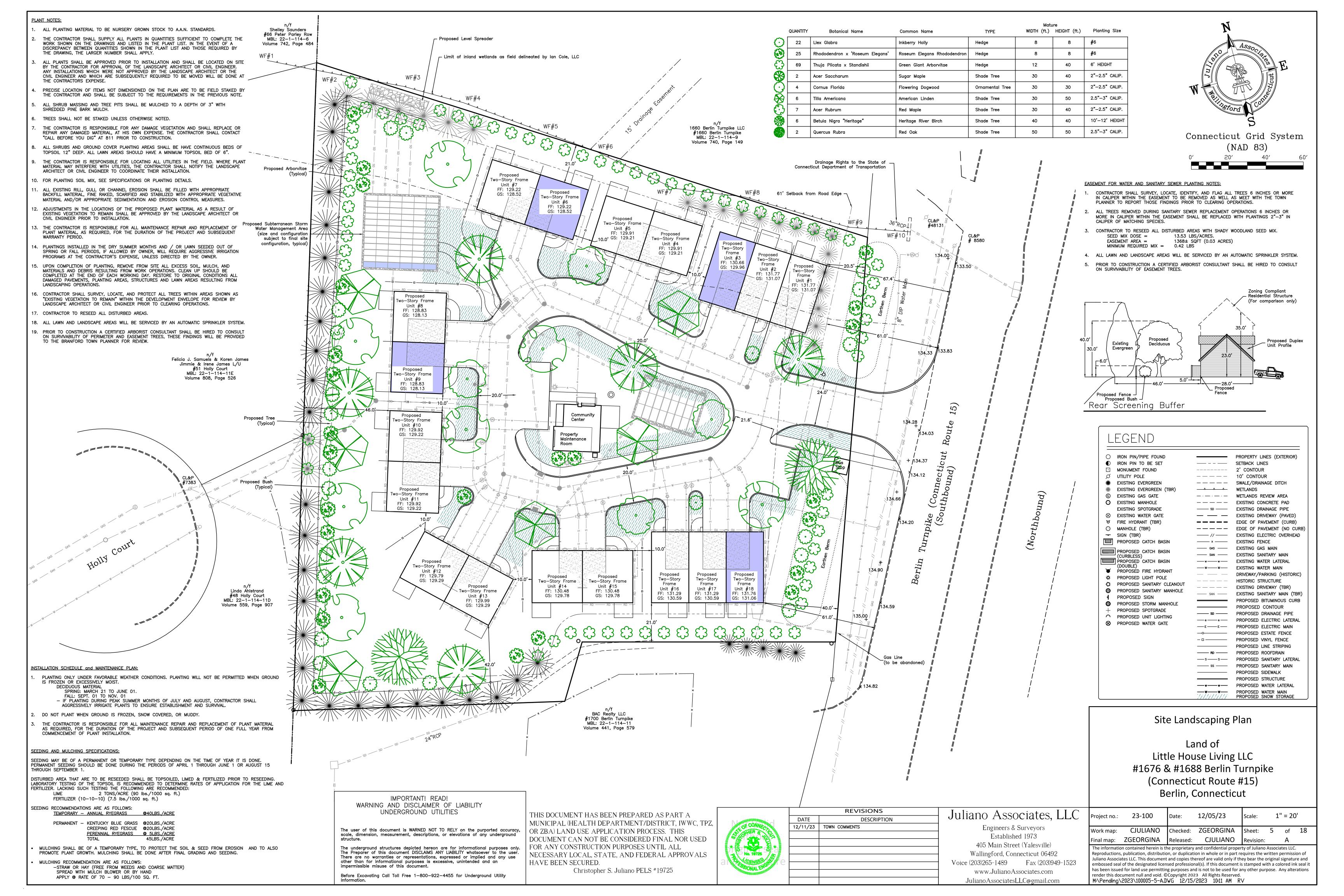


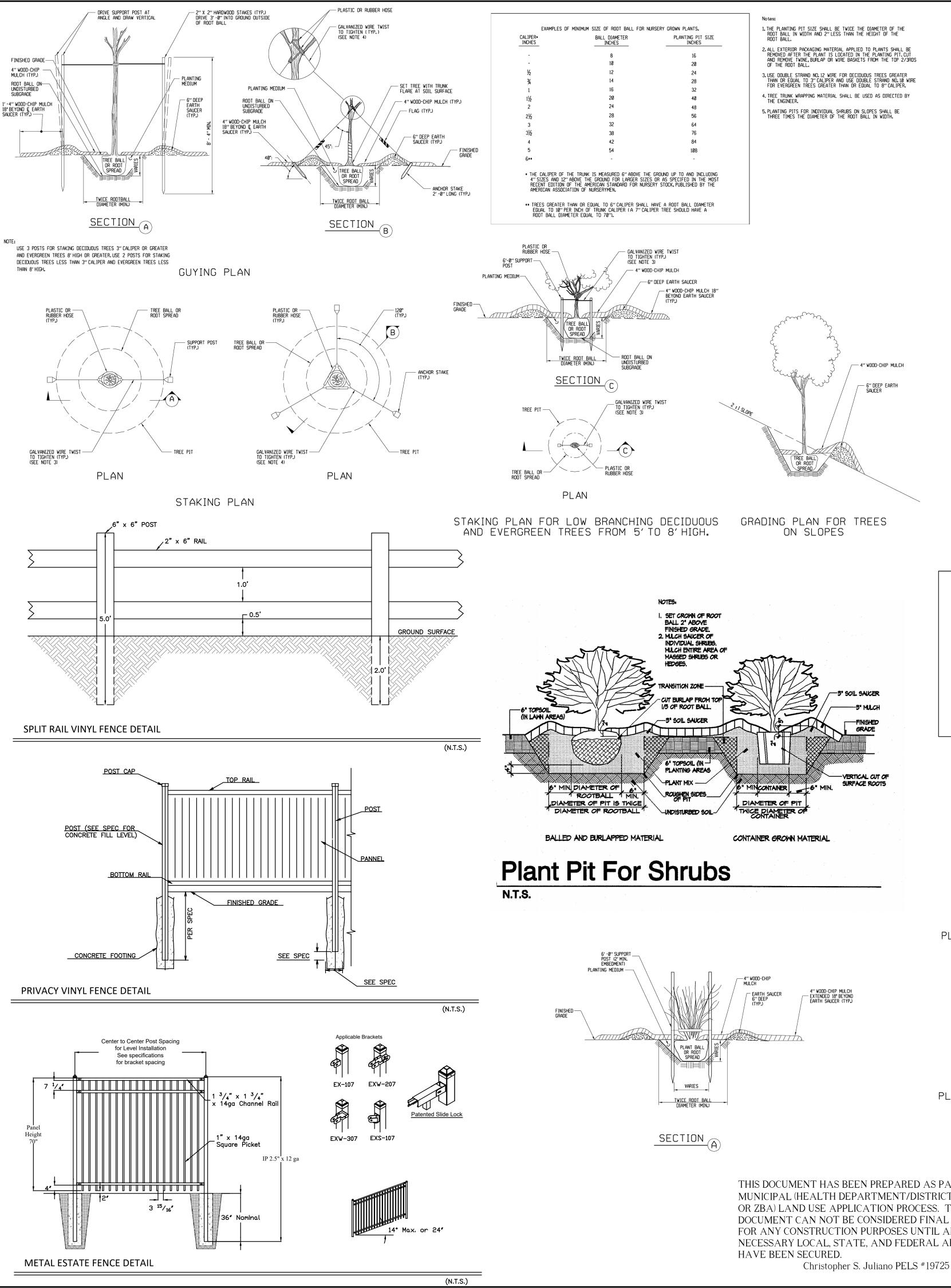


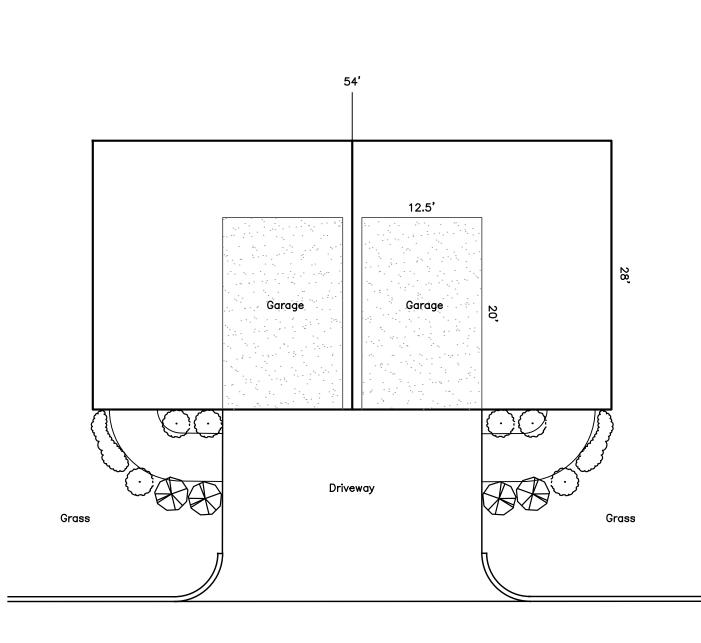






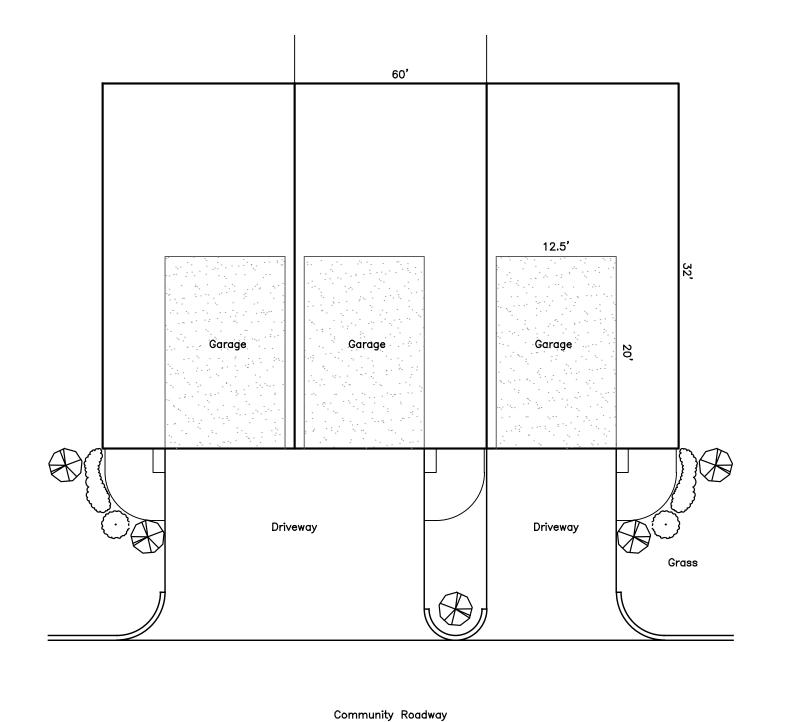






Double Unit Configuration

Community Roadway

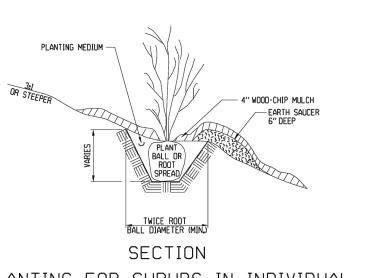


Triple Unit Configuration

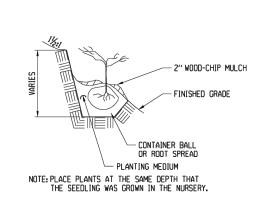
Scale: 1" = 10'

EXAMPLES OF MINIMUM CONTAINER SIZES FOR NURSERY GROWN PLANTS. GALLONS 0.7-1.1 0.7-1.1 0.7-1.1 1.4-2.0 3.4-4.2 4.7-5.4 5.8-7.8 12.0-16.0 THE CALIPER IS MEASURED 4" ABOVE GROUND LEVEL. ONLY DECIDUOUS SHRUBS ARE INCLUDED IN THIS TABLE. EVERGREEN SHRUBS ARE MEASURED BY HEIGHT BUT, CONTAINER SIZE DEPENDS ON BOTH SIZE AND SHAPE AND ARE CENERALLY 1 TO 2 SIZES LARGER THAN DECIDUOUS PLANTS.

TABLE FOR SHRUBS

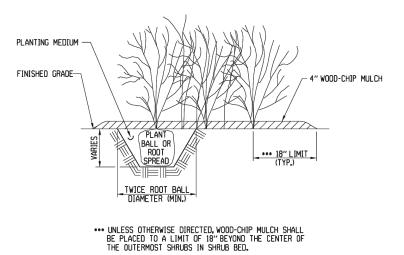


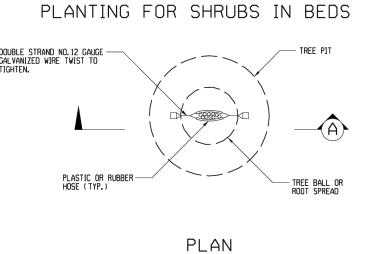
PLANTING FOR SHRUBS IN INDIVIDUAL PITS ON SLOPES



PLANTING FOR SEEDLINGS, VINES AND GROUND COVER PLANTS IN PITS ON SLOPES

1. THE PLANTING PIT SIZE SHALL BE TWICE THE DIAMETER OF THE ROOT BALL IN WIDTH AND 2" LESS THAN THE HEIGHT OF THE ROOT BALL. 2. ALL EXTERIOR PACKAGING MATERIAL APPLIED TO PLANTS SHALL BE REMOVED AFTER THE PLANT IS LOCATED IN THE PLANTING PIT. CUT AND REMOVE TWINE, BURLAP OR WIRE BASKETS FROM THE TOP 2/3RDS OF THE ROOT BALL. 3. USE DOUBLE STRAND NO.12 WIRE FOR DECIDUOUS TREES GREATER THAN OR EQUAL TO 3" CALIPER AND USE DOUBLE STRAND NO.10 WIRE FOR EVERGREEN TREES GREATER THAN OR EQUAL TO 8" CALIPER. 4. TREE TRUNK WRAPPING MATERIAL SHALL BE USED AS DIRECTED BY THE ENGINEER. 5. PLANTING PITS FOR INDIVIDUAL SHRUBS ON SLOPES SHALL BE THREE TIMES THE DIAMETER OF THE ROOT BALL IN WIDTH.





STAKING FOR MULTI-STEMMED DECIDUOUS TREES FROM 5' TO 10' HIGH

PLANT PALETTE OPTIONS (NORTH/WEST ORIENTATION)

| SYMBOL | BOTANICAL NAME | COMMON NAME | SIZE | SPACING |
|---------|--|---|----------------------------|-------------------------------|
| \$ | AZALEA VISCOSUM "LOLLIPOP" ILEX × MESERVEAE "BLUE PRINCESS" AND "BLUE PRINCE" TAXUS CUSPIDATA "NANA PYRAMIDALIS" | LOLLIPOP AZALEA BLUE PRINCESS & PRINCE HOLLY UPRIGHT NANA YEW | 3 GAL. 3 GAL. 3 GAL. | 5' O.C. 5' O.C. 5' O.C. |
| 0 | CLETHRA ALNIFOLIA "RUBY SPICE" ILEX GLABRA "SHAMROCK" PIERIS x BROUWER'S BEAUTY | RUBY SPICE SUMMERSWEET SHAMROCK INKBERRY BROUWERS BEUTY ANDROMEDA | 3 GAL. 3 GAL. 3 GAL. | 4' O.C. 4' O.C. 4' O.C. |
| \odot | ITEA VIRGINICA "LITTLE HENRY" KALMIA MYRTIFOLIA "LITTLE LINDA" RHODODENDRON "PURPLE GEM" | "LITTLE HENRY" SWEETSPIRE MINIATURE MOUNTAIN LAUREL PURPLE GEM RHODODENDRON | 3 GAL. 3 GAL. 3 GAL. | 3' O.C. 3' O.C. 3' O.C. |
| 2 | HEMEROCALLIS "HAPPY RETURNS" HOSTA "GUACAMOLE" LIRIOPE MUSCARI "BIG BLUE" | HAPPY RETURNS DAYLILY GUACAMOLE HOSTA BIG BLUE LILY TURF | 1 GAL. 1 GAL. 1 GAL. | 2' O.C. 2' O.C. 2' O.C. |

PLANT PALETTE OPTIONS (SOUTH/EAST ORIENTATION)

| SYMBOL | BOTANICAL NAME | COMMON NAME | SIZE | SPACING |
|-----------|--|---|--|-------------------------------|
| \otimes | HIBISCUS SYRIACUS "VIOLET SATIN" JUNIPERUS COMMUNIS "GOLD CONE" PRUNUS CISTENA | VIOLET SATIN ROSE OF SHARON GOLD CONE COMMON JUNIPER PURPLE LEAF SAND CHERRY | 5 GAL. 3 GAL. 3 GAL. | 5' O.C. 5' O.C. 5' O.C. |
| 0 | FOTHERGILLA MAJOR "MT.AIRY" ILEX CRENATA "STEEDS" PHYSOCARPUS OPULIFOLIUS "SUMMER WINE" | MT. AIRY FOTHERGILLA STEED'S UPRIGHT JAPANESE HOLLY SUMMER WINE COMMON NINEBARK | 3 GAL. 3 GAL. 3 GAL. | 4' O.C. 4' O.C. 4' O.C. |
| 0 | AZALEA "GIRARDS' FUCHSIA" PINUS STROBUS "SOFT TOUCH" MICROBIOTA DECUSSATA | GIRARDS' FUCHSIA AZALEA SOFT TOUCH DWARF WHITE PINE SIBERIAN CARPET CYPRESS | 3 GAL.3 GAL.3 GAL. | 3' O.C. 3' O.C. 3' O.C. |
| 0 | LEUCANTHEMUM x SUPERBUM "BECKY" NEPETA FAASSENII "WALKERS LOW" PENNISETUM ALOPECUROIDES "HAMELN" | BECKY SHASTA DAISY NEPETA FAASSENII "WALKERS LOW" DWARF FOUNTAIN GRASS | 1 GAL. 1 GAL. 1 GAL. | 2' O.C. 2' O.C. 2' O.C. |

Model Unit Landscaping Plan

Land of Little House Living LLC #1676 & #1688 Berlin Turnpike (Connecticut Route #15) Berlin, Connecticut

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Juliano Associates, LLC Engineers & Surveyors Established 1973 405 Main Street (Yalesville) Wallingford, Connecticut 06492 Voice (203)265-1489 Fax (203)949-1523 www.JulianoAssociates.com

Juliano Associates LLC@gmail.com

| Project no.: | 23-100 | Date: | 12/05/23 | Scale: | | NTS | |
|--|-----------|-----------|-----------|-----------|---|-----|----|
| Work map: | CJULIANO | Checked: | ZGEORGINA | Sheet: | 6 | of | 18 |
| Final map: | ZGEORGINA | Released: | CJULIANO | Revision: | | Α | |
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SITE PLAN NOTES

- 1. ALL CONSTRUCTION SHALL COMPLY WITH TOWN OF BERLIN, AND STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED HIERARCHY, IF SPECIFICATIONS ARE IN CONFLICT. THE MORE STRINGENT SPECIFICATION SHALL APPLY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
- 2. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY ALL APPLICABLE GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL TOWN CONSTRUCTION PERMITS, INCLUDING DOT PERMITS AND SEWER AND WATER CONNECTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
- 3. REFER TO OTHER PLANS, DETAILS AND NOTES FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE SITE ENGINEER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE LOCAL CONSTRUCTION MANAGER PRIOR TO BIDDING.
- 4. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS AND PLAN SPECIFICATIONS TO THE OWNER AND SITE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 BUSINESS DAYS FOR REVIEW.
- 5. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN.
- 6. THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF
- 7. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING WITH FURTHER WITH WORK IN THIS AREA.
- 8. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
- 9. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE FOUNDATION.
- 10. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, TRAFFIC CONTROLLERS AND UNIFORMED TRAFFIC OFFICERS AS REQUIRED, ORDERED BY THE ENGINEER OR REQUIRED BY THE LOCAL GOVERNING AUTHORITIES.
- 11. REFER TO DETAIL SHEETS FOR PAVEMENT, CURBING, AND SIDEWALK INFORMATION.
- 12. TRAFFIC CONTROL SIGNAGE SHALL CONFORM TO THE STATE DOT STANDARD DETAIL SHEETS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. SIGNS SHALL BE INSTALLED PLUMB WITH THE EDGE OF THE SIGN 2 FEET OFF THE FACE OF THE CURB, AND WITH 7 FOOT VERTICAL CLEARANCE UNLESS OTHERWISE DETAILED OR NOTED.
- 13. THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
- 14. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PAINT MIXTURE PRIOR TO STRIPING.
- 15. PAVEMENT MARKING KEY: PAINT FOR TRAFFIC MARKINGS SHALL BE EPOXY IN ACCORDANCE WITH CT DOT FORM 818. 4" SYDL 4' SOLD YELLOW DOUBLE LINE 4' SOUD YELLOW LINE 4" SYL
- 4" SWL 4" SOLID WHITE LINE 12" SWSB
- 12" SOLID WHITE STOP BAR 4" BWL 4" BROKEN WHITE LINE 10' STRIPE 30' SPACE
- 16. PARKING SPACES SHALL BE STRIPED WITH 4 SWL; HATCHED AREA SHALL BE STRIPED WITH 4' SWL AT A 45'ANGLE, 2' ON CENTER. HATCHING SYMBOLS, AND STRIPING FOR HANDICAPPED SPACES SHALL BE PAINTED BLUE IF REQUIRED BY BUILDING DEPARTMENT FOR RESIDENTIAL DEVELOPMENTS. OTHER MARKINGS SHALL BE PAINTED WHITE OR AS NOTED.
- 17. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE ENGINEER.
- 18. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER AT THE END OF CONSTRUCTION.
- THE ARCHITECT OR ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND ENGINEER HAVE NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY
- 20. THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
- 21. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, SITE ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING PROCESS.
- 22. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION. THE CONTRACTOR SHALL CONTACT "CALL 72 HOURS BEFORE COMMENCEMENT OF WORK AT "1(800)922-4455" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
- 23. PAVEMENT MARKINGS SHALL BE HOT APPLIED TYPE IN ACCORDANCE WITH CT DOT SPECIFICATIONS, UNLESS WHERE EPOXY RESIGN PAVEMENT MARKINGS ARE INDICATED
- 24. CT DOT ENCROACHMENT PERMIT SHALL BE OBTAINED BY CONTRACTOR WHO SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC PROTECTION NECESSARY FOR THE WORK PRIOR TO CONSTRUCTION.
- 25. AN EROSION CONTROL BOND IS REQUIRED TO BE POSTED BY THE CONTRACTOR BEFORE THE START OF ANY ACTIVITY ON OR
- 26. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.
- 27. THESE PLANS ARE FOR PERMITTING. 28. THE SITE IS PROPOSED TO BE SERVICED BY PUBLIC WATER AND PUBLIC SEWER.
- 29. 12" SWSB (STOP BAR) AND 4* SYDL AND SWL PAVEMENT MARKINGS LOCATED IN DRIVEWAYS AND IN STATE HIGHWAY SHALL BE EPOXY RESIN TYPE ACCORDING TO CT DOT SPECIFICATIONS.
- 30. FIRE LANES SHALL BE ESTABLISHED AND PROPERLY DESIGNATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN FIRE MARSHAL.
- 31. THE APPLICANT WILL PROVIDE AND MAINTAIN ADEQUATE SIGHT DISTANCES AT ALL DRIVEWAY INTERSECTIONS. CURRENT STATE
- OF CONNECTICUT HIGHWAY DESIGN STANDARDS WILL APPLY TO REQUIRED SIGHT DISTANCES. 32. THE APPLICANT WILL REGISTER BUILDING ALARMS PER TOWN AS REQUIRED BY ORDINANCE.
- 33. THE APPLICANT WILL CONTROL DUST AND DEBRIS ON THE SURROUNDING ROADWAYS DURING CONSTRUCTION. PROPER SAFETY PRECAUTIONS AND EQUIPMENT ARE TO BE UTILIZED WHEN WORKING ON PUBLIC ROADWAYS AND ARE THE APPLICANT'S
- 34. THE APPLICANT WILL OBTAIN A CONNECTICUT DEPARTMENT OF TRANSPORTATION ENCROACHMENT PERMIT FOR ANY WORK DONE IN THE STATE RIGHT OF WAY.
- 35. THE APPLICANT MUST COMPLY WITH CONNECTICUT DEPARTMENT OF TRANSPORTATION STIPULATIONS/REGULATIONS WHEN
- 36. ALL DISTURBED PAVEMENT MARKINGS MUST BE REPLACED WITH EPOXY PAINT.
- 37. THERE WILL BE NO OUTDOOR STORAGE ON THIS SITE.
- 38. AN AS-BUILT PLAN MUST BE SUBMITTED PRIOR TO BOND RELEASE.
- 39. ANY PROPOSED SIGNAGE OR FENCING WILL REQUIRE THE FILING OF APPLICATIONS WITH THE ZONING ENFORCEMENT OFFICER.
- 40. CONSTRUCTION HOURS TO COMPLY WITH THE TOWN OF BERLIN NOISE ORDINANCE, CHAPTER 180 OF THE BERLIN TOWN CODE. THE ORDINANCE IS APPLICABLE ONCE BUILDINGS ARE OCCUPIED.
- 41. PER THE TOWN ZONING REGULATIONS SECTION 4.B.2, THE FOLLOWING USES ARE PERMITTED ON THE PROPERTY WITH SPECIAL PERMIT/SITE PLAN APPROVAL: WHOLESALE COMMERCIAL, AUTOMOTIVE SERVICE STATION IN ACCORDANCE WITH SECTION 6.1. PUBLIC AND PRIVATE RECREATION, GENERAL WAREHOUSING AND DISTRIBUTION, CONTRACTORS YARDS AND LUMBER YARDS, PUBLIC SCHOOLS AND PUBLIC BUILDINGS, PRIVATE SCHOOLS INCLUDING NURSERY SCHOOLS, CHILD CARE CENTERS, ADULT CARE CENTERS, CHURCHES, SYNAGOGUES, PLACES OF WORSHIP, COMMUNITY BUILDINGS/CENTER, AND COMMERCIAL GREENHOUSES. PER THE TOWN ZONING REGULATIONS SECTION 4.B.2, THE FOLLOWING USES ARE PERMITTED ON THE PROPERTY WITH SITE PLAN APPROVAL: OFFICES, RESEARCH/DEVELOPMENT, ADVANCED MANUFACTURING, MANUFACTURING, ASSEMBLY. LIGHT ASSEMBLY AND WAREHOUSING/DISTRIBUTION OF GOODS MANUFACTURED OR ASSEMBLED ON PREMISES
- 42. PER THE TOWN ZONING REGULATIONS SECTION 4.B.2, THE FOLLOWING USES ARE PERMITTED ON THE PROPERTY WITH NO ZONING APPROVAL REQUIRED: FARMS, ORCHARDS, RAISING OF CROPS, PLANT NURSERY AND RAISING OF LIVESTOCK IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES AS PROMULGATED.

