

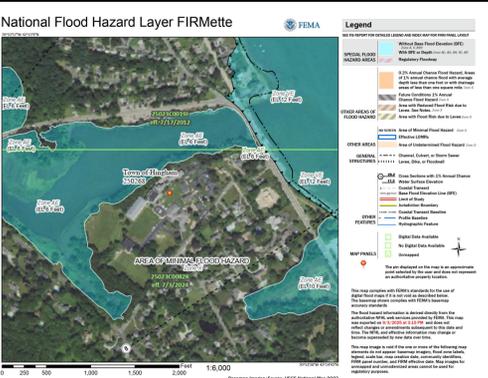
SURVEY NOTES:

1. ZONING INFORMATION SHOWN FROM RECORD INFORMATION, MAPS AND / OR GIS. ZONING DATA MAY VARY BASED ON USE, LOT SIZE, ORIENTATION AND OTHER FACTORS AND IS SHOWN FOR REFERENCE INFORMATION ONLY.
2. ZONING DATA MUST BE CONFIRMED WITH ZONING OFFICIAL AND / OR LEGAL COUNSEL FOR USE IN DESIGN OR PERMITTING.
3. COORDINATE SYSTEM IS NAD83 MASSACHUSETTS STATE PLANE (MASS).
4. PLAN ELEMENTS ARE IN U.S. SURVEY FEET.
5. TOPOGRAPHY AND COASTAL FEATURES SURVEYED ON 10-25 BY MERRILL ENGINEERS AND LAND SURVEYORS.
6. ELEVATIONS & LOCATION SHOWN WITH * PER GIS OR UAV DATA.
7. ALL PROPOSED ITEMS MUST BE LAID OUT BY REGISTERED SURVEYOR AS NOTED.
8. PLAN IS NOT AS-BUILT UTILITY PLAN.
9. ABUTTING PROPERTY LINES SHOWN APPROXIMATELY PER TOWN GIS OR BEST AVAILABLE INFORMATION.
10. FLOOD ZONE LINE IS SHOWN PER GRAPHIC PLOTTING ONLY, UNLESS OTHERWISE NOTED ON PLAN.
11. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT OF PROBATE SEARCH, AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN.
12. LOCATION OF SUBSURFACE MAINS, SURFACE FEATURES, AND LATERALS ARE OMITTED. CONTRACTOR TO CALL DIG SAFE AND/OR APPLICABLE UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. DIG SAFE TEL: #1-800-344-7233 (1-800-DIG-SAFE).

A. WATER - OMITTED FROM PLAN
 B. SEPTIC - OMITTED FROM PLAN
 C. GAS - OMITTED FROM PLAN
 D. ELECTRIC - OMITTED FROM PLAN
 E. STORM DRAIN - PER FIELD DATA AND REFERENCE PLAN

ALL UTILITIES DEPICTED AT ASCE QUALITY LEVEL D.

ALL POST-CONSTRUCTION CORRECTIVE WORK, WARRANTY, REPAIRS, OR MAINTENANCE PROVISIONS SHALL BE NOTED IN CONTRACT DOCUMENTS BETWEEN CLIENT AND CONTRACTOR(S). NO PROVISION ARE MADE IN THE PLAN UNLESS NOTED.



BENCHMARK NOTE:
 NEI WILL ALWAYS PROVIDE A MINIMUM OF TWO SITE BENCHMARKS. CONTRACTOR TO VERIFY ALL BENCHMARKS EXIST PRIOR TO CONSTRUCTION. ELEVATIONS OF ALL BENCHMARKS TO BE SHOT IN FIELD (WITH SUITABLE EQUIPMENT) AND DIFFERENTIAL TO BE VERIFIED. IF VERTICAL DIFFERENTIAL EXCEEDS 0.05' IT SHALL BE IMMEDIATELY REPORTED TO NEI. DIFFERENTIAL IN EXCESS OF 0.05' INDICATES THAT BENCHMARKS MAY HAVE BEEN DISTURBED AND ARE NOT SUITABLE FOR USE.

Delineation Flagging	Classification	Regulatory Setback
TCBa-1 - TCBa11	Coastal Bank (10.30) The seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.	100-foot Buffer Zone

WETLAND NOTE:
 FOR ILC HAS ESTABLISHED FLAGGING GENERALLY CONSISTENT WITH FIGURES 2 AND 6 OF THE WETLANDS PROGRAM POLICY 92-1. COASTAL BANKS CONSISTENT WITH TOWN OF HINGHAM REGULATIONS. FLOOD LINE DRAW FROM GRAPHIC PLOTTING ONLY IT IS NEI'S OPINION THAT THE AE FLOOD LIMIT WILL TERMINATE AT THE ELEVATION 6 CONTOUR AS SUCH THAT THE TOP OF COASTAL BANK HAS BEEN DRAWN BASED ON THE BIOLOGIST

WETLAND FLAGGING:
 PERFORMED BY ENVIRONMENTAL CONSULTING AND RESTORATION LLC OCTOBER 2025 AND FIELD LOCATED BY MERRILL ENGINEERS AND LAND SURVEYORS. FLAG LINES: A1 - A7 (TOP OF COASTAL BANK)

310 CODE OF MASSACHUSETTS REGULATIONS, SECTION 10.00, THE WETLANDS PROTECTION ACT (AUGUST 27, 2017) (WPA)



PLAN REFERENCE:
 SITE PLANS (EXISTING CONDITIONS, DEMO, RETAINING WALL BY NARRAGANSETT ENGINEERING INC. DATED 4/23/25 REVISION 2 DATED 9/3/25)

LEGEND

100.00'	DIMENSION - EXISTING
100.00'	DIMENSION - PROPOSED
100.00' (D)	PLAN / DEED DIMENSION
100.00' (S)	SURVEY DIMENSION
---	PROPERTY LINE - ABUTTING
---	PROPERTY LINE - EXISTING
---	PROPERTY LINE - PROPOSED
SETBACKS	
---	GRADE CONTOUR - EXISTING
---	GRADE CONTOUR - PROPOSED
---	ELECTRIC - OVERHEAD (OHE)
---	ELECTRIC - TELEPHONE - CABLE (ETC)
---	ELECTRIC - UNDERGROUND (UGE)
---	GAS (G)
---	SANITARY SEWER (S)
---	STORM DRAIN (SD)
---	WATER
---	LIMIT OF DISTURBANCE (LOD)
---	SEDIMENT CONTROL (SED)
---	LOD / SED
---	EDGE OF PAVEMENT - EXISTING
---	FENCE - METAL
---	FENCE - WOOD
---	STONE WALL
---	BRUSH LINE (APPROXIMATE)
WETLAND LIMIT	
---	STRUCTURE, EXISTING
---	STRUCTURE, PROPOSED
---	SPOT GRADE - EXISTING
---	SPOT GRADE - PROPOSED
---	GROUND CONTROL POINT
---	DRILL HOLE
---	GRANITE BOUND
---	REBAR / STEEL PIPE FOUND
---	SPIKE
---	WETLAND FLAG
---	COASTAL FEATURE FLAG
---	COASTAL BUFFER POST
---	FLOW ARROW
---	SOIL EVALUATION
---	48" SHOULDER
---	80" LEDGE

NEI
Narragansett
Engineering Inc.
 Civil - Survey Structural Environmental Design
 3102 East Main Road, Portsmouth RI 02871
 Tel. 401.683.6630 www.nei-cds.com

SHEET TITLE
 EXISTING CONDITIONS PLAN & DEMO PLAN

DERBY ACADEMY 56 BURDITT AVE, HINGHAM, MA 02043
 PROPERTY RECORD
 56 BURDITT AVENUE
 HINGHAM, MA 02043
 [PLAT:49 LOT:57, ZONE: RA, AREA: 21.6 ACRES]
 N/F: TRUSTEES OF DERBY ACADEMY

C/O
 JASON EARLS
 SAGAMORE
 75 RESEARCH RD
 HINGHAM, MA 02043
 T: (781) 531-9466
 E: JEARLS@SAGAMORE.COM

PROJECT NO.	DATE	BY
25.0126	9/16/25	AS

DRAWING ISSUE:

CONCEPT / DISCUSSION
 PERMITTING
 CONSTRUCTION
 AS-BUILT
 OTHER

ONLY PLANS ISSUED FOR CONSTRUCTION SHALL BE USED FOR CONSTRUCTION

SCOPE:
 RETAINING WALL DESIGN TO ACCOMMODATE MECH AIR HANDLER
 SITE GRADING UTILITY RECONFIGURATION LIMIT OF DISTURBANCE, SESG AND RELATED SITE CIVIL WORK

PRIOR DEP PERMITS:
 DEP 034-421, DEP 034-432, DEP 034-513.



FORMAL PLAN REVISIONS

No	DATE	STAGE/DESCRIPTION	BY

INTERNAL REVIEW

No	CHECK	CAD	DESCRIPTION/NOTES
1	JM	EB	PRELIMINARY STORMWATER DESIGN, SURFACE GRADES AROUND SYSTEM
2	JM	EB	REVISION OF STORMWATER AND GRADING BASED ON REVISED TOP OF COASTAL BANK AND BUFFER ZONES
3	JM	EB	UPDATED LOD AND DETAIL
			11/20/25 T1/19/25 SHEETS, ADDED MITIGATION AREAS

Drawings must be printed in color to be valid. This note should be blue. If this note is not blue, please reprint in color or contact NEI.

SCALE
 1" = 10'

SV-100



Civil - Survey Structural Environmental Design
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SHEET TITLE
 SITE LAYOUT PLAN

DERBY ACADEMY 56 BURDITT AVE, HINGHAM, MA 02043
 PROPERTY RECORD
 56 BURDITT AVENUE
 HINGHAM, MA 02043
 (PLAT:49 LOT:57, ZONE: RA, AREA: 21.6 ACRES)
 N/F: TRUSTEES OF DERBY ACADEMY

