

Civil Engineer

**JMC** Site Development Consultants  
120 Bedford Road  
Armonk, NY 10504  
914-273-5225  
[www.jmcpllc.com](http://www.jmcpllc.com)

## MEP Engineer

**BR+A**  
BR+A CONSULTING  
ENGINEERS, P.C.  
705 Madison Avenue, 10th Floor  
New York, NY 10016  
212.840.0060  
brplusa.com

Attorney

DelBello Donnellan Weingarten Wise &  
Wiederkehr, LLP  
One North Lexington Avenue, 11th Floor  
White Plains, New York 10601  
Phone: (914) 681-0200

## Geotechnical Engineer



Carlin-Simpson & Associates, LLC  
61 Main Street  
Sayreville, NJ 08872  
Phone: (732) 432-5757

Architect

**Gensler**  
1700 Broadway, Suite 400  
New York, New York 10019  
Phone: (212) 492-1400  
Fax: (212) 492-1472

Landscape Architect (Playground):

Langan  
 21 Penn Plaza, 360 West 31st Street, 8th Floor  
 New York, New York 10001  
 Phone: (212) 479-5400  
 Fax: (212) 479-5444

MEP/IT/Security Engineer:

**Cosentini Associates**  
498 Seventh Avenue  
New York, New York 10018  
Phone: (212) 615-3600  
Fax: (212) 615-3700

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[illegible]

### Project Info:

DAYCARE (B-17)

## CONSTRUCTION DRAWINGS

777 OLD SAW MILL RIVER ROAD  
MOUNT PLEASANT, NY 10591  
Vendor Name: Carlin-Simpson & Associates LLC  
Vendor Project No.: 20-166  
Discipline: Geotechnical      Drawn By: MRA  
Drawing Title:

## OVERALL DRAINAGE PLAN

Scale: 1" = 20'

GT-100

- ## GENERAL NOTES

1. GENERAL LAYOUT WAS OBTAINED FROM A DRAWING PREPARED BY JMC, PLLC., DATED 05/12/2022, ENTITLED "GRADING PLAN".
2. REFER TO THE REPORT ON SUBSURFACE SOIL AND FOUNDATION INVESTIGATION BY CARLIN-SIMPSON & ASSOCIATES LLC DATED 20 APRIL 2022 FOR BORING LOGS.
3. ALL BORING LOCATIONS ARE APPROXIMATE.
4. CROSS-SECTIONS ARE SHOWN ON SHEETS GT-101 AND GT-102. ALL BEDROCK AND GROUNDWATER ELEVATIONS ON THE CROSS-SECTIONS ARE APPROXIMATE.

## LIST OF DRAWINGS

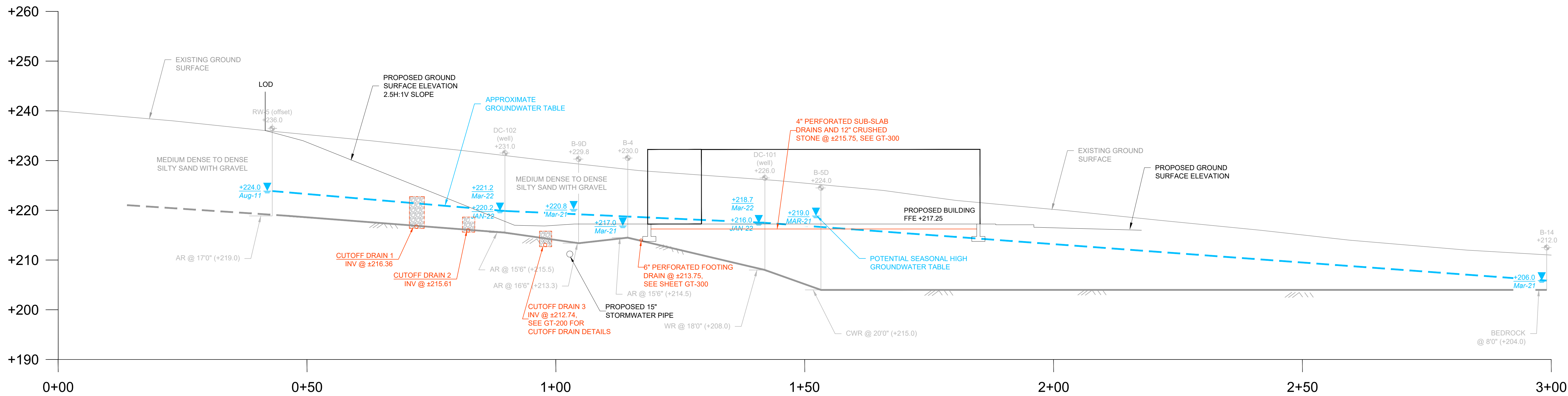
GT-100	OVERALL DRAINAGE PLAN
GT-101	CROSS-SECTIONS A & B
GT-102	CROSS SECTIONS C, D, & E
GT-200	SLOPE DRAINAGE PLAN
GT-300	BUILDING DRAINAGE PLAN
GT-400	PAVEMENT DRAINS & POND DRAINAGE BLANKET

