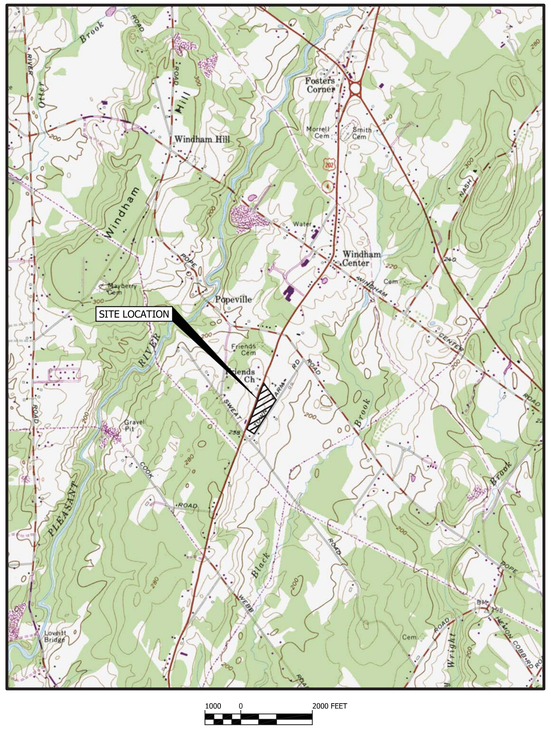
WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

TITLE	DWG NO
COVER SHEET	
GENERAL NOTES, ABBREVIATIONS, AND LEGEND	C-100
EXISTING CONDITIONS PLAN	C-101
SITE LAYOUT AND UTILITY PLAN	C-102
SITE GRADING AND DRAINAGE PLAN (SHEET 1 OF 2)	C-103
SITE GRADING AND DRAINAGE PLAN (SHEET 2 OF 2)	C-104
SITE EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 1 OF 2)	C-105
SITE EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 2 OF 2)	C-106
EROSION CONTROL NOTES AND DETAILS	C-300
SECTIONS AND DETAILS	C-301
SECTIONS AND DETAILS	C-302
PRE-DEVELOPMENT STORMWATER MANAGEMENT PLAN	D-100
POST DEVELOPMENT STORMWATER MANAGEMENT PLAN	D-101

LOCATION MAP



SME
SEVEE & MAHER ENGINEERS

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

GENERAL SITE NOTES:

1. BASE MAP IS BASED UPON A FIELD SURVEY PERFORMED BY SEBAGO TECHNICS IN OCTOBER OF 2006 AROUND THE EXISTING SKATE PARK. ADDITIONAL SITEAND EXISTING CONDITIONS WAS BASED UPON PLAN REFERENCE A SEE DWG C-100. COMMUNITY GARDEN LIMITS, TREE LINES AND TOWN FARM ROAD ARE FROM LOW ALTITUDE UVA STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

2. BOUNDARY INFORMATION SHOWN HEREON IS BASED SOLEY UPON PLAN REFERENCE A. NO MONUMENTATION FROM SAID PLAN WAS FOUND. THE BOUNDARY WAS SCALED ONTO THIS PLAN UTILIZING THE BUILDING AND UTILITY INFORMATION SHOWN ON PLAN REFERENCE A AND WAS ROTATED ONTO GRID NORTH (SEE NOTE 5).

3. A WETLAND DELINEATION WAS PERFORMED ON THIS PROJECT SITE BY GARY FULLERTON, SEBAGO TECHNICS, INC. AND LOCATED BY GROUND SURVEY. THIS DELINEATION CONFORMS TO THE STANDARDS AND METHODS OUTLINED IN THE 1987 WETLANDS DELINEATION MANUAL AUTHORED AND PUBLISHED BY THE U.S. ARMY CORPS OF ENGINEERS.