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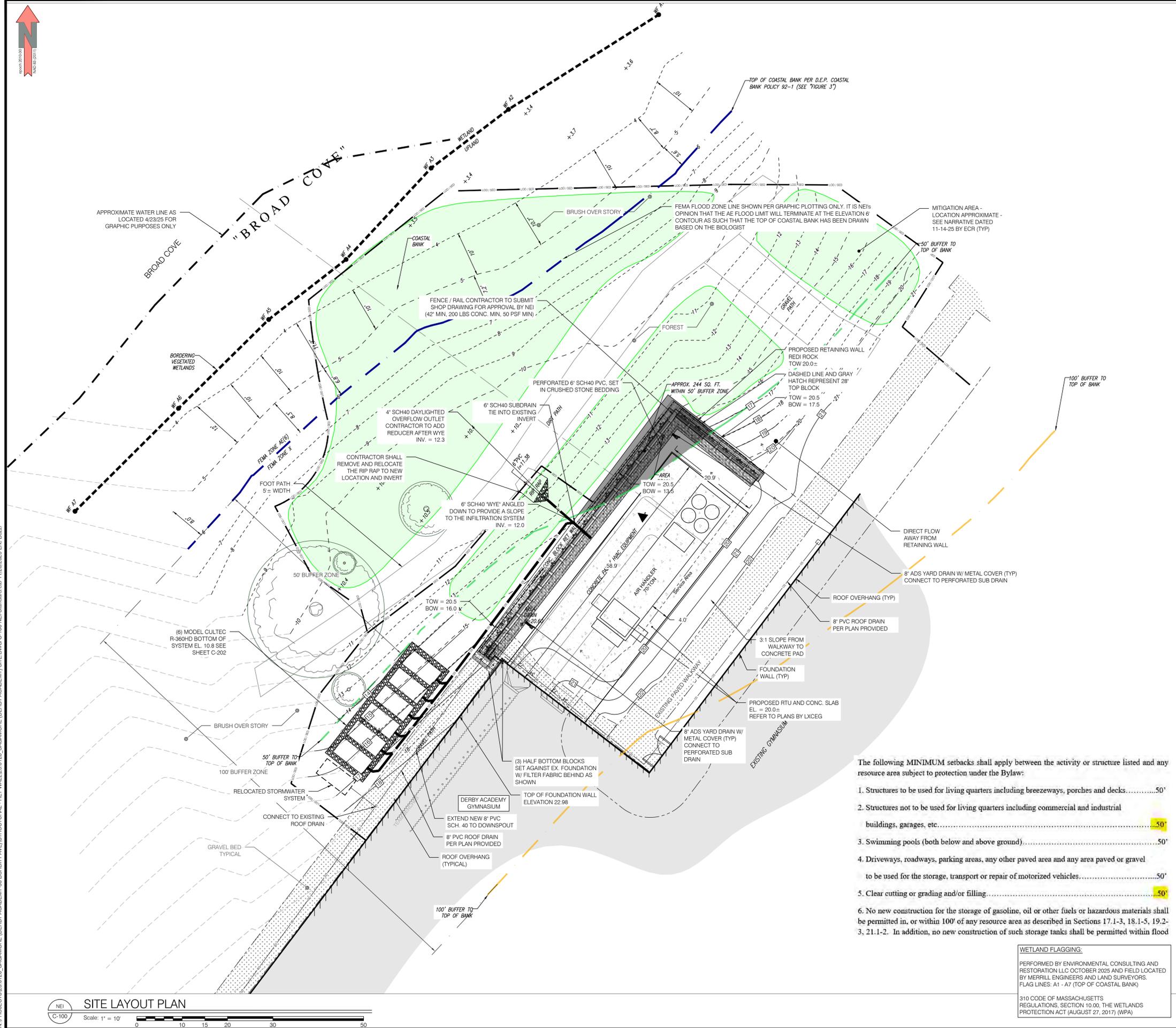
PROJECT NO.	DATE	BY
25.0126	9/16/25	AS

DRAWING ISSUE:

<input type="checkbox"/>	CONCEPT / DISCUSSION
<input checked="" type="checkbox"/>	PERMITTING
<input type="checkbox"/>	CONSTRUCTION
<input type="checkbox"/>	AS-BUILT
<input type="checkbox"/>	OTHER

ONLY PLANS ISSUED FOR CONSTRUCTION SHALL BE USED FOR CONSTRUCTION

CIVIL PE STAMP FOR SITE ELEMENTS ONLY (DOES NOT INCLUDE STRUCTURAL COMPONENTS)



LOAM & SEED NOTE:
 ANY SEED MIX APPLIED WITHIN THE 50' BUFFER ZONE SHOULD BE NATIVE
 NEW ENGLAND CONSERVATION/WILDLIFE MIX FROM NEW ENGLAND WETLAND PLANTS, INC. SEED MIX IS SUGGESTED, RECOMMENDED BY PWS, ED AVIZINIS TO BE SET LANDWARDS OF THE TOP-OF-BANK FOR ENVIRONMENTALLY SENSITIVE UPLAND SITES.
 *SEED MIX SELECTION PENDING CONSERVATION COMMISSION APPROVAL
<https://www.conservativenewengland.com/products/new-england-conservation-wildlife-mix/>

STORMWATER NOTES:
 1. CONTRACTOR TO VERIFY DEPTH TO WATER TABLE IN FIELD BY TEST PIT. SHOULD CONDITIONS VARY FROM DESIGN, CONTRACTOR TO COORDINATE WITH NEI.

NOTES:
 1. REFER TO NARRATIVE DATED 11-14-25 BY ECR FOR ALL LANDSCAPE ELEMENTS AND MITIGATION AREAS

HATCH LEGEND

[Green Hatched Box]	PROPOSED MITIGATION AREAS
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WETLAND KEY

[Blue Dashed Line]	COASTAL BANK
[Green Dashed Line]	50' BUFFER ZONE
[Yellow Dashed Line]	100' BUFFER ZONE

LEGEND

[--- 100.00' ---]	DIMENSION - EXISTING
[--- 100.00' (D) ---]	DIMENSION - PROPOSED
[--- 100.00' (S) ---]	PLAN / DEED DIMENSION
[--- 100.00' (S) ---]	SURVEY DIMENSION
[--- 100.00' (S) ---]	PROPERTY LINE - ABUTTING
[--- 100.00' (S) ---]	PROPERTY LINE - EXISTING
[--- 100.00' (S) ---]	PROPERTY LINE - PROPOSED
[--- 100.00' (S) ---]	SETBACKS
[--- 100.00' (S) ---]	GRADE CONTOUR - EXISTING
[--- 100.00' (S) ---]	GRADE CONTOUR - PROPOSED
[--- 100.00' (S) ---]	ELECTRIC - OVERHEAD (OHE)
[--- 100.00' (S) ---]	ELECTRIC - TELEPHONE - CABLE (ETC)
[--- 100.00' (S) ---]	ELECTRIC - UNDERGROUND (UGE)
[--- 100.00' (S) ---]	GAS (G)
[--- 100.00' (S) ---]	SANITARY SEWER (S)
[--- 100.00' (S) ---]	STORM DRAIN (SD)
[--- 100.00' (S) ---]	WATER
[--- 100.00' (S) ---]	LIMIT OF DISTURBANCE (LOD)
[--- 100.00' (S) ---]	SEDIMENT CONTROL (SED)
[--- 100.00' (S) ---]	LOD / SED
[--- 100.00' (S) ---]	EDGE OF PAVEMENT - EXISTING
[--- 100.00' (S) ---]	FENCE - METAL
[--- 100.00' (S) ---]	FENCE - WOOD
[--- 100.00' (S) ---]	STONE WALL
[--- 100.00' (S) ---]	BRUSH LINE (APPROXIMATE)
[--- 100.00' (S) ---]	WETLAND LIMIT
[--- 100.00' (S) ---]	CATCH BASIN
[--- 100.00' (S) ---]	DRAINAGE MANHOLE
[--- 100.00' (S) ---]	SANITARY MANHOLE
[--- 100.00' (S) ---]	ELECTRICAL MANHOLE
[--- 100.00' (S) ---]	TELEPHONE MANHOLE
[--- 100.00' (S) ---]	WELL
[--- 100.00' (S) ---]	GATE VALVE
[--- 100.00' (S) ---]	WATER SHUT OFF
[--- 100.00' (S) ---]	FIRE HYDRANT
[--- 100.00' (S) ---]	ELECTRIC BOX (ETC)
[--- 100.00' (S) ---]	UTILITY POLE
[--- 100.00' (S) ---]	DOWNSPOUT
[--- 100.00' (S) ---]	BENCHMARK
[--- 100.00' (S) ---]	DETAIL REFERENCE
[--- 100.00' (S) ---]	STRUCTURE, EXISTING
[--- 100.00' (S) ---]	STRUCTURE, PROPOSED
[--- 100.00' (S) ---]	SPOT GRADE - EXISTING
[--- 100.00' (S) ---]	SPOT GRADE - PROPOSED
[--- 100.00' (S) ---]	GROUND CONTROL POINT
[--- 100.00' (S) ---]	DRILL HOLE
[--- 100.00' (S) ---]	GRANITE BOUND
[--- 100.00' (S) ---]	REBAR / STEEL PIPE FOUND
[--- 100.00' (S) ---]	SPIKE
[--- 100.00' (S) ---]	WETLAND FLAG
[--- 100.00' (S) ---]	COASTAL FEATURE FLAG
[--- 100.00' (S) ---]	COASTAL BUFFER POST
[--- 100.00' (S) ---]	FLOW ARROW
[--- 100.00' (S) ---]	SOIL EVALUATION

The following MINIMUM setbacks shall apply between the activity or structure listed and any resource area subject to protection under the Bylaw:

- Structures to be used for living quarters including breezeways, porches and decks.....50'
- Structures not to be used for living quarters including commercial and industrial buildings, garages, etc.....50'
- Swimming pools (both below and above ground).....50'
- Driveways, roadways, parking areas, any other paved area and any area paved or gravel to be used for the storage, transport or repair of motorized vehicles.....50'
- Clear cutting or grading and/or filling.....50'
- No new construction for the storage of gasoline, oil or other fuels or hazardous materials shall be permitted in, or within 100' of any resource area as described in Sections 17.1-3, 18.1-5, 19.2-3, 21.1-2. In addition, no new construction of such storage tanks shall be permitted within flood

WETLAND FLAGGING:
 PERFORMED BY ENVIRONMENTAL CONSULTING AND RESTORATION LLC OCTOBER 2025 AND FIELD LOCATED BY MERRILL ENGINEERS AND LAND SURVEYORS.
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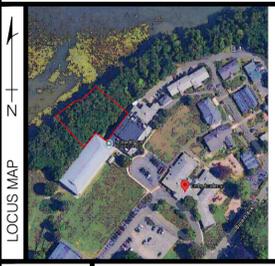
FORMAL PLAN REVISIONS

No	DATE	STAGE/DESCRIPTION	BY

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No	CHECK	CAD	DESCRIPTION/NOTES
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SCALE
 1" = 10'

C-100

N:\PROJECTS\25.0126_SAGAMORE (DERBY ACADEMY) SITE.DWG C-100 NEI-Standard.dwg 11/20/2025 Ekr Bluzi

SHEET TITLE
CROSS SECTION AND CIVIL NOTES

DERBY ACADEMY 56 BURDITT AVE, HINGHAM, MA 02043
 PROPERTY RECORD
 56 BURDITT AVENUE
 HINGHAM, MA 02043
 [PLAT-49 LOT.57, ZONE: RA, AREA: 21.6 ACRES]
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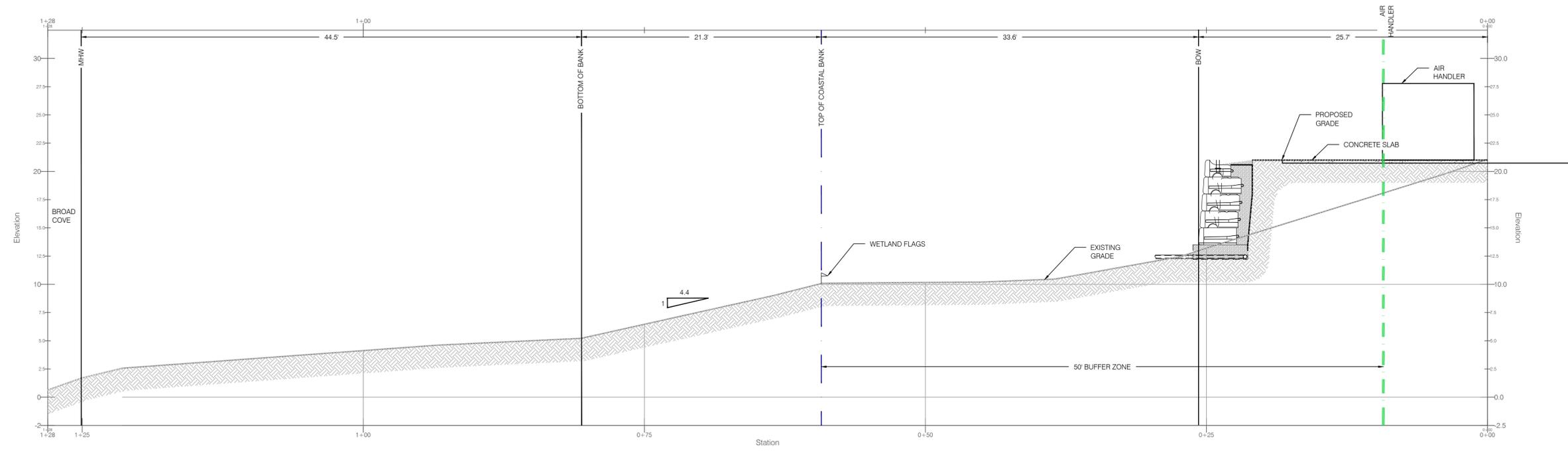
PROJECT NO.	DATE	BY
25.0126	9/16/25	AS