**LEGEND:**

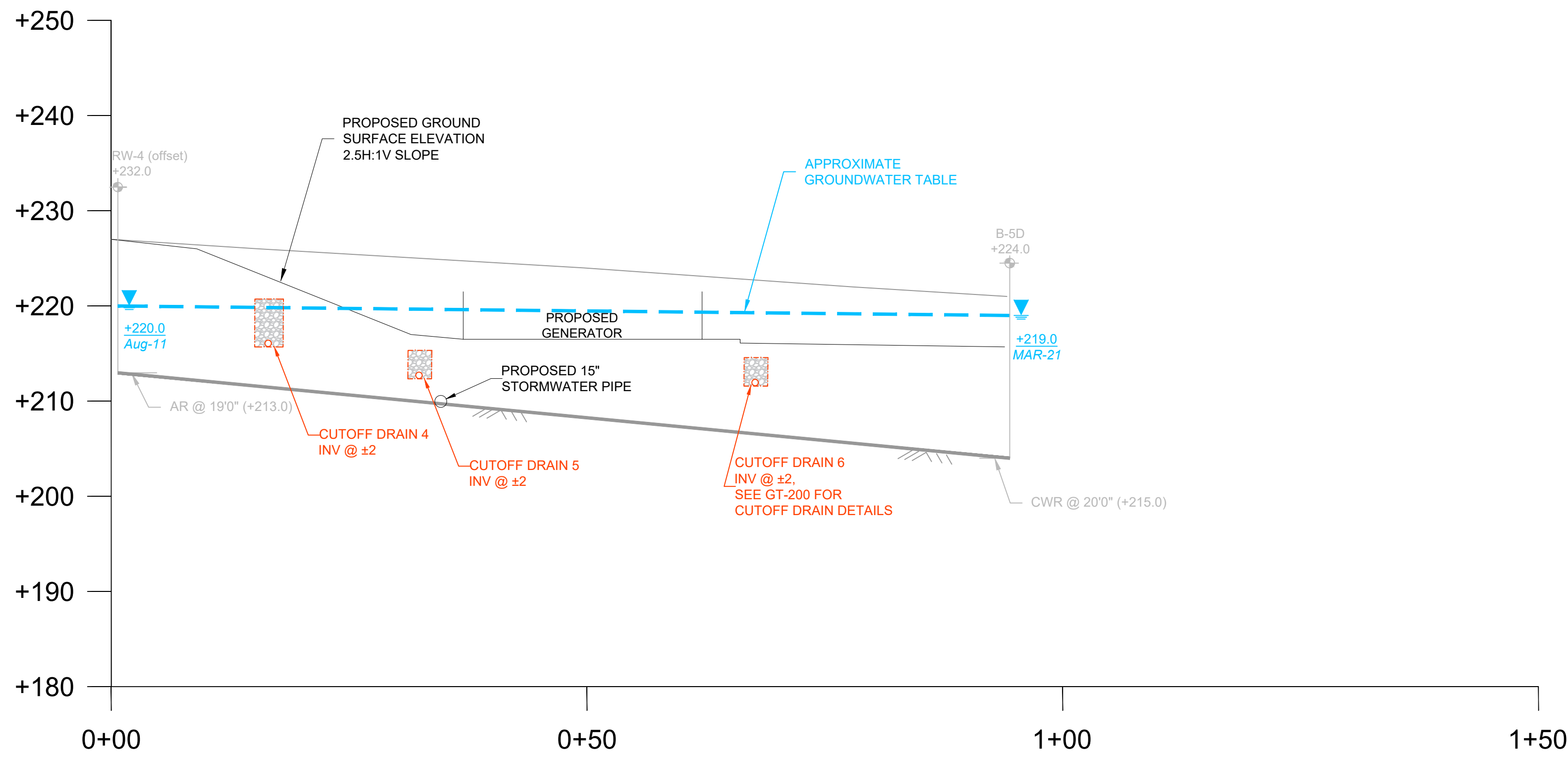
- ✦ - BORING AND/OR WELL LOCATION PERFORMED IN DECEMBER 2021 (DC-100 SERIES)
- ✦ - BORING LOCATION PERFORMED IN MARCH 2021 (BD SERIES)
- ✦ - BORING LOCATION PERFORMED IN FEB 2020 (B-1 THRU B-14)
- ✦ - BORING LOCATION PERFORMED IN MARCH 2016 (B-5 THRU B-10)
- ✦ - BORING LOCATION PERFORMED IN 2011 (B-101, B-102, AND RW-3 TO RW-6)