GRADING AND DRAINAGE NOTES

GRADING GENERAL NOTES:

- 1. SEE THIS PLAN SHEET FOR ADDITIONAL SITE PLAN AND GENERAL NOTES.
- 2. THE GRADING AND DRAINAGE PLAN IS INTENDED TO DESCRIBE GRADING AND DRAINAGE ONLY. REFER TO SITE PLAN FOR GENERAL INFORMATION, AND DETAIL SHEETS FOR DETAILS. SEE MEP DRAWINGS FOR BUILDING CONNECTION LOCATIONS AND
- 3. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS. REFER TO EROSION CONTROL PLAN FOR LIMIT OF DISTURBANCE AND NOTES.
- 4. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS REQUIRED BY GOVERNMENT AND LOCAL AGENCIES PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE LOCAL MUNICIPALITIES REQUIRED TO PERFORM ALL REQUIRED WORK, INCLUDING FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
- 6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES AND UNIFORMED TRAFFIC CONTROLLERS AS REQUIRED, ORDERED BY THE ENGINEER OR REQUIRED BY THE STATE AND LOCAL GOVERNING AUTHORITIES.
- 7. THE CONTRACTOR SHALL COMPACT FILL IN 12" MAXIMUM LIFTS UNDER ALL PARKING, BUILDING, AND DRIVE AREAS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST), OR AS DIRECTED BY THE
- 8. UNDERDRAINS SHALL BE ADDED, IF DETERMINED NECESSARY IN THE FIELD BY THE DESIGN OR TOWN ENGINEER AFTER SUBGRADE IS ROUGH GRADED, AS APPROVED BY THE BERLIN TOWN STAFF.
- 9. VERTICAL DATUM IS NVGD 1988

GEOTECHNICAL ENGINEER.

- 10. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE TOWN OF BERLIN AGENT PRIOR TO THE START OF WORK ON THE SITE.
- 11. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLANDS IN ACCORDANCE WITH THE REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDELINES FOR SOIL EROSION AND SEDIMENT POLLUTION CONTROL. IN ADDITION, THE CONTRACTOR SHALL STRICTLY ADHERE TO THE "EROSION CONTROL PLAN" CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY THE LOCAL MUNICIPALITIES, OR SOIL CONSERVATION SERVICE WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.
- 12. ALL SITE WORK, MATERIALS OR CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK, STORM DRAINAGE, AND UTILITY WORK SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION UNLESS OTHERWISE STATED IN THE PROJECT MANUAL SPECIFICATIONS. ALL FILL MATERIALS UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE DOT, UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. MATERIAL SHALL BE COMPACTED IN 12" LIFTS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT 3 +/- PERCENT OF OPTIMUM MOISTURE CONTENT.
- 13. ALL DISTURBANCE INCURRED TO TOWN OR STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF BERLIN AUTHORITY AND STATE OF CONNECTICUT.
- 14. ALL CONSTRUCTION SHALL COMPLY WITH THE LOCAL MUNICIPALITY'S STANDARDS AND STATE OF CONNECTICUT'S DOT SPECIFICATIONS. ALL CONSTRUCTION WITHIN A DOT RIGHT OF WAY SHALL COMPLY WITH ALL DEPARTMENT OF TRANSPORTATION STANDARDS. WHERE SPECIFICATIONS OR STANDARDS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION OR STANDARD

- 1. SHOP DRAWINGS: THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF MATERIALS AND STRUCTURES FOR REVIEW AND APPROVAL PRIOR TO DELIVERY TO THE SITE. ALLOW 14 BUSINESS DAYS FOR REVIEW.
- 2. POLY VINYL CHLORIDE PIPE (PVCP) FOR STORM AND SANITARY PIPING SHALL HAVE BUILT-IN RUBBER GASKET JOINTS. PVCP SHALL CONFORM TO ASTM D-3034 (SDR35) WITH COMPRESSION JOINTS AND MOLDED FITTINGS. PVCP SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS; ASTM-D2321 AND MANUFACTURERS RECOMMENDED PROCEDURE.
- 3. ALL RCP SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-76; ALL RCP SHALL BE CLASS IV UNLESS OTHERWISE SHOWN. JOINTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
- 4. MANHOLE SECTIONS AND CONSTRUCTION SHALL CONFORM TO ASTM C-478.
- 5. HIGH DENSITY POLYETHYLENE (HDPE) STORM SEWER 12" OR GREATER IN DIAMETER SHALL BE HI-Q SURE-LOK 10.8 PIPE AS MANUFACTURED BY HANCOR INC. OR APPROVED EQUAL HDPE PIPE SHALL HAVE SMOOTH INTERIOR AND CORRUGATED EXTERIOR AND SHALL MEET THE REQUIREMENTS OF AASHTO M294, TYPE PIPE SECTIONS SHALL BE JOINED WITH BELL-AND-SPIGOT JOINT MEETING THE REQUIREMENTS OF AASHTO'S. M294. THE BELL SHALL BE AN INTEGRAL PART OF THE PIPE AND PROVIDE A MINIMUM PULL-APART STRENGTH OF 400 POUNDS. THE JOINT SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212. GASKETS SHALL BE MADE OF POLYISOPRENE MEETING THE REQUIREMENTS OF ASTM F477. ALTERNATIVE HDPE PIPE MAY BE USED IF APPROVED BY THE ENGINEER AND CONSTRUCTION MANAGER PRIOR TO
- 6. HIGH DENSITY POLYETHYLENE (HDPE) STORM SEWER LESS THAN 12" IN DIAMETER SHALL BE HI-Q PIPE AS MANUFACTURED BY HANCOR INC. OR APPROVED EQUAL HDPE PIPE SHALL HAVE SMOOTH INTERIOR AND CORRUGATED EXTERIOR AND SHALL MEET THE REQUIREMENTS OF AASHTO 252, TYPE S. PIPE SECTIONS SHALL BE JOINED WITH COUPLING BANDS OR EXTERNAL SNAP COUPLERS COVERING AT LEAST 2 FULL CORRUGATIONS ON EACH END OF THE PIPE. SILT-TIGHT (GASKET CONNECTIONS SHALL INCORPORATE A CLOSED SYNTHETIC EXPANDED RUBBER GASKET. MEETING THE REQUIREMENTS OF AASHTO D1056 GRADE 2A2. GASKETS SHALL BE INSTALLED ON THE CONNECTION BY THE PIPE MANUFACTURER. ALTERNATIVE HDPE PIPE MAY BE USED IF APPROVED BY THE ENGINEER AND CONSTRUCTION MANAGER PRIOR TO ORDERING.

GENERAL NOTES

- 1. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE SITE ENGINEER AND ARCHITECT IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS.
- 2. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
- 3. THE CONTRACTOR SHALL ABIDE BY ALL OSHA FEDERAL STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
- 4. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE
- 5. THE ARCHITECT OR ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND ENGINEER HAVE NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY
- 6. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "1-(800)-922-4455" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
- 7. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN OVER SCALED DIMENSIONS.

OWNER AT THE END OF CONSTRUCTION.

- 8. IF PLANS AND OR SPECIFICATIONS ARE IN CONFLICT, THE MOST EFFECTIVE SHALL APPLY AS DETERMINED BY A LICENSED PROFESSIONAL AND APPROVED BY TOWN STAFF.
- 9. ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN COMPLETE DRAWING PLAN SETS FOR BIDDING AND CONSTRUCTION. PLAN SETS SHALL NOT BE DISASSEMBLED INTO PARTIAL PLAN SETS FOR USE BY CONTRACTORS AND SUBCONTRACTORS OF INDIVIDUAL TRADES, IT SHALL BE THE CONTRACTOR'S AND SUBCONTRACTOR'S RESPONSIBILITY TO OBTAIN COMPLETE PLAN
- 10. ALL NOTES AND DIMENSIONS DESIGNATED "TYPICAL" APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PROJECT.
- 11. CONTRACTORS TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE WORK AND BE RESPONSIBLE FOR COORDINATION OF SAME. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.
- 12. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION, NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

UTILITIES NOTES

UTILITY CONSTRUCTION NOTES:

- 1. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE LOCAL MUNICIPALITIES TO SECURE PERMITS AND FOR PAYMENT OF FEES FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES.
- 2. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES, FOR PROTECTION OF VEHICLES AND PEDESTRIANS, CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS FENCES AND UNIFORMED TRAFFIC CONTROLLERS AS REQUIRED, ORDERED BY THE ENGINEER OR REQUIRED BY THE LOCAL GOVERNING AUTHORITIES.
- 3. THIS PLAN DETAILS SITE INSTALLED PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO DRAWINGS BY OTHERS FOR BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT.
- 4. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE SEWERS CROSS UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE SITE ENGINEER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE
- 5. UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY CO. AND TOWN STAFF REVIEW. 6. THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY COMPANIES AND TOWN STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER. TOWN OF BERLIN PUBLIC WORKS DEPARTMENT AND CENTRAL CONNECTICUT HEALTH DISTRICT.
- 7. THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATIONS, INSPECTIONS, AND DEMOLITION.
- 8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED THE SITE CONTRACTOR SHALL INSTALL TEMPORARY OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE
- 9. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
- 10. SANITARY LATERAL SHALL MAINTAIN (10' MIN. HORIZONTAL 1.5' VERTICAL MIN.) SEPARATION DISTANCE FROM WATER LINES, OR ADDITIONAL PROTECTION MEASURES WILL BE REQUIRED WHERE PERMITTED.
- 11. RELOCATION OF UTILITY COMPANY FACILITIES SUCH AS POLES, TO BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF
- 12. THE CONTRACTOR SHALL COMPACT THE PIPE BACKFILL IN 12" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS, TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED IN AREAS OF ROCK EXCAVATION, STORM SEWERS MAY BE PLACED PRIOR TO PLACING FILL.
- 13. CONTRACTOR TO PROVIDE SLEEVES UNDER FOOTINGS FOR UTILITY CONNECTIONS.

PLANS OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

- 14. UTILITY PENETRATIONS AND LOCATIONS ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND SHALL BE VERIFIED WITH THE MEP DRAWINGS AND CONSTRUCTION MANAGER.
- 15. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY AND/OR THE LOCAL MUNICIPALITIES' REQUIREMENTS.
- 16. A THREE-FOOT MINIMUM CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM SEWERS SHALL BE PROVIDED, A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM AND SANITARY SEWER WITH A
- 17. CONTRACTOR SHALL PROVIDE ALL BENDS, FITTINGS, ADAPTERS, ETC., AS REQUIRED FOR PIPE CONNECTIONS TO BUILDING
- STUB OUTS, INCLUDING ROOF/FOOTING DRAIN CONNECTIONS TO ROOF LEADERS AND TO STORM DRAINAGE SYSTEM. 18. MANHOLE RIMS SHALL BE SET TO ELEVATIONS SHOWN. SET ALL EXISTING MANHOLE FRAMES AND VALVE COVERS TO BE
- RAISED OR LOWERED FLUSH WITH FINAL GRADE AS NECESSARY. 19. SITE CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AND CABLES FOR SITE LIGHTING WITH THE BUILDING
- ELECTRICIAN/ELECTRICAL CONTRACTOR. 20. CONTRACTOR SHALL COORDINATE INSTALLATION FOR ELECTRICAL SERVICES TO PYLON SIGNS AND SITE LIGHTING WITH THE
- BUILDING ELECTRICIAL/ELECTRICAL CONTRACTOR. 21. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, OR LANDSCAPED

AREAS DISTURBED DURING CONSTRUCTION, TO THEIR ORIGINAL CONDITION OR BETTER.

- 22. INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES INCLUDING SERVICES. CONTACT "CALL BEFORE YOU DIG AT 811 72 HOURS PRIOR TO CONSTRUCTION AND VERIFY ALL UNDERGROUND AN OVERHEAD UTILITY LOCATIONS.
- 23. THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY COMPANIES AND THE TOWN OF BERLIN FOR WORK TO BE PERFORMED BY UTILITY COMPANIES OR BY THE TOWN OF BERLIN. THE CONTRACTOR SHALL PAY ALL UTILITY FEES AND REPAIR PAVEMENTS AS NECESSARY.
- 24. ELECTRIC, AND TELEPHONE SERVICES SHALL BE INSTALLED UNDERGROUND FROM SERVICE POLE #CL&P 4813. THE CONTRACTOR SHALL INSTALL AND BACKFILL TWO 4" PVC CONDUITS FOR TELEPHONE SERVICE. FÖUR 4" PVC CONDUITS FOR ELECTRIC SERVICE PRIMARY, PVC CONDUITS FOR ELECTRICAL SECONDARY PER BUILDING ELECTRICAL PLANS (SCHEDULE 80N UNDER PAVEMENT, SCHEDULE 40 IN NON-PAVEMENT AREAS). SERVICES MAY BE INSTALLED IN A COMMON TRENCH WITH 1" CLEAR SPACE BETWEEN. MINIMUM COVER IS 36" ON ELECTRIC CONDUITS, AND 24" ON TELEPHONE CONDUITS. SERVICES SHALL BE MARKED WITH MAGNETIC LOCATOR TAPE AND SHALL BE BEDDED, INSTALLED, AND BACKFILLED IN ACCORDANCE WITH ELECTRIC COMPANY, AND PHONE COMPANY STANDARDS, GALVANIZED STEEL ELECTRICAL CONDUIT SHALL BE USED AT POLE AND TRANSFORMER LOCATIONS. INSTALL HANDHOLES AS REQUIRED. INSTALL CONCRETE ENCASEMENT ON PRIMARY ELECTRIC CONDUITS IF REQUIRED BY ELECTRIC COMPANY
- 25. ALL WATER LINES SHALL BE BURIED WITH 48" OF COVER UNLESS OTHERWISE APPROVED BY THE REGIONAL WATER
- AUTHORITY. ALL LINES SHALL BE BEDDED IN 6" OF SAND AND BACKFILLED WITH 12" OF SAND. 26. ALL WATER MAINS, WATER SERVICES AND SANITARY SEWER LATERAL SHALL CONFORM TO THE DEPARTMENT OF ENVIRONMENTAL HEALTH, APPLICABLE TOWN OF BERLIN SPECIFICATIONS, AS WELL AS TO OTHER APPLICABLE CODES AND
- 27. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, ENGINEER, UTILITY PROVIDER AND APPROPRIATE REGULATORY AGENCIES PRIOR TO INSTALLATION.
- 28. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY CONNECTIONS TO EXISTING ABUTTING HOUSES WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE OWNERS, THE PROJECT ENGINEER, UTILITY PROVIDER AND GOVERNING
- 29. ANY EXISTING POTABLE WATER WELLS AND SEPTIC TANKS/ABSORPTION AREAS SHALL BE ABANDONED AND REMOVED PER THE DEPARTMENT OR ENVIRONMENTAL PROTECTION AND HEALTH CODE REQUIREMENTS.

30. THE CONTRACTOR MAY SUBSTITUTE MASONRY STRUCTURES FOR PRECAST STRUCTURES IF APPROVED BY THE SITE ENGINEER

AND ALLOWED BY THE TOWN ENGINEER OR BY GOVERNING AUTHORITY.

POST CONSTRUCTION STORM WATER POLLUTION PLAN

- THE FOLLOWING PROCEDURES WILL BE IMPLEMENTED CONTINUALLY BY THE OWNER AND OR DESIGNATED RESPONSIBLE PARTIES:
- 1. PAVEMENT SWEEPING: PARKING LOTS AND DRIVES SHALL BE SWEPT A MINIMUM OF TWICE A YEAR (SPRING AND FALL). 2. CATCH BASIN SUMPS: CATCH BASIN SUMPS SHALL BE INSPECTED ON A REGULAR BASIS (AT LEAST TWICE PER YEAR) AND
- SEDIMENT SHALL BE REMOVED AS NECESSARY (A MINIMUM OF ONCE A YEAR TO ENSURE FUNCTIONING OF THE SYSTEM, UTILIZING A VACUUM TRUCK).
- 3. THE COLLECTION SYSTEM PIPES SHALL BE INSPECTED AT SIX-MONTH INTERVALS. REGULAR MAINTENANCE INCLUDES THE FOLLOWING ITEMS: -INSPECTION OF THE OUTLETS TO ENSURE THEY ARE NOT BLOCKED.
 - -CHECKING THE OUTLETS FROM THE LEVEL SPREADER IS CLEAR AND NOT ERODING. -REMOVING PAPER AND DEBRIS FROM OBSTRUCTING THE FLOW WITHIN THE SYSTEM.

MATERIALS SHALL BE STORED OFF SITE

- 4. THE ISOLATION ROW SHALL BE INSPECTED A MINIMUM OF EVERY SIX MONTHS, ONCE IN THE SPRING AND ONCE IN THE FALL. ALL TRASH, DEBRIS, SEDIMENT DEPOSITS, ETC, SHALL BE NOTED AND ANY DEPOSITS FOUND TO BE 4 INCHES OR MORE, AS MEASURED FROM THE BOTTOM OF THE SYSTEM SHALL BE CLEANED AND REMOVED. ANY DEBRIS OR TRASH, ETC., SHALL BE REMOVED DURING NORMAL LANDSCAPE MAINTENANCE OPERATIONS. BARE AREAS SHALL BE SEEDED.
- 5. LANDSCAPING: LANDSCAPED AREAS WILL BE MAINTAINED. NORMAL LANDSCAPING MAINTENANCE WILL CONSIST OF PRUNING, MULCHING, PLANTING, MOWING LAWNS, RAKING LEAVES, ETC. USE OF FERTILIZERS AND PESTICIDE WILL BE CONTROLLED AND LIMITED TO MINIMAL AMOUNTS NECESSARY FOR HEALTHY LANDSCAPE MAINTENANCE. THE LAWN AREAS, ONCE ESTABLISHED, WILL BE MAINTAINED AT A TYPICAL HEIGHT OF 3 1/2". THIS WILL ALLOW FOR THE GRASS TO BE MAINTAINED WITH A MINIMAL IMPACT FROM WEEDS AND/OR PEST, PESTICIDE WILL ONLY BE USED AS A CONTROL METHOD WHEN A PROBLEM HAS BEEN IDENTIFIED AND OTHER NATURAL CONTROL METHODS ARE NOT SUCCESSFUL, ALL PESTICIDE APPLICATION SHALL BE BY LICENSED APPLICATORS, WHERE NECESSARY. TOPSOIL, BRUSH, LEAVES, CHIPPINGS, MULCH, EQUIPMENT, AND OTHER
- 6. TRASH COLLECTION: ALL TRASH WILL BE CONTAINED IN DUMPSTERS. ALL DUMPSTERS WILL BE EQUIPPED WITH COVERS. ALL TRASH WILL BE COLLECTED ON A REGULAR BASIS AND DISPOSED OF LEGALLY OFF-SITE.
- 7. OUTDOOR STORAGE: THERE WILL BE NO OUTDOOR STORAGE OF HAZARDOUS CHEMICALS, FERTILIZER, PESTICIDES, OR HERBICIDE'S ANYWHERE AT THE FACILITY.
- 8. THE OWNER SHALL KEEP AN ON-SITE LOG OF STORMWATER MAINTENANCE MEASURES PERFORMED AND DATES THEY WERE IMPLEMENTED. THIS LOG BOOK SHALL BE AVAILABLE FOR THE TOWN OF BERLIN INSPECTION.

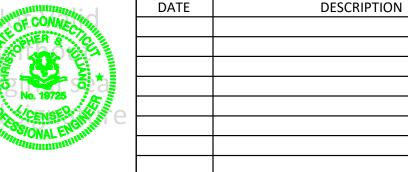
General Notes

Land of

Little House Living LLC #1676 & #1688 Berlin Turnpike (Connecticut Route #15) Berlin, Connecticut

THIS DOCUMENT HAS BEEN PREPARED AS PART A MUNICIPAL (HEALTH DEPARTMENT/DISTRICT, IWWC, TPZ, OR ZBA) LAND USE APPLICATION PROCESS. THIS DOCUMENT CAN NOT BE CONSIDERED FINAL NOR USED FOR ANY CONSTRUCTION PURPOSES UNTIL ALL NECESSARY LOCAL, STATE, AND FEDERAL APPROVALS HAVE BEEN SECURED.