- DRAWING ISSUE:**
- CONCEPT / DISCUSSION
 - PERMITTING
 - CONSTRUCTION
 - AS-BUILT
 - OTHER
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CIVIL PE STAMP FOR SITE ELEMENTS ONLY (DOES NOT INCLUDE STRUCTURAL COMPONENTS)



ELEVATION VIEW



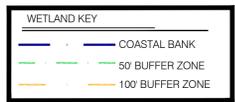
CROSS SECTION PLAN
 Scale: 1" = 5'
 0 5 7.5 10 15 20 25

NOTE:
 SECTION PREPARED FOR USE IN A CONSERVATION COMMISSION APPLICATION ONLY. REFER TO C-200 FOR STRUCTURAL CROSS SECTIONS

- RETAINING WALL NOTES:**
- STRIP ALL VEGETATION, ORGANIC SOILS AND UNSUITABLE FILL SOILS FROM THE WALL AND GRID ALIGNMENT AREA.
 - BENCH CUT ALL EXCAVATED SLOPES.
 - DO NOT OVER EXCAVATE UNLESS DIRECTED TO DO SO BY THE OWNERS SITE REPRESENTATIVE IN ORDER TO REMOVE UNSUITABLE SOIL IF OVER EXCAVATION IN ORDER TO IMPROVE BEARING CAPACITY, THE EXCAVATION SHALL EXTEND AT 1H:1V (FROM THE WALL BASE UNIT) IN FRONT OF THE WALL FACE AND AT LEAST AS FAR BEHIND THE WALL AS THE LONGEST GEOGRID LENGTH.
 - THE OWNERS SITE REPRESENTATIVE SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
 - LEVELING PAD SHALL CONSIST OF 3/4" CRUSHED STONE OR COMPACTED GRAVEL, MINIMUM 6" DEPTH. A THIN PAD (MAX. 3" THICK) OF MAX. 2000 psf UNREINFORCED CONCRETE MAY BE SUBSTITUTED. IN EITHER CASE THE SUBGRADE MUST BE COMPACTED PRIOR TO PLACING THE CONCRETE.
 - EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE AS INDICATED ON THE WALL FACE DRAWING(S).
 - FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURERS INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS, ESPECIALLY WITH REGARDS TO LEVELING OF BLOCKS AND BASE.
 - DRAINAGE FILL MIN. 12" THICK SHALL BE INSTALLED BEHIND THE WALL. THIS MATERIAL SHALL BE CLEAN 3/4" CRUSHED STONE.
 - WHERE PERFORATED HOLE DRAINS ARE USED, PROVIDE OUTLETS AT THE ENDS OF THE WALL AND AT 40' INTERVALS, OR TIE TO A CLOSED DRAINAGE SYSTEM. (ALTERNATE OUTLET METHODS MAY BE APPROVED BY THE DESIGN ENGINEER.)
 - BACKFILL AND COMPACT THE FILL MATERIAL BEHIND THE WALL AS THE WALL IS INSTALLED.
 - COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE OWNERS SITE REPRESENTATIVE.
 - COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY (92% MODIFIED, ASTM D-1557) OF THE FILL MATERIAL.
 - GEOGRID CUT LENGTHS AS SHOWN ON THE WALL FACE DRAWING(S) ARE MEASURED FROM THE FRONT FACE OF THE WALL.
 - ROLL GEOGRID OUT FROM THE WALL FACE AND PULL GEOGRID TIGHT PRIOR TO BACKFILLING.
 - THE PREFERRED LOCATION FOR GUARDRAIL/FENCE INSTALLATION IS BEYOND THE LENGTH OF THE GEOGRID, WHERE THIS CANNOT BE ACCOMPLISHED, THE FOLLOWING ALTERNATIVES ARE AVAILABLE FOR POST INSTALLATION:
 - ALTERNATIVE # 1: FOR FENCE POSTS LOCATED LESS THAN 3 FEET FROM THE REAR OF THE WALL BLOCK USE THE "SLEEVE-IT" FENCE POST INSTALLATION SYSTEM (CONTACT AT 1-800-883-3042). THIS PROCEDURE INVOLVES THE USE OF THE "SLEEVE-IT" POST RISER AND SUPPORT STRUTS AND IS INSTALLED WHEN THE WALL IS APPROX. 24" BELOW ITS FINISHED GRADE.
 - ALTERNATIVE # 2:
 - FOR GUARDRAILS/FENCES INSTALLED WHERE GEOGRID IS LESS THAN 19' FROM THE SURFACE, THE SOIL ABOVE THE GEOGRID IS TO BE EXCAVATED AND THE GEOGRID HAND-CUT. THE HOLE CUT IN THE GRID IS TO BE JUST LARGE ENOUGH FOR THE POST INSTALLATION. IF THE POST EXTENDS THROUGH FURTHER GRID LAYERS, IT MAY BE DRIVEN THROUGH ADDITIONAL LAYERS. PROVIDED THE DRIVEN END IS TAPERED IN SOME FORM TO PROVIDE A POINT. SQUARE-EDGE POSTS SHALL NOT BE DRIVEN THROUGH GEOGRID LAYERS. DRIVING WOOD POSTS IN CLOSE PROXIMITY TO THE REAR OF THE WALL MAY PUSH THE WALL FACE OUTWARD DUE TO DISPLACED SOIL.
 - FOR GUARDRAILS/FENCES INSTALLED WHERE GEOGRID IS MORE THAN 19' FROM THE SURFACE, THE POST MAY BE DRIVEN THROUGH THE GRID LAYER(S), PROVIDED THE DRIVEN END IS TAPERED IN SOME FORM TO PROVIDE A POINT. SQUARE-EDGE POSTS SHALL NOT BE DRIVEN THROUGH GEOGRID LAYERS. DRIVING WOOD POSTS IN CLOSE PROXIMITY TO THE REAR OF THE WALL MAY PUSH THE WALL FACE OUTWARD DUE TO DISPLACED SOIL. PROVIDED GEOGRID LAYERS WITHIN 19' OF THE SURFACE ARE HAND-CUT PRIOR TO AUGERING THE HOLE. IF THE POSTS ARE TO BE SLEEVED AND SET IN CONCRETE, ALL GRID LAYERS MUST BE HAND CUT, WITH THE CUT HOLES JUST LARGE ENOUGH TO PROVIDE ROOM FOR THE SLEEVE. USE OF A HAND-OPERATED POST-HOLE SHOVEL TO CUT THROUGH GEOGRID IS ACCEPTABLE FOR GRID LAYERS DEEPER THAN 15' FROM THE SURFACE. THE PREFERRED MINIMUM DISTANCE FROM THE BACK OF THE WALL TO A GUARDRAIL POST IS 2 FEET. UTILIZING A 6-FOOT POST DEPTH. IF THE GUARDRAIL MUST BE CLOSER THAN 2 FEET FROM THE BACK OF THE WALL, SIGNIFICANTLY DEEPER POST DEPTHS AND/OR ALTERNATIVE METHODS OF INSTALLATION MAY BE REQUIRED. EVALUATION OF THE STRUCTURAL CAPABILITIES OF ANY GUARDRAIL OR FENCE SYSTEM INSTALLED AT THIS SITE WAS NOT PART OF THIS DESIGN.
 - PROVIDE LATERAL DRAINAGE SWALES TO DIRECT FLOWS AROUND THE ENDS OF THE WALL AND AWAY FROM THE WALL DURING CONSTRUCTION. DO NOT CONSTRUCT SWALE BEHIND WALLS AS PART OF FINISHED CONSTRUCTION. GRADE TO ALLOW WATER TO FLOW OVER WALL FACE (OR TO A POINT MORE THAN 10 FEET BEYOND THE LONGEST GEOGRID LENGTH).
 - TURF, OR SOME ACCEPTABLE FORM OF SOIL EROSION PROTECTION, SHOULD BE ESTABLISHED AT THE TOP OF THE WALL AS SOON AS POSSIBLE AFTER THE WALL HAS BEEN COMPLETED.
 - FINAL WALL ALIGNMENT SHALL BE LOCATED IN THE FIELD BY THE OWNERS SITE REPRESENTATIVE.
 - RECOMMENDED COMPACTION EQUIPMENT WITHIN 15 FEET OF THE BACK OF THE WALL IS AS FOLLOWS:
 - 0 - 4 FEET HAND TAMP OR VIBRATORY PLATE COMPACTOR
 - 4 - 15 FEET NOTHING LARGER THAN TWO-DRUM, WALK-BEHIND VIBRATORY ROLLER (LARGER ROLLERS CAN BE USED STATICALLY, PROVIDED LIFT SIZE DOES NOT COMPROMISE ACHIEVEMENT OF NECESSARY COMPACTION RATES).
 - WHERE CATCH BASINS ARE PLACED IN CLOSE PROXIMITY TO THE WALL, THE CONTRACTOR SHOULD CONSIDER THE USE OF ECCENTRIC CONES IN ORDER TO MINIMIZE THE POSSIBLE IMPACT OF THE STRUCTURE ON THE WALL AND THE GEOGRID LAYERS.
 - ANY PLANTINGS SET BEHIND THE WALLS SHALL BE PLACED WITHOUT CUTTING OF THE GEOGRID REINFORCEMENT LAYERS. THIS CAN BE ACCOMPLISHED BY SETTING PLANTINGS ABOVE THE GEOGRID LAYERS OR BEYOND THE LIMITS OF THE GEOGRID LAYERS.
 - WHERE ANGLES IN THE RETAINING WALL ARE SHOWN, THE CONTRACTOR MAY CHOOSE TO CONSTRUCT THE WALL USING A CURVED FACE (AS DETAILED ON SHEET 1) AS OPPOSED TO THE SHARP ANGLE DEPICTED IN THE PLAN VIEW DRAWING. CURVES IN SEGMENTAL RETAINING WALLS REQUIRE LESS CUTTING OF BLOCK DURING CONSTRUCTION. USE OF CURVES IN PLACE OF SHARP ANGLES MUST BE APPROVED BY THE OWNERS SITE REPRESENTATIVE.
 - FOR PIPES WHICH OUTLET THROUGH THE WALL, THE SPACE NEEDED TO SQUARE-OFF THE PIPE TO THE WALL MAY BE FILLED WITH NON-SHRINK MORTAR, BLOCKS CUT TO SIZE OR OTHER APPROVED SEALANT METHOD TO PREVENT MIGRATION OF FINES THROUGH GAPS AROUND THE PIPE. A GRANITE OR CONCRETE LINTEL IS AN APPROVED METHOD OF SPANNING THE PIPE FOR SUPPORT OF THE WALL ABOVE.
 - ANY UTILITY LINE HAVING A DIAMETER GREATER THAN 4" AND PASSING UNDER A RETAINING WALL MUST HAVE A MINIMUM CLEARANCE OF 24" BETWEEN THE WALL BASE COURSE AND THE CROWN OF THE UTILITY LINE. WHERE THIS MINIMUM CLEARANCE CANNOT BE ACHIEVED, A GRANITE OR CONCRETE HEADER SHALL BE INSTALLED OVER THE PIPE. THIS HEADER SHALL EXTEND AT LEAST 24" BEYOND BOTH SIDES OF THE PIPE, RUNNING ALONG THE WALL BASE. THE HEADER SHALL BE AT LEAST 12" DEEP (TO MATCH THE WALL DEPTH) AND BE CENTERED BENEATH THE WALL BASE. THE HEADER SHALL BE AT LEAST 6" IN HEIGHT.
 - THE LOCATIONS, SIZES AND HEADWALL CONFIGURATIONS OF ANY PIPE/CULVERT SHOWN ON THESE DRAWINGS WERE TAKEN FROM INFORMATION SUPPLIED BY OTHERS. THE CONTRACTOR SHALL REFER TO DRAWINGS PREPARED BY THE SITE DESIGN ENGINEER FOR SPECIFIC SIZE, LOCATION AND CONFIGURATION INFORMATION OF ALL SITE UTILITIES.
 - THESE WALLS HAVE BEEN DESIGNED WITH CONSIDERATION OF SEISMIC LOADINGS.
 - WALL MUST BE INSTALLED BY QUALIFIED CONTRACTOR WITH EXPERIENCE IN AT LEAST 5 PROJECTS USING REDI ROCK WALLS OF SIMILAR HEIGHT AND SCALE
 - WALLS SHALL CONFORM ALL MANUFACTURER REQUIREMENTS AN INSTALLATION PROCEDURES