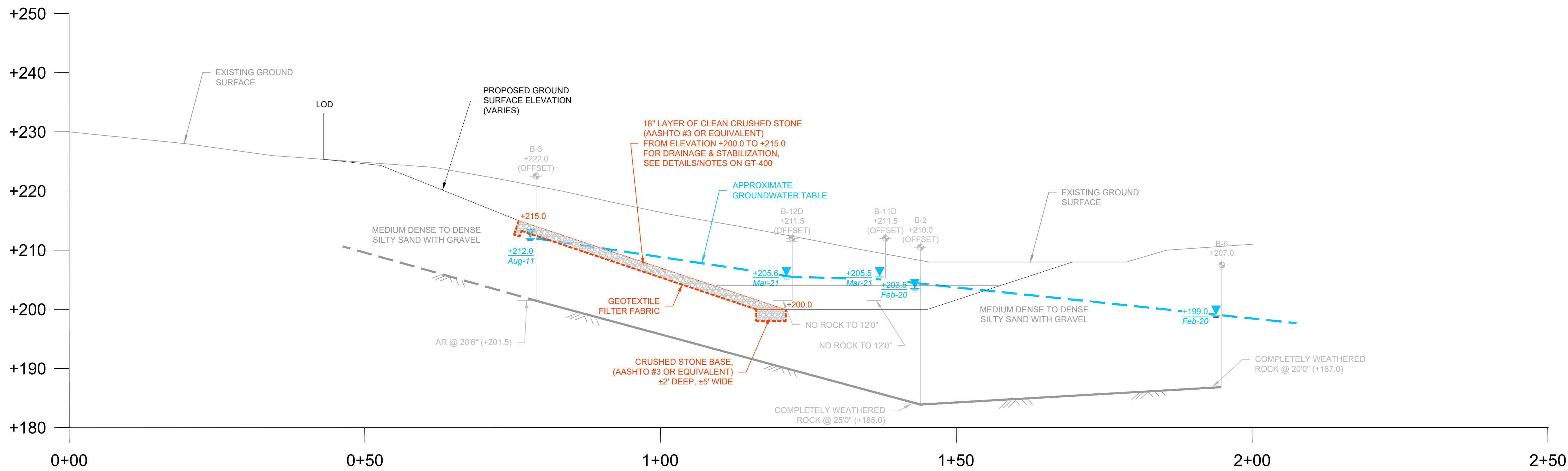
GT-DC-Drainage-1000-2022-05-13.dwg, GT-102.dwg, 9\_20163.dwg



CROSS-SECTION "C"  
SCALE: 1" = 10'



CROSS-SECTION "D"  
SCALE: 1" = 10'



CROSS-SECTION "E"  
SCALE: 1" = 10'

## REGENERON

REAL ESTATE &  
FACILITIES MANAGEMENT

Regeneron Pharmaceuticals Inc.  
777 Old Saw Mill River Road  
Tarrytown, NY 10591-6707  
T: 914.847.7400  
F: 914.847.7991  
www.regeneron.com

Civil Engineer:  
JMC  
Site Development Consultants  
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MEP Engineer:  
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No.	Date	Description
0	05/20/2022	ISSUED FOR PERMIT
0	05/13/2022	100% CONSTRUCTION DOCUMENTS
Rev	Date	Description

Project Info:  
DAYCARE (B-17)

CONSTRUCTION  
DRAWINGS

777 OLD SAW MILL RIVER ROAD  
MOUNT PLEASANT, NY 10591  
Vendor Name: Carlin-Simpson & Associates LLC  
Vendor Project No.: 20-166  
Discipline: Geotechnical Drawn By: MRA  
Drawing Title:

CROSS-SECTIONS  
C, D, & E

Scale: 1" = 10'

GT-102



CUTOFF DRAIN SCHEDULE				
DRAIN NO.	APPROXIMATE LENGTH	PIPE DIAMETER	MINIMUM TRENCH WIDTH (W) (3)	MINIMUM TRENCH HEIGHT (H) (1,2)
1	370 LF	8"	3'-0"	5'-0"
2	365 LF	8"	2'-6"	3'-0"
3	312 LF	8"	2'-6"	3'-0"
4	56 LF	8"	3'-0"	5'-0"
5	82 LF	8"	2'-6"	3'-0"
6	67 LF	8"	2'-6"	3'-0"

