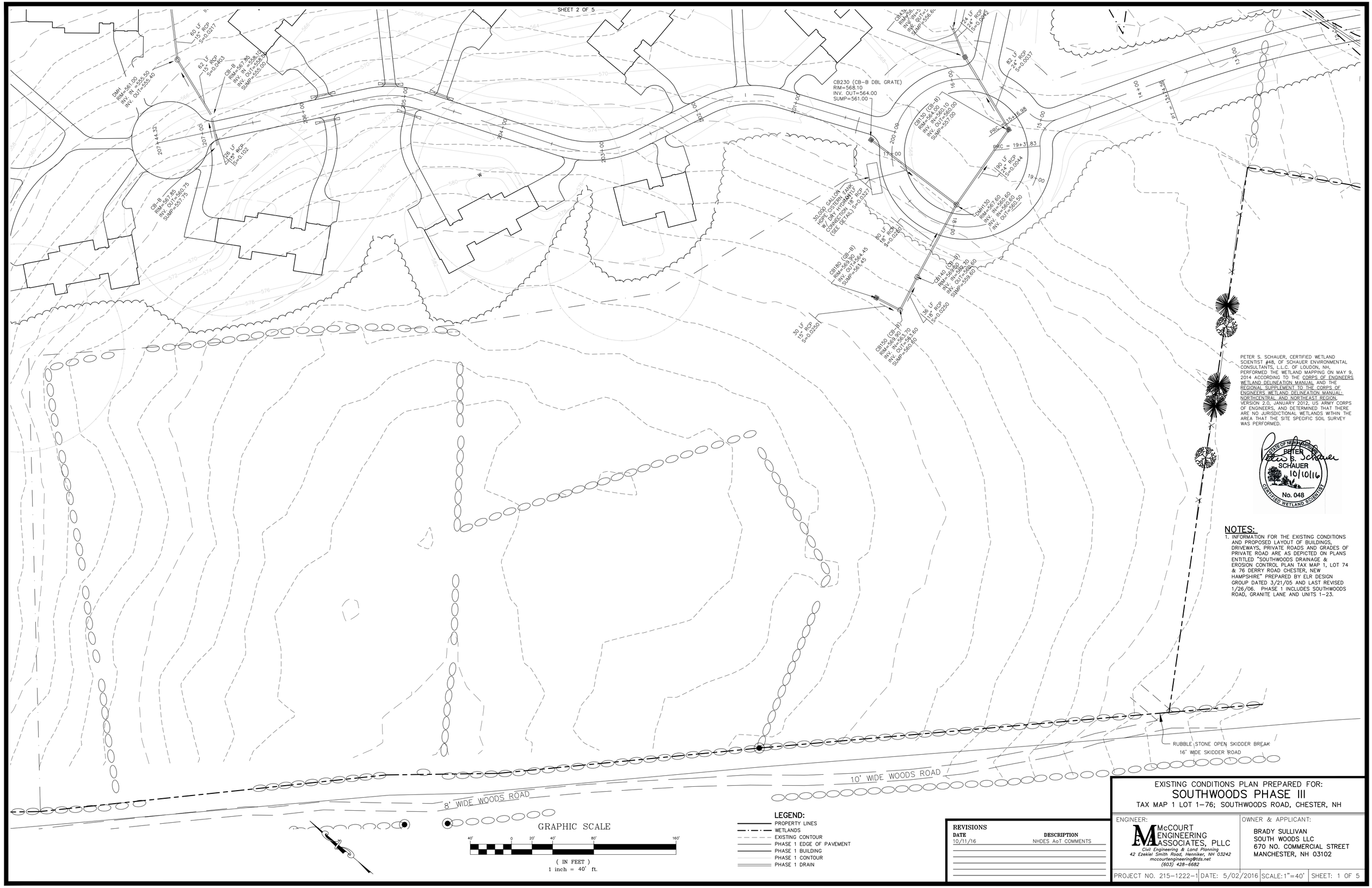


REVISIONS	
DATE	DESCRIPTION
10/11/16	NHDES AoT COMMENTS

EXISTING CONDITIONS PLAN PREPARED FOR:

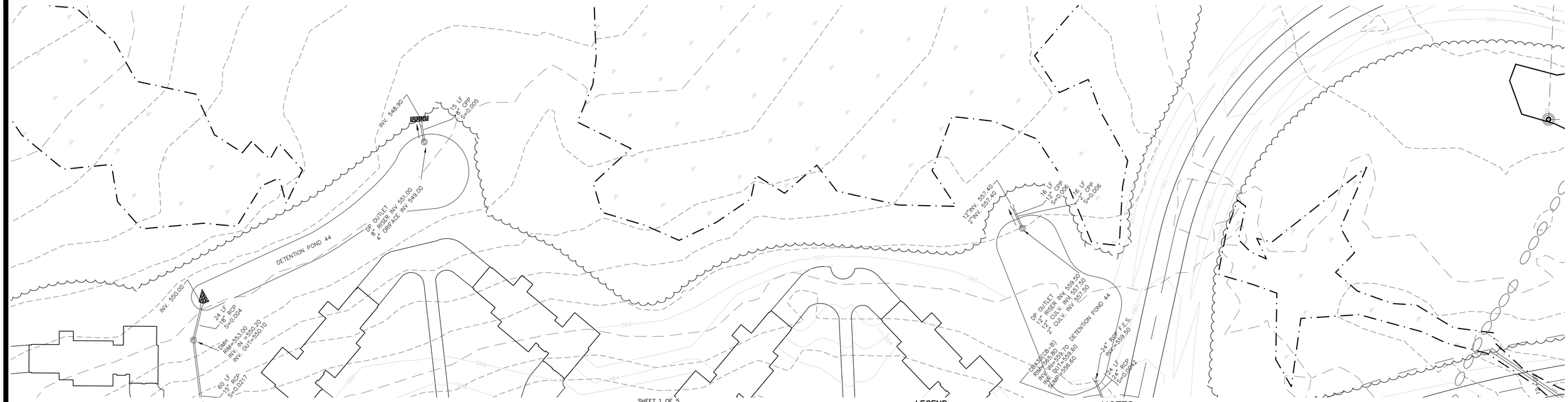
SOUTHWOODS PHASE III

TAX MAP 1 LOT 1–76; SOUTHWOODS ROAD, CHESTER, NH

ENGINEER:
McCOURT ENGINEERING ASSOCIATES, PLLC
Civil Engineering & Land Planning
42 Ezekiel Smith Road, Henniker, NH 03242
mccourtengineering@tds.net
(603) 428–6682

OWNER & APPLICANT:
BRADY SULLIVAN
SOUTH WOODS LLC
670 NO. COMMERCIAL STREET
MANCHESTER, NH 03102

PROJECT NO. 215–1222–1	DATE: 5/02/2016	SCALE: 1"=40'	SHEET: 1 OF 5



GRAPHIC SCALE

40' 0 20' 40' 80' 160'

(IN FEET)
1 inch = 40' ft.