4. EXCAVATE AND STOCKPILE ON-SITE TOPSOIL. TOPSOIL IS TO REMAIN THE PROPERTY OF THE TOWN OF WINDHAM DURING CONSTRUCTION, AND SHALL NOT BE REMOVED FROM THE SITE. AFTER FINAL LOAM AND SEED EXCESS TOPSOIL SHALL BE REMOVED FROM SITE BY CONTRACTOR.

5. PROVIDE SIGNAGE AND BARRICADES TO PREVENT PEDESTRIANS FROM ENTERING THE WORK AREA THROUGHOUT CONSTRUCTION.

GRADING NOTES:

1. ADD 4" LOAM, SEED AND MULCH TO DISTURBED AREAS UNLESS OTHERWISE NOTED. PROVIDE EROSION CONTROL MESH ON ALL SLOPES 6:1 OR STEEPER.

2. MAINTAIN TEMPORARY EROSION CONTROL MEASURES FOR THE FULL DURATION OF CONSTRUCTION. INSPECT WEEKLY AND AFTER EACH STORM AND REPAIR AS NEEDED. REMOVE SEDIMENTS FROM THE SITE. PLACE IN AREA OF LOW EROSION POTENTIAL, AND STABILIZE WITH SEED AND MULCH.

3. PLACE TEMPORARY SOIL STABILIZATION WITHIN 14 DAYS OF INITIAL DISTURBANCE. PLACE PERMANENT SOIL STABILIZATION WITHIN 7 DAYS OF FINAL GRADING.

DIG SAFE NOTES:

PRIOR TO EXCAVATION, VERIFY THE UNDERGROUND UTILITIES, PIPES, STRUCTURES AND FACILITIES. PROVIDE THE FOLLOWING MINIMUM MEASURES:

1. PRE-MARK THE BOUNDARIES OF YOUR PLANNED EXCAVATION WITH WHITE PAINT, FLAGS OR STAKES, SO UTILITY CREWS KNOW WHERE TO MARK THEIR LINES.

2. CALL DIG SAFE, AT 811, AT LEAST THREE BUSINESS DAYS - BUT NO MORE THAN 30 CALENDAR DAYS - BEFORE STARTING WORK. DO NOT ASSUME SOMEONE ELSE WILL MAKE THE CALL.

3. IF BLASTING, NOTIFY DIG SAFE AT LEAST ONE BUSINESS DAY IN ADVANCE.

4. WAIT THREE BUSINESS DAYS FOR LINES TO BE LOCATED AND MARKED WITH COLOR-CODED PAINT, FLAGS OR STAKES. NOTE THE COLOR OF THE MARKS AND THE TYPE OF UTILITIES THEY INDICATE. SURVEY MARKED UTILITIES AND RECORD ON THE AS-BUILT DRAWINGS.

5. CONTACT THE LANDOWNER AND OTHER "NON-MEMBER" UTILITIES (WATER, SEWER, GAS, ETC.). FOR THEM TO MARK THE LOCATIONS OF THEIR UNDERGROUND FACILITIES. SURVEY MARKED UTILITIES AND RECORD ON THE AS-BUILT DRAWINGS.

6. RE-NOTIFY DIG SAFE AND THE NON-MEMBER UTILITIES IF THE DIGGING, DRILLING OR BLASTING DOES NOT OCCUR WITHIN 30 CALENDAR DAYS, OR IF THE MARKS ARE LOST DUE TO WEATHER CONDITIONS, SITE WORK ACTIVITY OR ANY OTHER REASON.

7. HAND DIG WITHIN 18 INCHES IN ANY DIRECTION OF ANY UNDERGROUND LINE UNTIL THE LINE IS EXPOSED. MECHANICAL METHODS MAY BE USED FOR INITIAL SITE PENETRATION, SUCH AS REMOVAL OF PAVEMENT OR ROCK.