- (1) THE TRENCHES FOR DRAINS 1 AND 4 ARE EXPECTED TO BE THE MINIMUM HEIGHT OF 5'-0" FOR THE MAJORITY OF THE DRAIN LINES SINCE THE DRAIN LINES ARE EXPECTED TO BE INSTALLED TO AT LEAST 1'-0" ABOVE THE GROUNDWATER TABLE. IN AREAS, THE TRENCH HEIGHT WILL EXCEED 5'-0".
- (2) THE TRENCHES FOR DRAINS 2, 3, 5, AND 6 ARE EXPECTED TO BE 3'-0" IN HEIGHT, BUT MAY BE SLIGHTLY LESS THAN 3'-0" IN HEIGHT IN AREAS SO THAT THE TOP OF THE CRUSHED STONE REMAINS AT LEAST 1'-6" BELOW THE FINISHED GRADE.
- (3) THE TRENCH WIDTHS ARE MINIMUM WIDTHS, DEPENDING ON THE INSTALLATION METHOD. WIDER TRENCHES MAY BE EXCAVATED. IN THIS CASE, THE ENTIRE TRENCH SHALL BE FILLED WITH CLEAN CRUSHED STONE. THE TRENCHES SHALL BE COVERED WITH FILTER FABRIC AS SHOWN IN THE TYPICAL CUTOFF DRAIN DETAIL.

1. THE OWNER SHALL RETAIN, AT THEIR COST, CARLIN-SIMPSON & ASSOCIATES LLC TO PERFORM QUALITY ASSURANCE INSPECTION AND MONITORING SERVICES RELATED TO THE INSTALLATION OF SLOPE DRAINAGE SYSTEM AND THE CONSTRUCTION OF THE SOIL SLOPES.
2. CONTRACTOR SHALL ARRANGE FOR AND SCHEDULE ALL REQUIRED INSPECTIONS.
3. THE ABOVE FIELD INSPECTION AND MONITORING WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET THE MORE STRINGENT OF THE CONSTRUCTION DRAWINGS, MANUFACTURER'S REQUIREMENTS, AND THE PROJECT SPECIFICATIONS.
4. CONTRACTOR SHALL TAKE PROMPT ACTION TO PREVENT OR CORRECT ANY CONDITIONS WHICH HAVE RESULTED OR COULD RESULT IN THE SUBMITTAL TO ENGINEER OF ITEMS OR SERVICES WHICH DO NOT CONFORM TO THE QUALITY PERFORMANCE OF THE CONTRACT, THE TESTS SPECIFIED IN THE CONTRACT AND OTHER TESTS AS MAY BE REQUIRED TO SUBSTANTIATE CONFORMANCE.



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GT-200

No.	Date	Description
0	05/20/2022	ISSUED FOR PERMIT
0	05/13/2022	100% CONSTRUCTION DOCUMENTS
Rev	Date	Description

DAYCARE (B-17)