SHEET 1 OF 5

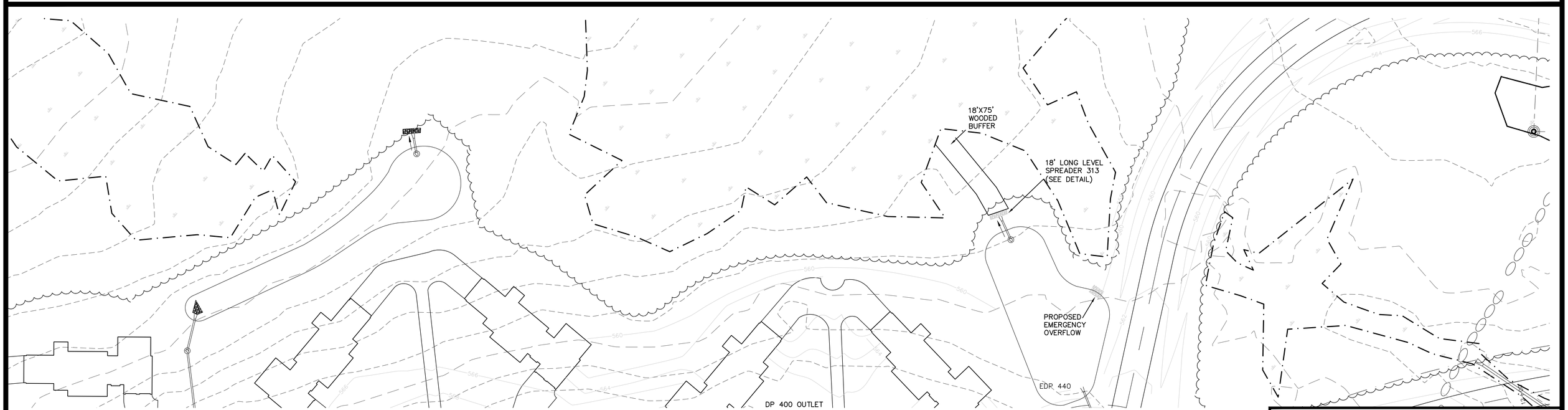
EXISTING CONDITIONS PLAN

LEGEND:

- PROPERTY LINES
- WETLANDS
- EXISTING CONTOUR
- PHASE 1 EDGE OF PAVEMENT
- PHASE 1 BUILDING
- PHASE 1 CONTOUR
- PHASE 1 DRAIN

NOTES:

1. INFORMATION FOR THE EXISTING CONDITIONS AND PROPOSED LAYOUT OF BUILDINGS, DRIVEWAYS, PRIVATE ROADS AND GRADES OF PRIVATE ROAD ARE AS DEPICTED ON PLANS ENTITLED "SOUTHWOODS DRAINAGE & EROSION CONTROL PLAN TAX MAP 1, LOT 74 & 76 DERRY ROAD CHESTER, NEW HAMPSHIRE" PREPARED BY ELR DESIGN GROUP DATED 3/21/05 AND LAST REVISED 1/26/06. PHASE 1 INCLUDES SOUTHWOODS ROAD, GRANITE LANE AND UNITS 1–23.



SHEET 3 OF 5

NOTES:

1. THE INTENT OF THIS PROJECT IS FOR APPLICATION OF PHASE 2 TO NHDES ALTERATION OF TERRAIN.
2. INFORMATION FOR THE EXISTING CONDITIONS AND PROPOSED LAYOUT OF BUILDINGS, DRIVEWAYS, PRIVATE ROADS AND GRADES OF PRIVATE ROAD ARE AS DEPICTED ON PLANS ENTITLED "SOUTHWOODS DRAINAGE & EROSION CONTROL PLAN TAX MAP 1, LOT 74 & 76 DERRY ROAD CHESTER, NEW HAMPSHIRE" PREPARED BY ELR DESIGN GROUP DATED 3/21/05 AND LAST REVISED 1/26/06. PHASE 1 INCLUDES SOUTHWOODS ROAD, GRANITE LANE AND UNITS 1–23.
3. ALL DESIGN IS BASED OFF OF THE ORIGINAL PLANS AND ANY DISCREPANCIES FOUND SHALL BE REPORTED TO THIS OFFICE FOR RESOLVE.

STATE OF NEW HAMPSHIRE
JENNIFER B. McCOURT
No. 8133
LICENSED
PROFESSIONAL ENGINEER
05/09/16

PROPOSED GRADING & EROSION CONTROL PLAN

GRAPHIC SCALE

40' 0 20' 40' 80' 160'

(IN FEET)
1 inch = 40' ft.