- MADOT AGGREGATE NOTES:**
- GRAVEL BORROW, GRAVEL BORROW SHALL CONSIST OF BANK RUN SAND AND GRAVEL OR PLANT PROCESSED, CRUSHED OR UNCRUSHED GRAVEL WITH FINE AGGREGATE ADDED AS FILLER. ALTERNATIVELY, GRAVEL BORROW MAY CONSIST OF SELECTED MATERIALS WHICH HAVE BEEN RECLAIMED FROM WITHIN PROJECT LIMITS, ARE PROPORTIONED AND PROCESSED TO PRODUCE GRANULAR MATERIAL, FOR REUSE AS GRAVEL BORROW WITHIN THE SOURCE PROJECT LIMITS. GRAVEL BORROW, WHETHER CONSISTING OF BANK RUN OR PLANT PROCESSED SAND AND GRAVEL, OR RECLAIMED AND PROCESSED GRANULAR MATERIAL, SHALL CONSIST OF SOUND, DURABLE PARTICLES FREE FROM LOAM, CLAY, ORGANIC SOIL, VEGETATIVE MATTER, SOFT AND ELONGATE PARTICLES. GRAVEL BORROW SHALL CONFORM TO ALL APPLICABLE SPECIFICATION REQUIREMENTS PRIOR TO ITS FINAL PLACEMENT ON THE PROJECT. THE PRACTICE OF CULLING DELETERIOUS OR OUT OF SPECIFICATION MATERIAL AFTER PLACEMENT AND/OR GRADING IN-PLACE WILL NOT BE ALLOWED.
- BANK RUN OR PLANT-PROCESSED SAND AND GRAVEL, BANK RUN OR PLANT-PROCESSED SAND AND GRAVEL PROPOSED FOR GRAVEL BORROW SHALL BE WELL-GRADED AND MEET THE GRADATION REQUIREMENTS SPECIFIED IN MADOT M1 03.30. IN ADDITION, THE MAXIMUM PARTICLE SIZE SHALL NOT EXCEED 9 INCHES OR THREE-FOURTHS OF THE LOOSE LIFT THICKNESS, WHICHEVER IS SMALLER.

ALL POST-CONSTRUCTION CORRECTIVE WORK, WARRANTY, REPAIRS, OR MAINTENANCE PROVISIONS SHALL BE NOTED IN CONTRACT DOCUMENTS BETWEEN CLIENT AND CONTRACTOR(S). NO PROVISION ARE MADE IN THE PLANS UNLESS NOTED.



FORMAL PLAN REVISIONS

No	DATE	STAGE/DESCRIPTION	BY

INTERNAL REVIEW

No	CHECK	CAD	DESCRIPTION/NOTES
1	JM	EB	PRELIMINARY STORMWATER DESIGN, SURFACE GRADES AROUND SYSTEM
2	JM	EB	REVISION OF STORMWATER AND GRADING BASED ON REVISED TOP OF COASTAL BANK AND BUFFER ZONES
3	JM	EB	UPDATED LOD AND DETAIL
	11/20/25	11/19/25	SHEETS, ADDED MITIGATION AREAS

Drawings must be printed in color to be valid. This note should be blue. If this note is not blue, please reprint in color or contact NEI.



SCALE AS INDICATED
C-101

Fence/Railing required where clear height exceeds 30". To be in accordance with all building code requirements. Contractor to submit shop drawing to NEI / Owner for approval (min 42" height, 200 lbs concentrated load + 50 psf linear)

Setback = 1 5/8" (5° Wall Batter Angle)

Cap block (alt.) per owner selection

Grade to drain surface water away from wall

Top block

6" concrete slab w/ 6"x6" wire mesh over min. 6" gravel borrow w/ filter fabric. Set over compacted, level, and stable subbase

See sheet C-100 for concrete pad and AIR HANDLER location

5 BLOCK HIGH SECTION

- (1) 28" Block
- (4) 41" Blocks

7'-0"± (max)
TOW = 20.5
BOW = 13.0

Existing Grade (Dashed line)

0'-6" ± (min)

28" Top

41" Middle

41" Middle

41" Middle

41" Middle

41" Bottom

8" ADS yard drain w/ 4" sch40 connected to subdrain

Non-woven geotextile fabric

Move blocks forward during installation to engage shear knobs (Typical)

Backfilled with clean fill, free of fines & organics, compacted to 95% of the standard modified proctor test. Install in 12" (max) lifts.

Infill stone (3/4" crushed stone)
Fill between adjacent blocks (all blocks)
Fill vertical core slot (PC blocks)
Stone to extend at least 12" behind blocks.

Non-woven geotextile fabric

Middle block (Typical)

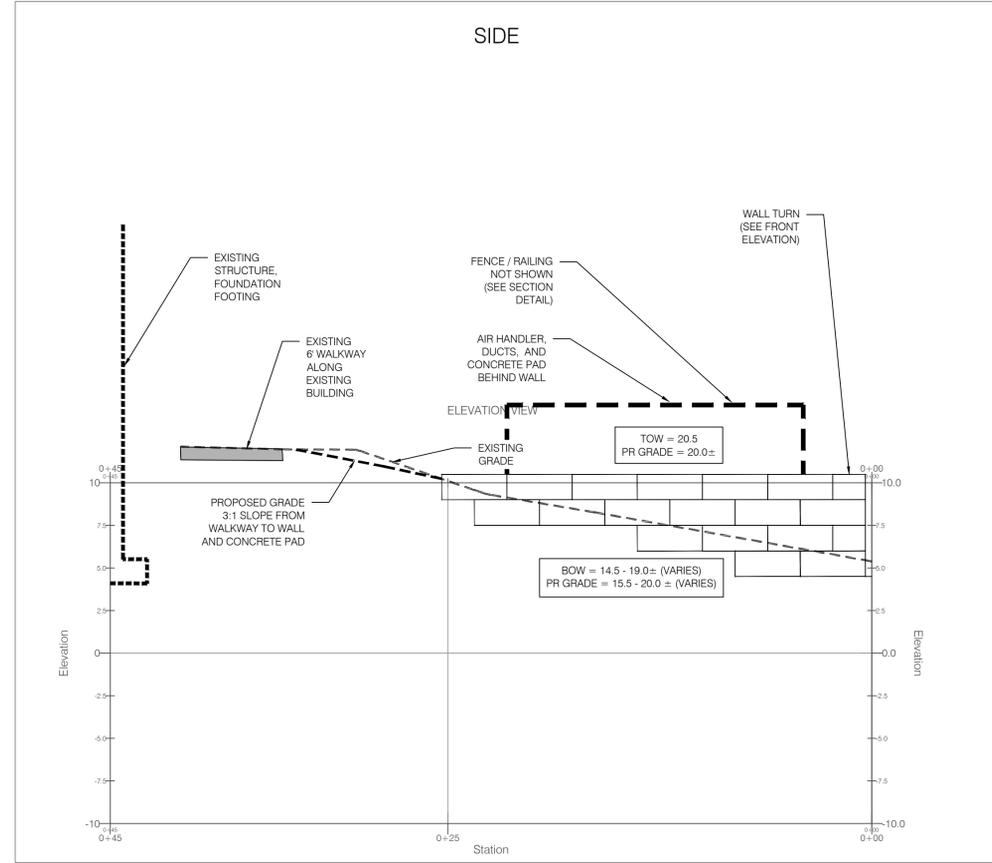
Solid bottom block

12" Leveling pad

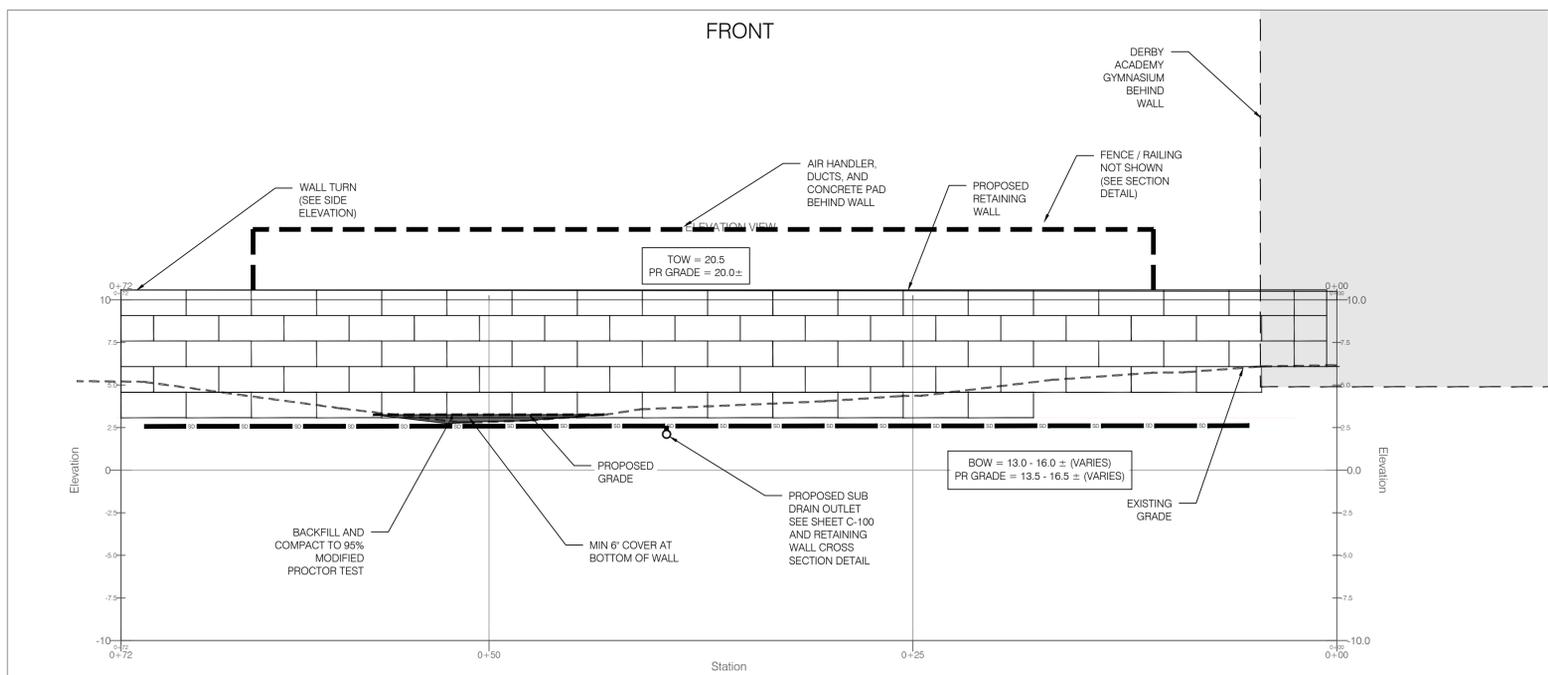
Perforated 6" SCH40 PVC subdrain, Daylight pipe per sheet C-100