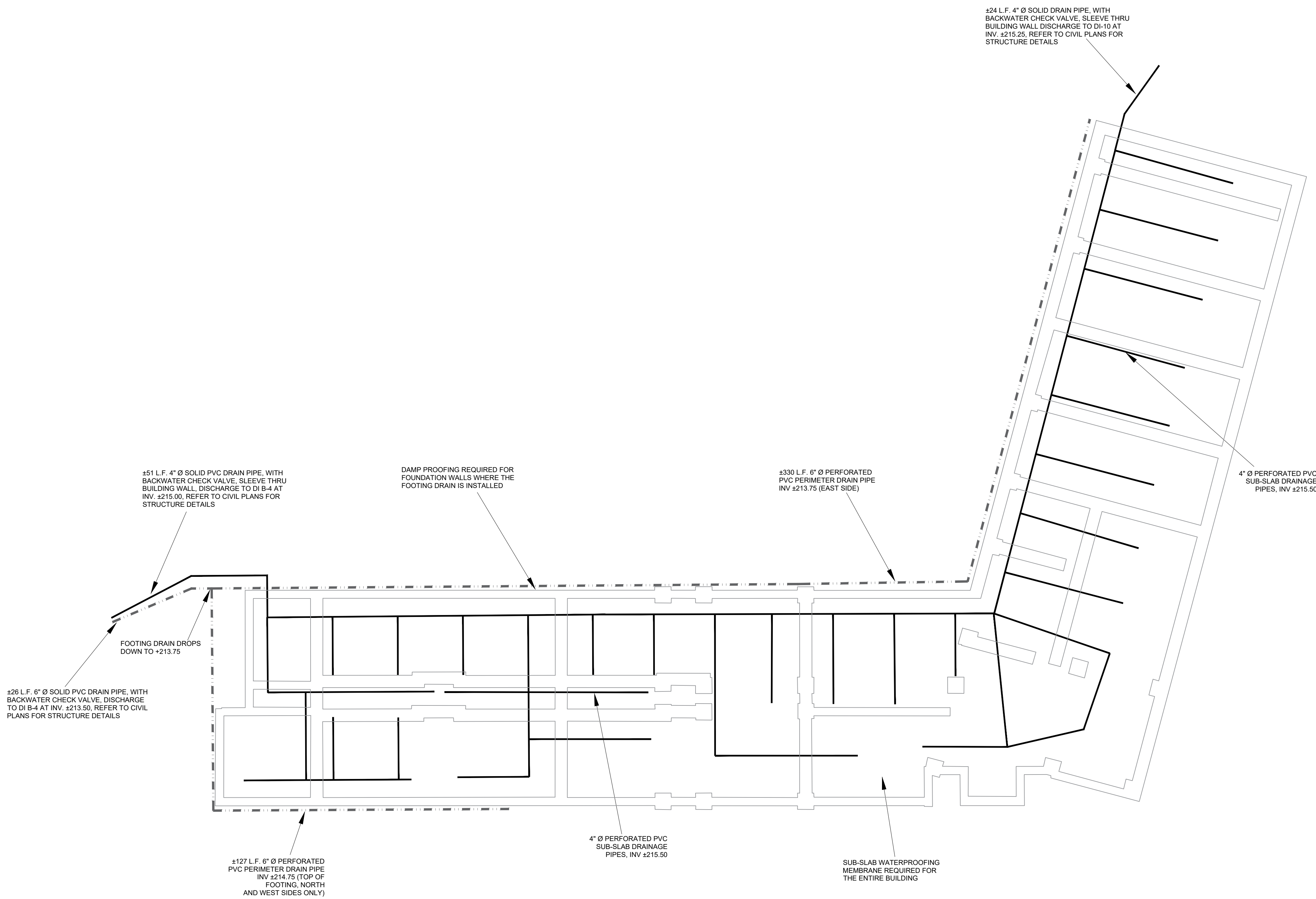
# CONSTRUCTION DRAWINGS

777 OLD SAW MILL RIVER ROAD  
MOUNT PLEASANT, NY 10591  
Vendor Name: Carlin-Simpson & Associates LLC  
Vendor Project No.: 20-166  
Discipline: Geotechnical      Drawn By: MRA  
Drawing Title:

BUILDING DRAINAGE  
PLAN

Scale: AS SHOWN

GT-300



**BUILDING DRAINAGE LOCATION PLAN**  
**SCALE: 1" = 15'**

### BUILDING DRAINAGE NOTES

### A. GENERAL NOTES

1. GENERAL LAYOUT FOR THE BUILDING DRAINAGE PLANS WAS OBTAINED FROM DRAWINGS THAT WERE PREPARED BY BR+A CONSULTING ENGINEERS PC AND THORNTON TOMASETTI, WHICH INCLUDE THE FOLLOWING:
  - GROUND FLOOR PLAN (S-100)
  - PLUMBING UNDERGROUND PLAN (P-100)
2. CONTRACTOR SHALL REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR ALL FOUNDATION, FLOOR SLAB, WATERPROOFING, AND VAPOR BARRIER DETAILS. CONTRACTOR SHALL REFER TO MEP DRAWINGS FOR ALL SUB-SLAB PIPE DETAILS AND DISCHARGE DETAILS. CONTRACTOR SHALL REFER TO CIVIL DRAWINGS FOR GRADING, EXTERIOR UTILITIES, AND STORMWATER STRUCTURE DETAILS.
3. CONTRACTOR SHALL HAVE AN APPROVED SET OF CONSTRUCTION DRAWINGS, SHOP DRAWINGS, AND SPECIFICATIONS ON SITE AT ALL TIMES DURING CONSTRUCTION.
4. ALL OF THE WORK SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND CITY CODES, REGULATIONS, AND REQUIREMENTS. IN CASE OF CONFLICT, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
5. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING CONSTRUCTION SUBMITTALS (MINIMUM) TO CARLIN-SIMPSON & ASSOCIATES LLC AND THE OWNER'S REPRESENTATIVE: 1) MATERIALS TO BE USED IN THE BUILDING DRAINAGE SYSTEM; 2) DAMP PROOFING AND WATERPROOFING MATERIALS AND INSTALLATION PROCEDURES; AND 3) DETAILS REGARDING BACKWATER CHECK VALVES. WORK SHALL NOT BEGIN UNTIL THE APPROPRIATE SUBMITTALS HAVE BEEN RECEIVED, REVIEWED, AND ACCEPTED IN WRITING BY THE ENGINEER.