LEGEND:

- PROPERTY LINES
- WETLANDS
- EXISTING CONTOUR
- PHASE 1 EDGE OF PAVEMENT
- PHASE 1 BUILDING
- PHASE 1 CONTOUR
- PHASE 1 DRAIN
- PHASE 2 DRAIN

REVISIONS

DATE	DESCRIPTION

EXISTING CONDITIONS PLAN AND
PROPOSED GRADING & EROSION CONTROL PLAN PREPARED FOR:

SOUTHWOODS PHASE II

TAX MAP 1 LOT 1–76; SOUTHWOODS ROAD, CHESTER, NH

ENGINEER:
McCOURT ENGINEERING ASSOCIATES, PLLC
Civil Engineering & Land Planning
42 Ezekiel Smith Road, Henniker, NH 03242
mccourtengineering@tds.net
(603) 428–6682

OWNER & APPLICANT:
BRADY SULLIVAN
SOUTH WOODS LLC
670 NO. COMMERCIAL STREET
MANCHESTER, NH 03102

PROJECT NO. 215–1222–1	DATE: 5/02/2016	SCALE: 1"=40'	SHEET: 1 OF 6

LEGEND:

- PROPERTY LINES
- WETLANDS
- EXISTING CONTOUR
- PHASE 1 EDGE OF PAVEMENT
- PHASE 1 BUILDING
- PHASE 1 CONTOUR
- PHASE 1 DRAIN
- PHASE 2 EDGE OF PAVEMENT
- PHASE 2 BUILDING
- PHASE 2 CONTOUR
- PHASE 2 DRAIN
- FABRIC SILTATION FENCE

REVISIONS

DATE	DESCRIPTION
10/11/16	NHDES AoT COMMENTS

GRADING & EROSION CONTROL PLAN PREPARED FOR:

SOUTHWOODS PHASE III

TAX MAP 1 LOT 1-76; SOUTHWOODS ROAD, CHESTER, NH

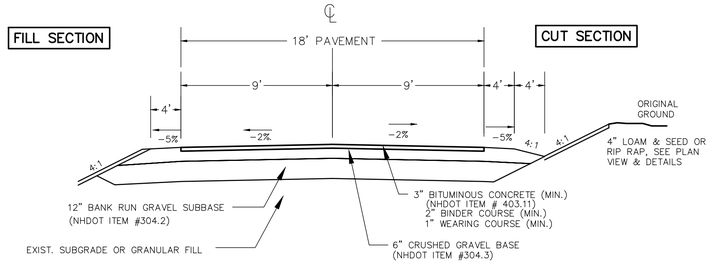
ENGINEER:

McCOURT ENGINEERING ASSOCIATES, PLLC
Civil Engineering & Land Planning
42 Ezekiel Smith Road, Henniker, NH 03242
mccourtengineering@tds.net
(603) 428-6682

OWNER & APPLICANT:

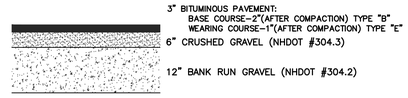
BRADY SULLIVAN
SOUTH WOODS LLC
670 NO. COMMERCIAL STREET
MANCHESTER, NH 03102

PROJECT NO. 215-1222-1 | DATE: 5/02/2016 | SCALE: 1"=40' | SHEET: 3 OF 5



TYPICAL ROAD CROSS SECTION

–NOT TO SCALE–

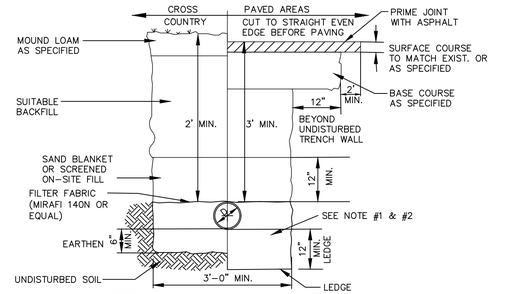


NOTES:

1. ALL AGGREGATE SHALL BE COMPACTED TO AT LEAST 95% MODIFIED PROCTOR DENSITY.
2. THICKNESS OF PARKING LOT PAVEMENT AND GRAVELS MUST GRADUALLY INCREASE TO MATCH THE EXISTING THICKNESS OF THE NHDOT GRAVELS AT THE EDGE OF PAVEMENT FOR THE DRIVEWAY.

PAVEMENT AREA TYPICAL

–NOT TO SCALE–

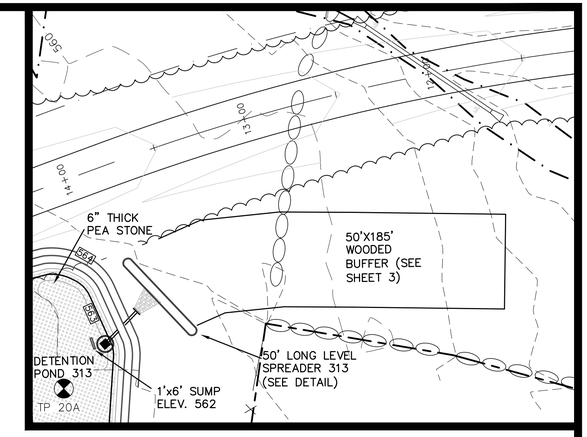


NOTES

1. FOR HDPE PIPE BEDDING SHALL BE 3/4" STONE TO THE CROWN OF THE PIPE
2. ALL BACKFILL, SELECT GRAVELS AND AGGREGATES SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

TYPICAL STORM DRAINAGE TRENCH DETAIL

NOT TO SCALE



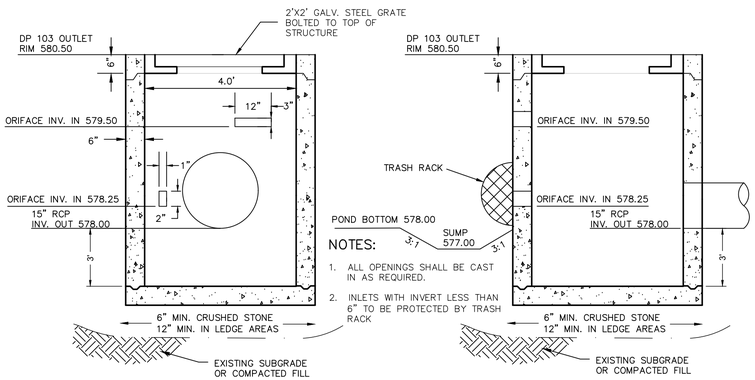
PLAN INSERT

SCALE 1"=40'

GRAPHIC SCALE

40' 0 20' 40' 80' 160'

(IN FEET)
1 inch = 40' ft.