Christopher S. Juliano PELS #19725



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Juliano Associates, LLC 23-100 12/05/23 NTS Scale: CJULIANO Checked: ZGEORGINA Sheet: 7 of 18 Nork map: Final map: ZGEORGINA CJULIANO Released: The information contained herein is the proprietary and confidential property of Juliano Associates LLC. Reproductions, publication, distribution, or duplication in whole or in part requires the written permission of Juliano Associates LLC. This document and copies thereof are valid only if they bear the original signature and embossed seal of the designated licensed professional(s). If this document is stamped with a colored ink seal it has been issued for land use permitting purposes and is not to be used for any other purpose. Any alterations

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SEDIMENT BARRIERS

1. DEFINITION

A temporary barrier installed across or at the toe of a slope.

2. PURPOSE

To intercept and retain small amounts of sediment from disturbed or unprotected areas of limited extent.

3. APPLICABILITY

The sediment barrier is used where:

- a. Sedimentation can pollute or degrade adjacent wetland and/or
- b. Sedimentation will reduce the capacity of storm drainage systems or adversely affect adjacent areas.
- c. Contributing drainage area is less than 1 acre and the length of slope above the barrier is less than 150 feet. If the slope length is greater, other measures such as diversions may be necessary to reduce slope length.

4. PLANNING CONSIDERATIONS

Sediment barriers may consist of filter fence, straw, hay bales, stone berms, or other filter materials. Planned lifespan of sediment barriers varies. Straw or hay bales shall only be used as a temporary barrier for no longer than 60 days. Synthetic filter fences can be used for 60 days or longer depending on their stability and manufacturer's recommendations. Stone barriers can be used for longer periods of time.

5. INSTALLATION REQUIREMENTS

a. Straw/Hay Bales

(1) Sheet Flow Applications

- Bales shall be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another.
- Bales shall be wire-bound only and shall be installed so that binding does not contact the earth.
- The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfilled soil shall conform to the ground level on the downhill side and shall be built up to 4 inches against the uphill side of the barrier. Ideally, bales shall be placed 10 feet away from toe of slope.
- (d) Each bale shall be securely anchored by at least two stakes driven through the bale. The first stake in each bale shall be driven toward the previously laid bale to force the bales together. Stakes shall be driven deep enough into the ground to securely anchor the bales.
- Gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between bales. (Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency.)

In sloping areas where surface flow follows the bale line, perpendicular bale checks shall be installed at appropriate intervals (100 feet maximum).

- Inspection, repair and/or replacement shall be made on a c ontinuing basis.
- Bale barriers shall be removed when they have served their usefulness, but not before construction areas have been permanently stabilized.

(2) Channel Flow Applications

- Bales shall be placed in a single row, lengthwise, oriented perpendicular to the channel, with ends of adjacent bales tightly abutting one another.
- Specifications for installing a bale barrier for sheet flow applications apply here with the following
 - 1) The barrier shall be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment laden runoff will flow either through or over the barrier, but not around

(3) Catch Basin Application

- Bales shall be placed in a square or rectangular shape around depressed catch basin inlets. Catch basins constructed on sloping areas should not be encircled by bales, but shall have downhill side left open.
- The areas immediately around the catch basin may be excavated slightly to increase ponding of runoff water around catch basin.

DURING CONSTRUCTION THERE SHALL BE A SUPPLY OF SILT FENCE

AND/OR HAY BALES STORED ON SITE FOR EMERGENCY SEDIMENT

AND EROSION CONTROL PURPOSES

Remaining specifications for installing a bale barrier for sheet flow applications apply here.

(4) Maintenance

- Inspection shall be made weekly and after each storm and repair or replacement shall be made promptly as
- Cleanout of accumulated sediment behind the bales is necessary if 1/2 of the original height of the bales becomes filled in with sediment.

b. Filter Fences

(1) Materials

| Filtering Efficiency | 75% (min.) |
|---|---|
| Tensile Strength at 20% (max.) Elongation | Extra Strength 50 Ibs/lin. inch (min.) |
| Flow Rate | Standard Strength 30 lbs/lin. inch (min.) 0.3 gal./sq. ft./mir (min.) |

Burlap shall be 10 ounce per square yard fabric.

Physical Property

Stakes for filter fences shall be 1" x 2" wood or equivalent metal with a minimum length of 3 feet.

> Where additional strength is required, posts for filter fences shall be either 2 x 3 or 2 x 4 inch wooden studs or 0.5 (min.) pounds/linear foot steel with a minimum length of 5 feet. Steel posts shall have projections for fastening wire.

Wire fence reinforcement for silt fences using standard strength filter cloth shall be a minimum of 42 inches in height, a minimum of 14 guage and shall have a maximum mesh spacing of 6 inches.

> Some silt fences do not require a wire backing. Consult manufacturer's instructions for proper installation requirements.

(2) Installation Requirements

This sediment barrier utilizes burlap, standard or extra strength synthetic filter fabrics. It is designed for situations in which only sheet or overland flows are expected. In special cases burlap may be used in drainageways.

- (a) The height of the barrier shall not exceed 36 (Higher barriers may impound volumes of water sufficient to cause failure of the structure.) Ideally the filter fence shall be placed 10 feet away from the toe of slope.
- When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6 inch overlap, and securely sealed. See manufacturer's recommendations.
- Posts shall be spaced a maximum of 10 feet apart at the barrier location and driven securely into the around (minimum of 12 inches). When extra strength fabric is used without the wire support fence, space posts as manufacturer recommends.
- (d) A trench shall be excavated approximately 6 inches wide and 6 inches deep along the line of posts as manufacturer recommends.
- When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1 inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2 inches and shall not extend more than 36 inches above the original ground surface.
- (f) The standard strength filter fabric shall be stapled, wired or tied to the wire fence, and 8 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
- When extra strength filter fabric or burlap and closer post spacing are used, the wire mesh support fabric is stapled. wired or tied directly to the posts with all specifications of (f) above applying
- The trench shall be backfilled and the soil compacted over the filter fabric.
- (i) Filter barriers shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Maintenance

- Filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made
- Should the fabric decompose or become ineffective, the fabric shall be replaced promptly.
- Sediment deposits shall be removed when they reach approximately one—half the height of the barrier.
- Any sediment deposits remaining in place after the silt fence or filter barrier is not longer required shall be dressed to conform to the existing grade,

The stone shall meet ASTM C-33 size no. 2 or 3 (3" or 2-1/2").

(1) Installation Requirements

- The stone shall be piled to a natural angle of repose with a height of at least 2 feet.
- The barrier shall be constructed so water cannot bypass the barrier around the ends

(2) Maintenance

- Inspection shall be frequent and repair and/or replacement made promptly as needed.
- The barrier shall be removed when it has served its usefulness so as not to block or impede storm flow or

d. Vegetative Filter

Vegetative filters shall be used to filter sediment from overland flow only where concentrations of sediment and rates of runoff are low.

(1) Installation Requirements

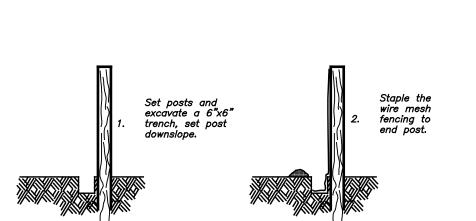
The minimum width of the filter strip shall be at least 15 feet.

The width of the filter strip shall be increased proportionately for slopes longer than 150 feet or for higher sediment concentrations. When using filter strips at inlets to storm sewers, as large an area as possible shall be provided. Filters shall be placed along the contours whenever possible. No construction shall be allowed within filter strip areas.

Vegetation must be adapted to sediment producing areas. Either existing or established vegetation must be healthy and have a vigorous growth habit. Establishing vegetation by seed or sodding shall be done in accordance with the specifications for Permanent Vegetative Cover or Sodding and shall be established prior to land disturbance.

(2) Maintenance

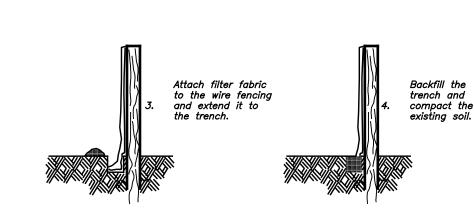
Maintenance of vegetative filter strips is the same as that recommended for any vegetation as specified in Permanent Vegetative Cover. A healthy growth of vegetation can best be maintained by fertilizing, removing sediment when the filter becomes clogged, and by preventing construction traffic from driving upon or across filter strips.

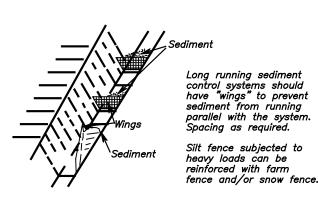


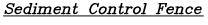
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Bottom of

Excavate a trench 4" deep and the width







*BIOBAGS MUST BE REMOVED AT END OF JOB

FIBER ROLL —

MAXIMUM

3 MONTH USE-FOR ROADWAY

APPLICATIONS ONLY*

AREA DRAIN

<u>PLAN</u>

DITCH INLET

FILTRATION BAGS, SOCKS, & ROLLS FOR TEMPORARY

INLET PROTECTION DETAIL DRAWING 4.3-B

GEDTEXTILE BAGS

REQUIRED FOR

compact the excavated soil as shown on the

uphill side of the barrier to

prevent piping.

MAY BE USED SHORT

PHASING OF

W/ UTILITY WORK AND

CATCH BASIN

IAXIMUM 3 MONTH

USE WITH ALL IN STREET

APPLICATIONS

FACE OF

CURB

<u>SEDIMENT</u>

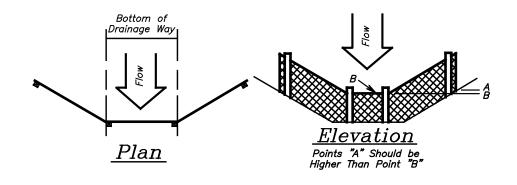
ATTENUATOR

EROSION CONTROL MANUAL

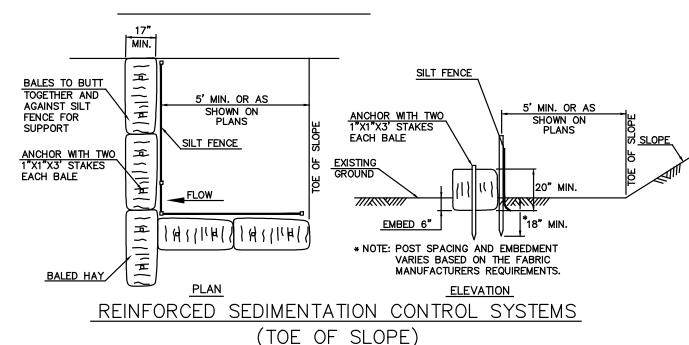
USE INSERT SACKS

PROTECT INLETS.

ALONG W/BIOBAGS TO



Placement and Construction of a Synthetic Filter Barrier

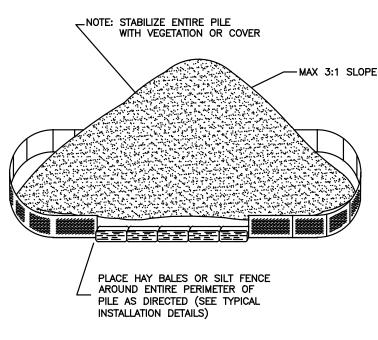


Place and stake

Placement and Construction of a Hay Bale Barrier

2. straw bales, two stakes

PLAN



5. MAX SLOP OF STOCKPILE SHALL BE 3:1 (H:V) UNLESS OTHERWISE APPROVED. TEMPORARY SOIL STOCKPILE

EROSION CONTROL MANUAL <u>INSTALLATION NOTES:</u>
1. AREA CHOSEN FOR STOCKPILE OPERATION SHALL BE DRY AND STABLE.

2. THE GROUND SURFACE SHALL SLOPE AWAY FROM THE STOCKPILE.

3. IF NECESSARY, PLACE TARP OR IMPERVIOUS MATERIAL BENEATH STOCKPILE TO PREVENT MIXING OF SOIL.

4. COVER STOCKPILE WITH FABRIC OR VEGETATION AS

Erosion Control Details & Specifications

Land of Little House Living LLC #1676 & #1688 Berlin Turnpike (Connecticut Route #15) Berlin, Connecticut

Project no.: 23-100 NTS Date: 12/05/23 Scale: Checked: ZGEORGINA Work map: CJULIANO Sheet: 8 of 18 CJULIANO Released: ZGEORGINA

HAVE BEEN SECURED.

2" DIA. PROCESSED AGGREGATE

AS PER STATE OF CT. DOT

FILTER FABRIC -

CONSTRUCTION ENTRANCE

REVISIONS DATE DESCRIPTION

Juliano Associates, LLC Engineers & Surveyors Established 1973 405 Main Street (Yalesville) Wallingford, Connecticut 06492 Voice (203)265-1489 Fax (203)949-1523 www.JulianoAssociates.com

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THIS DOCUMENT HAS BEEN PREPARED AS PART A MUNICIPAL (HEALTH DEPARTMENT/DISTRICT, IWWC, TPZ, OR ZBA) LAND USE APPLICATION PROCESS. THIS DOCUMENT CAN NOT BE CONSIDERED FINAL NOR USED FOR ANY CONSTRUCTION PURPOSES UNTIL ALL NECESSARY LOCAL, STATE, AND FEDERAL APPROVALS

Christopher S. Juliano PELS #19725

NTS

Juliano Associates LLC @gmail.com

(a) Synthetic Filter Fabric Synthetic filter fabric shall be a pervious sheet of prepared and seeded. propylene, nylon, polyester or ethylene filaments and certified by the manufacturer or supplier as c. Stone Barrier conforming to the following requirements:

Requirements

CULTEC RECHARGER 180HD SPECIFICATIONS

CULTEC RECHARGER® 180HD CHAMBERS ARE DESIGNED FOR UNDERGROUND

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

CHAMBER PARAMETERS

- 1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
- THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE
- THE CHAMBER SHALL BE ARCHED IN SHAPE.
- THE CHAMBER SHALL BE OPEN-BOTTOMED.
- 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.
- THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER® 180HD SHALL BE 20.5 INCHES (521 MM) TALL, 36 INCHES (914 MM) WIDE AND 7.33 FEET (2.23 M) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER® 180HD SHALL BE 6.33 FEET (1.93 M).
- MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 15 INCHES (375 MM) HDPE.
- THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE O.D. IN THE SIDE PORTAL IS 12.25 INCHES (311 MM).
- 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® 180HD CHAMBER SHALL BE 3.445 FT3 / FT (0.32 M3 / M) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A SINGLE RECHARGER 180RHD STAND ALONE UNIT SHALL BE 25.25 FT3 (0.72 M3) WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER® 180EHD AS AN INTERMEDIATE UNIT SHALL BE 21.81 FT3 (0.62 M3) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF THE LENGTH ADJUSTMENT AMOUNT PER RUN SHALL BE 3.445 FT3 (0.32 M3) - WITHOUT STONE.
- 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® 180HD CHAMBER SHALL HAVE SEVENTY-EIGHT DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.
- 13. THE RECHARGER® 180HD CHAMBER SHALL HAVE 14 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® 180RHD STAND ALONE/STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS.
- THE RECHARGER® 180EHD 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.
- 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® 180HD AND ACT AS CROSS FEED CONNECTIONS.
- 18. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN
- 19. 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
- 20. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION ON THE LARGE RIB END.
- 21. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY.
- . MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 12.0' (3.66 M).
- 23. 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 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE WITH CULTEC'S INSTALLATION INSTRUCTIONS.
- THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED

ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

MODEL 180HD CHAMBER SYSTEMS FOR RETENTION, RECHARGING, DETENTION, AND CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF. CHAMBER PROPERTIES

CULTEC HVLV (HIGH VOLUME, LOW VELOCITY) FEED CONNECTOR POLYETHYLENE CHAMBERS ARE DESIGNED FOR

UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED TO MANIFOLD CULTEC RECHARGER

- 1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT (203-775-4416).
- CONTACT CULTEC, INC. AT 203-775-4416 FOR SUBMITTAL PACKAGES AND TO PURCHASE PRODUCT.
- 3. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC FEED CONNECTOR SHALL BE 12 INCHES TALL,
- 16 INCHES WIDE. THE HVLV FC-48 IS 54 INCHES LONG. THE HVLV FC-24 IS 24.2 INCHES LONG
- 5 THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY
- POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.

THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.819 CF/LF

- 6. THE HVLV FC FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS. AND

CULTEC FC-24 FEED CONNECTOR SPECIFICATIONS

ALL CHAMBERS SHALL BE ARCHED IN SHAPE. HEAVY DUTY UNITS ARE DESIGNED ACCORDING TO AASHTO HS-25 LOAD RATING (40,000 LBS. /AXLE) WHEN

HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF

- BURIED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
- HEAVY DUTY UNITS ARE DESIGNATED BY A COLORED STRIPE ALONG THE LENGTH OF THE CHAMBER. 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)
- THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE. 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
- 5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING
- 7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING
- 8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING
- 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

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.

- 1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT.
- (203-775-4416 OR 1-800-428-5832) THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE
- THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632
- 4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TESTING
- 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
- 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
- D4533 TESTING METHOD. 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 METHOD.

FINISHED GRADE

NATURALLY COMPACTED FILL

- CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY, BOTTOM PER

INSPECTION PORT KNOCK-OUT 36.0" [914 mm] – 88.0" [2234 mm] — — 76.0" [1929 mm] INSTALLED — MAXIMUM PIPE SIZE IN END WALL: 15" [375 mm] HDPE —— 38.0" [964 mm] → | 38.0" [964 mm] — 15" [375 mm] PVC LARGE RIB -20.5" [521 mm] SIDE PORTAL FOR OPTIONAL INTERNAL MANIFOLD 24.0" [610 mm] (ACCOMMODATES CULTEC HVLV FC-24 FEED MODEL 180EHD END IB LARGE RIB CONNECTOR OR STORM PIPE) MAX. PIPE: ---- 36.0" [914 mm] -----10" [250 mm] HDPE 12" [300 mm] PVC CULTEC RECHARGER 180HD CHAMBER STORAGE = 3.445 FT3 / FT (0.32 M3 / M) INSTALLED LENGTH ADJUSTMENT = 1.0' [306 mm]

6" [150 mm] DIA.

MODEL 180 RHD STARTER

UNITS ARE USED AS SINGLE

STAND ALONE SECTIONS.

MODEL 180 SHD STARTER

UNITS ARE USED

TO BEGIN A LINE.

MODEL 180 IHD INTERMEDIATE

UNITS ARE USED AS MIDDLE SECTIONS TO EXTEND THE

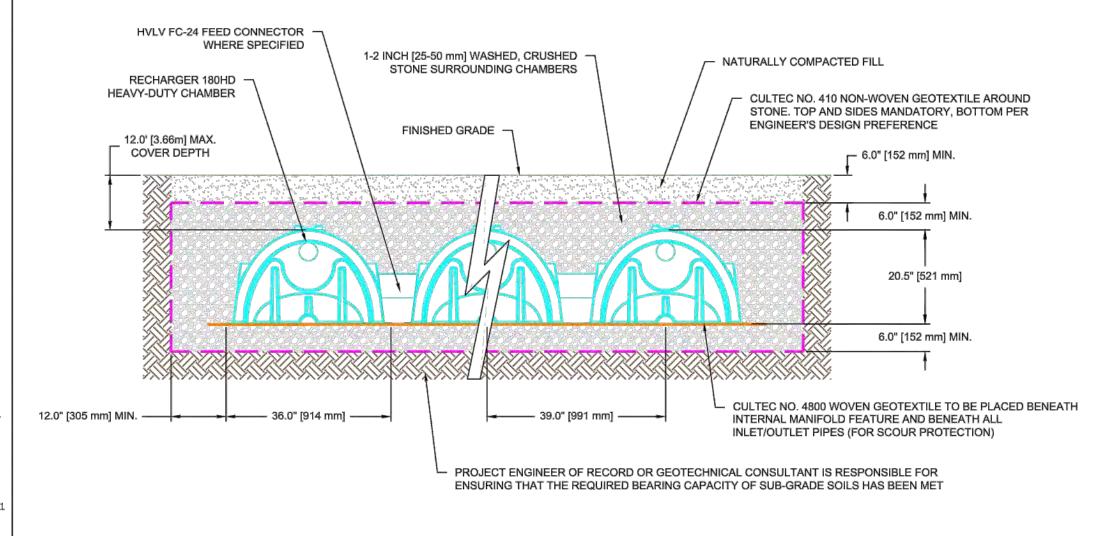
LENGTH OF A LINE.

MODEL 180 EHD END UNITS

OF A LINE.