8. DIG SAFE REQUIREMENTS ARE IN ADDITION TO TOWN, CITY AND/OR STATE DOT STREET OPENING PERMIT REQUIREMENTS.

9. FOR COMPLETE DIG SAFE REQUIREMENTS, CALL THE PUBLIC UTILITIES COMMISSION (PUC) AT 1-800-452-4699 OR VISIT WWW.STATE.ME.US/MPUC

10. IF YOU DAMAGE, DISLOCATE OR DISTURB ANY UNDERGROUND UTILITY LINE, IMMEDIATELY NOTIFY THE AFFECTED UTILITY. IF DAMAGE CREATES SAFETY CONCERNS, CALL THE FIRE DEPARTMENT AND TAKE IMMEDIATE STEPS TO SAFEGUARD HEALTH AND PROPERTY.

11. ANY TIME AN UNDERGROUND LINE IS DAMAGED OR DISTURBED OR IF LINES ARE IMPROPERLY MARKED, YOU MUST FILE AN INCIDENT REPORT WITH THE PUC FOR AN INCIDENT REPORT FORM VISIT WWW.STATE.ME.US/MPUC OR CALL THE PUC AT 1-800-452-4699.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	BUILDING	
	EDGE OF PAVEMENT	
	CURB	
100	CONTOUR	100
	SPOT GRADE	114.23
X	FENCE	X
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
	CATCH BASIN	
	DRAINAGE MANHOLE	
	UTILITY POLE	
OHU	OVERHEAD UTILITY	OHU
UGU	UNDERGROUND ELECTRIC	UGE
	UNDERGROUND COMMUNICATION CABLE	UCC
	TRANSFORMER	T
	LIGHT POLE	
	BOLLARD LIGHT	
	FLOOD LIGHT	
W	WATER LINE	W
	WATER GATE VALVE	
	HYDRANT	
	SIGN	
	RIPRAP	
	RETAINING WALL	
	TREELINE	
	PAVED WALK	
	SUPERHUMUS GRAVEL WALK	
	VOLLEY BALL COURT	
	IRON ROD FOUND	
	IRON PIPE FOUND	
	IRON ROD TO BE SET	
	TEMPORARY BENCH MARK	

TYPICAL ABBREVIATIONS:

ACCMP	ASPHALT COATED CMP
ACP	ASBESTOS CEMENT PIPE
AC	ACRE
AGG	AGGREGATE
ALUM	ALUMINUM
APPD	APPROVED
APPROX	APPROXIMATE
ARMH	AIR RELEASE MANHOLE
ASB	ASBESTOS
ASP	ASPHALT
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AZ	AZIMUTH
BCCMP	BITUMINOUS COATED CMP
BM	BENCH MARK
BIT	BITUMINOUS
BLDG	BUILDING
BOT	BOTTOM
BRG	BEARING
BV	BALL VALVE
CB	CATCH BASIN
CEN	CENTER
CEM LIN	CEMENT LINED
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CLASS
CONC	CONCRETE
CONST	CONSTRUCTION
CONTR	CONTRACTOR
CS	CURB STOP
CTR	CENTER
CU	COPPER
CY	CUBIC YARD
D	DEGREE OF CURVE
DBL	DOUBLE
DEG OR °	DEGREE
DEPT	DEPARTMENT
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DN	DOWN
DR	DRAIN
DWG	DRAWING
EA	EACH
EG	EXISTING GROUND OR GRADE
ELEC	ELECTRIC
EL	ELEVATION
ELB	ELBOW
EOP	EDGE OF PAVEMENT
EQUIP	EQUIPMENT
EST	ESTIMATED
EXC	EXCAVATE
EXIST	EXISTING
FI	FIELD INLET
FG	FINISH GRADE
FBRGL	FIBERGLASS
FDN	FOUNDATION
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOOR
FPS	FEET PER SECOND
FT OR '	FEET
FTG	FOOTING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HYD	HYDRANT
ID	INSIDE DIAMETER
IN OR "	INCHES
INV	INVERT
INV EL	INVERT ELEVATION
LB	POUND
LC	LEACHATE COLLECTION
LD	LEAK DETECTION
LF	LINEAR FEET
LOC	LOCATION
LT	LEACHATE TRANSPORT
MH	MANHOLE
MJ	MECHANICAL JOINT
MATL	MATERIAL
MAX	MAXIMUM
MFR	MANUFACTURE
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
NITC	NOT IN THIS CONTRACT
NTS	NOT TO SCALE
N/F	NOW OR FORMERLY
NO OR #	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
PC	POINT OF CURVE
PD	PERIMETER DRAIN
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PT	POINT OF TANGENT
PERF	PERFORATED
PP	POWER POLE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QTY	QUANTITY
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RAD	RADIUS
REQD	REQUIRED
RT	RIGHT
RTE	ROUTE
S	SLOPE
SCH	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SMH	SANITARY MANHOLE
ST	STREET
STA	STATION
SY	SQUARE YARD
TAN	TANGENT
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPORARY
TYP	TYPICAL
UD	UNDERDRAIN
V	VOLTS
VA TEE	VALVE ANCHORING TEE
VERT	VERTICAL
WG	WATER GATE
W/	WITH
W/O	WITHOUT
YD	YARD