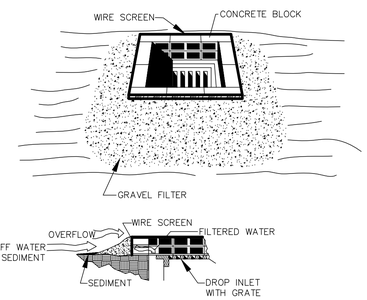


NOTES:

1. ALL OPENINGS SHALL BE CAST IN AS REQUIRED.
2. INLETS WITH INVERT LESS THAN 6" TO BE PROTECTED BY TRASH RACK

DETENTION POND 103 MANHOLE DETAIL

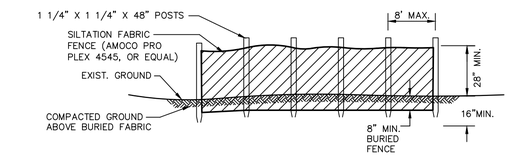
NOT TO SCALE



1. CONCRETE BLOCKS SHOULD BE PLACED LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET. THE ENDS OF EACH BLOCK SHOULD BE ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED DEPENDING ON THE DESIGN BY STACKING VARIOUS COMBINATIONS OF DIFFERENT SIZED BLOCKS. THE BARRIER SHOULD BE A MINIMUM OF 12–INCHES HIGH AND A MAXIMUM OF 24 INCHES HIGH.
2. HARDWARE CLOTH OR WIRE MESH SHOULD BE PLACED OVER OPENINGS OF THE CONCRETE BLOCKS AND EXTENDED AT LEAST 12–INCHES AROUND THE OPENING TO PREVENT AGGREGATE FROM BEING TRANSPORTED THROUGH THE OPENINGS IN THE BLOCK.
3. SEWER STONE OR OTHER CLEAN COARSE AGGREGATE SHOULD BE PLACED AGAINST THE BLOCK TO THE TOP OF THE BARRIER.

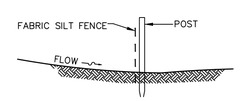
BLOCK & GRAVEL DROP INLET SEDIMENT FILTER

–NOT TO SCALE–



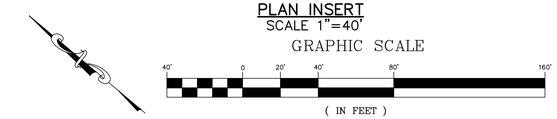
NOTES:

1. FILTER FABRIC TO BE FASTENED SECURELY TO POSTS WITH STAPLES SPACED 24" AT TOP, MID AND BOTTOM.
3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY ONE POST SECTION (8' MIN.)
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. SILT FENCE TO BE REMOVED WHEN SITE IS 85% STABILIZED.

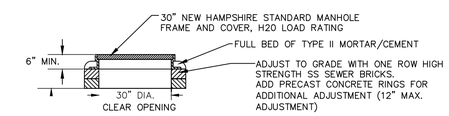


SILT FENCE DETAIL

NOT TO SCALE

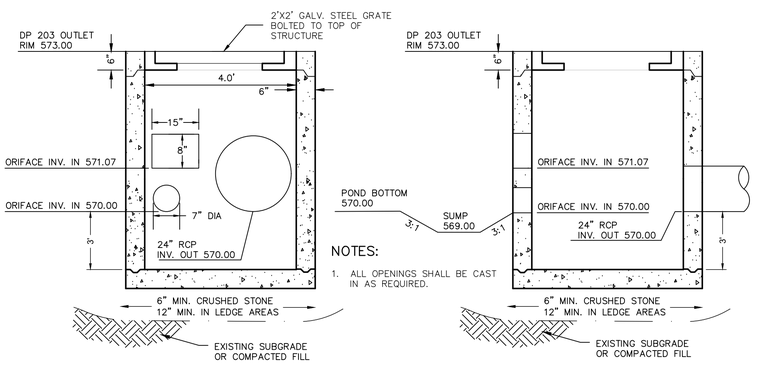


(IN FEET)
1 inch = 40' ft.



TYPICAL DRAIN MANHOLE FRAME & COVER

NOT TO SCALE

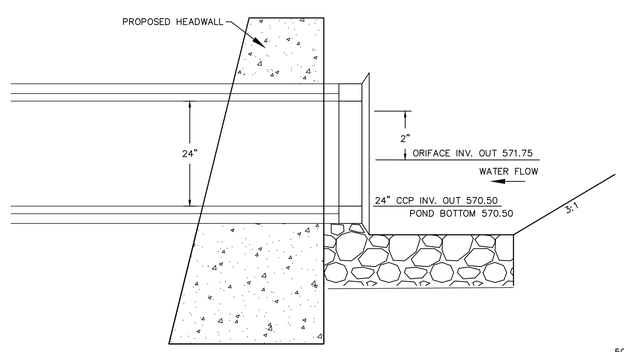


NOTES:

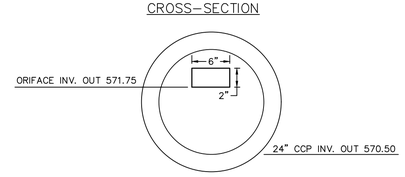
1. ALL OPENINGS SHALL BE CAST IN AS REQUIRED.

DETENTION POND 203 MANHOLE DETAIL

NOT TO SCALE



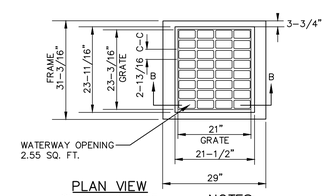
CROSS–SECTION



END VIEW

INFILTRATION POND 400 ORIFACE DETAIL

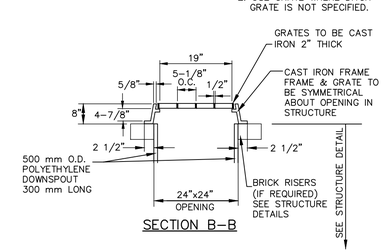
–NOT TO SCALE–



PLAN VIEW
SINGLE GRATE

NOTES:

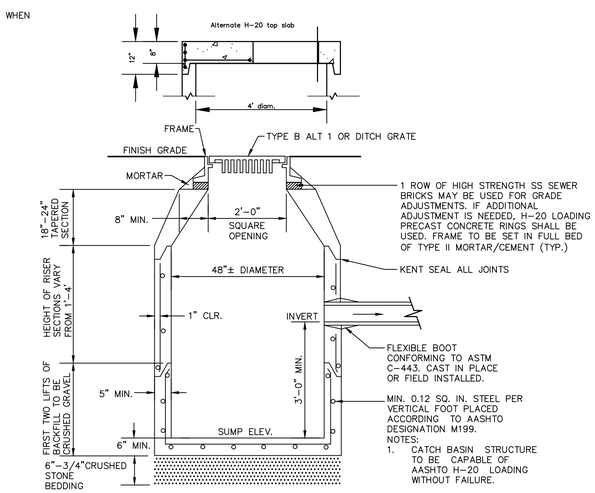
1. CATCH BASIN FRAME & GRATE SHALL BE H–20 LOADING.
2. USE GRATE WHERE DITCH GRATE IS NOT SPECIFIED.



SECTION B–B

FRAME AND GRATE – TYPE B ALT 1

NOT TO SCALE



NOTES:

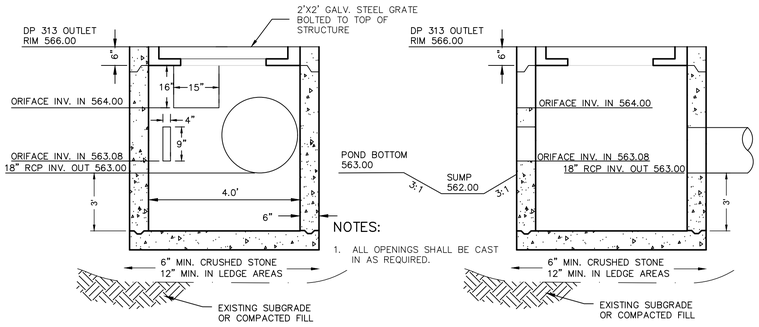
1. CATCH BASIN STRUCTURE TO BE CAPABLE OF AASHTO H–20 LOADING WITHOUT FAILURE.

TYPICAL CATCH BASIN DETAIL

NOT TO SCALE

NOTE:

1. ALL AGGREGATE SHALL BE COMPACTED TO AT LEAST 95% MODIFIED PROCTOR DENSITY.



NOTES:

1. ALL OPENINGS SHALL BE CAST IN AS REQUIRED.

DETENTION POND 313 MANHOLE DETAIL

NOT TO SCALE

CONSTRUCTION DETAILS PREPARED FOR:

SOUTHWOODS PHASE III

TAX MAP 1 LOT 1–76; SOUTHWOODS ROAD, CHESTER, NH

REVISIONS

DATE	DESCRIPTION
10/11/16	NHDES AoT COMMENTS

ENGINEER:

McCOURT ENGINEERING ASSOCIATES, PLLC
Civil Engineering & Land Planning
42 Ezekiel Smith Road, Henniker, NH 03242
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OWNER & APPLICANT:

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670 NO. COMMERCIAL STREET
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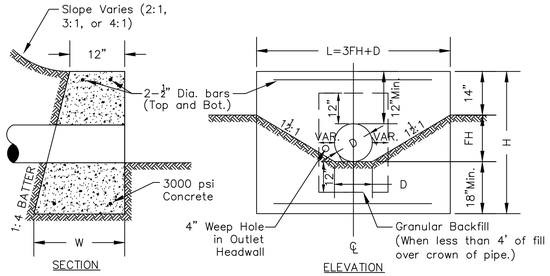
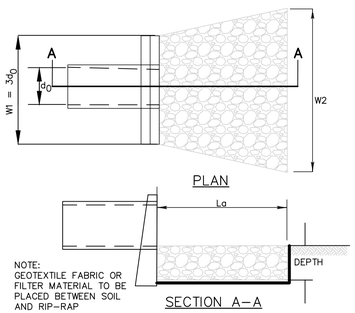
PROJECT NO. 215–1222–1 | DATE: 5/02/2016 | SCALE: 1"=40' | SHEET: 4 OF 5



Dia. D (IN.)	Area of Pipe (Sq. ft.)	Gran Fill (Cu. Yd) Per Lin. Ft.	HDR. Length L	HDR. Height H	Fill Height FH	Width at Bot. of HDR. W
12	0.79	0.30	3'-6"	3'-6"	0'-10"	1'-10½"
15	1.23	0.35	4-6	3-9	1-1	1-11¼
18	1.77	0.39	5-6	4-0	1-4	2-0
24	3.14	0.48	7-6	4-6	1-10	2-1½

TYPICAL CONCRETE HEADWALL, NO WINGS

NOT TO SCALE



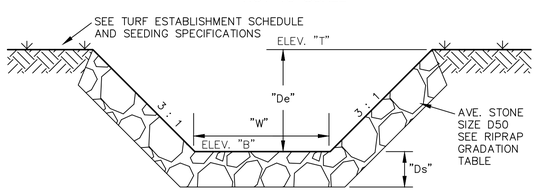
OUTLET LOCATION	La	W1	W2	d50	DEPTH
CB 102	12'	4'	8'	3"	8"
DP 103	10'	4'	8'	3"	8"
CULV. 104	10'	4'	8'	3"	8"
CULV. 105	10'	4'	8'	3"	8"
CULV. 200	10'	3'	7'	3"	8"
CULV. 201	8'	3'	6'	3"	8"
CULV. 202	11'	3'	7'	3"	8"
DP 203	16'	6'	12'	6"	12"
CULV. 310	10'	3'	7'	3"	8"
CULV. 311	14'	4'	9'	3"	8"
CULV. 312	10'	3'	7'	3"	8"
DP 313	13'	5'	10'	6"	12"
CULV. 400	9'	4'	7'	3"	8"

PIPE OUTLET PROTECTION DETAIL

NOT TO SCALE

RIP RAP GRADATION TABLE

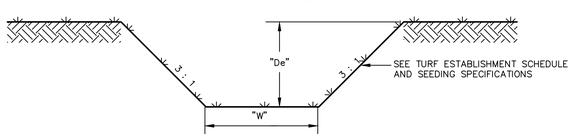
% OF WEIGHT SMALLER THAN GIVEN SIZE	FOR d50 = 3"	FOR d50 = 6"
100	5-6"	9-12"
85	4-5"	8-11"
50	3-5"	6-9"
15	1-2"	2-3"