ARE USED TO END THE LENGTH

CULTEC RECHARGER 180HD HEAVY DUTY THREE VIEW



HIDDEN END MODEL 180 EHD HIDDEN END MODEL 180 IHD BEGINNING OF RUN HVLV FC-24 FEED CONNECTOR MODEL 180 IHD TRIM CUT-OUT TO UTILIZE INTERNAL MANIFOLD FEATURE MODEL 180 SHD

CULTEC RECHARGER 180HD HEAVY DUTY END DETAIL INFORMATION

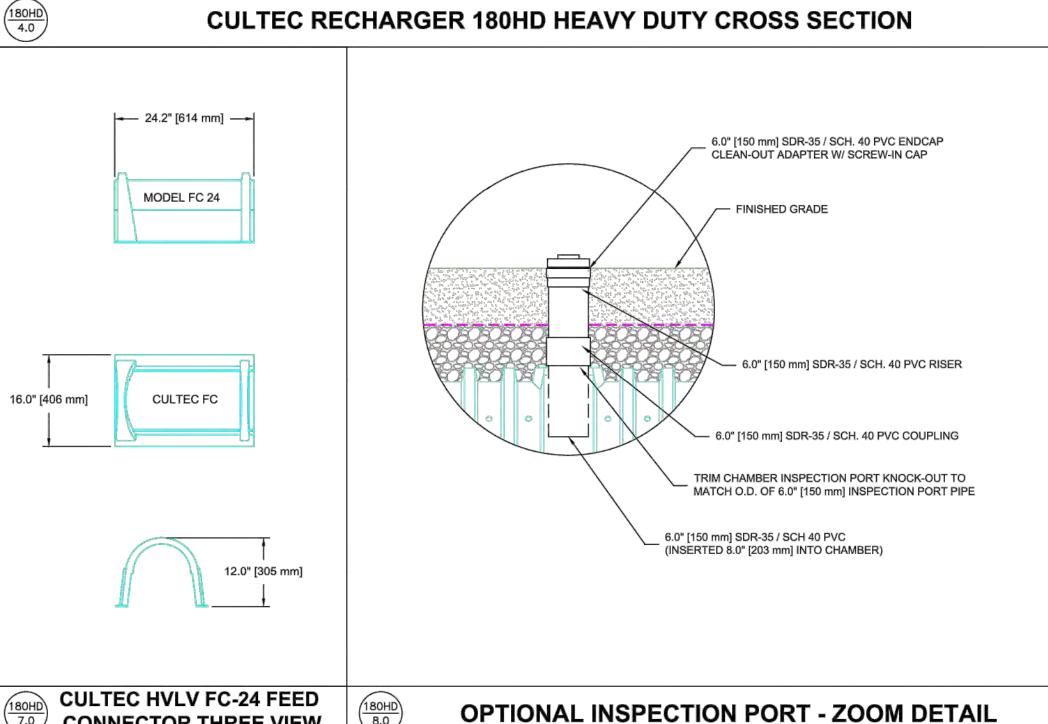
LARGE RIE

END DETAIL

SMALL RIB

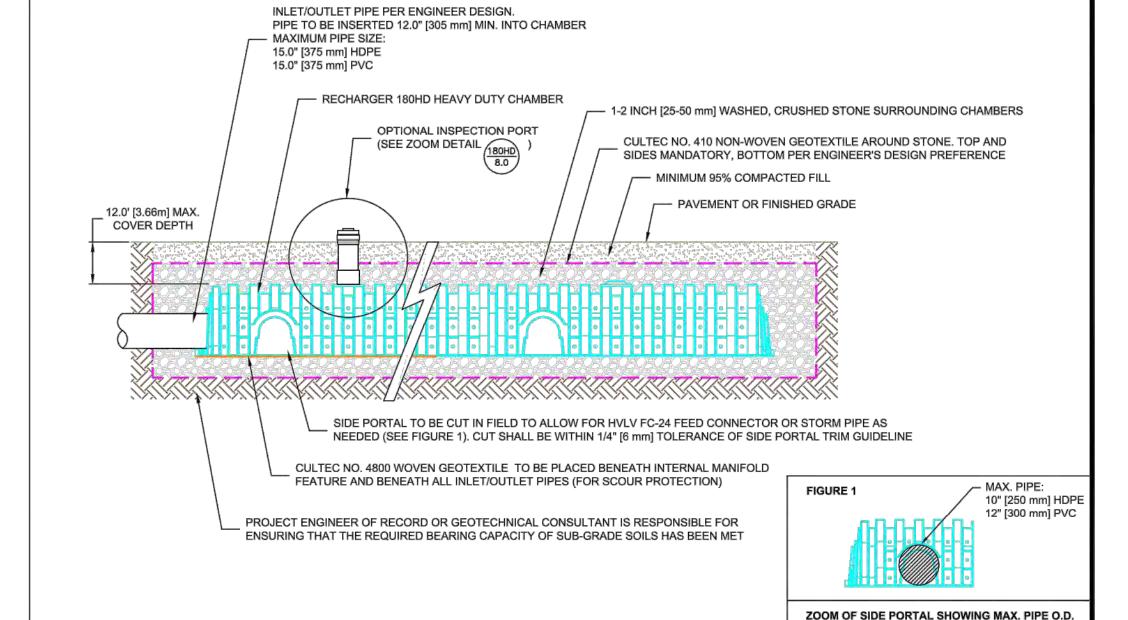
END DETAIL

CULTEC RECHARGER 180HD HEAVY DUTY CROSS SECTION



CULTEC RECHARGER 180HD HEAVY DUTY TYPICAL INTERLOCK

HVLV FC-24 FEED CONNECTOR



CULTEC INTERNAL MANIFOLD DETAIL - OPTIONAL INSPECTION PORT DETAIL

ENGINEER'S DESIGN PREFERENCE - 6.0 INCH [152 mm] MIN. DEPTH OF 1-2 INCH [25-50 mm] WASHED CRUSHED STONE BENEATH AND ABOVE CHAMBERS 10.0' [3.0 m] MIN. - 6.0 INCH [152 mm] MIN. DEPTH OF CULTEC NO. 4800 WOVEN GEOTEXTILE 1-2 INCH [25-50 mm] WASHED CRUSHED BENEATH INLET PIPES STONE BENEATH AND ABOVE CHAMBERS CULTEC HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED CULTEC RECHARGER 180HD 7.5' [2.29 m] MIN. CULTEC NO. 4800 WOVEN GEOTEXTILE **HEAVY-DUTY CHAMBER** BENEATH FEED CONNECTORS 12.0 INCH [305 mm] MIN. WIDTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE BORDER SURROUNDING PIPE PER ENGINEER DESIGN. PIPE TO BE INSERTED 12.0 INCHES [305 mm] MIN. INTO CHAMBER. MAXIMUM PIPE SIZE: 15.0" [375 mm] HDPE

15.0" [375 mm] PVC

GENERAL NOTES

CULTEC RECHARGER 180HD HEAVY DUTY PLAN VIEW

Subsurface Stormwater Management Systems P.O. Box 280

PH: (203) 775-4416 PH: (800) 4-CULTEC FX: (203) 775-1462 tech@cultec.com

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

CONNECTOR THREE VIEW

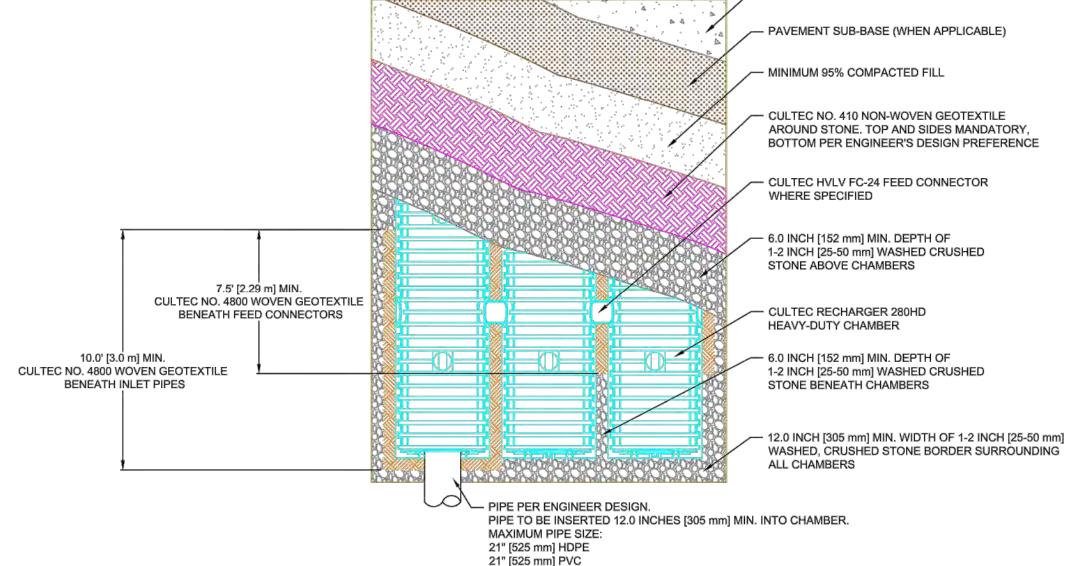
RECHARGER 180HD DETAIL SHEET NON-TRAFFIC APPLICATION

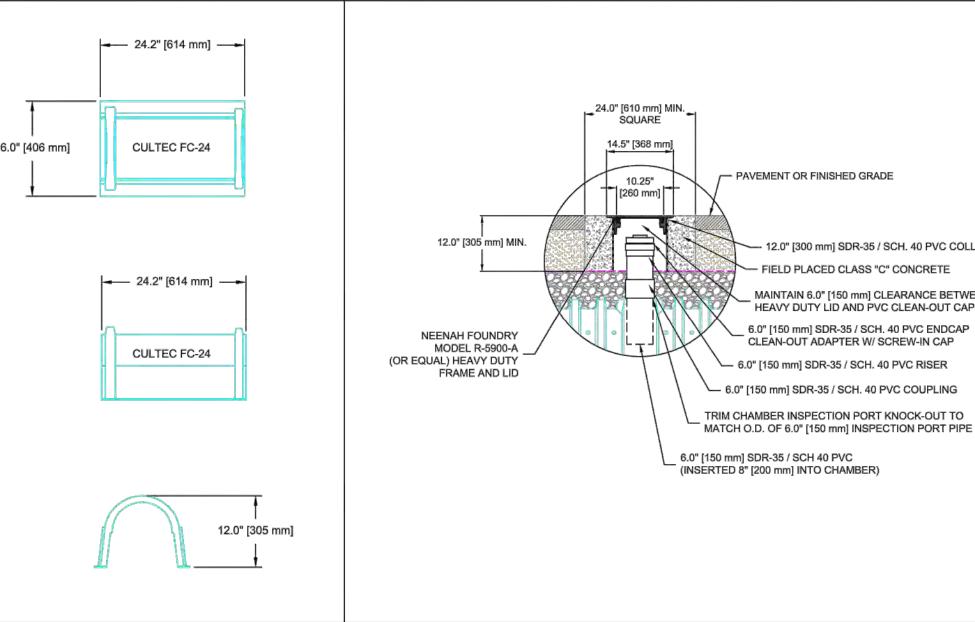
| CULTEC STORMWATER CHAMBER | | | | | | |
|---------------------------|-------------|-------------------|--|--|--|--|
| PROJECT NO: | 23-100 | DATE: $12/05/23$ | | | | |
| DRAWN BY: | CULTEC, INC | CHECKED BY: TECH | | | | |
| SCALE: | N.T.S. | SHEET NO: 9 OF 18 | | | | |

CULTEC, Inc.

878 Federal Road Brookfield, CT 06804 www.cultec.com

LARGE RIB **CULTEC RECHARGER® 280HD SPECIFICATIONS CULTEC HVLV® FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS** INSPECTION PORT KNOCK-OUT **END DETAIL** CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER 280HD CULTEC RECHARGER 280HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF. 1. THE CHAMBERS WILL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832) 47.0" [1194 mm] 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE 1. THE CHAMBERS WILL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR. (203-775-4416 OR 1-800-428-5832) MODEL 280RHD STARTER UNITS ARE USED AS SINGLE 3. THE CHAMBER WILL BE ARCHED IN SHAPE 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH STAND ALONE SECTIONS. 4. THE CHAMBER WILL BE OPEN-BOTTOMED DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR. LARGE RIE 5. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 3. THE CHAMBER WILL BE ARCHED IN SHAPE. NCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG. – 96.0" [2438 mm] –––– 6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR WILL BE 0.913 FT* / FT (0.085 m³ / m) - WITHOUT 4. THE CHAMBER WILL BE OPEN-BOTTOMED. 7. THE HVLV FC-24 FEED CONNECTOR CHAMBER SHALL HAVE 2 CORRUGATIONS. 5. THE CHAMBER WILL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. - MAXIMUM PIPE SIZE IN END WALL: 42.0" [1066 mm] ———— 42.0" [1066 mm] — CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO 21" [525 mm] HDPE MODEL 280SHD STARTER SEPARATE COUPLINGS OR SEPARATE END WALLS. NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT WILL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD. 21" [525 mm] PVC LARGE RIB UNITS ARE USED 6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 280HD SHALL BE TO BEGIN A LINE. 9. THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S 26.5 INCHES (673 mm) TALL, 47 INCHES (1194 mm) WIDE AND 8 FEET (2.44 m) LONG. THE RECOMMENDED INSTALLATION INSTRUCTIONS. INSTALLED LENGTH OF A JOINED RECHARGER 280HD SHALL BE 7 FEET (2.13 m). LARGE RIB 10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY. 7. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 21 INCHES (525 mm) HDPE. 26.5" [673 mm] **CULTEC NO. 410™ NON-WOVEN GEOTEXTILE** CULTEC NO, 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® 8. THE CHAMBER WILL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED 9.0" [229 mm] STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE. CONNECTORS TO CREATE AN INTERNAL MANIFOLD. NOMINAL INSIDE DIMENSIONS OF THE SIDE PORTAL SHALL HAVE A WIDTH OF 11.25" [286 mm] AND HEIGHT OF 11.5" [292 MODEL 280IHD INTERMEDIATE mm]. THE SIDE PORTAL CAN ACCEPT A MAXIMUM OUTER DIAMETER (O.D.) PIPE SIZE OF UNITS ARE USED AS MIDDLE 1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 12,25 INCHES [311 mm]. 🚤 35.0" [889 mm] 🗻 ✓ SIDE PORTAL FOR OPTIONAL INTERNAL MANIFOLD SECTIONS TO EXTEND THE 1-800-428-5832) (ACCOMMODATES CULTEC HVLV FC-24 FEED CONNECTOR LENGTH OF A LINE. 9. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV® FC-24 FEED CONNECTOR THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE. OR STORM PIPE) SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) 3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M). MAX. PIPE: 4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 10" [250 mm] HDPE LARGE RIE TESTING METHOD. 12" [300 mm] PVC 10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 280HD CHAMBER WILL BE 6.079 5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING FT3 / FT (0.565 m³ / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED METHOD. RECHARGER 280HD SHALL BE 42.553 FT3 / UNIT (1.205 m3 / UNIT) - WITHOUT STONE. 6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING CULTEC RECHARGER 280HD CHAMBER STORAGE = 6.079 CF/FT [0.565 m³/m] 11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR WILL BE 0.913 INSTALLED LENGTH ADJUSTMENT = 1.0' [0.3048 m] MODEL 280EHD END UNITS FT³ / FT (0.085 m³ / m) - WITHOUT STONE. ARE USED TO END THE LENGTH 7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD. OF A LINE. 12. THE RECHARGER 280HD CHAMBER WILL SEVENTY-TWO DISCHARGE HOLES BORED 8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF 9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING 13. THE RECHARGER 280HD CHAMBER SHALL HAVE 15 CORRUGATIONS. **CULTEC RECHARGER 280HD HEAVY DUTY THREE VIEW CULTEC RECHARGER 280HD HEAVY DUTY END DETAIL INFORMATION** METHOD. 10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING 14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, WILL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS 11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD. CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES 12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE 15. THE RECHARGER 280RHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER ASTM D4491 TESTING METHOD. HIDDEN END HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END 13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING PAVEMENT OR FINISHED GRADE PLATES OR SEPARATE END WALLS. MIN. 95% COMPACTED FILL 16. THE RECHARGER 280SHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER **CULTEC NO. 4800™ WOVEN GEOTEXTILE** HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED - RECHARGER 280HD - 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 9 INCHES (229 mm) HIGH X HEAVY DUTY CHAMBER SURROUNDING CHAMBERS CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THI 35 INCHES (889 mm) WIDE. 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 - CULTEC HVLV FC-24 FEED 17. THE RECHARGER 280IHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER 12.0' [3.66 m] MAX 8.0" [203 mm] MIN. FOR PAVED CONNECTOR WHERE SPECIFIED COVER DEPTH HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL MODEL 280EHD 10.0" [254 mm] MIN. FOR UNPAVED WITH A LOWER TRANSFER OPENING OF 9 INCHES (229 mm) HIGH X 35 INCHES (889 mm) GEOTEXTILE PARAMETERS THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. 18. THE RECHARGER 280EHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING (203-775-4416 OR 1-800-428-5832) ONE FULLY FORMED INTEGRAL ENDWALL AND ONE FULLY OPEN END WALL AND HAVING THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE. 6.0" [152 mm] MIN. NO SEPARATE END PLATES OR END WALLS. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD. 19. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END TESTING METHOD. WALLS. THE UNIT WILL FIT INTO THE SIDE PORTALS OF THE RECHARGER 280HD AND MODEL 280IHD BEGINNING THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT 26.5" [673 mm] ACT AS CROSS FEED CONNECTIONS. OF RUN (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,096 20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD. 21. THE CHAMBER WILL HAVE A RAISED INTEGRAL CAP AT THE TOP OF THE ARCH IN THE THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2, 6.0" [152 mm] MIN. CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR 740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD. SHOWN WITH HVLV FC-24 THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X FEED CONNECTOR INSERTED 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD. MODEL 280IHD 22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY 9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM CORRUGATION. D6241 TESTING METHOD. — 52.0" [1321 mm] —— 10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) 23. THE CHAMBER SHALL BE MANUFACTURED IN AN IN AN ISO 9001:2015 CERTIFIED 11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER - CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD TO ACCOMMODATE CULTEC HVLV FC-24 24. THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ASTM D4751 TESTING METHOD FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION) FEED CONNECTOR ACCORDING TO CULTEC'S INSTALLATION INSTRUCTIONS. 12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING MODEL 280SHD 25. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND 13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE STRUCTURAL REQUIREMENTS OF IAPMO PS 63-2019, INCLUDING RESISTANCE TO REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET D4491 TESTING METHOD. AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE WITH HVLV FC-24 FEED CONNECTOR 14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING CULTEC'S INSTALLATION INSTRUCTIONS. 26. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.65 m). **CULTEC RECHARGER 280HD HEAVY DUTY TYPICAL INTERLOCK GENERAL NOTES** CULTEC RECHARGER 280HD HEAVY DUTY CROSS SECTION - PAVEMENT OR FINISHED GRADE INLET/OUTLET PIPE PER ENGINEER DESIGN. 24.2" [614 mm] —— PIPE TO BE INSERTED 12.0" [305 mm] MIN. INTO CHAMBER - PAVEMENT SUB-BASE (WHEN APPLICABLE) MAXIMUM PIPE SIZE: MINIMUM 95% COMPACTED FILL SQUARE RECHARGER 280HD HEAVY DUTY CHAMBER - CULTEC NO. 410 NON-WOVEN GEOTEXTILE 14.5" [368 mm] 16.0" [406 mm] CULTEC FC-24 OPTIONAL INSPECTION PORT AROUND STONE. TOP AND SIDES MANDATORY (SEE ZOOM DETAIL (280HD) BOTTOM PER ENGINEER'S DESIGN PREFERENCE - PAVEMENT OR FINISHED GRADE 10.25" · CULTEC HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED 12.0" [300 mm] SDR-35 / SCH. 40 PVC COLLAR - 6.0 INCH [152 mm] MIN. DEPTH OF FIELD PLACED CLASS "C" CONCRETE 1-2 INCH [25-50 mm] WASHED CRUSHED 24.2" [614 mm] —= STONE ABOVE CHAMBERS MAINTAIN 6.0" [150 mm] CLEARANCE BETWEEN HEAVY DUTY LID AND PVC CLEAN-OUT CAP





OPTIONAL INSPECTION PORT - ZOOM DETAIL

CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE SURROUNDING CHAMBERS MIN. 95% COMPACTED FILL — PAVEMENT OR FINISHED GRADE CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION 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 10" [250 mm] HDPE PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET ZOOM OF SIDE PORTAL SHOWING MAX. PIPE O. **CULTEC INTERNAL MANIFOLD - OPTIONAL INSPECTION PORT DETAIL**



tech@cultec.com

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 HVLV FC-24

FEED CONNECTOR THREE VIEW

CULTEC STORMWATER CHAMBER RECHARGER 280HD DETAIL SHEET PROJECT NO: 23-100 TRAFFIC APPLICATION CULTEC, INC DRAWN BY:

P.O. Box 280

www.cultec.com

Subsurface Stormwater Management Systems

PH: (203) 775-4416 PH: (800) 4-CULTEC 878 Federal Road FX: (203) 775-1462 Brookfield, CT 06804

CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

DATE: 12/05/23CHECKED BY: TECH SHEET NO: 10 OF 18 SCALE: N.T.S.

SMALL RIB

END DETAIL

END OF RUN

HIDDEN END

SEPARATOR ROW™ SPECIFICATIONS

GENERAL

1. CULTEC'S SEPARATOR ROW IS USED AS AN INEXPENSIVE MEANS OF REMOVING TOTAL SUSPENDED SOLIDS FROM THE CHAMBER SYSTEM, AS WELL AS PROVIDING EASIER ACCESS FOR INSPECTION AND MAINTENANCE.

2. THE SEPARATOR ROW PERFORMANCE SHALL BE TESTED AND VERIFIED TO THE PROTOCOLS AND PROCEDURES AS DEFINED BY ENVIRONMENTAL TECHNOLOGY VERIFICATION (ETV) CANADA TO ACHIEVE 80% TSS REMOVAL.

INSTALLATION INSTRUCTIONS

A SEPARATOR ROW IS INSTALLED ON A 1-2 INCH [25-51 mm] WASHED, CRUSHED STONE BASE. TYPICALLY, THE CULTEC CHAMBER MODEL USED FOR THE SEPARATOR ROW IS THE SAME CHAMBER USED THROUGHOUT THE ENTIRE CHAMBER BED.

STORMWATER IS DISTRIBUTED TO THE SEPARATOR ROW BY A PRIMARY FEED SYSTEM THAT DIVERTS FLOW TO THE SEPARATOR ROW AND A SECONDARY BYPASS FEED SYSTEM THAT DIVERTS THE FLOW OF CLEAN WATER TO THE OTHER PARTS OF THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM. THE DISTRIBUTION SYSTEM MAY BE BY PIPES SET AT A LOWER ELEVATION THAT PERMIT THE FIRST FLUSH TO THE SEPARATOR ROW VERSUS OTHER PARTS OF THE UNDERGROUND STORMWATER SYSTEM. THIS INITIAL FLOW MAY BE MANAGED BY A BAFFLE OR WEIR. THE SIZING OF THE PIPE(S) THAT PROVIDE STORM WATER TO THE SEPARATOR ROW IS TO BE DETERMINED BY THE DESIGN ENGINEER AND IS BASED UPON THE REQUIREMENT TO ACCOMMODATE THE DESIGN FLOW AND SERVICE CONVENIENCE.

THE CHAMBERS UTILIZED IN THE SEPARATOR ROW ARE TO BE COMPLETELY WRAPPED WITH CULTEC NO. 410 NON-WOVEN GEOTEXTILE. THIS CREATES A PASS-THROUGH FILTER ARRANGEMENT TO SEPARATE TOTAL SUSPENDED SOLIDS IN THE TRANSFER OF STORM WATER TO OTHER CHAMBERS THROUGHOUT THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM.

ONCE WRAPPED, THE SEPARATOR ROW IS TO THEN PLACED ENTIRELY OVER 1 LAYER OF CULTEC No. 4800 WOVEN GEOTEXTILE. THIS WOVEN GEOTEXTILE PROVIDES A DURABLE SURFACE WITHIN THE ROW FOR MAINTENANCE PROCEDURES AS WELL AS TO PREVENT ANY SCOURING OF THE STONE BASE DURING HIGH PRESSURE JETTING.

THE RECOMMENDED INSTALLATION OF SEPARATOR ROW CHAMBERS, IN REGARD TO STONE SEPARATION AND STONE ABOVE THE UNIT. ALONG WITH OTHER MINIMUM BURIAL. MATERIALS AND METHOD SPECIFICATIONS DETAILED FOR THE PROPER INSTALLATION, IS THE SAME AS CULTEC'S REQUIREMENT DETAILED IN THE COMPANY'S INSTALLATION GUIDELINES WITH THE EXCEPTION OF THE PLACEMENT OF THE REQUIRED FILTERING FABRICS. PLEASE REFER TO CULTEC'S CURRENT INSTALLATION INSTRUCTIONS FOR STORMWATER CHAMBERS AS A GUIDE.