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

GENERAL NOTES, ABBREVIATIONS, AND LEGEND

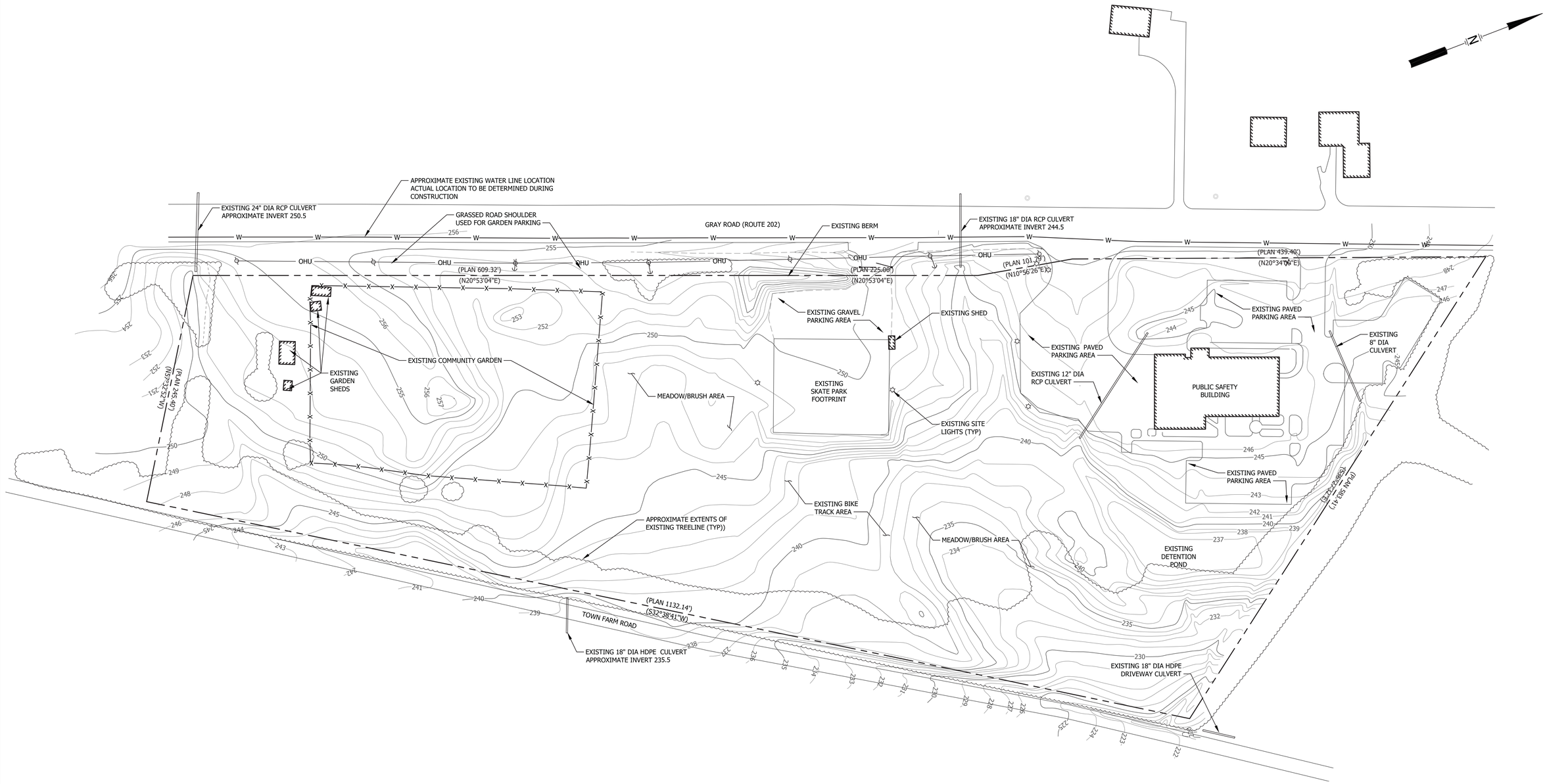
SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY: DPD
DRAWN BY: SJM
DATE: 4/2018
CHECKED BY: KPN/BDP
LMN: NONE
CTB: SME-STD