$\phi = 34^\circ$

A RETAINING WALL SECTION
Scale: 1" = 1'



2 RETAINING WALL SIDE ELEVATION
Scale: 1" = 5'



1 RETAINING WALL FRONT ELEVATION
Scale: 1" = 5'

NEI
Narragansett
Engineering Inc.
Civil - Survey Structural Environmental Design
3102 East Main Road, Portsmouth RI 02871
Tel. 401.683.6630 www.nei-cds.com

SHEET TITLE
DETAILS AND NOTES

DERBY ACADEMY 56 BURDITT AVE, HINGHAM, MA 02043
PROPERTY RECORD
56 BURDITT AVENUE
HINGHAM, MA 02043
[PLAT:49 LOT:57, ZONE: RA, AREA: 21.6 ACRES]
N/F: TRUSTEES OF DERBY ACADEMY

C/O
JASON EARLS
SAGAMORE
75 RESEARCH RD
HINGHAM, MA 02043
T: (781) 531-9466
E: JEARLS@SAGAMORE.COM

PROJECT NO.	DATE	BY
25.0126	9/16/25	AS

DRAWING ISSUE:

<input type="checkbox"/>	CONCEPT / DISCUSSION
<input checked="" type="checkbox"/>	PERMITTING
<input type="checkbox"/>	CONSTRUCTION
<input type="checkbox"/>	AS-BUILT
<input type="checkbox"/>	OTHER

ONLY PLANS ISSUED FOR CONSTRUCTION SHALL BE USED FOR CONSTRUCTION

SCOPE:
RETAINING WALL DESIGN TO ACCOMMODATE MECH AIR HANDLER
SITE GRADING UTILITY RECONFIGURATION LIMIT OF DISTURBANCE, SESC AND RELATED SITE CIVIL WORK



FORMAL PLAN REVISIONS

No	DATE	STAGE/DESCRIPTION	BY

INTERNAL REVIEW

No	CHECK	CAD	DESCRIPTION/NOTES
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SCALE N/A **C-200**

N:\PROJECTS\25.0126_SAGAMORE (DERBY ACADEMY)\STRUCTURAL - RET WALL\25.0126_SAGAMORE (DERBY ACADEMY) SITE.DWG C-200 NEI-Standard.dwg 11/20/2025 Eric Buzzi

EROSION AND SEDIMENT CONTROL NOTES:

- ALL EROSION CONTROL SHALL BE IN ACCORDANCE WITH MASSACHUSETTS SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST REVISION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROL MEASURES SHOWN ON THESE PLANS.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED ONCE WEEKLY OR AFTER EVERY RAINFALL EVENT GREATER THAN 0.25 INCHES.
- SEDIMENT BUILD UP GREATER THAN ONE-HALF THE BARRIER HEIGHT SHALL BE REMOVED AND DISPOSED OF PROPERLY AS REQUIRED. ANY SEDIMENT BUILD UP OUTSIDE OF THE SEDIMENT BARRIER SHALL BE REMOVED IMMEDIATELY.
- CONTRACTOR SHALL MAINTAIN A RESERVE OF EROSION CONTROL MATERIALS FOR EMERGENCY USE AND ROUTINE MAINTENANCE.
- THE CONTROLS SHOWN ON THESE PLANS ARE INTENDED AS MINIMUM MEASURES. ADDITIONAL MEASURES MAY BE REQUIRED AND SHALL BE IMPLEMENTED BY THE CONTRACTOR IF WARRANTED OR REQUESTED BY THE OWNER, OWNER REPRESENTATIVE, ENGINEER, OR ANY APPLICABLE REGULATING AGENCY.
- PRIOR TO THE START OF ANY LAND CLEARING / GRUBBING OR OTHER CONSTRUCTION ACTIVITY THE PERIMETER CONTROLS SHALL BE PLACED, PROPERLY CONSTRUCTED AND CLEARLY VISIBLE. THESE CONTROLS SHALL REPRESENT THE LIMITS OF WORK AND WORKERS SHALL BE NOTIFIED THAT NO CONSTRUCTION ACTIVITY IS ALLOWED BEYOND THESE CONTROLS.
- IF OR AS POSSIBLE CONSTRUCTION SHALL BE PHASED TO LIMIT TO THE MAXIMUM EXTENT PRACTICABLE THE AMOUNT OF EXPOSED SOILS. ALL DISTURBED AREAS SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 14 DAYS OF COMPLETION OF GRADING ACTIVITIES.
- THE CONTRACTOR SHALL SCHEDULE WORK IN A WAY TO ALLOW POSITIVE DRAINAGE OF SUBGRADE THROUGHOUT CONSTRUCTION.
- CONSTRUCTION ENTRANCES PER RIDOT STANDARD DETAIL 9.9.0 SHALL BE EMPLOYED AT ALL POINTS OF INGRESS AND EGRESS FROM THE SITE.
- TEMPORARY DIVERSIONS, SEDIMENT BASINS, AND TEMPORARY SWALES MAY BE USED AND SHALL BE SIZED ACCORDING TO THE MASSACHUSETTS SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.
- CATCH BASINS AND STORM DRAINS SHALL BE PROTECTED PER RIDOT STANDARD DETAIL 9.8.0 IN GRASSED AREAS OR SEDIMENT BAGS IN PAVED AREAS.
- TEMPORARY SEDIMENT STOCK PILES SHALL BE KEPT MOIST AND COVERED AT ALL TIMES. CALCIUM CHLORIDE SHALL ONLY BE USED IF AN APPROVAL FROM THE TOWN/CITY OR OTHER APPLICABLE AGENCY HAS BEEN GRANTED.
- DEWATERING FROM EXCAVATIONS WILL BE CONVEYED BY HOSE TO AN UPLAND AREAS AND DISCHARGED INTO A DEWATERING BASIN PER RIDOT STANDARD 9.7.0, HAYBALE CORRALS, OR SEDIMENTATION BAGS. THE CONTRACTOR SHALL ENSURE THAT NO CONTAMINATE IS PRESENT IN ANY WATERS PRIOR TO DISCHARGE FROM SITE AND IS RESPONSIBLE FOR ALL ENGINEERING, EQUIPMENT, MATERIAL AND LABOR REQUIRED FOR THE SITE WATER REMOVAL DURING CONSTRUCTION.
- CONSTRUCTION WASTE MATERIALS SHALL BE KEPT ON-SITE AND DISPOSED OF IN AN APPROVED AND APPROPRIATE MANNER IN ACCORDANCE WITH ALL APPLICABLE REGULATORY AGENCIES.
- RIPRAP SHALL BE USED WHERE NECESSARY TO CONTROL EXIT VELOCITIES.
- NON MOBILE (I.E. TRACKED MACHINERY) SHALL BE MAINTAINED WITHIN THE LIMIT OF DISTURBANCE DEFINED BY SEDIMENT BARRIER.
- NEWLY VEGETATED AREAS SHALL BE REGULARLY INSPECTED AND MAINTAINED TO ENSURE ESTABLISHMENT OF APPROPRIATE VEGETATION.
- THE CONTRACTOR SHALL NOT REMOVE ANY EROSION AND SEDIMENTATION CONTROL MEASURES UNTIL FINAL ACCEPTANCE OF THE SITE HAS OCCURRED.
- ALL DRAINAGE STRUCTURES SHALL BE CLEARED OF ACCUMULATED SEDIMENT PRIOR TO THE FINAL SITE ACCEPTANCE.
- TEMPORARY VEGETATIVE COVER SHALL BE APPLIED TO ANY DISTURBED AREAS (INCLUDING SOIL STOCKPILE AREAS) THAT HAVE NOT YET REACHED FINISH GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS A TEMPORARY ASSIST UNLESS THE ACTIVITY IS TO RESUME WITHIN 21 DAYS. THE RECOMMENDED TEMPORARY SEATING DATES ARE MARCH 15 TO NOVEMBER 15 WITH THE APPROVAL OF THE ENGINEER THIS TEMPORARY VEGETATIVE COVER SHALL CONSIST OF 60% OF ANNUAL OR PERENNIAL RYEGRASS AND 40% OF MULLETT OR SUDAN GRASS OR 100% OF WINTER RYE. ANNUAL OR PERENNIAL RYEGRASS SHALL BE PLANTED AT THE RATE OF 1.5 POUNDS PER 1000 FT²; WINTER RYE SHALL BE PLANTED AT A RATE OF 2.5 POUNDS PER 1000 FT²; AND MILLET OR SUDAN GRASS SHALL BE PLANTED AT A RATE OF 1 POUND PER 1000 FT².

LIMESTONE AND FERTILIZER SHALL BE APPLIED ACCORDING TO SOIL TEST RECOMMENDATIONS OFFERED BY THE UNIVERSITY OF MASSACHUSETTS SOIL TESTING LABORATORY. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 300 POUNDS PER ACRE OR 7 1/2 POUNDS PER 1000 FT² OF 10-10-10 OR EQUIVALENT. APPLY LIMESTONE EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE AS FOLLOWS: (1) 3 TONS PER ACRE OR 135 POUNDS PER 1000 FT² FOR CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL; (2) 2 TONS PER ACRE OR 90 POUNDS PER 1000 FT² FOR SANDY LOAM, LOAM, SILTY LOAM, AND (3) 1 TON PER ACRE OR 45 POUNDS PER 1000 FT² LOAMY SAND OR SAND. TEMPORARY VEGETATIVE COVER SHALL BE INSTALLED AS OUTLINED IN THE MASSACHUSETTS SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.

- PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO ALL DISTURBED AREAS THAT HAVE REACHED FINISH GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. THE RECOMMENDED PERMANENT SEATING DATES ARE APRIL 1 TO MAY 31 AND AUGUST 15 TO OCTOBER 15. PERMANENT VEGETATIVE COVER OUTSIDE OF DETENTION BASINS, IMPERVIOUS SURFACES, OR NOT OTHERWISE SPECIFIED ON THE LANDSCAPE PLANS SHALL RECEIVE THE FOLLOWING SEED MIXTURE ALSO KNOWN AS PARK SEED MIXTURE:

75% OF RED FESCUE	APPLICATION RATE: 1.75 LBS/ 1,000 SF
15% OF KENTUCKY BLUEGRASS	APPLICATION RATE: 0.35 LBS/ 1,000 SF
5% COLONIAL BENTGRASS	APPLICATION RATE: 0.11 LBS/ 1,000 SF
5% OF PERENNIAL RYEGRASS	APPLICATION RATE: 0.11 LBS/ 1,000 SF

LIMESTONE AND FERTILIZER SHALL BE APPLIED ACCORDING TO SOIL TEST RECOMMENDATIONS OFFERED BY THE UNIVERSITY OF MASSACHUSETTS SOIL TESTING LABORATORY. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT A RATE OF 500 POUNDS PER ACRE OR 11.5 POUNDS PER 1000 FT² OF 10-20 DASH 20 OR EQUIVALENT. APPLY LIMESTONE EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE AS FOLLOWS: 4 TONS PER ACRE OR 180 POUNDS PER 1000 FT² FOR CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL; 3 TONS PER ACRE OR 135 POUNDS PER 1000 FT² FOR SANDY LOAM, LOAM, OR SILT LOAM; AND 2 TONS PER ACRE OR 90 POUNDS PER 1000 FT² LET ME SAND OR SAND.

NOTE:
THE USE OF HAY IS NOT ALLOWED. ALL REFERENCES TO HAY, SHALL BE TAKEN TO MEAN STRAW.

GENERAL NOTES:

- THE STATE OF MASSACHUSETTS STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION, AND THE MASSACHUSETTS STANDARD DETAILS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO. ALL WORK SHALL CONFORM TO MASSACHUSETTS STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION 2004 EDITION OR LATEST REVISION. THE 2004 EDITION OF THE STANDARD SPECIFICATION MAY BE OBTAINED AT THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO APPLY FOR AND OBTAIN ANY AND ALL NECESSARY PERMITS, PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE SAME, AND COORDINATE WITH ARCHITECT OR ENGINEER AS NECESSARY.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF THE JOB SITE. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AND/OR BARRIERS AROUND ANY EXPOSED EXCAVATED AREAS IN ACCORDANCE WITH OSHA STANDARDS.
- IN THE CASE THAT ANY DEVIATION / ALTERATION / OR IMPROVEMENT FROM THE APPROVED PLANS IS NECESSARY THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER AND OWNER PRIOR TO OCCURRENCE OF DEVIATION.
- ALL WORK SHALL BE LIMITED TO THE AREAS WITHIN THE LIMIT OF DISTURBANCE DISPLAYED ON THESE PLANS OR PROPERTY LINE IF LIMIT OF DISTURBANCE IS UNCLEAR. ANY AREA DISTURBED OUTSIDE OF THE LIMIT OF DISTURBANCE SHALL BE REPAIRED AND RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER OR ENGINEER, AND PERFORMED TO THE ENGINEERS SATISFACTION.
- ALL SITE WORK SHALL MEET OR EXCEED THE SITE WORK SPECIFICATION SHOWN ON THESE PLANS AND/OR ACCOMPANYING SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING IF ANY CONFLICTS WITH EXISTING CONDITIONS OR PROPOSED CONDITIONS EXIST. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED.
- EXCAVATED ROCK SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF UNLESS OTHER ARRANGEMENTS ARE MADE WITH THE OWNER. SUITABLE ROCK MAY BE UTILIZED IN FILL AREAS WITH WRITTEN PERMISSION OF THE OWNERS REPRESENTATIVES.
- DEBRIS, ORGANICS AND OTHER UNSUITABLE MATERIALS UNCOVERED DURING THE COURSE OF SITE EXCAVATION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES THAT SERVICE THE SITE AND NEIGHBORING AREAS. IF ANY DAMAGE OCCURS TO EXISTING UTILITIES IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PAY ALL COSTS ASSOCIATED WITH REPAIR OF UTILITIES AS DIRECTED BY THE ENGINEER, UTILITY OWNER, OR GOVERNING AGENCY.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR QUANTITY TAKE-OFF IN COMPUTING ANY ESTIMATES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
- THE LOCATION OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. "DIG SAFE" SHALL BE CONTACTED BY THE CONTRACTOR AS PART OF THIS VERIFICATION.
- NO EXCAVATION SHALL PROCEED UNTIL UTILITY COMPANIES ARE NOTIFIED IN ADVANCE.
- ALL TREE PROTECTION BY OTHERS UNLESS OTHERWISE NOTED.
- CONTRACTOR TO LOAM AND SEED ALL DISTURBED AREAS WITH APPROPRIATE SEED MIXTURES.

GRADING AND UTILITIES NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED WORK SHOWN ON THESE PLANS DO NOT CONFLICT WITH ANY EXISTING CONDITIONS OR OTHER PROPOSED WORK. IF CONFLICTS ARISE, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED. NO FIELD ADJUSTMENTS IN THE LOCATION OF SITE ELEMENTS SHALL BE MADE WITHOUT THE ENGINEERS APPROVAL.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH WORK, THE LOCATION, ELEVATION, SIZE AND MATERIAL SHALL BE ACCURATELY DETERMINED BY THE CONTRACTOR IMMEDIATELY AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION. THE CONTRACTOR SHALL NOT CONTINUE WORK ON AFFECTED UTILITIES UNTIL THE CONFLICT IS RESOLVED.
- ALL WORK PERFORMED AND ALL MATERIALS FURNISHED SHALL CONFORM WITH THE LINE AND GRADES ON THE PLANS AND SITE WORK SPECIFICATIONS.
- AT ALL LOCATIONS WHERE EXISTING CURBING OR PAVEMENT ABOUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT AND CURBS SMOOTHLY INTO EXISTING BY MATCHING LINES, GRADES AND JOINTS.
- ALL UTILITY COVERS, GRATES, AND THE LIKE SHALL BE FLUSH WITH THE SURROUNDING SURFACE OR PAVEMENT FINISH. RIM ELEVATIONS ARE APPROXIMATE AND FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH GRADING.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION OF PRIVATE UTILITIES BY THE UTILITY COMPANY, AS REQUIRED.
- THE CONTRACTOR SHALL PROTECT ALL UNDERGROUND UTILITY FACILITIES FROM EXCESSIVE VEHICULAR LOADING. ANY DAMAGE RESULTING TO THESE FACILITIES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE.
- ALL WATER WORKS SHALL HAVE 5 FEET OF COVER.
- GAS, ELECTRIC, AND COMMUNICATIONS ROUTING ARE SUBJECT TO REVIEW AND APPROVAL BY UTILITY COMPANY.
- DURING CONSTRUCTION CONTRACTOR SHALL PROTECT EXISTING UTILITIES BY PROVIDING TEMPORARY SUPPORTS OR SHEETINGS AS REQUIRED AT NOT ADDITIONAL COST TO THE OWNER.
- EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINE OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATION AT NO COST TO THE OWNER.
- PITCH EVENLY BETWEEN ALL SPOT GRADES.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ANY, ROCKS, DEBRIS, ORGANICS, OR THE LIKE UNCOVERED IN THE COURSE OF WORK.

LOAM AND SEED:

GENERAL:

- ALL DISTURBED AREAS TO BE LOAMED AND SEED PER MASSACHUSETTS SOIL EROSION AND SEDIMENT CONTROL HANDBOOK AS AMENDED OR REVISED.
- FOR NON-NATIVE PLANTING SEEDING DATES ARE APRIL 1 THROUGH JUNE 15 AND AUGUST 15 THROUGH SEPTEMBER 30. DATE MAY BE EXTENDED 15 DAYS IN NEWPORT COUNTY. FOR NATIVE PLANTING SEEDING DATES ARE BETWEEN AUGUST AND SEPTEMBER.

SEED BED PREPARATION:

- LOOSEN SOIL TO A DEPTH OF FIVE INCHES BY RAKING, DISCHING, DRAGGING OR TRAVERSING WITH TRACKED MACHINERY, OVER COMPACTION SHALL BE AVOIDED CLEAT MARKS SHALL BE PERPENDICULAR TO ANTICIPATED DIRECTION OF SURFACE WATER FLOW.
- APPLY TOPSOIL IF NECESSARY.
- APPLY SLOW RELEASE FERTILIZER NOT TO EXCEED 1500 LBS PER ACRE OR 36 LBS PER 1,000 SF USING THE FOLLOWING PERCENTAGES BY WEIGHT:
 - 10% AVAILABLE NITROGEN (N)
 - 20% AVAILABLE PHOSPHORIC ACID (P)
 - 20% AVAILABLE POTASSIUM (K)
- REMOVE FROM SURFACE ALL STONES LARGER THAN 2" IN DIAMETER, ALL DEBRIS, TREE ROOTS OR OTHER UNSUITABLE MATERIAL.
- INSPECT AREA TO BE SEED IMMEDIATELY PRIOR TO SEEDING FOR ANY COMPACTED AREAS, IF COMPACTED AREAS EXIST SCARIFY PRIOR TO COMMENCING SEEDING.

SEEDING:

- APPLY SELECTED SEED AT RATES PROVIDED UNIFORMLY BY HAND, CYCLOE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER.
- NORMAL SEEDING DEPTH IS 25 TO .5 INCH. HYDROSEEDINGS MAY BE LEFT ON THE SOIL SURFACE.
- WHERE FEASIBLE, EXCEPT WHERE EITHER CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, FIRM THE SEEDBED FOLLOWING SEEDING OPERATION WITH ROLLER, OR LIGHT DRAG.
- SEEDING RATES SHALL BE INCREASED BY 10% WHEN USING HYDROSEEDING.
- USE OF STRAW MULCH HELD WITH ADHESIVE MATERIALS OR 500 LBS PER ACRE OF WOOD FIBER MULCH IS RECOMMENDED FOR PROTECTION FROM SOIL EROSION.
- IF SEEDING CAN NOT BE COMPLETED WITHIN SEEDING DATES USE MULCHING TO PROTECT SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

RECOMMENDED SEEDING:
SEED MIXTURE NO. 1

KENTUCKY BLUE GRASS	22.5 LBS/AC	0.5 LBS/1000 SF
CREeping RED FESCUE	105 LBS/AC	2.5 LBS/1000 SF
PERENNIAL RYEGRASS	22.5 LBS/AC	0.5 LBS/1000 SF

NOTES: WHERE CONFUSION OR UNCERTAINTY EXISTS IN LOAMING AND SEEDING CONSULT THE MASSACHUSETTS SOIL EROSION AND SEDIMENT CONTROL HANDBOOK AS AMENDED OR REVISED, ENGINEER, LANDSCAPE ARCHITECT

DEMOLITION NOTES:

- THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION OF STRUCTURES, PAVEMENT, CONCRETE MATERIALS AND UTILITIES WITH THE PROPOSED SITE, UTILITY, LANDSCAPING, AND ARCHITECTURAL DRAWINGS.
- ALL NOTED UTILITIES TO BE REMOVED AND DISPOSED OF, RELOCATED OR CAPPED REPRESENT ALL KNOWN SITE CONDITIONS TO BE DEMOLISHED. CONTRACTOR SHALL COORDINATE ALL UNFORESEEN CONDITIONS WITH THE PROJECT ENGINEER, ARCHITECT, OWNER REPRESENTATIVE AND/OR AFFECTED UTILITIES COMPANY.
- THERE SHALL BE NO INTERRUPTION OF UTILITY SERVICE DURING THE CONSTRUCTION PROCESS WITHOUT THE WRITTEN PERMISSION OF THE OWNER OR OWNERS REPRESENTATIVE.
- WATER, SEWER, DRAINAGE AND OTHER SITE UTILITIES SERVICING THE EXISTING FACILITIES ARE TO REMAIN ACTIVE UNTIL PROPOSED IMPROVEMENTS ARE CONSTRUCTED AND ONLINE. WHEN CONNECTION TO ACTIVE OR RELOCATED UTILITIES, SHUTDOWNS SHALL BE MINIMIZED AND COMPLETED OFF HOURS AND COORDINATED WITH THE OWNER OR OWNER REPRESENTATIVE.