B. FOOTING PERIMETER DRAIN

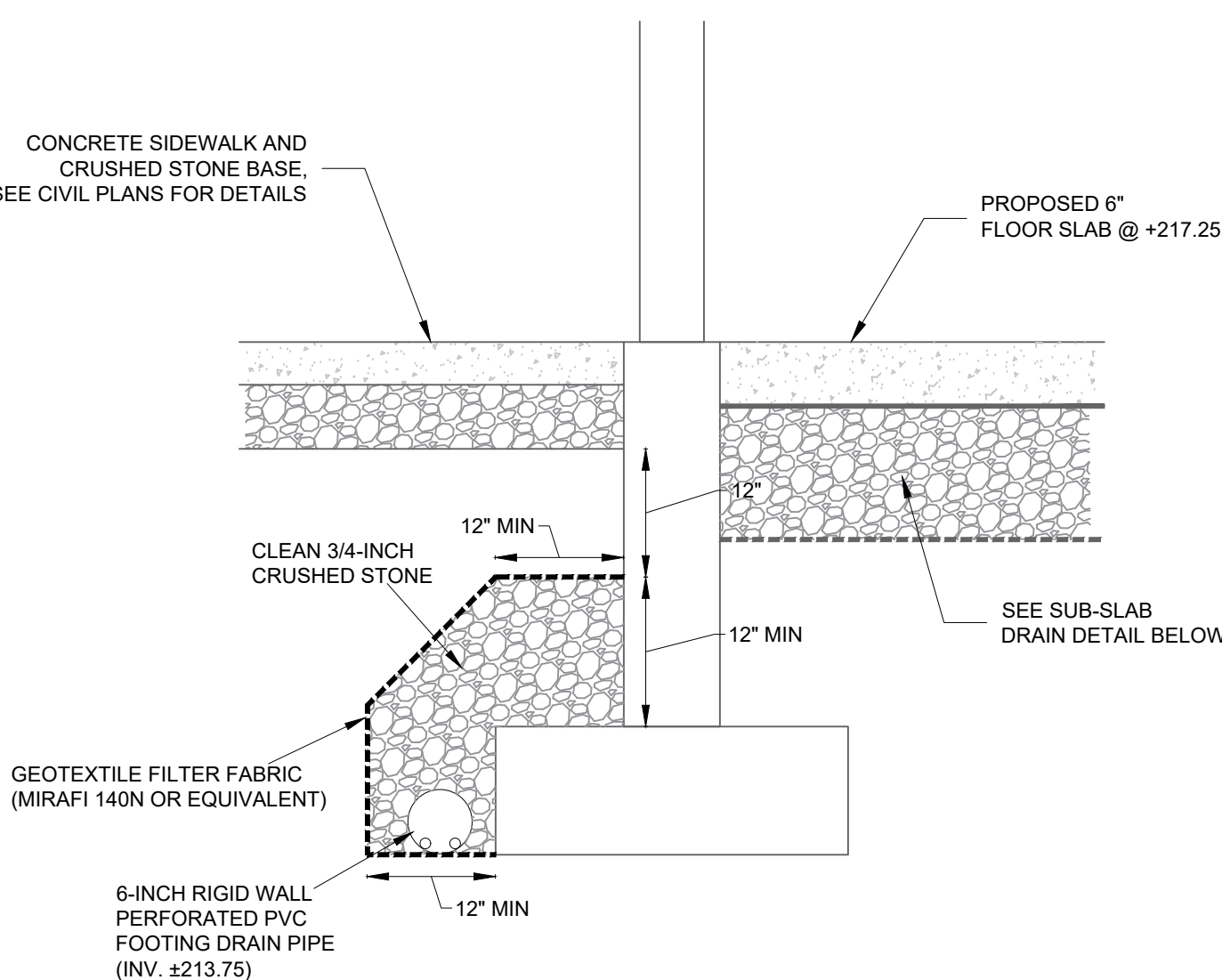
1. A PERIMETER DRAIN OR FOOTING DRAIN, CONSISTING OF A SIX (6) INCH DIAMETER PERFORATED PVC PIPE WITH HOLES FACING DOWN, SHALL BE INSTALLED AROUND THE OUTSIDE PERIMETER OF THE BUILDING AS SHOWN ON THIS PLAN TO PREVENT WATER FROM ACCUMULATING AGAINST THE FOUNDATION WALLS.
2. THE PIPE SHALL CONSIST OF SDR-26 OR SCHEDULE 40 PVC.
3. DAM PROOFING IS REQUIRED FOR THE FOUNDATION WALLS WHERE THE PERIMETER DRAIN IS INSTALLED. CONTRACTOR TO SUBMIT DAM PROOFING MATERIALS AND PROCEDURES FOR REVIEW AND APPROVAL.
4. THE FOOTING DRAIN PIPE SHALL BE SURROUNDED BY A MINIMUM OF 12 INCHES OF CLEAN 3/4-INCH CRUSHED STONE THAT IS WRAPPED IN A GEOTEXTILE FILTER FABRIC (MIRAF 140N OR EQUIVALENT) AND EXTENDS TO APPROXIMATELY 12 INCHES BELOW THE SIDEWALK SUBGRADE ELEVATION. REFER TO THE TYPICAL FOOTING DRAIN DETAIL FOR MORE INFORMATION.
5. THE FOOTING DRAIN PIPE SHALL BE PIPED INTO STORMWATER STRUCTURE DI B-4 AS INDICATED ON THIS PLAN. REFER TO THE CIVIL DRAWINGS FOR STRUCTURE DETAILS. A BACKWATER CHECK VALVE IS REQUIRED FOR THE DISCHARGE LOCATION. THE BACKWATER CHECK VALVE TYPE IS TO BE SELECTED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL BY THE MEP ENGINEER AND GEOTECHNICAL ENGINEER.