MAINTENANCE PROCEDURES

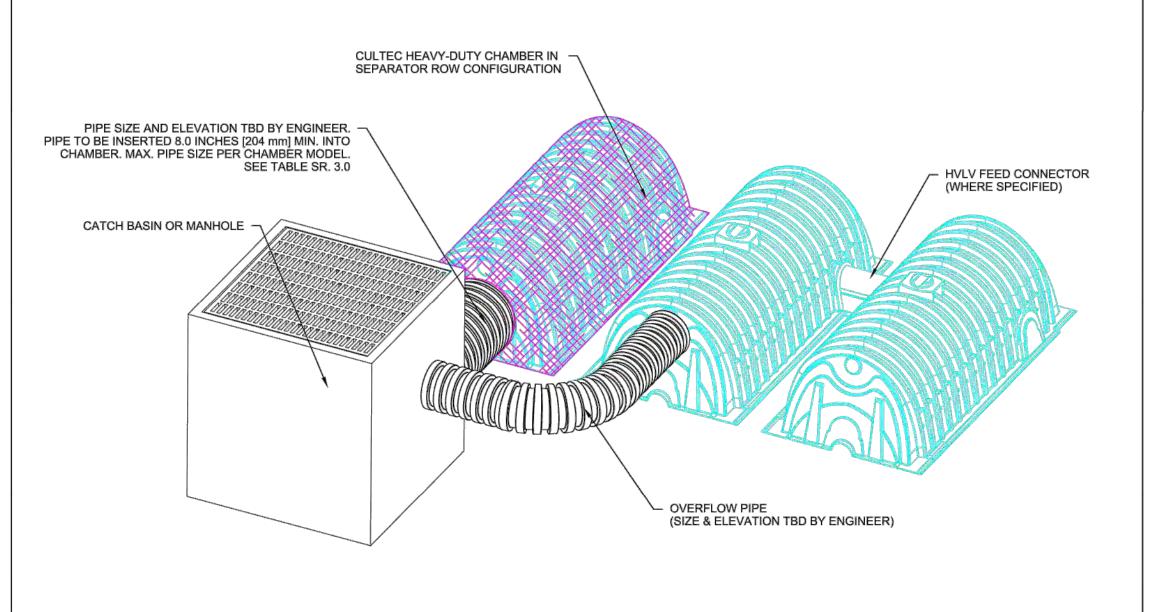
CULTEC RECOMMENDS INSPECTIONS OF THE SEPARATOR ROW TO BE PERFORMED EVERY SIX MONTHS FOR THE FIRST YEAR. THE FREQUENCY OF INSPECTION CAN THEN BE ADJUSTED BASED UPON PREVIOUS OBSERVATION OF SEDIMENT DEPOSITION.

WHILE CLEANING IS POSSIBLE FROM A SINGLE MANHOLE IN SHORTER LINES, A CLEAN-OUT OPTION FROM EITHER END OF A LINE IS PREFERABLE, PARTICULARLY FOR LONGER RUNS. CLEANING INVOLVES FLUSHING SEDIMENT FROM THE BASE FABRIC OF THE SEPARATOR ROW.

ACCESS WILL BE PROVIDED VIA A MANHOLE(S) LOCATED AT THE END(S) OF THE ROW FOR CLEAN OUT.

MAINTENANCE OF THE SEPARATOR ROW IS TO BE ACCOMPLISHED WITH A JETVAC PROCESS.

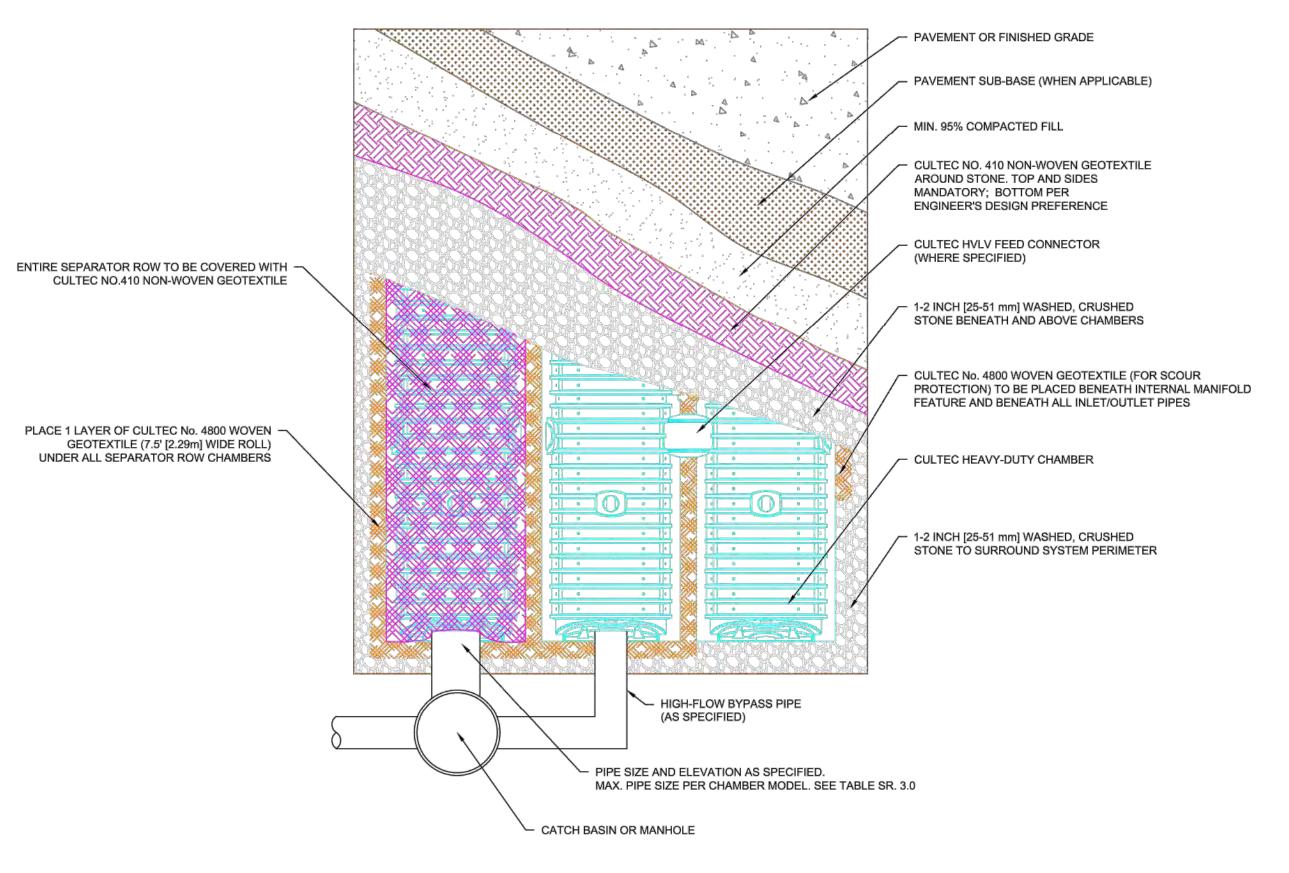
THE JETVAC IS TO BE SENT DOWN THE ENTIRE LENGTH OF THE SEPARATOR ROW. AS THE HIGH PRESSURE WATER NOZZLE IS RETRIEVED, THE CAPTURED SEDIMENTS ARE PUSHED BACK INTO THE MANHOLE FOR VACUUMING.



TYPICAL SEPARATOR ROW CONFIGURATION INLET CONNECTION

| CULTEC CHAMBER MODEL | | | | | | | | | |
|----------------------|---|-----------------|-----------------|-----------------|-----------------|----------------|--|--|--|
| | DESCRIPTION CONTACTOR RECHARGER RECHARGER RECHARGER 330XLHD 902HD | | | | | | | | |
| A ¹ | MIN. DEPTH OF STONE BASE | 6" 152 mm | 6" 152 mm | 6" 152 mm | 6" 152 mm | 9" 229 mm | | | |
| В | CHAMBER HEIGHT | 12.5" 318 mm | 18.5" 470 mm | 26.5" 673 mm | 30.5" 775 mm | 48" 1219 mm | | | |
| C¹ | MIN. DEPTH OF STONE REQUIRED ABOVE UNITS FOR TRAFFIC APPLICATIONS | 6" 152 mm | 6" 152 mm | 6" 152 mm | 6" 152 mm | 12" 305 mm | | | |
| D | MIN. DEPTH REQUIRED OF 95% COMPACTED FILL FOR PAVED TRAFFIC | 8" 203 mm | 8" 203 mm | 8" 203 mm | 10" 254 mm | 12" 305 mm | | | |
| E | MAX. DEPTH OF COVER ALLOWED ABOVE CROWN OF CHAMBER | 12' 3.65 m | 12' 3.65 m | 12' 3.65 m | 12' 3.65 m | 8.3' 2.53 m | | | |
| | MAX. PIPE SIZE TO CHAMBER ENDWALL/ENDCAP | 10" 250 mm | 12" 300 mm | 18" 450 mm | 24" 600 mm | 24" 600 mm | | | |

NOTE1: STONE ABOVE AND BELOW UNITS MAY VARY PER SYSTEM. SEE SYSTEM LAYOUT FOR STONE REQUIREMENTS

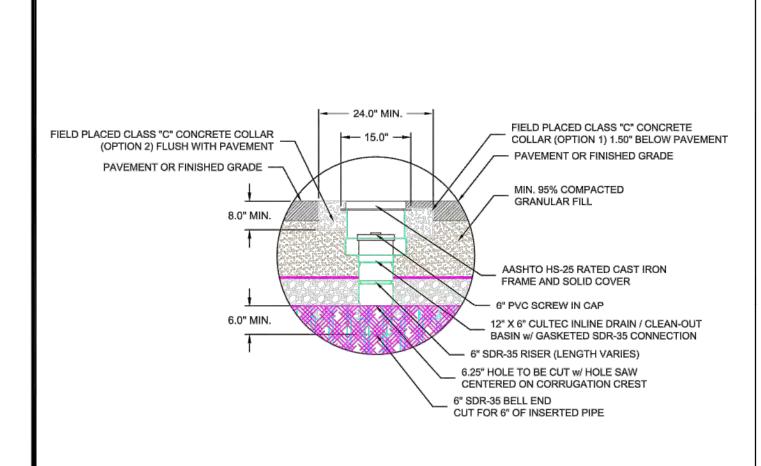


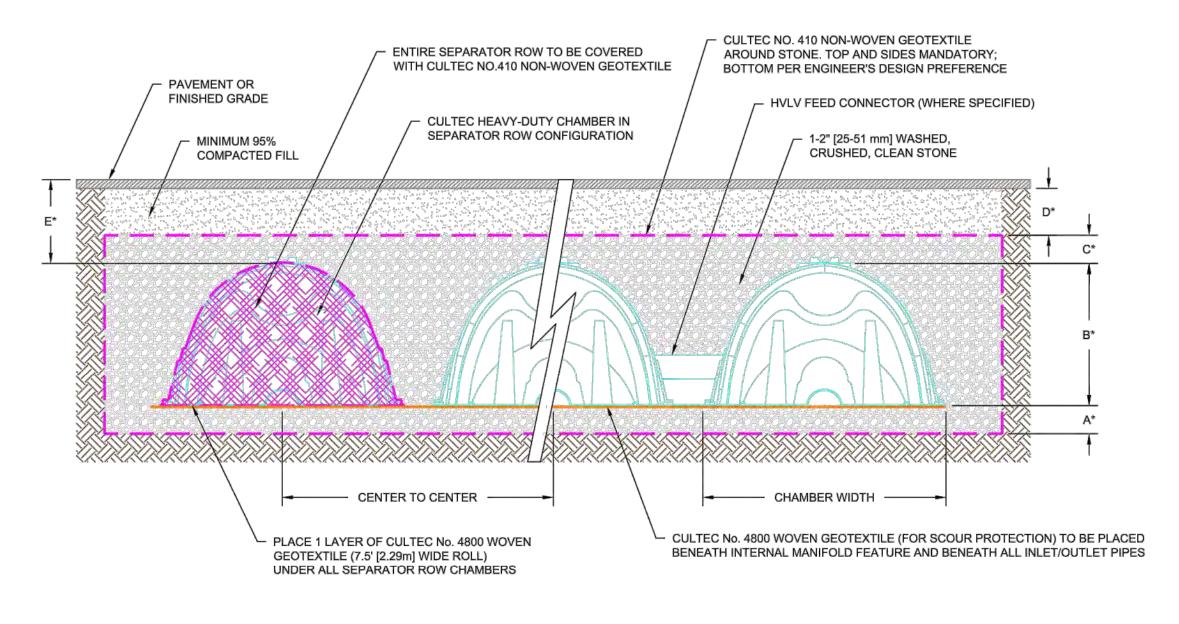
GENERAL NOTES

CROSS SECTION TABLE REFERENCE

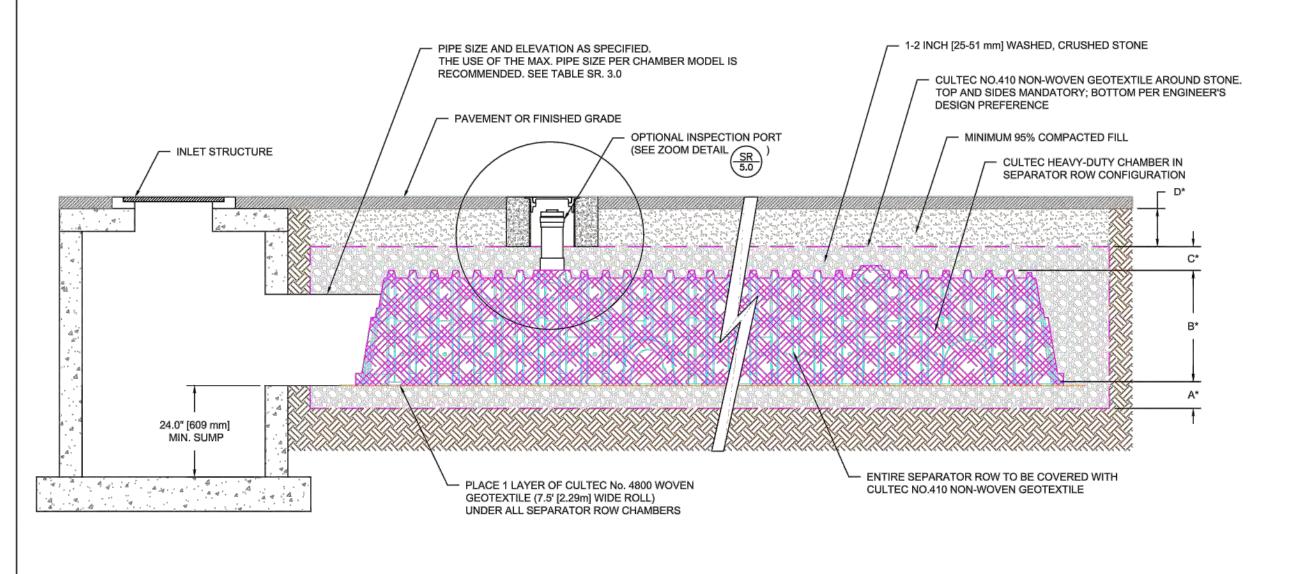








* SEE SR 3.0 - CROSS SECTION TABLE REFERENCE



* SEE SR 3.0 - CROSS SECTION TABLE REFERENCE

TYPICAL INSPECTION PORT - ZOOM DETAIL

 $\left(\begin{array}{c} SR \\ 6.0 \end{array}\right)$

SR 3.0

TYPICAL SEPARATOR ROW CONFIGURATION CROSS SECTION

TYPICAL SEPARATOR ROW CONFIGURATION CROSS SECTION WITH INSPECTION PORT DETAIL



CULTEC, Inc.

Subsurface Stormwater Management Systems

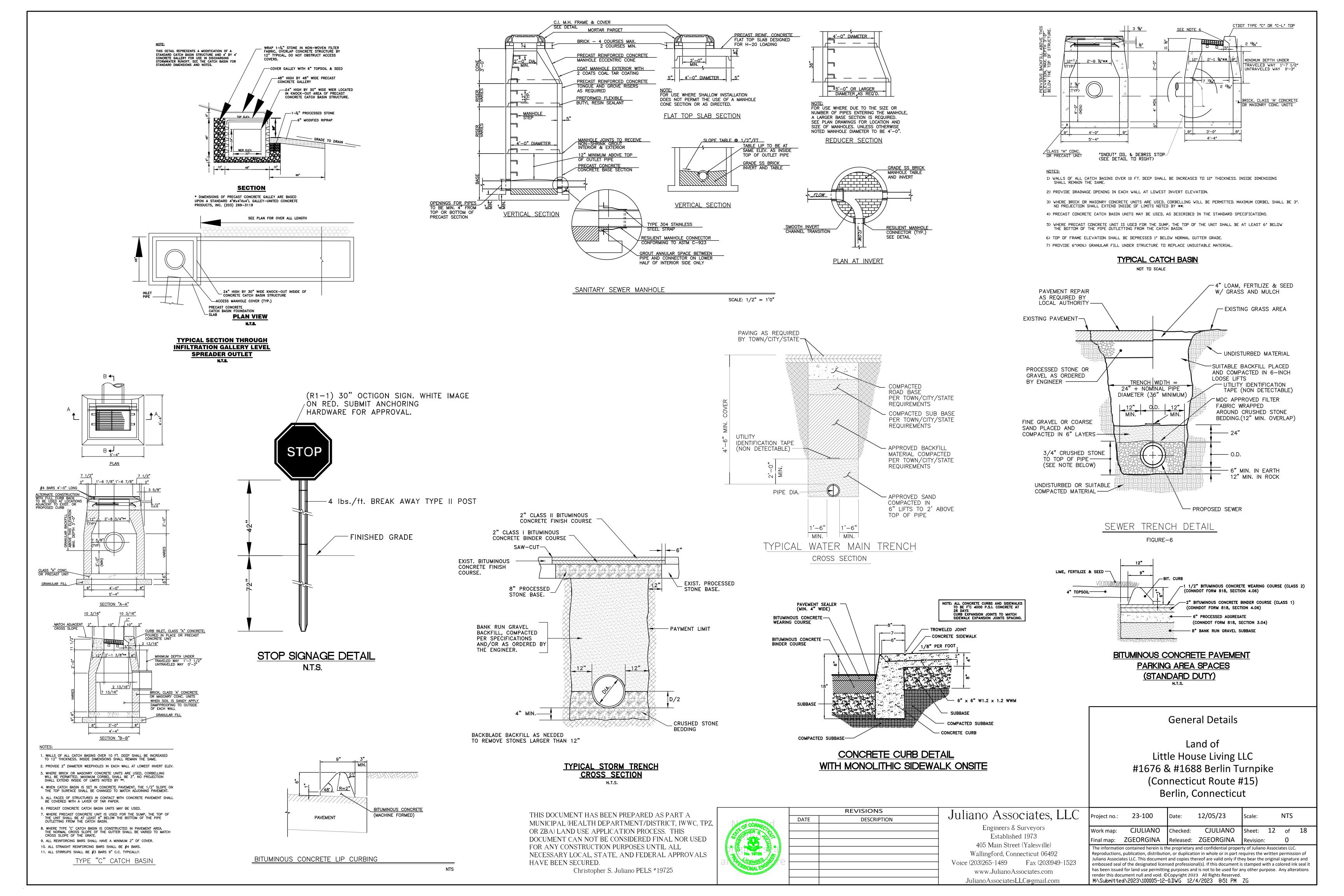
P.O. Box 280 878 Federal Road Brookfield, CT 06804 www.cultec.com

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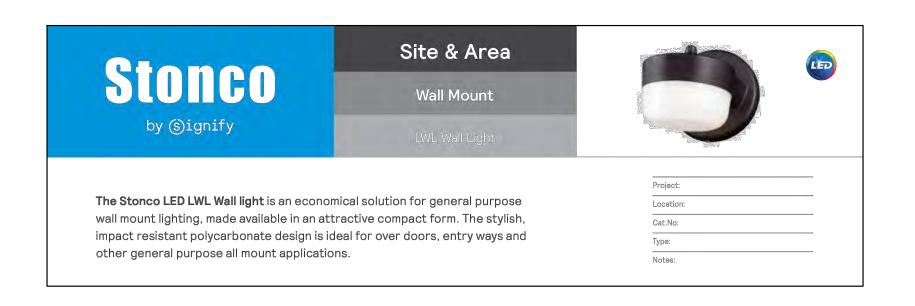
SEPARATOR ROW DETAIL SHEET TRAFFIC APPLICATION

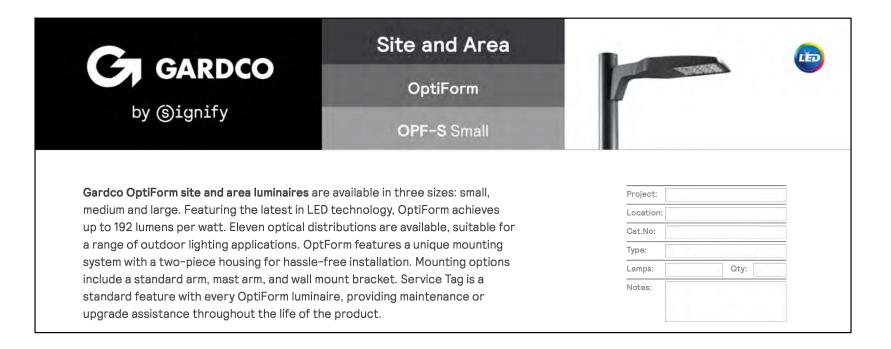
| SEPARATOR ROW DETAIL SHEET | | | | | |
|----------------------------|--------------------|--|--|--|--|
| PROJECT NO: 23-100 | DATE: 12/05/23 | | | | |
| DESIGNED BY: CULTEC, INC | CHECKED BY: TECH | | | | |
| SCALE: N.T.S. | SHEET NO: 11 OF 18 | | | | |

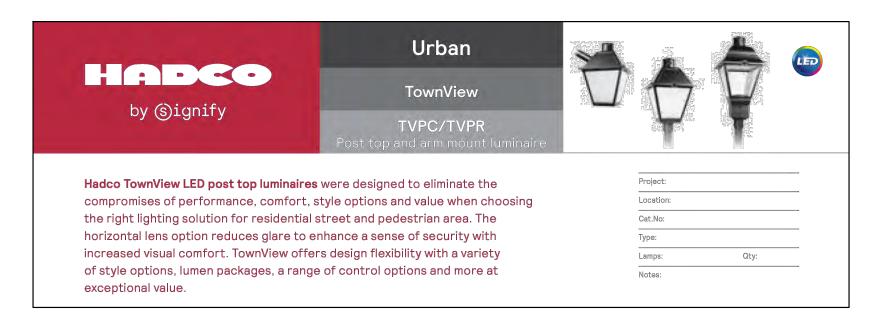




| LUMINAIRE SCHEDULE | | | | | | |
|--------------------|--|----------------------------|---|----------|--------------------------------------|--|
| SYMBOL | DESCRIPTION | MOUNTING (Fixture Type) | MODEL | QUANTITY | DEFAULT ELEVATION (Mounting Heights) | |
| Ю | STONCO LWL LED WALL LIGHT | WALL | STONCO KEENE, LWL-WW-G2-PCB-1-BZ | 19 | 6' | |
| | GARDCO OptiForm Precision Plus — Small, 40 LED's, 3000K CCT, TYPE T2M OPTIC, 80CRI | WALL | SIGNIFY GARDCO CANADA LTD OPF-S-P01-830-T2M | 18 | 10' | |
| | HADCO TownView (TVPR), 32 LED's, 4000K CCT, TYPE 2SH OPTIC, with Vertical Ribbed Panels and House—side Shield | POLE | SIGNIFY HADCO, TVPR-32-G1-5-2SH-740 | 7 | 13' | |







Photometric Plan

Land of
Little House Living LLC
#1676 & #1688 Berlin Turnpike
(Connecticut Route #15)
Berlin, Connecticut

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Christopher S. Juliano PELS #19725



| | | REVISIONS | | | | |
|------|------------------------|-------------|--|--|--|--|
| | DATE | DESCRIPTION | | | | |
| | 12/11/23 TOWN COMMENTS | | | | | |
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Wallingford Connecticut 06402

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www.JulianoAssociates.com
JulianoAssociatesLLC@gmail.com

| () | Project no.: | 23-100 | Date: | 12/05/23 | Scale: | 1" | = 20' | |
|-----|--------------|---------------------------|-----------|-----------|-----------|----|-------|----|
| | Work map: | CJULIANO | Checked: | ZGEORGINA | Sheet: | 13 | of | 18 |
| | Final map: | ZGEORGINA | Released: | CJULIANO | Revision: | | Α | |
| | | on contained herein is th | | | • | | | |

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MI\Pending\2023\100005-13-A.DWG 12/15/2023 10:12 AM RV

exceptional value.