COMPOST FILTER SOCK DETAIL

N.T.S.

- INSTALLATION. COMPOST FILTER SOCKS SHALL BE CONSTRUCTED AT THE LOCATIONS, AND IN ACCORDANCE WITH THE DETAILS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. THE FOLLOWING STIPULATIONS ALSO APPLY:
 - COMPOST FILTER SOCKS MAY BE EITHER FABRICATED ON SITE OR DELIVERED TO THE SITE.
 - COMPOST MEDIA SHALL CONFORM TO AASHTO MP 9-06.
 - TRENCHING IS NOT REQUIRED. COMPOST FILTER SOCKS SHALL BE PLACED OVER THE TOP OF GROUND, WOODEN STAKES SHALL BE DRIVEN THROUGH THE CENTER OF THE FILTER SOCKS TO ANCHOR THEM TO THE GROUND. TO ENSURE OPTIMUM PERFORMANCE, HEAVY VEGETATION SHALL BE CUT DOWN OR REMOVED, AND EXTREMELY UNEVEN SURFACES SHALL BE GRADED TO ENSURE THAT THE COMPOST FILTER SOCK UNIFORMLY CONTACTS THE GROUND SURFACE.
 - FILTER SOCKS SHALL BE PLACED IN A CONTINUOUS LINE. WHERE ENDS INTERSECT THEY SHALL BE SLEEVED TO CREATE AN INTERLOCK WITH A TWO (2) FOOT OVERLAP. AFTER ONE SECTION IS FILLED AND THE ENDS TIED OFF, THE NEXT SECTION SHALL BE PULLED OVER THE TIED OFF END OF THE PREVIOUS SECTION, TO CREATE A 2 FOOT OVERLAP. THE OVERLAP SHALL BE STAKED. THE INTERSECTING OVERLAPS SHALL BE CONSTRUCTED TO ENSURE THAT STORMWATER DOES NOT BREAK THROUGH AT THESE INTERSECTION POINTS.
- REMOVAL. THIS WORK, IF REQUIRED, SHALL INCLUDE THE REMOVAL OF THE COMPOST FILTER SOCK AND STAKES UNLESS BIODEGRADABLE. THE MESH FILTER SOCK MATERIAL SHALL BE CUT OPEN AND THE MESH REMOVED. IN GENERAL, THE COMPOST FILTER MATERIAL MAY BE LEFT IN PLACE. HOWEVER THE MATERIAL WILL BE RAKED OUT LEVLED TO SURROUNDING GRADES, THEN SEED. PRIOR TO SUCH REMOVAL, HOWEVER, ALL SILT, MUD AND DEBRIS ENTRAPPED OUTSIDE OF THE COMPOST FILTER SOCK SHALL BE REMOVED AND THE AREA CLEANED UP.

CONSTRUCTION ACCESS

PER RIDOT STANDARD 9.9.0
N.T.S.

NOTE: SHALL BE IN ACCORDANCE WITH SECTION 211 OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

TEMPORARY SEDIMENT STOCKPILE

N.T.S.

NOTES:

- PRIOR TO CONSTRUCTION CONTRACTOR SHALL PREPARE PLAN INDICATING LOCATIONS OF SEDIMENT STOCKPILES FOR APPROVAL BY THE ENGINEER OR APPROPRIATE REGULATORY AUTHORITY.
- STOCKPILE SHALL NOT EXCEED GIVEN DIMENSIONS WITH OUT APPROVAL BY ENGINEER OR APPROPRIATE REGULATORY AUTHORITY.
- STOCKPILED MATERIAL NOT TO BE USED WITHIN 14 CALENDAR DAYS SHALL BE PLANTED WITH TEMPORARY SEED MIX MADOT STD M.6.3.1 SEED MIX

90° Battered Corner - Flush End

Notes:

- Wall is flush with building.
- Rows 2, 4, 6, and 8 require approximately 1/8" (3 mm) gaps between blocks for length of wall given.
- Solution shown based on a 24" (610 mm) wide corner block.

Row	Short Blocks Required
1	0
2 and 3	1 per Row
4 and 5	2 per Row
6 and 7	3 per Row
8	4 per Row

This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY: JRJ
APPROVED BY: JRJ
DATE: 06-22-2015
SHEET: 1 of 1

TITLE: 90° Battered Corner - Flush End
FILE: 10 90deg Battered Corner - Flush End 062215.dwg

REDI+ROCK
15681 US 31 SOUTH, CHARLEVOIX, ME 04720
(866) 222-8405 ext 3010 • engineer@redirock.com
www.redirock.com

90° OUTSIDE CORNER DETAIL

(41" AND 28" SERIES)

Notes: Top row of blocks are shown in RED and have been colour to show location of knobs on bottom row of blocks.

Remove part of 10" knob with chop saw to allow for proper alignment.

Remove part of 6" knob with chop saw to allow for proper alignment.

Alternate construction practice would be to offset freestanding block 1" to avoid cutting knob. Note, this will result in a small offset to the bond beam down the wall.

41" or 28" Series Block with 10" Knobs (41" Block Shown)

Freestanding Corner Block with 6" Knobs

TOP VIEW
(NO SCALE)

6" Knob

Cut 10" knob to fit within groove

SIDE VIEW
(NO SCALE)

1 1/2"

6"

Drawings must be printed in color to be valid. This note should be blue. If this note is not blue, please reprint in color or contact NEI.

DRAWN BY: JRJ
APPROVED BY: JRJ
DATE: 06-22-2015
SHEET: 1 of 1

TITLE: 90° Outside Corner Detail Trimmed Knob Option
FILE: 2 90deg Outside Corner Detail - Trimmed Knob 062215.dwg

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NEI
Narragansett
Engineering Inc.

Civil - Survey Structural Environmental Design
3102 East Main Road, Portsmouth RI 02871
Tel. 401.683.6630 www.nei-cds.com

SHEET TITLE

DETAILS AND NOTES

DERBY ACADEMY 56 BURDITT AVE, HINGHAM, MA 02043
PROPERTY RECORD
56 BURDITT AVENUE
HINGHAM, MA 02043
[PLAT:49 LOT:57, ZONE: RA, AREA: 21.6 ACRES]
N/F: TRUSTEES OF DERBY ACADEMY

C/O JASON EARLS
SAGAMORE
75 RESEARCH RD
HINGHAM, MA 02043
T: (781) 531-9466
E: JEARLS@SAGAMORE.COM

PROJECT NO.	DATE	BY
25.0126	9/16/25	AS

DRAWING ISSUE:

CONCEPT / DISCUSSION

PERMITTING

CONSTRUCTION

AS-BUILT

OTHER

ONLY PLANS ISSUED FOR CONSTRUCTION SHALL BE USED FOR CONSTRUCTION

SCOPE:
RETAINING WALL DESIGN TO ACCOMMODATE MECH AIR HANDLER
SITE GRADING UTILITY RECONFIGURATION LIMIT OF DISTURBANCE, SECC AND RELATED SITE CIVIL WORK

MICHAEL E. MARTEL
STRUCTURAL
No. 41674
REGISTERED PROFESSIONAL ENGINEER
11/25/2025

FORMAL PLAN REVISIONS

No	DATE	STAGE/DESCRIPTION	BY

INTERNAL REVIEW

No	CHECK	CAD	DESCRIPTION/NOTES
1	JM	EB	PRELIMINARY STORMWATER DESIGN, SURFACE GRADES AROUND SYSTEM
2	JM	EB	REVISION OF STORMWATER AND GRADING BASED ON REVISED TOP OF COASTAL BANK AND BUFFER ZONES
3	JM	EB	UPDATED LOD AND DETAIL SHEETS, ADDED MITIGATION AREAS

neil-cds.com

LOCUS MAP

SCALE
N/A

C-201

N:\PROJECTS\25.0126_SAGAMORE (DERBY ACADEMY) (STRUCTURAL) - RET WALL\25.0126_SAGAMORE (DERBY ACADEMY) SITE DWG C-201 NEI-Standard.dwg 1/20/2025 EJC BUZ

CULTEC RECHARGER® 360HD PRODUCT SPECIFICATIONS

- GENERAL**
- CULTEC RECHARGER® 360HD 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**
- THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, OF BROOKFIELD, CT (CULTEC.COM, 203-775-4416).
 - THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
 - INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
 - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
 - 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
 - THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12. WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS, THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
 - THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
 - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95
 - THE INSTALLED CHAMBER SYSTEM SHALL BE STRUCTURALLY DESIGNED TO PROVIDE RESISTANCE TO LIVE LOADS AS DEFINED BY THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12. WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
 - THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
 - 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.
 - THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER® 360HD SHALL BE 36 INCHES (914 MM) TALL, 60 INCHES (1525 MM) WIDE AND 50 INCHES (1275 MM) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 360HD SHALL BE 3.67 FEET (1.12 M).
 - MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER® 360HD END CAP. MAXIMUM INLET OPENING ON THE END CAP IS 24 INCHES (600 MM) HDPE OR 30 INCHES (750 MM) PVC.
 - THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV™ FC-48 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE PIPE SIZE IN THE SIDE PORTAL IS 10 INCHES (250 MM) HDPE AND 12 INCHES (300 MM) PVC.
 - THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV™ FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 MM) TALL, 16 INCHES (406 MM) WIDE AND 49 INCHES (1245 MM) LONG.
 - THE NOMINAL STORAGE VOLUME OF THE RECHARGER 360HD CHAMBER SHALL BE 10.0 FT³ / UNIT (0.28 M³ / UNIT) - WITHOUT STONE.
 - THE NOMINAL STORAGE VOLUME OF THE HVLV™ FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / UNIT (0.085 M³ / UNIT) - WITHOUT STONE.
 - THE RECHARGER 360HD CHAMBER SHALL HAVE 7 CORRUGATIONS.
 - THE CHAMBER SHALL BE CAPABLE OF ACCEPTING A 6 INCH (150 MM) INSPECTION PORT OPENING AT THE TOP CENTER OF EACH CHAMBER, CENTERED ON THE CORRUGATION CREST.
 - THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
 - THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.
 - MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 12.0 FEET (3.66 M).