### C. SUB-SLAB DRAINAGE SYSTEM

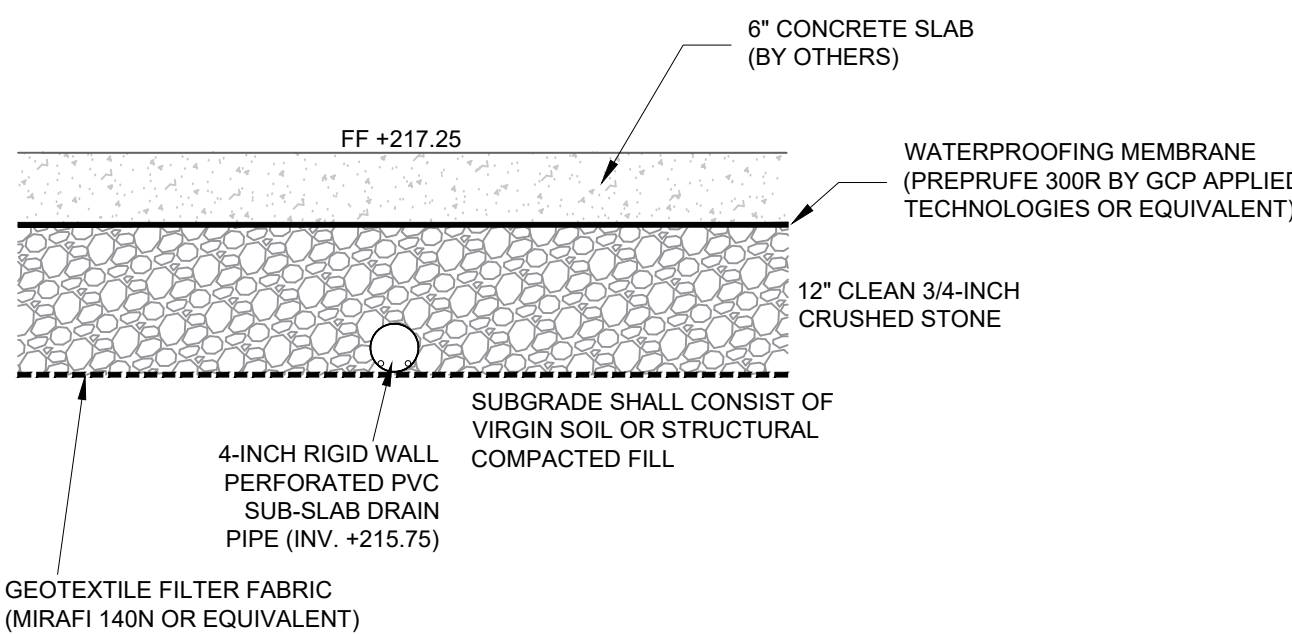
1. SUB-SLAB WATERPROOFING IS REQUIRED FOR THE ENTIRE BUILDING. THE WATERPROOFING MEMBRANE SHALL CONSIST OF PREPARE 300R BY GCP APPLIED TECHNOLOGIES OR AN ENGINEER-APPROVED EQUIVALENT
2. THE SUB-SLAB DRAINAGE SYSTEM SHALL CONSIST OF DRAIN LINES AS SHOWN ON THE BUILDING DRAINAGE PLAN. THE DRAINPIPS SHALL CONSIST OF FOUR (4) INCH DIAMETER RIGID WALL PERFORATED PVC PIPES WITH HOLES FACING DOWN, PLACED AT THE BOTTOM OF 12 INCHES OF CLEAN 3/4-INCH CRUSHED STONE GRAVEL. THIS CORRELATES TO A PIPE INVERT ELEVATION OF APPROXIMATELY +215.75. REFER TO THE TYPICAL SUB-SLAB DRAIN DETAIL FOR MORE INFORMATION.
3. THE PIPE SHALL CONSIST OF SDR-26 OR SCHEDULE 40 PVC.
4. A LAYER OF GEOTEXTILE FILTER FABRIC (MIRAFI 140N OR EQUIVALENT) SHALL BE PLACED BETWEEN THE SUBGRADE SOIL AND THE CRUSHED STONE TO PREVENT SOIL FROM CLOGGING THE PIPES. THE EDGES OF THE FILTER FABRIC SHALL BE FOLDED ON TOP OF THE CRUSHED STONE FILL. THE SUBGRADE SHALL BE GRADED ("PITCHED") TOWARDS THE UNDERDRAIN. ADJACENT FILTER FABRIC PANELS SHALL OVERLAP BY A MINIMUM OF 12 INCHES.
5. THE SUB-SLAB DRAINS WILL CROSS THE NEW SHEAR WALLS AT SEVERAL LOCATIONS. SLEEVES WILL BE REQUIRED DURING SHEAR WALL CONSTRUCTION TO ALLOW FUTURE INSTALLATION OF THE DRAINAGE PIPES. REFER TO THE STRUCTURAL PLANS FOR PENETRATION DETAILS.
6. THE PERFORATED PVC DRAINPIPS SHALL CONNECT TO FOUR (4) INCH DIAMETER RIGID WALL SOLID PVC PIPES THAT DISCHARGE TO STORMWATER STRUCTURE D1-B-4 OFF THE NORTHEAST CORNER OF THE BUILDING AND TO STRUCTURE D1-O1 OFF THE SOUTHEAST SIDE OF THE BUILDING. SLEEVES THROUG THE EXTERIOR WALLS WILL BE REQUIRED FOR THE DISCHARGE PIPES.
7. BACKWATER CHECK VALVES ARE REQUIRED FOR BOTH DISCHARGE LOCATIONS. THE BACKWATER CHECK VALVE LOCATION AND TYPE ARE TO BE SELECTED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL BY THE MEP ENGINEER AND GEOTECHNICAL ENGINEER.