Ordering guide: Luminaire

comfort

TVPR TownView

A¹ Arm Mt

L4 Large Post

entry)

with vertical L3 Large Post

4" (tool less

3" (tool less

entry)

S2 Small Post

Fitter 2-3/8"

S3 Small Pos

\$4 Small Post

Hadco TownView LED post top luminaires were designed to eliminate the

the right lighting solution for residential street and pedestrian area. The

horizontal lens option reduces glare to enhance a sense of security with

increased visual comfort. TownView offers design flexibility with a variety

of style options, lumen packages, a range of control options and more at

compromises of performance, comfort, style options and value when choosing

TVPC/TVPR

7 700 mA

8 800 mA

7 700 mA

32 32 LEDs G1 Gen 1

Sensor Receptacle 8 Surge Protection

48 48 LEDs G1 Gen 1 5 530 mA

SP1 10kV/10kA Surge

SP2 20kV/10kA Surge

House-side

3S Type 3 Short | 827 2 2700K

shield

House-side

3WH Type 3 Wide

1 1050 mA | 2S Type 2 Short

5 530 mA 3SH Type 3 Short

1 1050 mA | 3W Type 3 Wide

Term Block

N None

T Terminal Block



example: TVPC-S3-S-32-G1-7-3S-730-A-N-R7-N-SP1-T-N-N-BKS

(70 CRI) J 480V

740 4000K **K** 347V

Decorative Option

L 6 Ladder Rest

TVPC/TVPR TownView

| Project: | |
|-----------|------|
| Location: | |
| Cat.No: | |
| Туре: | |
| Lamps: | Qty: |

DD 5 6 Hrs 25% Reduction

DE 5 6 Hrs 50% Reduction

DF 5 6 Hrs 75% Reduction

DG 5 8 Hrs 25% Reduction

DH 5 8 Hrs 50% Reduction

DJ 5 8 Hrs 75% Reduction

CLO 5 Constant light output

(default: L70 hrs)

wattage selector

BKS Black Smooth

WHS White Smooth

BZS Bronze Smooth

GNS Green Smooth

BK Black Texture

WH White Texture

BZ Bronze Texture

GN Green Texture

SRD 4.5 Sensor ready driver

FAWS Field adjustable

(standard configuration)

startup time

AST 5 Adjustable

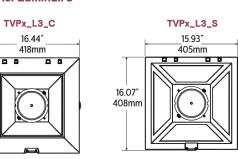
OTL 5 Over the life

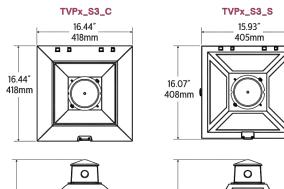
None

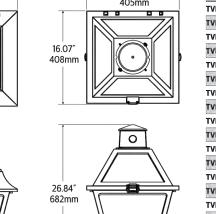
Bird Guard

(default: logarithmic)

| ject: | | Diı |
|---------|------|-----|
| cation: | | |
| t.No: | | , |
| e: | | |
| nps: | Qty: | , |
| tes: | | 1 |
| | | |







| //// | 1 VPC-32-G1-7-X-730 | 32 | 700 | 3000 | 70 | 5,075 | 12 | DI-03-GI | 3,307 | 70 | DI-03-GI | 3,417 | 11 | BI-03-G2 |
|------|---------------------|----|------|------|-----|-------|----|----------|-------|-----|----------|-------|----|----------|
| | TVPC-32-G1-8-x-730 | 32 | 800 | 3000 | 80 | 5,645 | 70 | B1-U3-G1 | 6,128 | 76 | B1-U3-G1 | 6,028 | 75 | B1-U3-G1 |
| | TVPC-32-G1-1-x-730 | 32 | 1050 | 3000 | 108 | 7.091 | 65 | B1-U3-G1 | 7.698 | 71. | B1-U3-G2 | 7,572 | 70 | B1-U3-G2 |
| | TVPC-48-G1-5-x-730 | 48 | 530 | 3000 | 81 | 6,126 | 76 | B1-U3-G1 | 6,650 | 82 | B1-U3-G1 | 6,541 | 81 | B1-U3-G2 |
| | TVPC-48-G1-7-x-730 | 48 | 700 | 3000 | 105 | 7,690 | 73 | B1-U3-G2 | 8,348 | 80 | B1-U3-G2 | 8,211 | 78 | B1-U3-G2 |
| | TVPC-16-G1-5-x-740 | 16 | 530 | 4000 | 29 | 2,302 | 79 | B0-U2-G1 | 2,553 | 87 | B0-U2-G1 | 2,369 | 81 | B1-U2-G1 |
| | TVPC-16-G1-7-x-740 | 16 | 700 | 4000 | 39 | 2,913 | 76 | B1-U2-G1 | 3,230 | 84 | B1-U2-G1 | 2,997 | 78 | B1-U3-G1 |
| | TVPC-16-G1-9-x-740 | 16 | 900 | 4000 | 49 | 3,574 | 72 | B1-U2-G1 | 3,963 | 80 | B1-U3-G1 | 3,678 | 74 | B1-U3-G1 |
| • | TVPC-16-G1-1-x-740 | 16 | 1050 | 4000 | 58 | 4,028 | 70 | B1-U2-G1 | 4,466 | 78 | B1-U2-G1 | 4.145 | 72 | B1-U3-G1 |
| | TVPC-32-G1-5-x-740 | 32 | 530 | 4000 | 54 | 4,418 | 82 | B1-U3-G1 | 4,796 | 89 | B1-U3-G1 | 4,718 | 87 | B1-U3-G1 |
| | TVPC-32-G1-7-x-740 | 32 | 700 | 4000 | 71 | 5,577 | 79 | B1-U3-G1 | 6,055 | 85 | B1-U3-G1 | 5,955 | 84 | B1-U3-G2 |
| | TVPC-32-G1-8-x-740 | 32 | 800 | 4000 | 81 | 6,207 | 76 | B1-U3-G1 | 6,738 | 83 | B1-U3-G1 | 6,628 | 82 | B1-U3-G1 |
| | TVPC-32-G1-1-x-740 | 32 | 1050 | 4000 | 110 | 7,796 | 71 | B1-U3-G1 | 8,464 | 77 | B1-U3-G2 | 8,325 | 76 | B1-U3-G2 |
| | TVPC-48-G1-5-x-740 | 48 | 530 | 4000 | 82 | 6,735 | 82 | B1-U3-G1 | 7,312 | 89 | B1-U3-G1 | 7,192 | 88 | B1-U3-G2 |
| ā | TVPC-48-G1-7-x-740 | 48 | 700 | 4000 | 106 | 8,454 | 80 | B1-U3-G2 | 9,178 | 87 | B1-U3-G2 | 9,028 | 85 | B1-U3-G2 |

1.49 sq. ft.

1.54 sq. ft.

| TVPC-16-G1-5-x-740 | 16 | 530 | 4000 | 29 | 2,302 | 79 | B0-U2-G1 | 2,553 | 87 | B0-U2-G1 | 2,369 | 81 | B1-U2-G1 |
|--------------------|----|------|------|-----|-------|----|----------|-------|----|----------|-------|----|-----------|
| TVPC-16-G1-7-x-740 | 16 | 700 | 4000 | 39 | 2,913 | 76 | B1-U2-G1 | 3,230 | 84 | B1-U2-G1 | 2,997 | 78 | B1-U3-G1 |
| TVPC-16-G1-9-x-740 | 16 | 900 | 4000 | 49 | 3,574 | 72 | B1-U2-G1 | 3,963 | 80 | B1-U3-G1 | 3,678 | 74 | B1-U3-G1 |
| TVPC-16-G1-1-x-740 | 16 | 1050 | 4000 | 58 | 4,028 | 70 | B1-U2-G1 | 4,466 | 78 | B1-U2-G1 | 4,145 | 72 | B1-U3-G1 |
| TVPC-32-G1-5-x-740 | 32 | 530 | 4000 | 54 | 4,418 | 82 | B1-U3-G1 | 4,796 | 89 | B1-U3-G1 | 4,718 | 87 | B1-U3-G1 |
| TVPC-32-G1-7-x-740 | 32 | 700 | 4000 | 71 | 5,577 | 79 | B1-U3-G1 | 6,055 | 85 | B1-U3-G1 | 5,955 | 84 | B1-U3-G2 |
| TVPC-32-G1-8-x-740 | 32 | 800 | 4000 | 81 | 6,207 | 76 | B1-U3-G1 | 6,738 | 83 | B1-U3-G1 | 6,628 | 82 | B1-U3-G1 |
| TVPC-32-G1-1-x-740 | 32 | 1050 | 4000 | 110 | 7,796 | 71 | B1-U3-G1 | 8,464 | 77 | B1-U3-G2 | 8,325 | 76 | B1-U3-G2 |
| TVDC-48-G1-5-v-740 | 48 | 530 | 4000 | 82 | 6.735 | 82 | R1_U3_G1 | 7 312 | 80 | R1_U3_G1 | 7102 | 99 | B1-113-G2 |

LED Lumen values - TVPR (Vertical Ribbed Panels)

TVPC/TVPR TownView

Post top and arm mount luminaire

LED Lumen values - TVPC (Visual Comfort Panels and House-side shield)

| | | System | | | | Type 25 | | | Type 35 | | | Type 3V | 1 | | Type 5 | |
|--------------------|----------|------------------|----------------|----------------------------|--------|-------------------|---------------|-----------------|-------------------|---------------|--------|-------------------|---------------|-----------------|-------------------|---------------|
| Ordering Code | LED qty. | Current (mA). | Color Temp. | Avg. System Wattage (W) | Lumen | Efficacy (LPW) | BUG Rating | Lumen Output | Efficacy (LPW) | BUG Rating | Lumen | Efficacy (LPW) | BUG Rating | Lumen Output | Efficacy (LPW) | BUG Rating |
| TVPR-16-G1-5-x-730 | 16 | 530 | 3000 | 29 | 2,750 | 95 | B1-U2-G1 | 2,940 | 102 | B1-U2-G1 | 2,920 | 101 | B1-U3-G1 | 3,096 | 107 | B2-U3-G1 |
| TVPR-16-G1-7-x-730 | 16 | 700 | 3000 | 38 | 3,479 | 91 | B1-U2-G1 | 3,719 | 98 | B1-U2-G1 | 3,694 | 97 | B1-U3-G1 | 3,917 | 103 | B2-U3-G1 |
| TVPR-16-G1-9-x-730 | 16 | 900 | 3000 | 49 | 4,269 | 87 | B1-U3-G1 | 4,564 | 93 | B1-U3-G1 | 4,533 | 93 | B1-U3-G1 | 4,806 | 98 | B3-U3-G1 |
| TVPR-16-G1-1-x-730 | 16 | 1050 | 3000 | 57 | 4,811 | 85 | B1-U3-G1 | 5,144 | 90 | B1-U3-G1 | 5,109 | 90 | B1-U3-G1 | 5,417 | 95 | B3-U3-G1 |
| TVPR-32-G1-5-x-730 | 32 | 530 | 3000 | 53 | 5,380 | 101 | B1-U3-G1 | 5,602 | 105 | B1-U3-G1 | 5,611 | 105 | B1-U3-G1 | 5,884 | 110 | B3-U3-G2 |
| TVPR-32-G1-7-x-730 | 32 | 700 | 3000 | 70 | 6,792 | 97 | B2-U3-G2 | 7,071 | 101 | B1-U3-G2 | 7,083 | 101 | B1-U3-G2 | 7,428 | 106 | B3-U3-G2 |
| TVPR-32-G1-8-x-730 | 32 | 800 | 3000 | 80 | 7,558 | 94 | B2-U3-G2 | 7,869 | 98 | B1-U3-G2 | 7,882 | 98 | B2-U3-G2 | 8,266 | 103 | B3-U3-G2 |
| TVPR-32-G1-1-x-730 | 32 | 1050 | 3000 | 108 | 9,494 | 88 | B2-U3-G2 | 9,885 | 91 | B2-U3-G2 | 9,901 | 91 | B2-U3-G2 | 10,383 | 96 | B4-U3-G2 |
| TVPR-48-G1-5-x-730 | 48 | 530 | 3000 | 81 | 8,202 | 102 | B2-U3-G2 | 8,539 | 106 | B2-U3-G2 | 8,553 | 106 | B2-U3-G2 | 8,970 | 111 | B4-U3-G2 |
| TVPR-48-G1-7-x-730 | 48 | 700 | 3000 | 105 | 10,296 | 98 | B2-U3-G2 | 10,720 | 102 | B2-U3-G2 | 10,737 | 102 | B2-U3-G2 | 11,260 | 107 | B4-U3-G2 |
| TVPR-16-G1-5-x-740 | 16 | 530 | 4000 | 29 | 3,023 | 103 | B1-U2-G1 | 3,232 | 111 | B1-U2-G1 | 3,210 | 110 | B1-U3-G1 | 3,404 | 116 | B2-U3-G1 |
| TVPR-16-G1-7-x-740 | 16 | 700 | 4000 | 39 | 3,825 | 99 | B1-U2-G1 | 4,089 | 106 | B1-U2-G1 | 4,062 | 105 | B1-U3-G1 | 4,306 | 112 | B2-U3-G1 |
| TVPR-16-G1-9-x-740 | 16 | 900 | 4000 | 49 | 4,693 | 95 | B1-U3-G1 | 5,018 | 101 | B1-U3-G1 | 4,984 | 101 | B1-U3-G1 | 5,284 | 107 | B3-U3-G1 |
| TVPR-16-G1-1-x-740 | 16 | 1050 | 4000 | 58 | 5,290 | 92 | B1-U3-G1 | 5,655 | 98 | B1-U3-G1 | 5,617 | 98 | B1-U3-G1 | 5,955 | 104 | B3-U3-G1 |
| TVPR-32-G1-5-x-740 | 32 | 530 | 4000 | 54 | 5,915 | 110 | B1-U3-G1 | 6,159 | 114 | B1-U3-G1 | 6,169 | 114 | B1-U3-G1 | 6,469 | 120 | B3-U3-G2 |
| TVPR-32-G1-7-x-740 | 32 | 700 | 4000 | 71 | 7,467 | 105 | B2-U3-G2 | 7,775 | 110 | B1-U3-G2 | 7.787 | 110 | B1-U3-G2 | 8,166 | 115 | B3-U3-G2 |
| TVPR-32-G1-8-x-740 | 32 | 800 | 4000 | 81 | 8,310 | 102 | B2-U3-G2 | 8,652 | 106 | B2-U3-G2 | 8,666 | 107 | B2-U3-G2 | 9,088 | 112 | B3-U3-G2 |
| TVPR-32-G1-1-x-740 | 32 | 1050 | 4000 | 110 | 10,438 | 95 | B2-U3-G2 | 10,868 | 99 | B2-U3-G2 | 10,886 | 99 | B2-U3-G2 | 11,416 | 104 | B4-U3-G2 |
| TVPR-48-G1-5-x-740 | 48 | 530 | 4000 | 82 | 9,017 | 110 | B2-U3-G2 | 9,389 | 115 | B2-U3-G2 | 9,404 | 115 | B2-U3-G2 | 9,862 | 121 | B4-U3-G2 |
| TVPR-48-G1-7-x-740 | 48 | 700 | 4000 | 106 | 11,319 | 107 | B2-U3-G2 | 11,786 | 111 | B2-U3-G2 | 11,805 | 111 | B2-U3-G2 | 12,379 | 117 | B4-U3-G2 |

| 16 | 530 | 3000 | 29 | 2,094 | 72 | B0-U2-G1 | 2,322 | 80 | B0-U2-G1 | 2,155 | 75 | B1-U2-G1

32 530 3000 53 4,018 75 B1-U3-G1 4,362 82 B1-U3-G1 4,291 80 B1-U3-G1

32 700 3000 70 5,073 72 BI-U3-G1 5,507 78 BI-U3-G1 5,417 77 BI-U3-G2

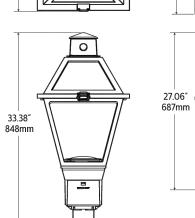
Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout - contact Applications at outdoorlighting.applications@philips.com. Consult DLC QPL to confirm your specific fixture selection is DLC approved. Note: Some data may be scaled based on tests of similar but not identical luminaries.

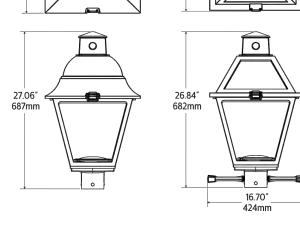
Urban

Post top and arm mount luminaire

| Dimensions: Luminaire | |
|-----------------------|--|
| | |

| 16.44" | 16.07 |
|--------|-----------------|
| 18mm | 408mm |
| 660° | 33.38° 848mm |





OPF-RMB Retrofit Mounting Bolst

OPF-RPA Round Pole Adapter. Fit

PTF2-1-90-(F) 1 luminiare at 90° PTF2-2-90-(F) 2 luminiares at 90°

PTF2-3-90-(F) 3 luminiares at 90° PTF2-4-90-(F) 4 luminiares at 90° PTF2-2-180-(F) 2 luminiares at 180° PTF2-3-120-(F) 3 luminiares at 120°

PTF3-1-90-(F) 1 luminiare at 90° PTF3-2-90-(F) 2 luminiares at 90° PTF3-3-90-(F) 3 luminiares at 90° PTF3-4-90-(F) 4 luminiares at 90°

PTF3-2-180-(F) 2 luminiares at 180°

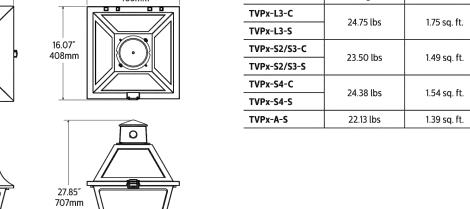
PTF3-3-120-(F) 3 luminiares at 120°

PTF2 - Pole top fitter fits 2 3/8 - 2 1/2" OD x 4" depth tenon

PTF3 - Pole top fitter fits 3-3 1/2" OD x 6" depth tenon

Pole Top Fitters

| TVPx_S4_C | TVPx_S4_S |
|------------------|-----------------|
| 16.44** 418mm | 15.93° |
| 4" nm | 16.07" 408mm |
| 0 | 0 |



EPA Values

Footnotes see page 2.

Ordering guide (continued)

Photo Control Receptacle

R7 7 Pin tooless rotatable

PH8 7 7 Pin tooless rotatable

PH9 7 Pin tooless rotatable

standard - no photocell

standard - with photocel

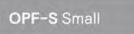
PHX 5 7 Pin tooless rotatable standar

- with long life photocell

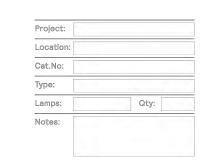
standard - with shorting cap

G GARDCO by (Signify

Site and Area OptiForm



Gardco OptiForm site and area luminaires are available in three sizes: small, medium and large. Featuring the latest in LED technology, OptiForm achieves up to 192 lumens per watt. Eleven optical distributions are available, suitable for a range of outdoor lighting applications. OptForm features a unique mounting system with a two-piece housing for hassle-free installation. Mounting options include a standard arm, mast arm, and wall mount bracket. Service Tag is a standard feature with every OptiForm luminaire, providing maintenance or upgrade assistance throughout the life of the product.



| example: OPF-S-A01-84 | 40-T4M-AR1-120-BL50-L3-BZ | <u>,</u> |
|-----------------------|---------------------------|----------|

| rdering | guid | 0 | | | | | | | | example: OPF-S | -A01-8 | 40-T4M-AR1- | -120-Bl | _50-L3-B |
|--|--------------------------|--|---------------------------------|---|--|--|--|---|--|---|---|--|--|--|
| Luminaire OPF-S | Confi | iguration (nom. lu | mens) | | Colo | r Temperature | Distr | ibution | | | Mounti | ng | Voltag | e |
| OPF-S OptiForm Small Area | A01 A02 A03 A04 | 7,000 lumens 9,000 lumens 11,000 lumens 15,000 lumens | P01 P02 P03 P04 | 2,500 lumens 4,000 lumens 9,000 lumens | 827 ¹ 830 840 727 ¹ 730 740 | 80CRI 2700K 80CRI 3000K 80CRI 4000K 70CRI 2700K 70CRI 3000K 70CRI 4000K | AFR T2M T3M T4M T4W T5N | Autofront row Type 2 medium Type 3 medium Type 4 medium Type 4 wide Type 5 narrow | LCL LCR BLC 2RL 2RR 3RL | LEED corner optic left LEED corner optic right Back light control Type 2 rotated left 90° Type 2 rotated right 270° Type 3 rotated left 90° | AR1 ^{2,17} MAR ³ WAL MOS ⁴ | Arm mount (standard) Mast arm Wall mount Mounting ordered separately | 120 208 240 277 347 480 | 120V 208V 240V 277V 347V 480V |
| | A05 A06 A07 | 17,000 lumens 19,000 lumens 20,000 lumens | P05 P06 P07 P08 P09 | 11,500 lumens 14,000 lumens 16,500 lumens 19,000 lumens 22,000 lumens | 750 | 70CRI 5000K | T5M T5W | Type 5 medium Type 5 wide (electrical, | 3RR 4RL¹ 4RR¹ | Type 3 rotated right 270° Type 4 rotated left 90° Type 4 rotated right 270° | | .,, | HVU ¹⁶ | 120-277\ 347-480' |

| | | 1000 | | (electrical, | Tonas and | | 2000 | |
|------------------------|---|--------------------------------|----------------------|--|------------------------|---------------------------|----------|-------------------------------------|
| Dimming Co | ntrois | Sensing | mechani | ical, etc) | Emerge | псу | Finish | 1 |
| The followin | ng options include 0-10V Driver | | None | Surge protector 10kV/10kA standard | EM ^{12,14,15} | Emergency | Standa | ard textured finish |
| none | 0-10V dimming driver | | SP2 | Surge protector 20kV/10kA (option) | | Battery Pack (0-40 °C) | вк | Black |
| DLEA ^{5,10} | Dimming leads externally | | FS1 ¹¹ | Single fuse (120, 277, or 347VAC) | | Available with | WH | White |
| | accessible (controls by others) | | FS2 ¹¹ | Double fuse (208, 240, or 480V) | | precision plus optics | BZ DG | Bronze Dark Gray |
| FAWS ^{5,8,10} | Field adjustable wattage selector | | PCB ^{11,12} | Photocontrol button connected to | | P01-P03 only | MG | Medium Gray |
| BL50 ^{6,7,10} | Bi-level with motion sensor | L2 PIR sensor, #2 lens | | 0-10V driver | | | | |
| | | (Required if BL50 is selected) | TR5 | NEMA Twist-lock 5-pin receptacle connected to 0-10V driver | | | | |
| The following | ng options include SR/DALI Driver | | TR713 | 7-pin twist lock receptacle connected | | | | |
| SRDR ^{5,8,13} | SR driver connected to Zhaga socket (D4i) | | | to D4i compliant driver | | | Custo | mer specified |
| OMSR ^{5,8,13} | Outdoor multi-sensor | | TLP ^{11,13} | 7-pin twist lock receptacle connected | | | ос | Special optional |
| DynaDimme | r: Automatic Profile Dimming | | | to D4i compliant driver w/ 3-pin photocell | | | | color or RAL, consult factory |
| CS50 ^{5,13} | Security 50% dimming, 7 hours | | EHS | Housing machined to accept external | | | sc | Special color (must supply color |
| CM50 ^{5,13} | Median 50% dimming, 8 hours | | | house side shield for field install. | | | | chip, requires |
| CS30 ^{5,13} | Security 30% dimming, 7 hours | | | Must be combined with OPF-S-EHS-1 | | | | factory quote) |
| CM30 ^{5,13} | Median 30% dimming, 8 hours | | | accessory. | | | | |

12. Not available in HVU [347-480V].

(physical restriction).