- END CAP PARAMETERS**
- THE CULTEC RECHARGER® 360HD END CAP (REFERRED TO AS "END CAP") SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, OF BROOKFIELD, CT (CULTEC.COM, 203-775-4416).
 - THE END CAP SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
 - THE END CAP SHALL BE ARCHED IN SHAPE.
 - THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
 - THE END CAP SHALL HAVE 5 CORRUGATIONS.
 - THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 36.5 INCHES (927 MM) TALL, 60 INCHES (1525 MM) WIDE AND 18 INCHES (457 MM) LONG. WHEN JOINED WITH A RECHARGER 360HD CHAMBER, THE INSTALLED LENGTH OF THE END CAP SHALL BE 15 INCHES (381 MM).
 - THE NOMINAL STORAGE VOLUME OF THE END CAP SHALL BE 5.17 FT³ / UNIT (0.48 M³ / UNIT) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF AN INTERLOCKED END CAP SHALL BE 6.46 FT³ / UNIT (0.183 M³ / UNIT) - WITHOUT STONE.
 - MAXIMUM INLET OPENING ON THE END CAP IS 24 INCHES (600 MM) HDPE OR 30 INCHES (750 MM) PVC.
 - THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS

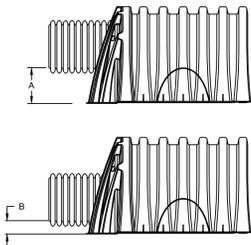
- GENERAL**
- CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 360HD STORMWATER CHAMBERS.
- FEED CONNECTOR PARAMETERS**
- THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
 - THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HDHMDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
 - THE FEED CONNECTOR SHALL BE ARCHED IN SHAPE.
 - THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED.
 - THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
 - THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / UNIT (0.085 m³ / m) - WITHOUT STONE.
 - THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.
 - THE HVLV FC-48 FEED CONNECTOR MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
 - THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-25 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
 - THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.
- CULTEC NO. 410™ NON-WOVEN GEOTEXTILE**
- CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.
- GEOTEXTILE PARAMETERS**
- THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
 - THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
 - THE GEOTEXTILE SHALL HAVE A TENSILE WEIGHT OF 4.5 OZ/SY (142 G/M).
 - THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
 - 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 METHOD.
 - THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER ASTM D4491 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.
- CULTEC AFAB-HPF™ WOVEN GEOTEXTILE**
- CULTEC AFAB-HPF™ WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.
- GEOTEXTILE PARAMETERS**
- THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC 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 320 X 320 LBS (1,420 X 1,420 N) PER ASTM D4632 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK RESISTANCE OF 15 X 15% PER ASTM D4632 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 3,563 X 3,563 LBS/FT (52 X 52 KN/M) PER ASTM D4595 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,500 LBS (6,670 N) PER ASTM D6241 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 120 X 120 LBS (540 X 540 N) PER ASTM D4533 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 30 US STD. SIEVE (0.60 MM) PER ASTM D4751 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.2 SEC-1 PER ASTM D4491 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 22 GPM/FT2 (900 LPM/M2) PER ASTM D4491 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 70% @ 500 HRS. PER ASTM D4355 TESTING METHOD.

GENERAL NOTES

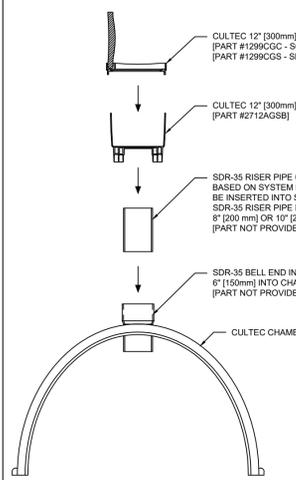
PIPE	A	B
6" (150 mm)	26.50" [673 mm]	1.00" [25 mm]
8" [200 mm]	24.50" [622 mm]	1.00" [25 mm]
10" [250 mm]	22.25" [565 mm]	1.25" [32 mm]
12" [300 mm]	19.75" [502 mm]	1.75" [45 mm]
15" [375 mm]	16.50" [419 mm]	2.00" [50 mm]
18" [450 mm]	13.00" [330 mm]	2.50" [64 mm]
21" [525 mm]	10.00" [254 mm]	2.50" [64 mm]
24" [600 mm]	7.00" [178 mm]	2.50" [64 mm]
30" [750 mm]	N/A	3.50" [89 mm]

*THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE. THE HEAVY DUTY END CAP HAS PRE-MARKED TRIM LINES FOR PIPE DIAMETERS 12" (300mm), 15" (375mm), 18" (450mm) AND 24" (600mm). PIPES OF ANY SIZE AND MATERIAL UP TO 24" (600mm) MAY BE PLACED AT CUSTOM LOCATIONS AND CUSTOM INVERTS. 30" (750 mm) SMOOTH-WALL SDR-35 PVC PIPE MAY BE USED AT THE BOTTOM OF THE END CAP. THE CROWN OF THE PIPE MUST REMAIN A MINIMUM OF 3" (75mm) FROM THE EDGE OF THE HEAVY DUTY END CAP.

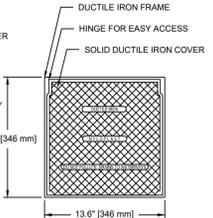
CULTEC RECHARGER 360HD TYPICAL PIPE INVERTS



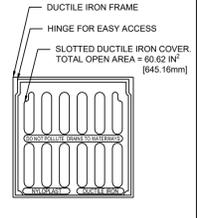
FINAL ASSEMBLY



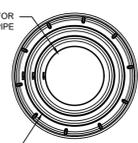
SOLID COVER OPTION



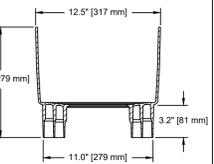
SLOTTED COVER OPTION



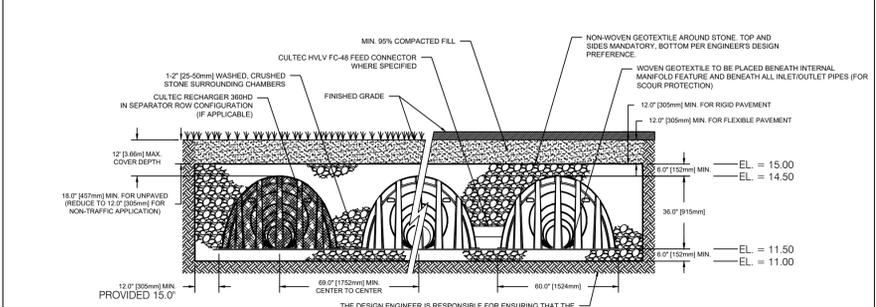
PVC BODY PLAN VIEW



PVC BODY ELEVATION VIEW

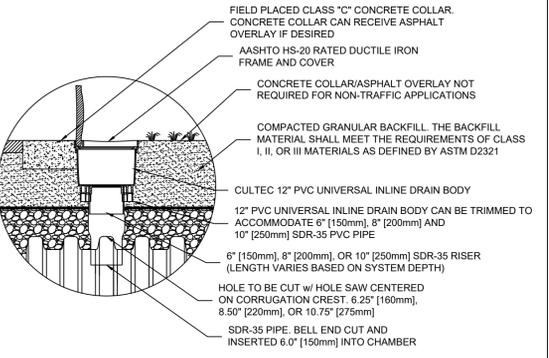
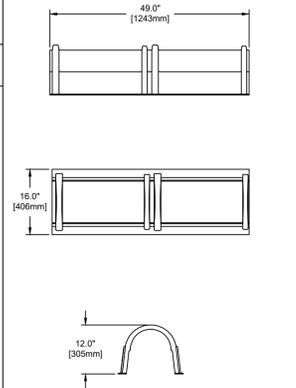


CULTEC UNIVERSAL INSPECTION PORT KIT DETAIL



- NOTES**
- THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
 - INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
 - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
 - 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
 - THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12. WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS, THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
 - THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
 - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

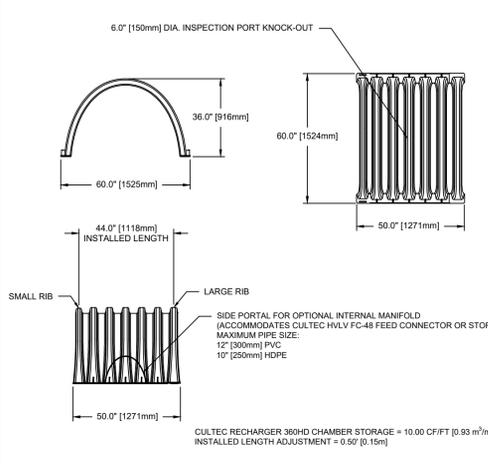
CULTEC RECHARGER 360HD CROSS SECTION



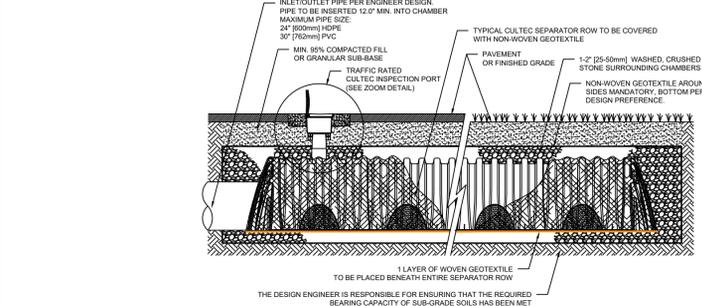
CULTEC HVLV FC-48 FEED CONNECTOR THREE VIEW

OPTIONAL CULTEC INSPECTION PORT - ZOOM DETAIL

CULTEC RECHARGER 360HD HEAVY DUTY THREE VIEW



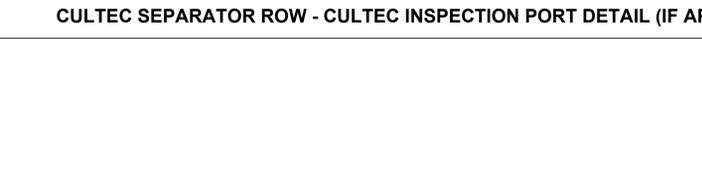
CULTEC RECHARGER 360HD HEAVY DUTY TYPICAL INTERLOCK



- NOTES**
- THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
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 - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
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 - THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
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 - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95



CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)



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Engineering Inc.
Civil - Survey Structural Environmental Design
3102 East Main Road, Portsmouth RI 02871
Tel. 401.683.6630 www.nei-cds.com

SHEET TITLE
DETAILS AND NOTES

DERBY ACADEMY 56 BURDITT AVE, HINGHAM, MA 02043
PROPERTY RECORD
56 BURDITT AVENUE
HINGHAM, MA 02043
[PLAT-49 LOT.57, ZONE: RA, AREA: 21.6 ACRES]
N/F: TRUSTEES OF DERBY ACADEMY

C/O JASON EARLS
SAGAMORE
75 RESEARCH RD
HINGHAM, MA 02043
T: (781) 531-9466
E: JEARLS@SAGAMORE.COM

PROJECT NO.	DATE	BY
25.0126	9/16/25	AS

- DRAWING ISSUE:**
- CONCEPT / DISCUSSION
 - PERMITTING
 - CONSTRUCTION
 - AS-BUILT
 - OTHER
- ONLY PLANS ISSUED FOR CONSTRUCTION SHALL BE USED FOR CONSTRUCTION

SCOPE:
RETAINING WALL DESIGN TO ACCOMMODATE MECH AIR HANDLER
SITE GRADING/UTILITY RECONFIGURATION LIMIT OF DISTURBANCE, SECC AND RELATED SITE CIVIL WORK



FORMAL PLAN REVISIONS

No	DATE	STAGE/DESCRIPTION	BY

INTERNAL REVIEW

No	CHECK	CAD	DESCRIPTION/NOTES
1	JM	EB	PRELIMINARY STORMWATER DESIGN, SURFACE GRADES AROUND SYSTEM
2	JM	EB	REVISION OF STORMWATER AND GRADING BASED ON REVISED TOP OF COASTAL BANK AND BUFFER ZONES
3	JM	EB	UPDATED LOD AND DETAIL SHEETS, ADDED MITIGATION AREAS

Drawings must be printed in color or to be valid. This note should be blue. If this note is not blue, please reprint in color or contact NEI.



SCALE N/A

C-202