JOB NO. 18048.00 DWG FILE SYMSHT

C-100

\\server4\Windham\Community Park\AutoPlan\SYMSHT.dwg, 10/2/2018 10:21:18 AM, kjm



NOTE:

FOR GENERAL NOTES AND ORIGIN OF EXISTING CONDITIONS, SEE DWG C-100.

25 0 50 100 FEET

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

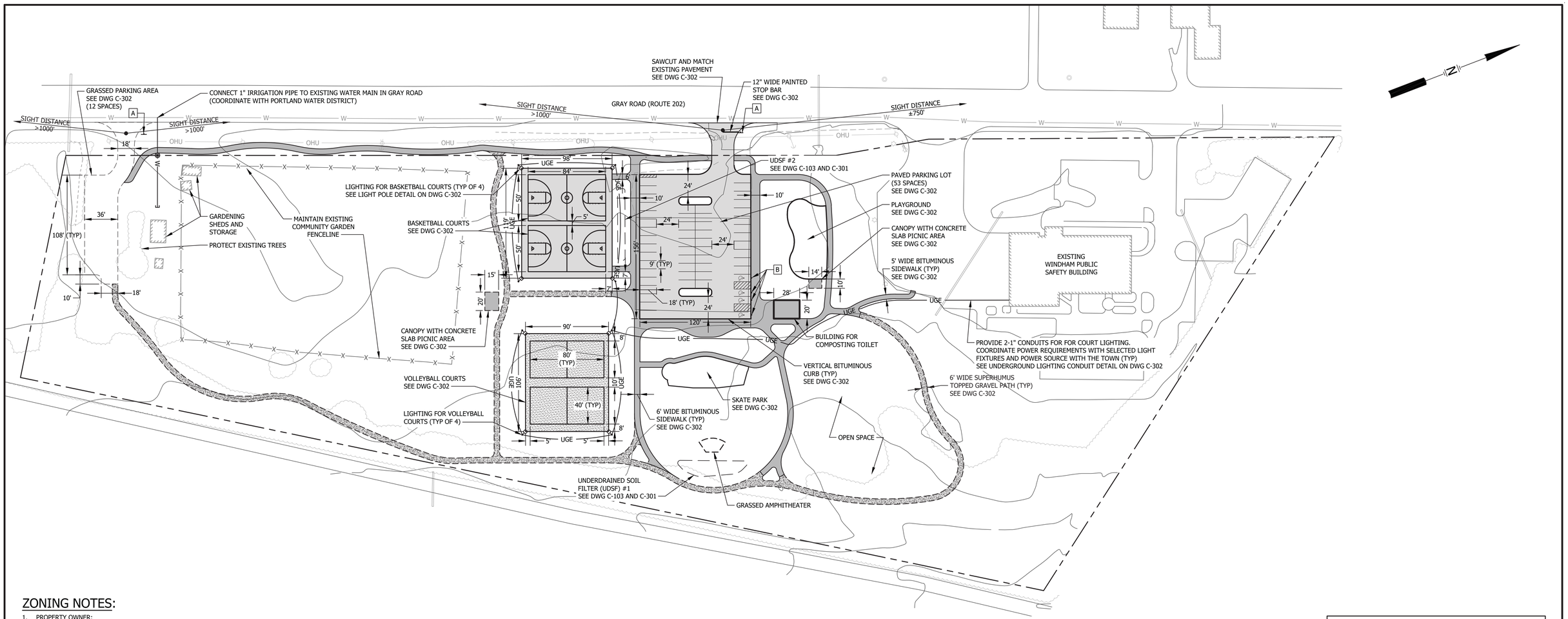
EXISTING CONDITIONS PLAN

SME
SEVEE & MAHER
ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY:	DPD
DRAWN BY:	SJM
DATE:	4/2018
CHECKED BY:	BDP
LMN:	EXCON
CTB:	SME-STD

JOB NO. 18048.00 DWG FILE BASE

C-101



ZONING NOTES:

1. PROPERTY OWNER:
   TOWN OF WINDHAM

2. APPLICANT:
   TOWN OF WINDHAM
   8 SCHOOL ROAD
   WINDHAM, MAINE 04062

3. PROPOSED USE:

   RECREATION FACILITY, OUTDOOR (CONDITIONAL USE)

4. NO SEWER OR SEPTIC SYSTEM PROPOSED. A COMPOSTING TOILET ON SITE.

5. LOT INFORMATION: TAX MAP 9 LOT 71

6. ZONING DISTRICT: FARM-RESIDENTIAL DISTRICT (FR)

7. ZONING REQUIREMENTS: DIMENSIONAL STANDARDS TO BE IN ACCORDANCE WITH THE APPROVED ZONE AS SHOWN BELOW:

	FARM-RESIDENTIAL ZONE	