#### D. QUALITY ASSURANCE AND INSPECTION

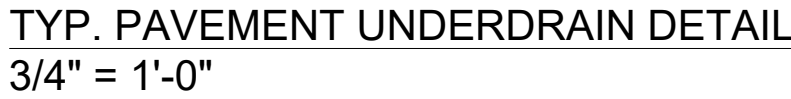
1. THE OWNER SHALL RETAIN, AT THEIR COST, CARLIN-SIMPSON & ASSOCIATES LLC TO PERFORM QUALITY ASSURANCE INSPECTION AND MONITORING SERVICES RELATED TO THE INSTALLATION OF BUILDING DRAINAGE SYSTEM.
2. CONTRACTOR SHALL ARRANGE FOR AND SCHEDULE ALL REQUIRED INSPECTIONS.
3. THE ABOVE FIELD INSPECTION AND MONITORING WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET THE MORE STRINGENT OF THE CONSTRUCTION DRAWINGS, MANUFACTURER'S REQUIREMENTS, AND THE PROJECT SPECIFICATIONS.
4. CONTRACTOR SHALL TAKE PROMPT ACTION TO PREVENT OR CORRECT ANY CONDITIONS WHICH HAVE RESULTED OR COULD RESULT IN THE SUBMITTAL TO ENGINEER OF ITEMS OR SERVICES WHICH DO NOT CONFORM TO THE QUALITY PERFORMANCE OF THE CONTRACT, THE TESTS SPECIFIED IN THE CONTRACT AND OTHER TESTS AS MAY BE REQUIRED TO SUBSTANTIATE CONFORMANCE.



TYP. FOOTING DRAIN DETAIL  
3/4" = 1'-0"



TYP. SUB-SLAB DRAIN DETAIL  
3/4" = 1'-0"



## GT-400