13. UNV [120-277V] only available for lumen packages P03-P09. HVU [347-480V]

15. Not available with Dynadimmer, SRDR, FAWS, FS1, FS2, OMSR, DLEA, BL50

16. Precision Plus Optics (P01-P09) available only with T2M, T3M, T4M, and T5M

only available for lumen packages P06-P09 & A04-A07.

optical distributions and are non-rotatable.

14. UNV [120-277V] only available for lumen packages P04-P09.

17. OPF-RMB accessory recommended for retrofit applications.

- 1. Extended leadtime applies. Consult factory for details.
- 2. Mounts to a square pole with knockout for 4-5" OD round pole. 3. Mounts to a horizontal 2-3/8" OD x 5" Long tenon.
- 4. Must be ordered with mounting accessory. Photocell option (TR7) must be selected with mounting accessory. See Page 2 for options. $\label{eq:constraint}$ 5. Not available with other dimming control options (mutually exclusive).
- 6. Not available with motion sensor (physical restriction). 7. Must be specified with a motion sensor lens (L2).
- 8. Not available with PCB, TR5.
- 9. Must be specified with a motion sensor LW, LB.
- 10. Not available with TR7, TLP.

OPF-S_OptiForm_Small 04/23 page 1 of 8

OPF-S OptiForm small Site & area luminaire

TownView-spec-sheet 03/22 page 3 of 8

Shielding Accessory Kits (order separately) External house side shield (field installed) OPF-S-HIS-1** Internal house side shields. For Area optic types T2M, T3M, and T5M OPF-S-HIS-T4-1** Internal house side shield for Area optic types T4M and T4W, qty 1. OPF-S-HIS-5M/5W-1** Internal house side shield for Area optic types T5M and T5W. qty 1 *Must select EHS option on luminiare options section

**Not available for Precision Plus (P01-P09) Luminaire Accessories (order separately)

| FP1 | Pole mount single fuse (120V, 277V, or 347V) |
|-----|--|
| FP2 | Pole mount double fuse (208V, 240V, or 480V) |
| FP3 | Pole mount double fuse canadian double pull (208V, 240V, or 48 |

| | Total madric deable rade danidalan deab | | | | | | |
|--------------|---|--|--|--|--|--|--|
| Photocell Ac | cessories | | | | | | |
| P400S | Shorting cap | | | | | | |
| Mountine | se (hoved and chinned congret | | | | | | |

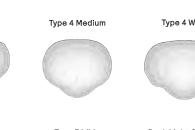
| luminaire. Uset | ul for attachment of arm to pole | prior to luminaire installation. |
|-----------------|----------------------------------|----------------------------------|
| | | OS) selection for mounting optic |
| Mounting | (boxed and shipped : | separately) |

| Standard Arm | |
|------------------------------------|--|
| OPF-AR1-(F) ^{2,17} | Standard arm mount |
| OPF-AR1-TR7-(F) ^{2,13,17} | Mast arm mount with 7-pin (TR7) receptacle |
| Wall Mount | |
| OPF-WAL-(F) | Wall mount bracket |
| OPF-WAL-TR7-(F)13 | Wall mount with 7-pin (TR7) receptacle |

| Mast Arm | |
|---------------------|--|
| OPF-MAR-(F)3 | Mast arm mount |
| OPF-MAR-TR7-(F)3,13 | Mast arm mount with 7-pin (TR7) receptac |

Optical Distributions

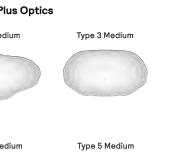
| Site and Area Optics | |
|----------------------|---------------|
| Type 2 Medium | Type 3 Medium |
| | |

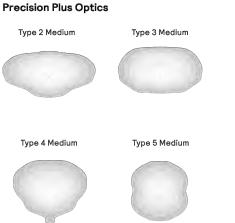












OPF-S OptiForm small

Site & area luminaire

| OPF-S | Area | Optic | Lumen | values | (cont'd) | |
|-------|------|-------|-------|--------|----------|--|
| | | | | | | |

| er Plate for attaching OptiForm to existing poles. ofit applications. | | | |
|--|-------------|--------|-----------|
| | Performance | System | Distribut |
| s to 3"- 3.9" O.D. pole. Painted black. | Package | Watts | Туре |

TVP_TownView-spec-sheet 03/22 page 5 of 8

| Package | Watts | Туре | Lumen Output | BUG Rating | Efficacy (LPW) | Lumen Output | BUG Rating | Efficacy (LPW) | Lumen Output | BUG Rating | Efficacy (LPW) |
|---------|-------|------|-----------------|---------------|-------------------|-----------------|---------------|-------------------|-----------------|---------------|-------------------|
| | | T2M | 16226 | B3-U0-G3 | 156 | 17155 | B3-U0-G3 | 164 | 17155 | B3-U0-G3 | 164 |
| | | ТЗМ | 16096 | B3-U0-G3 | 154 | 17018 | B3-U0-G3 | 163 | 17018 | B3-U0-G3 | 163 |
| | | T4M | 16313 | B2-U0-G3 | 156 | 17247 | B2-U0-G3 | 165 | 17247 | B2-U0-G3 | 165 |
| | | T5M | 16814 | B4-U0-G2 | 161 | 17777 | B4-U0-G2 | 170 | 17777 | B4-U0-G2 | 170 |
| | | AFR | 16806 | B3-U0-G3 | 161 | 17768 | B3-U0-G3 | 170 | 17768 | B3-U0-G3 | 170 |
| A05 | 104 | T4W | 15532 | B3-U0-G3 | 149 | 16421 | B3-U0-G3 | 157 | 16421 | B3-U0-G3 | 157 |
| | | T5N | 16696 | B4-U0-G2 | 160 | 17652 | B4-U0-G2 | 169 | 17652 | B4-U0-G2 | 169 |
| | | T5W | 16075 | B4-U0-G3 | 154 | 16995 | B4-U0-G3 | 163 | 16995 | B4-U0-G3 | 163 |
| | | LCL | 8828 | B1-U0-G2 | 85 | 9333 | B1-U0-G2 | 89 | 9333 | B1-U0-G2 | 89 |
| | | LCR | 8828 | B1-U0-G2 | 85 | 9333 | B1-U0-G2 | 89 | 9333 | B1-U0-G2 | 89 |
| | | BLC | 11314 | B1-U0-G2 | 108 | 11961 | B1-U0-G2 | 115 | 11961 | B1-U0-G2 | 115 |
| | | T2M | 18441 | B3-U0-G3 | 151 | 19496 | B3-U0-G3 | 160 | 19496 | B3-U0-G3 | 160 |
| | | тзм | 18294 | B3-U0-G3 | 150 | 19341 | B3-U0-G3 | 158 | 19341 | B3-U0-G3 | 158 |
| | | T4M | 18540 | B3-U0-G3 | 152 | 19601 | B3-U0-G3 | 160 | 19601 | B3-U0-G3 | 160 |
| | | Т5М | 19110 | B4-U0-G2 | 156 | 20203 | B4-U0-G2 | 165 | 20203 | B4-U0-G2 | 165 |
| | | AFR | 19100 | B3-U0-G3 | 156 | 20193 | B3-U0-G3 | 165 | 20193 | B3-U0-G3 | 165 |
| A06 | 122 | T4W | 17652 | B3-U0-G3 | 144 | 18662 | B3-U0-G3 | 153 | 18662 | B3-U0-G3 | 153 |
| | | T5N | 18975 | B4-U0-G2 | 155 | 20061 | B4-U0-G2 | 164 | 20061 | B4-U0-G2 | 164 |
| | | T5W | 18270 | B5-U0-G3 | 150 | 19315 | B5-U0-G3 | 158 | 19315 | B5-U0-G3 | 158 |
| | | LCL | 10033 | B2-U0-G2 | 82 | 10607 | B2-U0-G2 | 87 | 10607 | B2-U0-G2 | 87 |
| | | LCR | 10033 | B2-U0-G2 | 82 | 10607 | B2-U0-G2 | 87 | 10607 | B2-U0-G2 | 87 |
| | | BLC | 12858 | B1-U0-G2 | 105 | 13594 | B1-U0-G2 | 111 | 13594 | B1-U0-G2 | 111 |

| PF-S Pre | cision Plu | ıs Optic Lum | en values | | | | | | |
|-------------|-----------------|--------------|-----------------|---------------|-------------------|-----------------|---------------|-------------------|-----------|
| | | | | 70 CRI | | | 70 CRI | | |
| Performance | System Watts | Distribution | 3000К | | | 4000K | | | |
| Package | | Type | Lumen Output | BUG Rating | Efficacy (LPW) | Lumen Output | BUG Rating | Efficacy (LPW) | Lui Ou |
| | | T2M | 2691 | B1-U0-G1 | 182 | 2845 | B1-U0-G1 | 192 | 28 |
| | | TaM | 2718 | R1-110-G1 | 19.4 | 2874 | R1-U0-G1 | 19.4 | 25 |

| Performance Package | System Watts | Distribution | 3000К | | | | 4000K | | | 5000K | |
|------------------------|-----------------|--------------|-----------------|---------------|-------------------|-----------------|---------------|-------------------|-----------------|---------------|------------------|
| | | Туре | Lumen Output | BUG Rating | Efficacy (LPW) | Lumen Output | BUG Rating | Efficacy (LPW) | Lumen Output | BUG Rating | Efficac (LPW) |
| | | T2M | 2691 | B1-U0-G1 | 182 | 2845 | B1-U0-G1 | 192 | 2845 | B1-U0-G1 | 192 |
| DO4 | 45 | T3M | 2718 | B1-U0-G1 | 184 | 2874 | B1-U0-G1 | 194 | 2874 | B1-U0-G1 | 194 |
| P01 | 15 | T4M | 2665 | B1-U0-G1 | 180 | 2817 | B1-U0-G1 | 190 | 2817 | B1-U0-G1 | 190 |
| | | T5M | 2610 | B2-U0-G1 | 176 | 2759 | B2-U0-G1 | 186 | 2759 | B2-U0-G1 | 186 |
| | | T2M | 4022 | B1-U0-G1 | 178 | 4252 | B1-U0-G1 | 189 | 4252 | B1-U0-G1 | 189 |
| | 23 | ТЗМ | 4062 | B1-U0-G1 | 180 | 4295 | B1-U0-G1 | 191 | 4295 | B1-U0-G1 | 191 |
| P02 | | T4M | 3983 | B1-U0-G1 | 177 | 4211 | B1-U0-G1 | 187 | 4211 | B1-U0-G1 | 187 |
| | | T5M | 3900 | B2-U0-G1 | 173 | 4124 | B2-U0-G1 | 183 | 4124 | B2-U0-G1 | 183 |
| | | T2M | 6465 | B2-U0-G2 | 169 | 6835 | B2-U0-G2 | 179 | 6835 | B2-U0-G2 | 179 |
| DOS | | ТЗМ | 6530 | B2-U0-G2 | 171 | 6904 | B2-U0-G2 | 181 | 6904 | B2-U0-G2 | 181 |
| P03 | 38 | T4M | 6402 | B1-U0-G2 | 168 | 6768 | B1-U0-G2 | 177 | 6768 | B1-U0-G2 | 177 |
| | | T5M | 6269 | B3-U0-G2 | 164 | 6629 | B3-U0-G2 | 174 | 6629 | B3-U0-G2 | 174 |
| | | T2M | 8759 | B2-U0-G2 | 165 | 9261 | B2-U0-G2 | 174 | 9261 | B2-U0-G2 | 174 |
| 201 | 53 | ТЗМ | 8848 | B2-U0-G2 | 166 | 9355 | B2-U0-G2 | 176 | 9355 | B2-U0-G2 | 176 |
| P04 | 53 | T4M | 8674 | B2-U0-G2 | 163 | 9171 | B2-U0-G2 | 172 | 9171 | B2-U0-G2 | 172 |
| | | | | | | | | | | | |

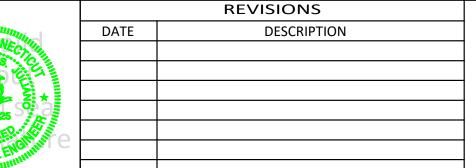
T5M 8495 B3-U0-G2 160 8982 B3-U0-G2 169 8982 B3-U0-G2 169



THIS DOCUMENT HAS BEEN PREPARED AS PART A MUNICIPAL (HEALTH DEPARTMENT/DISTRICT, IWWC, TPZ, OR ZBA) LAND USE APPLICATION PROCESS. THIS DOCUMENT CAN NOT BE CONSIDERED FINAL NOR USED FOR ANY CONSTRUCTION PURPOSES UNTIL ALL NECESSARY LOCAL, STATE, AND FEDERAL APPROVALS HAVE BEEN SECURED.

Christopher S. Juliano PELS #19725





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www.JulianoAssociates.com

Juliano Associates LLC @gmail.com

General Description

| g Guide | | | Example: LWL-WW-G2- | PCB-1-BZ | |
|------------|-----------------------|------------------------|--|---------------|------------------|
|] | Color Temperature | Generation G2 | Options PCB | Voltage 1 | Finish BZ |
| Wall Light | WW 3000k 80CRI | 62 Generation 2 | PCB Photocell Button Type (integrated) | 1 120V | BZ Bronze |

Site & Area

LWL Wall light

other general purpose all mount applications.

LED Wattage and Lumen Values

Stonco

| Ordering Codes | Total LEDs | System Current (mA) | Color Temp. (K) | Average System Wattage | Lumen Output 12 | BUG Rating | Efficacy (LPW) |
|----------------|---------------|---------------------|--------------------|---------------------------|--------------------|------------|-------------------|
| | | | | | | 1 | |

The Stonco LED LWL Wall light is an economical solution for general purpose

wall mount lighting, made available in an attractive compact form. The stylish,

impact resistant polycarbonate design is ideal for over doors, entry ways and

- **LWL-WW-G2-PCB-1-BZ** 16 300 3000 12 1104 B1-U3-G1 90 1. Wattage and lumen output may vary by due to LED manufacturer forward volt specification and ambient temperature.
- $Wattage\ shown\ is\ average\ for\ 120V\ input.\ Measured\ wattage\ may\ vary\ due\ to\ variation\ in\ input\ voltage..$ 2. Lumen values based on photometric tests performed in compliance with IESNA LM-79. NOTE: Contact outdoorlighting.applications@philips.com for details or additional information.

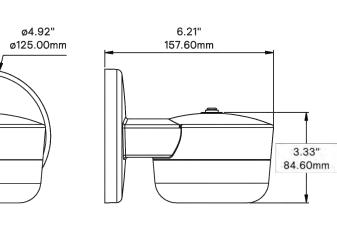
Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours.

| nbient mperature °C | LED Current | Calculated L ₇₀ hrs ¹² | L ₇₀ Per TM-21 ^{2,3} | Lumen Maintenance % @ 48,000hrs¹ | | |
|------------------------|-------------|--|--|-------------------------------------|--|--|
| 25°C | ~75mA | > 182,000 hours | > 48,000 hours | 82% | | |

- 1. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.
- LTO is the predicted time when LED performance depreciates to 70% of initial lumen output.
 Calculated per IESNA TM 21-11. Published LTO hours limited to 6 times actual LED test hours.

LWL



Approximate Luminaire Weight: 1.00 Lbs (0.45 Kg)

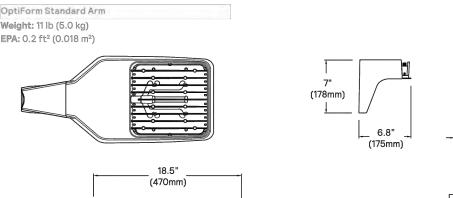
OPF-S OptiForm small

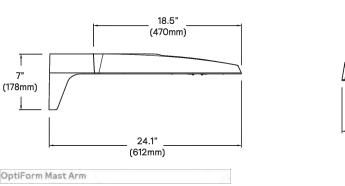
Site & area luminaire

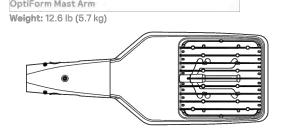
Dimensions

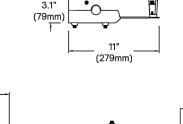
OptiForm Wall Mount Weight: 11.5 lb (5.2 kg)

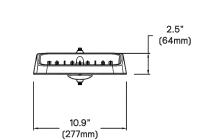
OPF-S_OptiForm_Small 04/23 page 6 of 8

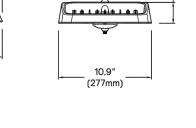


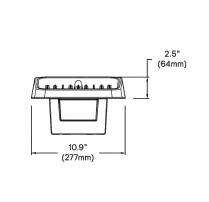












Photometrics Details

Land of Little House Living LLC #1676 & #1688 Berlin Turnpike (Connecticut Route #15) Berlin, Connecticut

| roject no.: | 23-100 | Date: 12/0 | Scale: | N | ITS | | |
|--|-----------|------------|-----------|-----------|-----|----|----|
| ork map: | ZGEORGINA | Checked: | ZGEORGINA | Sheet: | 14 | of | 18 |
| nal map: | ZGEORGINA | Released: | CJULIANO | Revision: | | 0 | |
| ne information contained herein is the proprietary and confidential property of Juliano Associates LLC | | | | | | | |

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Product Specifications

LWL Wall light combines economy with efficiency and is provided with LED technology that offers significant savings over traditiona incandescent wall luminaires. This compact luminaire easily mounts over a standard 4" j-box and features a built-in button photo cell for automatic dusk to dawn lighting needs. Ideal for replacing the classic glass jar lights typically used over doors and by entry ways, LED Wall Light can also be used as ambient marker lights and throughout

corridors for added security and

Impact-resistant polycarbonate housing and lens.

illumination.

Electrical 120V driver (efficiency >90% standard) provided with 120V button photocell. RoHS compliant.

Optical System

Frosted lens for an inviting and even light distribution. Mid-power LED, 3000K +/-250K. Typical CRI 80

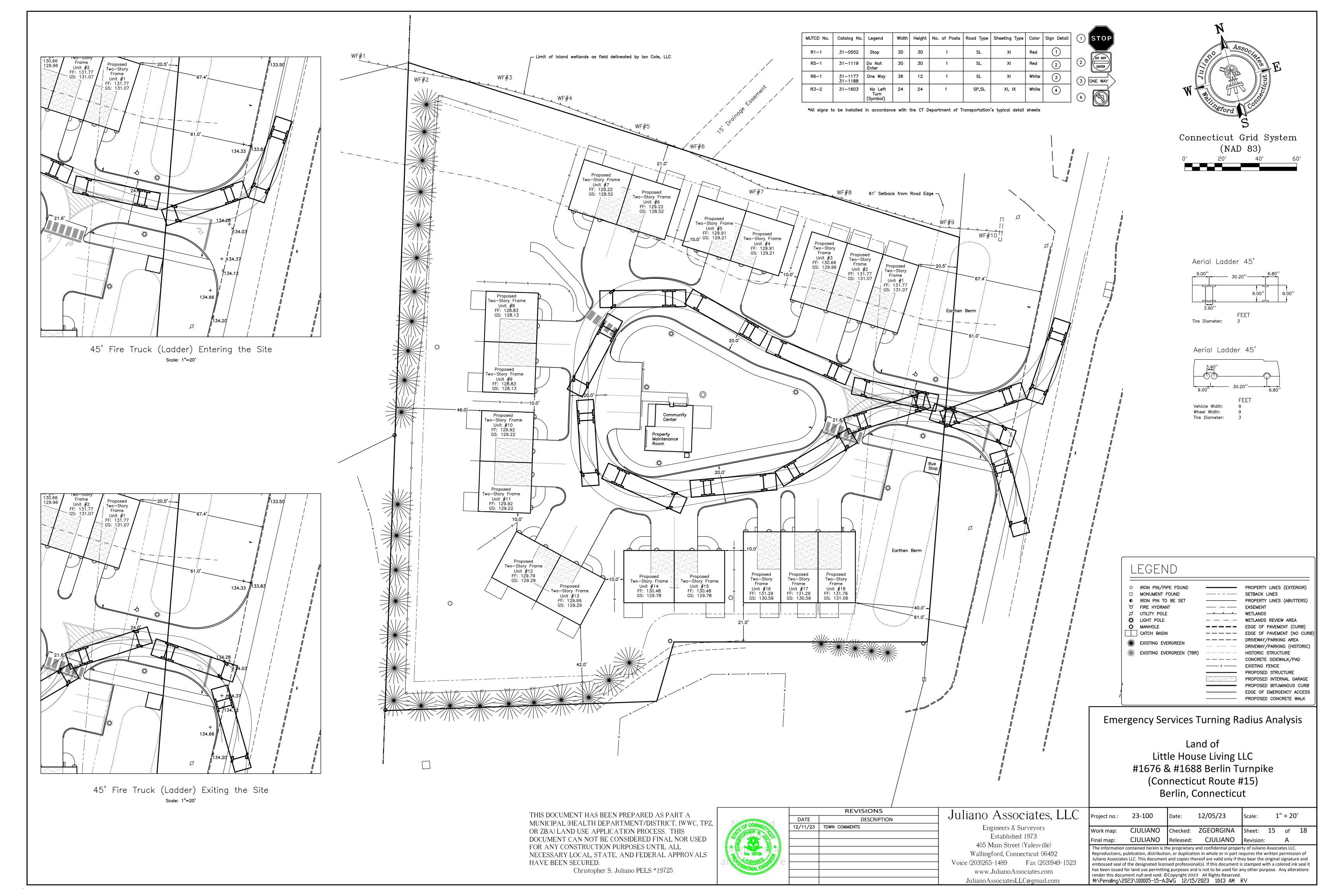
Wall mount lens in downward facing position only. Standard luminaire provided with galvanized mounting plate. Can be mounted over a 4" i-box or smaller.

UL listed to the UL 1598 standard, suitable for Wet Locations. Suitable for use in ambients from -40° to 40°C (-22° to 104°F).

Standard finish color is textured

bronze (BZ).

LED Wall Light luminaires feature a 5 year limited warranty.



LEGEND □ − MONUMENT RECOVERED - PROPERTY LINES O - IRON PIN RECOVERED ----- - BUILDING SETBACK LINES EXISTING SIGN — — — — WETLANDS ϕ — UTILITY METER ----- - UPLAND REVIEW AREA ♥ - UTILITY POLE - - - - - - FEMA FLOODPLAIN LINE -··-- - APPROXIMATE STREAM CATCH BASIN OVERHEAD ELECTRIC CURB-LESS CATCH BASIN © TREE LINE — EXISTING LIGHTPOLE - EXISTING RETAINING WALL TREE ---- - EXISTING CONCRETE MONITORING WELL ----- - EXISTING GRAVEL ---- - EXISTING BUILDING - PROPOSED BUILDING ⊗ − WATER GATE ⊚ − GAS GATE ---- - EXISTING PAVEMENT EXISTING MANHOLE ---- - EXISTING PAVEMENT (CURBED) EXISTING BOLLARD ------ - PROPOSED PAVEMENT 🏲 — FLAGPOLE - PROPOSED PAVEMENT (CURBED) 🖶 — MAILBOX ---- - EXISTING PARKING — YARD DRAIN ------ - PROPOSED PARKING → GROUND LIGHT ---- - EXISTING SIDEWALK ★ − PROPOSED LIGHT POLE ---- - PROPOSED SIDEWALK ------ - EXISTING WOOD FENCE

Form 818 Construction Notes

All work within the State right-of-way will comply with Form 818, "The State of Connecticut Department of Transportation Standard Specifications for Roads. Bridges and Incidental Construction " with the latest Special Provisions and Typical State Standard Details. In any case where the construction is not specifically detailed in the Form 818, the work will be completed as directed by the Engineer or District Permit Section

Removal of pavement markings along state roadways shall be completed by a non-destructive method in compliance with the State of Connecticut Department of Transportation Standard Specifications for Road, Bridges, and Incidental Construction Form 818 Section 12.11 as revised.