LOCATION	OUTLET WIDTH "W"	OUTLET DEPTH "De"	BERM TOP ELEV. "T"	OUTLET INV. ELEV. "B"	STONE DEPTH "Ds"	AVE. STONE SIZE "D50"
POND 103	5'	0.5'	582.00'	581.50'	9"	3"
POND 203	5'	0.5'	573.50'	573.00	9"	3"
POND 313	5'	0.5'	566.00'	565.50	9"	3"
POND 400	5'	0.5'	574.60'	574.10	9"	3"
POND 440	5'	1.5'	561.00'	560.50	9"	3"

PONDS OUTLET DETAIL

NOT TO SCALE



LOCATION	OUTLET WIDTH "W"	OUTLET DEPTH "De"	INV. IN ELEV	INV. OUT ELEV.	SWALE LENGTH	SWALE SLOPE
SWALE 203	8'	1'	572.65	572.00	125'	0.5%

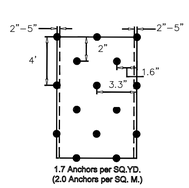
MAINTENANCE

TIMELY MAINTENANCE IS IMPORTANT TO KEEP THE VEGETATION IN THE SWALE IN GOOD CONDITION. MOWING SHOULD BE DONE FREQUENTLY ENOUGH TO KEEP THE VEGETATION IN VIGOROUS CONDITION AND TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION, HOWEVER IT SHOULD NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE FILTERING EFFECT. FERTILIZE ON AN "AS NEEDED" BASIS TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION CAN RESULT IN THE SWALE BECOMING A SOURCE OF POLLUTION.

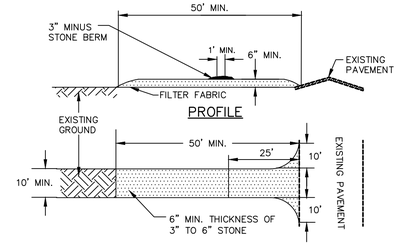
THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE SWALE. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND RE-VEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

TYPICAL TREATMENT SWALE DETAIL

NOT TO SCALE



SLOPE ANCHOR DETAIL



CONSTRUCTION SPECIFICATIONS

1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 TO 6 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.

2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.

3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.

4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.

5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT.

6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.

7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.

8. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

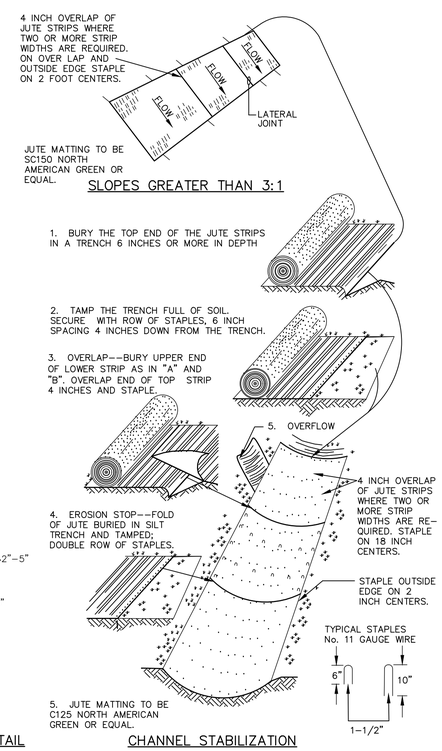
MAINTENANCE

MUD AND SOIL PARTICLES WILL EVENTUALLY CLOG THE VOIDS IN THE GRAVEL AND THE EFFECTIVENESS OF THE GRAVEL PAD WILL NOT BE SATISFACTORY. WHEN THIS OCCURS, THE PAD SHOULD BE TOPDRESSED WITH NEW STONE. COMPLETE REPLACEMENT OF THE PAD MAY BE NECESSARY WHEN THE PAD BECOMES COMPLETELY CLOGGED.

IF WASHING FACILITIES ARE USED, THE SEDIMENT TRAPS SHOULD BE CLEANED OUT AS OFTEN AS NECESSARY TO ASSURE THAT ADEQUATE TRAPPING EFFICIENCY AND STORAGE VOLUME IS AVAILABLE. VEGETATIVE FILTER STRIPS SHOULD BE MAINTAINED TO INSURE A VIGOROUS STAND OF VEGETATION AT ALL TIMES.

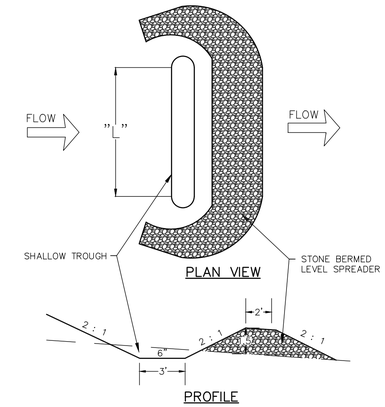
STABILIZED CONSTRUCTION EXIT DETAIL

NOT TO SCALE



DETAIL FOR STABILIZING WITH JUTE MATTING

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. "L"= LENGTH AS INDICATED ON PLAN.

2. CONSTRUCT THE LEVEL SPREADER LIP ON A ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.

3. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.

4. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.

5. PERIODIC INSPECTION AND REQUIRED MAINTAINED SHALL BE PERFORMED.

MAINTENANCE

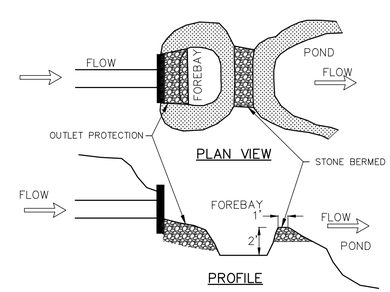
THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND TO DETERMINE THAT THE MAJOR DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED.

STONED BERMED LEVEL SPREADER

NOT-TO-SCALE

STONED BERM GRADATION TABLE

% OF WEIGHT PASSING GIVEN SIEVE SIZE	SIEVE SIZE
100	12"
84-100	6"
68-83	3"
42-55	1"
8-12	No. 4



CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT THE STONED BERMED LIP ON A ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.

MAINTENANCE

CHECK ANNUALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND TO DETERMINE THAT THE MAJOR DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED.

SEDIMENT FOREBAY

NOT-TO-SCALE

CONSTRUCTION SEQUENCE

1. CONTRACTOR TO NOTIFY DIG-SAFE 72-HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

2. THE TOTAL AREA OF DISTURBANCE DURING CONSTRUCTION, SHALL NOT EXCEED FIVE (5) ACRES AT ANY ONE TIME. THIS PORTION OF PROJECT IS TO BE PHASED. PHASE 3A INCLUDES CONSTRUCTION OF GYPSUM LANE AND MICA LANE INCLUDING ALL ASSOCIATED STORM WATER PRACTICES INCLUDING BUT NOT LIMITED TO CB'S 100 THROUGH LEVEL SPREADER 103; DETENTION POND 313 AND CONVERSION OF ECB403 & ECB 404. PHASE 3B SHALL NOT COMMENCE UNTIL STABILIZATION OF THE FIRST PHASE. THE PHASE 3B INCLUDES ALL OTHER PROPOSED WORK INDICATED ON THE PLANS.

3. PRIOR TO GRUBBING OF CLEARED AREAS, ALL SILTATION BARRIERS DESIGNED FOR USE AS TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS CALLED FOR ON PROJECT PLANS, INCLUDING BUT NOT LIMITED TO THE STABILIZED CONSTRUCTION EXIT, SILT FENCE AND INLET SEDIMENT FILTERS.

4. CUT AND CLEAR TREES AND BRUSH FROM CONSTRUCTION AREAS TO THE EXTENT NECESSARY. ALL BRANCHES, TOPS AND BRUSH TO BE PROPERLY DISPOSED OF BY CONTRACTOR.

5. COMPLETE GRUBBING OPERATIONS. ALL STUMPS AND SIMILAR DEBRIS SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR. ORGANIC MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED IN UPLAND AREAS. ALL STOCKPILES SHALL BE SEEDED WITH WINTER RYE AND IF NECESSARY SURROUNDED WITH HAY BALES IN ORDER TO PREVENT LOSS DUE TO EROSION.

6. CONSTRUCT TEMPORARY CULVERTS AS NECESSARY TO FACILITATE CONSTRUCTION ACTIVITIES. ALL SUCH CROSSINGS SHALL BE PROTECTED WITH SILT FENCE BARRIERS TO LIMIT EROSION.

7. STABILIZE ALL SWALES, DITCH LINES AND PONDS PRIOR ROUGH SITE GRADING AND PRIOR TO DIRECTING FLOW INTO THEM, CONSTRUCT DRAINAGE SYSTEM, AND OTHER SUBSURFACE UTILITIES.

8. COMMENCE CONSTRUCTION OF SITE INCLUDING ALL ROADWAYS AND UTILITIES. PERFORM EXCAVATION ACTIVITIES REQUIRED TO ACHIEVE SUBGRADE ELEVATION. ALL EXCAVATED EMBANKMENTS, DITCHES, SWALES AND CULVERTS SHALL BE INSTALLED AND STABILIZED. ALL SWALES AND DITCH LINES SHALL BE PROTECTED FROM EROSION BY IMPLEMENTATION OF SILT FENCE BARRIERS AS SHOWN ON PROJECT PLANS. DIVERT STORM WATER RUNOFF THROUGH THE USE OF TEMPORARY CULVERTS, OR OTHER MEANS NECESSARY PRIOR TO THE COMPLETION OF A FUNCTIONAL STORM DRAINAGE SYSTEM. SLOPES AND EMBANKMENTS SHALL BE STABILIZED BY TRACKING AND TEMPORARY SEEDING WITH WINTER RYE PRIOR TO TURF ESTABLISHMENT. ALL DITCHES & SWALES SHALL BE STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM.

9. CONSTRUCTION OF INFILTRATION POND 400 SHALL BE COMPETED AS FOLLOWS:
   a. DO NOT TRAFFIC EXPOSED SOIL WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
   b. AFTER INFILTRATION SYSTEM AREA IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
   c. INFILTRATION SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL CONTRIBUTING AREAS ARE FULLY STABILIZED.

10. COMPLETE CONSTRUCTION OF EMBANKMENTS BY ADDING APPROPRIATE BASE MATERIALS GRADED TO PROPER ELEVATION.

11. APPLY TOPSOIL TO SLOPES AND OTHER AREAS DISTURBED BY CONSTRUCTION. TOPSOIL USED MAY BE NATIVE ORGANIC MATERIAL SCREENED SO AS TO BE FREE OF ROOTS, BRANCHES, STONES, AND OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM OF A 4-INCH COMPACTED THICKNESS. UPON COMPLETION OF TOPSOILING, FINISHED SECTIONS ARE TO BE LIMED, SEEDED AND MULCHED. CONSTRUCTION PERSONNEL SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR BASIS AND REMEDY ANY PROBLEM AREAS UNTIL A HEALTHY STAND OF GRASS HAS BECOME ESTABLISHED.

12. PERFORM FINE GRADING OF ROADWAY BASE MATERIALS.

13. INSTALL THE FINAL GRAVEL COURSE FOR ROADWAYS OVER ALL DESIGNATED AREAS.

14. COMPLETE INSTALLATION OF LANDSCAPING, SIGNAGE AND OTHER SITE AMENITIES.

15. MAINTAIN, REPAIR, AND REPLACE AS NECESSARY TEMPORARY EROSION CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE CONSTRUCTION AREA HAS BEEN STABILIZED (A MINIMUM OF ONE WINTER SHALL HAVE PASSED).