New Pavement markings shall be painted with epoxy resin paint in compliance with the State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction Form 817 Section 12.10 as revised.

New sign material and sheeting shall be made of reflective material in compliance with State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction Form 818 Section 12.08 as revised. Type 1 Reflective Sheeting shall be used for signs with white background, Type 3 Reflective Sheeting shall be used for signs with colored background except for signs with red background that shall be Type 8 or 9 Reflective Sheeting.

All signs and pavement markings installed within the State Right of Way must conform to the "Manual on Uniform Traffic Control Devices" and the latest State of Connecticut Catalog of Signs as revised.

Any damage to the existing curb, sidewalk or any other highway appurtenances during the development of the permitted site will be replaced by the contractor as directed by the District 3 Permit Section at no cost to the State.

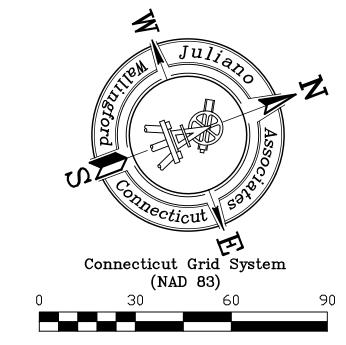
| MUTCD No. | Catalog No. | Legend | Width | Height | No. of Posts | Road Type | Sheeting Type | Color | Sign Detail |
|-----------|--------------------|-----------------------------|-------|--------|--------------|-----------|---------------|-------|-------------|
| R1-1 | 31-0552 | Stop | 30 | 30 | 1 | SL | ΧI | Red | 1 |
| R5-1 | 31-1119 | Do Not Enter | 30 | 30 | 1 | SL | ΧI | Red | 2 |
| R6-1 | 31-1177 31-1188 | One Way | 36 | 12 | 1 | SL | ΧI | White | 3 |
| R3-2 | 31–1603 | No Left Turn (Symbol) | 24 | 24 | 1 | SP,SL | XI, IX | White | 4 |

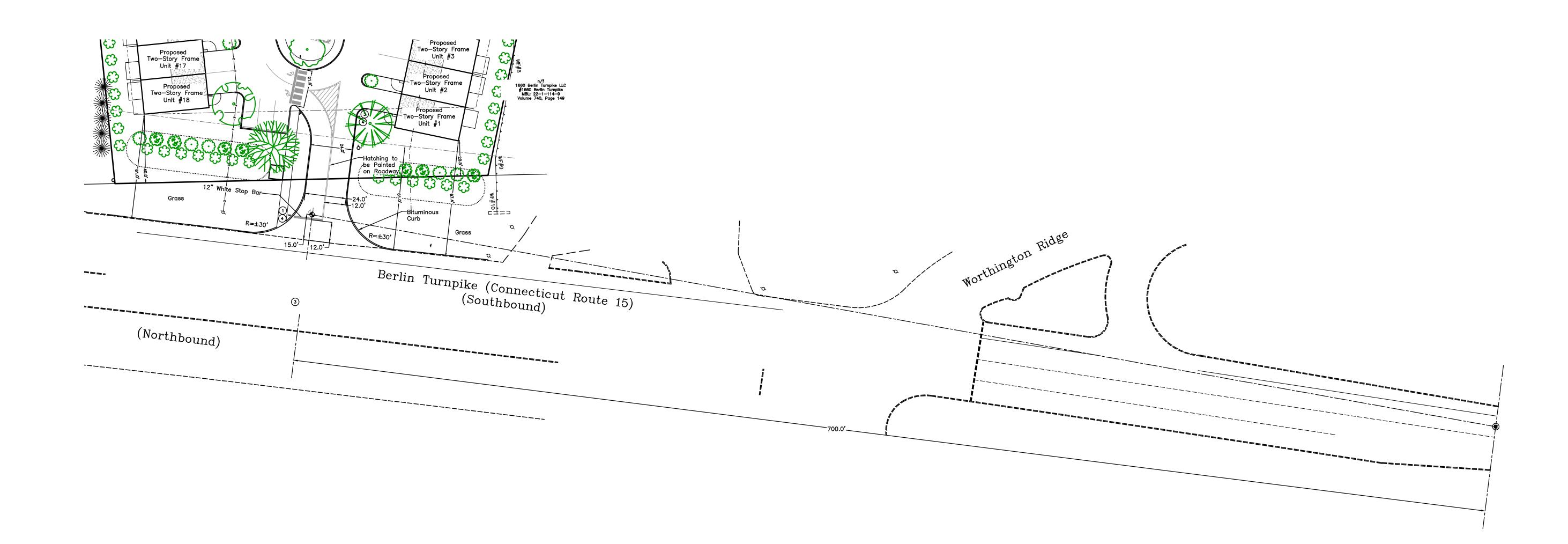
3 ONE WAY

| *All signs to be | installed in | accordance | with | the | CT | Department | of | Transportation's | typical | detail | sheet |
|------------------|--------------|------------|------|-----|----|------------|----|------------------|---------|--------|-------|

| Design Speed | ISD (ft) | | | | | | | |
|--------------------------------|----------------|--------------------|----------------------|--|--|--|--|--|
| (V _{major}) (mph) | Passenger Cars | Single-Unit Trucks | Tractor/Semitrailers | | | | | |
| 20 | 225 | 280 | 340 | | | | | |
| 25 | 280 | 350 | 425 | | | | | |
| 30 | 335 | 420 | 510 | | | | | |
| 35 | 390 | 490 | 595 | | | | | |
| 40 | 445 | 560 | 680 | | | | | |
| 45 | 500 | 630 | 765 | | | | | |
| 50 | 555 | 700 | 850 | | | | | |
| 55 | 610 | 770 | 930 | | | | | |
| 60 | 665 | 840 | 1015 | | | | | |
| 65 | 720 | 910 | 1100 | | | | | |
| 70 | 775 | 980 | 1185 | | | | | |

Posted Speed Limit = 50 MPH





The permittee shall contact Ms. Jennifer L. Caro, Department's District Survey Unit, at 203-389-3122 prior to any construction within the State right-of-way.

The permittee will be responsible for all engineering costs should the CTDOT

boundary/survey markers be disturbed or damaged. 3. In the event the Department determines the subject CTDOT boundary/survey markers need to be replaced due to the proposed development, the Department will furnish new monuments, which the permittee will be required to install under the

direction of a Connecticut licensed surveyor. 4. The CTDOT boundary survey markers shall be verified and accepted by the District 3 Survey Unit prior to releasing the encroachment permit bond.

All proposed signage to be installed beyond required Intersection Sight Distance

6. All existing signage, objects, trees, bushes, vegetation within the State Right-Of-Way that conflict with proposed sight line triangles to be relocated, removed,

All signage to be installed on breakaway posts.

8. A 2" Mill and Pave of trench excavation will be required. This will include the restoration of all pavement markings in epoxy paint that are disturbed. Limits will be determiend by CTDOT prior to final restoration

Expanded site sight line mapping based on aerial photography.

THIS DOCUMENT HAS BEEN PREPARED AS PART A MUNICIPAL (HEALTH DEPARTMENT/DISTRICT, IWWC, TPZ, OR ZBA) LAND USE APPLICATION PROCESS. THIS DOCUMENT CAN NOT BE CONSIDERED FINAL NOR USED FOR ANY CONSTRUCTION PURPOSES UNTIL ALL NECESSARY LOCAL, STATE, AND FEDERAL APPROVALS HAVE BEEN SECURED.

Christopher S. Juliano PELS #19725

REVISIONS DATE DESCRIPTION 12/11/23 TOWN COMMENTS

Juliano Associates, LLC Engineers & Surveyors Established 1973 405 Main Street (Yalesville)

Wallingford, Connecticut 06492 Voice (203)265-1489 Fax (203)949-1523 www.JulianoAssociates.com

Juliano Associates LLC @gmail.com

Little House Living LLC #1676 & #1688 Berlin Turnpike (Connecticut Route #15) Berlin, Connecticut 23-100 12/05/23

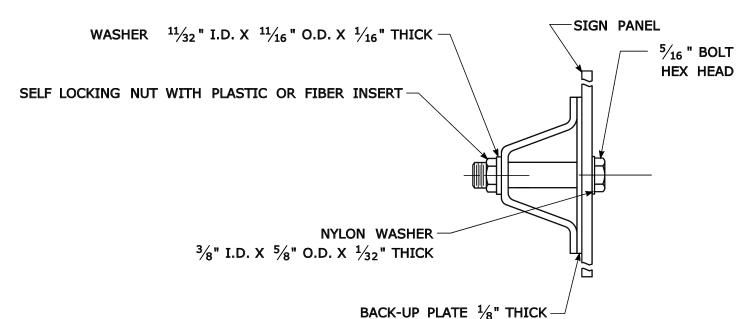
Sight Line Analysis Plan

Land of

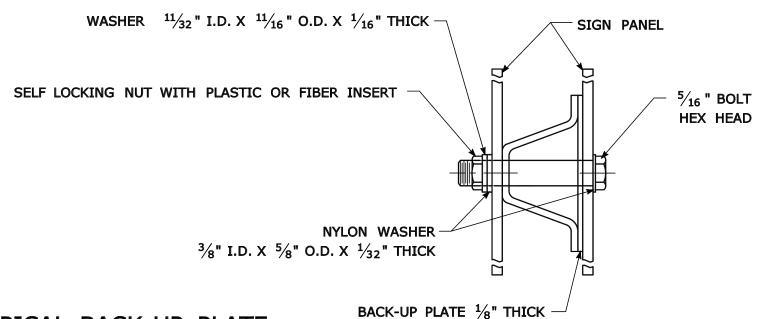
1" = 20' CJULIANO Checked: ZGEORGINA Sheet: 16 of 18 CJULIANO Reproductions, publication, distribution, or duplication in whole or in part requires the written permission of Juliano Associates LLC. This document and copies thereof are valid only if they bear the original signature and embossed seal of the designated licensed professional(s). If this document is stamped with a colored ink seal it has been issued for land use permitting purposes and is not to be used for any other purpose. Any alterations render this document null and void. ©Copyright 2023 All Rights Reserved.

M:\Pending\2023\100005-16-A.DWG 12/15/2023 10:14 AM RV

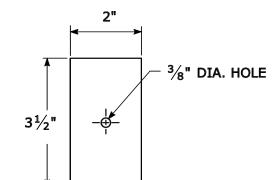
TYPICAL SIGN PANEL ATTACHMENT



TYPICAL BACK TO BACK SIGN PANEL ATTACHMENT



TYPICAL BACK-UP PLATE



TYPICAL SIGN PLACEMENT DETAIL

PARKING SIGNS TYPICALLY USE 45° MOUNTING BRACKET.

SIGN POSTS AND SIGN MOUNTING.

OFFSET (1)

12' (3)

12' ③

2' (4)

2' (4)

ALL SIGNS AND SHIELDS ON DIRECTIONAL ASSEMBLIES SHALL ABUT VERTICALLY.

MIN LATERAL MIN PLAQUE | ASSEMBLY LOCATION

HEIGHT (1)

REFER TO STANDARD SHEET No. TR-1208_02 "METAL SIGN POSTS AND SIGN MOUNTING DETAILS" FOR

IF A RETFOREFLECTIVE STRIP IS USED ON SIGN SUPPORT, IT SHALL BE PLACED FOR THE FULL LENGTH OF THE SUPPORT FROM THE BOTTOM OF THE SIGN TO WITHIN 2 FT ABOVE THE EDGE OF THE ROADWAY.

AND WRONG WAY SIGNS

• SIGNS IN RURAL AREAS

· CHEVRON ALIGNMENT SIGNS LOCATED ON

LOCATED ON FREEWAYS AND EXPRESSWAYS

OR OTHER OBSTRUCTIONS LIMIT VISIBILITY

BUSINESS & RESIDENTIAL AREAS WHERE PARKING

CENTRAL ISLANDS OF ROUNDABOUTS

NOTES:

MIN SIGN

7' (2)

BOLTS - STAINLESS STEEL CONFORMING TO ASTM F593, ALLOY GROUP 1 OR 2 (ALLOY TYPES 304 OR 316). SELF LOCKING NUTS - STAINLESS STEEL CONFORMING TO ASTM F594 ALLOY GROUP 1 OR 2 (ALLOY TYPES 304 OR 316). WASHERS - STAINLESS STEEL CONFORMING TO ASTM A240, (ALLOY TYPES 304 OR 316).

SIGNS ON FREEWAYS AND EXPRESSWAYS EXCEPT CHEVRON ALIGNMENT SIGNS,

• DO NOT ENTER AND WRONG WAY SIGNS ON LIMITED ACCESS HIGHWAYS

INCIDENT MANAGEMENT SIGNS AND MILE POST MARKER ASSEMBLIES

ONE-DIRECTION LARGE ARROW SIGNS, DO NOT ENTER SIGNS,

· DO NOT ENTER AND WRONG WAY SIGNS ALONG EXIT RAMPS

FREEWAYS, EXPRESSWAYS, RAMPS, AND IN RURAL AREAS • ONE-DIRECTION LARGE ARROW SIGNS LOCATED ON

FREEWAYS, EXPRESSWAYS, RAMPS, AND IN RURAL AREAS

RETROREFLECTIVE STRIP DETAIL

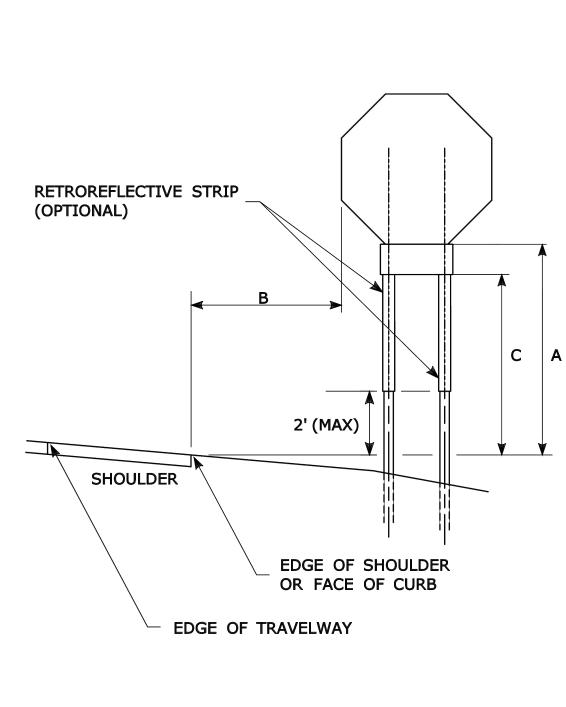
RETROREFLECTIVE STRIPS

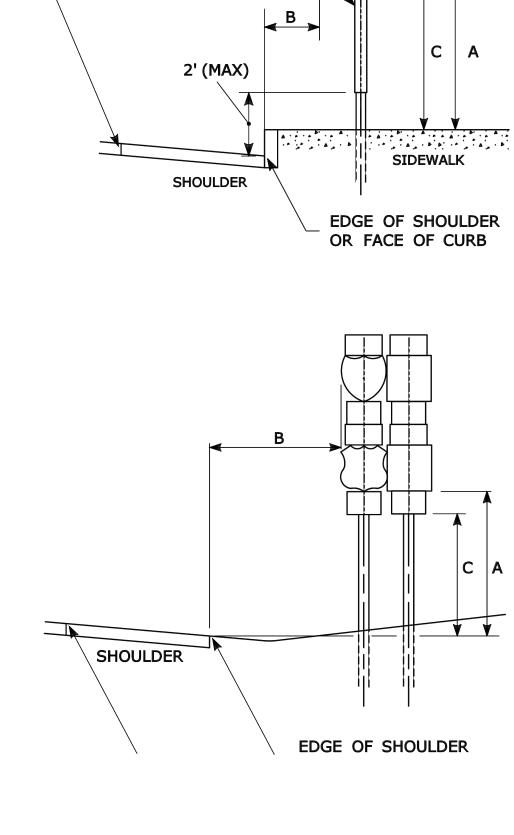
OVER 48" LONG:

RETROREFLECTIVE STRIPS

48" LONG OR LESS:

- RETROREFLECTIVE STRIPS WHICH ARE 48 IN LONG OR LESS SHALL BE ATTACHED USING 2 BOLTS AND RETROREFLECTIVE STRIPS OVER 48 IN LONG SHALL BE ATTACHED USING 3 BOLTS AS SHOWN ON THE DETAILS ABOVE. REFER TO STANDARD SHEET No. TR-1208_02 "METAL SIGN POSTS
- AND SIGN MOUNTING DETAILS" FOR MOUNTING DETAILS. RETROREFLECTIVE STRIP COLOR SHALL MATCH THE BACKGROUND COLOR OF THE SIGN, EXCEPT THAT THE COLOR OF THE STRIP FOR "YIELD" AND "DO NOT ENTER" SIGNS SHALL BE RED.





RETROREFLECTIVE STRIP

EDGE OF TRAVELWAY

(OPTIONAL)

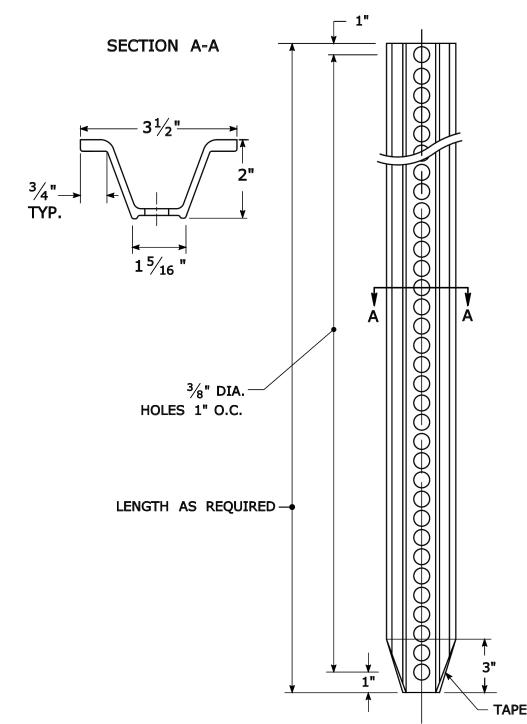
SECTION F-F DIRECTION OF TRAVEL Ф Ф -|-4" MAX REVEAL GROUND LINE 38" MIN **EMBEDMENT GALVANIZED STEEL** $\frac{4}{16}$ DIA. GRADE 9 BAR SPACER CADMIUM PLATED HEX HEAD 5" LONG X $\frac{3}{4}$ " WIDE X $\frac{1}{2}$ " Thk. BOLT WITH FLAT WASHER, OR ANOTHER BREAKAWAY SYSTEM LOCK WASHER AND HEX NUT. THAT MEETS MASH OR NCHRP 350 CRASH TEST REQUIREMENTS FOR 4 LB/FT POSTS

BREAKAWAY INSTALLATION

FOR 4 LBS./FT. POSTS

TYPICAL SIGN PLACEMENT DETAIL

TYPICAL METAL SIGN POSTS



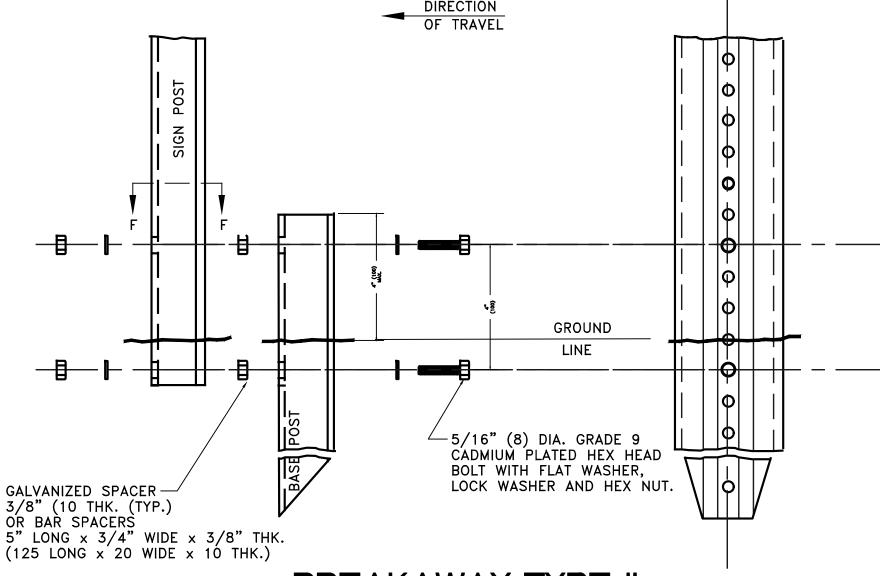
1. STEEL FOR DELINEATOR POSTS SHALL BE ASTM A36 STEEL. STEEL FOR ALL OTHER POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A 499 GRADE 80 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A1 CARBON STEEL TEE RAIL HAVING NOMINAL

2. AFTER FABRICATION, ALL STEEL POSTS, STRAPS AND PLATES SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A123.

- 3. WASHERS FOR BREAKAWAY INSTALLATIONS SHALL MEET ASTM F436, TYPE 1.
- THE MECHANICAL REQUIREMENTS OF ASTM A36.
- REQUIREMENTS CONTAINED IN THE CURRENT "STANDARD SPECIFICATIONS FOR THE BREAKAWAY FEATURES SHALL BE STRUCTURALLY ADEQUATE TO CARRY THE SIGNS SHOWN IN THE PLANS AT 60 mph WIND LOADINGS. INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

SECTION F-F

FOR 3 & 4 LB. POST



BREAKAWAY TYPE II POST INSTALLATION DETAIL

> **Connecticut Department Of Transportation** Details Land of Little House Living LLC #1676 & #1688 Berlin Turnpike

(Connecticut Route #15) Berlin, Connecticut

NTS

Scale:

Project no.: 23-100 Date: 12/05/23

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GENERAL NOTES:

WEIGHT (MASS) OF 91 LBS. OR GREATER PER LINEAR YARD.

- 4. SPACER BAR FOR BREAKAWAY INSTALLATION SHALL CONFORM TO
- 5. ALL BOLTS, NUTS, AND WASHERS FOR BREAKAWAY INSTALLATIONS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A153.
- 6. ALL SIGN POSTS SHALL HAVE BREAKAWAY FEATURES THAT MEET AASHTO STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS."
- 7. SIGN POSTS SHALL BE 4 LBS./FT.

OR AS DIRECTED BY THE ENGINEER

2 8 FT MINIMUM HEIGHT REQUIRED IF A SUPPLEMENTAL PLAQUE IS SUBMOUNTED BELOW THE MAJOR SIGN.

SIDEWALKS (5)

- 6 FT FROM EDGE OF SHOULDER, WHEN SHOULDER IS OVER 6 FT WIDE 12 FT FROM EDGE OF TRAVELWAY, WHEN SHOULDER IS LESS THAN 6 FT WIDE.
- A LATERAL OFFSET OF AT LEAST 1 FT FROM THE FACE OF THE CURB MAY BE USED WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING UTILITY POLES ARE CLOSE TO THE CURB.
- (5) A CLEAR PATH OF NOT LESS THAN 4 FT SHALL BE PROVIDED IN SIDEWALK AREAS.

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Christopher S. Juliano PELS #19725

James V. DiMeo PE #32551

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REVISIONS

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Juliano Associates, LLC

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