16. AFTER STABILIZATION REMOVE AND SUITABLY DISPOSE OF TEMPORARY EROSION CONTROL MEASURES.

17. LOT DISTURBANCE, OTHER THAN THAT SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.

EROSION CONTROL NOTES:

1. THE TOTAL AREA OF DISTURBANCE DURING CONSTRUCTION, INCLUDING LOT DISTURBANCE, SHALL NOT EXCEED FIVE (5) ACRES AT ANY ONE TIME. AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL NOT BE LEFT UNSTABILIZED FOR A PERIOD EXCEEDING 15 DAYS. ALL AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF FINISH GRADE. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EVERY SUBSTANTIAL (0.5 INCHES) RAINFALL.

2. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN FIELD CONDITIONS, OR FIELD OPERATIONS OF THE INDIVIDUAL SITE CONTRACTOR MAY WARRANT. ALL TEMPORARY EROSION CONTROL MEASURES USED SHALL BE PERIODICALLY INSPECTED, CLEANED, MAINTAINED AND OTHERWISE KEPT IN AN EFFECTIVE OPERATIONAL MANNER THROUGHOUT THE CONSTRUCTION PERIOD.

3. ALL DISTURBED AREAS DESIGNATED NOT TO RECEIVE PAVEMENT OR RIP RAP, SHALL RECEIVE A MINIMUM APPLICATION OF 4-INCHES OF LOAM (COMPACTED THICKNESS), PRIOR TO SEEDING AND MULCHING.

4. ALL SWALES AND DITCH LINES SHALL BE PERIODICALLY CLEANED OF DEPOSITED SEDIMENT SO AS TO MAINTAIN AN EFFECTIVE GRADE AND CROSS-SECTION.

5. BALED HAY USED FOR TEMPORARY EROSION CONTROL MEASURES SHALL BE DRY MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE OF NOXIOUS WEEDS, DEBRIS, AND WOOD.

6. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS ARE INSTALLED.
   B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
   C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS RIP-RAP OR STONE HAS BEEN INSTALLED.
   D. EROSION CONTROL BLANKETS OR EQUAL HAVE BEEN PROPERLY INSTALLED.

7. WINTER SHUT DOWN:
   A. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
   B. ALL DITCHES AND SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WIT STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS; AND
   C. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

8. DUST SHALL BE CONTROLLED BY THE USE OF WATER AND/OR SWEEPING AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD.

9. IN NO WAY ARE THOSE TEMPORARY EROSION CONTROL MEASURES INDICATED ON THESE PLANS TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT.

TURF ESTABLISHMENT SCHEDULE:

SEED BED PREPARATION:

1. PLACE 4-INCH (MINIMUM) COMPACTED THICKNESS OF CLEAN SUITABLE LOAM;
2. RAKE OUT LOAM TO FREE SOIL OF DEBRIS AND STONES GREATER THAN 1-INCH IN DIAMETER;
3. FINE GRADE SURFACE AND SUPPLEMENT WITH LOAM WHERE NEEDED TO CREATE UNIFORM SURFACE;
4. APPLY AGRICULTURAL LIMESTONE AT A RATE OF 90-POUNDS PER 1,000 S.F.;
5. APPLY 10-20-20 FERTILIZER AT A RATE OF 11-POUNDS PER 1,000 S.F.

SEEDING SPECIFICATIONS:

1. SEED SHALL BE SPREAD UNIFORMLY BY BROADCASTING, DRILLING OR HYDROSEEDING. IF HYDROSEEDING, USE 4-TIMES THE RECOMMENDED RATE OF INOCULATE.
2. SEEDING FOR WINTER FROST COVER SHALL OCCUR BETWEEN NOVEMBER 15 AND MARCH 1. SEEDING SHALL BE MULCHED WITH HAY, STRAW OR OTHER ACCEPTABLE MATERIAL AT A RATE OF 2-TONS PER ACRE. SEED MIXTURE FOR FROST SEEDING SHALL BE A PERENNIAL RYE GRASSES MIXTURE AND SHALL BE WELL TRACKED INTO THE LOAM.
3. SEEDING FOR PERMANENT COVER SHALL OCCUR BETWEEN APRIL 15 AND OCTOBER 1, WHEN SEEDING BETWEEN MAY 15 AND SEPTEMBER 1, ALL AREAS SEEDED SHALL BE MULCHED WITH HAY, STRAW OR OTHER ACCEPTABLE MATERIAL AT A RATE OF 2-TONS PER ACRE.
4. SEED MIXTURE FOR LAWN AREAS SHALL CONTAIN 45% TALL FESCUE, 45% CREEPING RED FESCUE, AND 10% REDTOP APPLIED AT A RATE OF 45 POUNDS PER ACRE.
5. SEED MIXTURE FOR SLOPED AREAS SHALL CONFORM WITH NHDOT "SLOPE STABILIZATION MIX."
6. AREAS HAVING FINISH GRADES STEEPER THAN 3:1 OR ROADWAY DITCHES STEEPER THAN 5% SHALL BE STABILIZED WITH JUTE MATTING, STONE RIP RAP OR 3" OF STUMP GRINDINGS. WHEN AND IF FIELD CONDITIONS WARRANT, OR IF SO ORDERED, JUTE MATTING INSTALLED TO CONFORM WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE OUTLINED IN "STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE".

STATE OF NEW HAMPSHIRE JENNIFER B. McCOURT No. 8133 LICENSED PROFESSIONAL ENGINEER

PROJECT NO. *214-0202-1*

REVISIONS	
DATE	DESCRIPTION
10/11/16	NHDES AoT COMMENTS

CONSTRUCTION DETAILS PREPARED FOR:

SOUTHWOODS PHASE III

TAX MAP 1 LOT 1-76; SOUTHWOODS ROAD, CHESTER, NH

ENGINEER:
McCOURT ENGINEERING ASSOCIATES, PLLC
PROJECT NO.
Civil Engineering & Land Planning
42 Ezekiel Smith Road, Henniker, NH 03242
mccourtengineering@tds.net
(603) 428-6682

OWNER & APPLICANT:
BRADY SULLIVAN
SOUTH WOODS LLC
670 NO. COMMERCIAL STREET
MANCHESTER, NH 03102

PROJECT NO. 215-1222-1 | DATE: 5/02/2016 | SCALE: 1"=40' | SHEET: 5 OF 5