	REQUIRED	PROVIDED
MINIMUM LOT SIZE	50,000 SF	> 50,000 SF
MAXIMUM RESIDENTIAL DENSITY	1 LOT/ 40,000SF	1 LOT/ > 40,000 SF
MINIMUM LOT WIDTH	150 FEET	> 150 FEET
MINIMUM FRONT YARD SETBACK	30 FEET	> 30 FEET
MINIMUM REAR/SIDE SETBACK	10 FEET	> 10 FEET
MAXIMUM BUILDING HEIGHT	35 FEET	< 35 FEET
MAXIMUM LOT COVERAGE	20%	< 20%

8. THIS SITE DOES NOT CONTAIN WETLANDS.

9. SITE UTILITIES WILL BE PROVIDED AS FOLLOWS:

ELECTRIC/COMMUNICATIONS:	EXISTING SERVICE
WATER SUPPLY:	1" DIA IRRIGATION FOR COMMUNITY GARDEN
SEWER SERVICE:	ON-SITE COMPOSTING TOILET

10. THE PROPERTY IS NOT WITHIN A FLOODPLAIN OR SHORELAND ZONE.

WAIVERS:

1. WAIVER FROM SECTION 518 OF TOWN OF WINDHAM LAND USE ORDINANCE PERMITTING UP TO TWO (2) CURB CUTS. PROPOSED PROJECT INCLUDES FOUR (4) CURB CUTS.

APPROVED: TOWN OF WINDHAM PLANNING BOARD

DATE

NOTE:

FOR GENERAL NOTES AND ORIGIN OF EXISTING CONDITIONS, SEE DWG C-100.

0 0 50 100 FEET

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

SITE LAYOUT AND UTILITIES PLAN

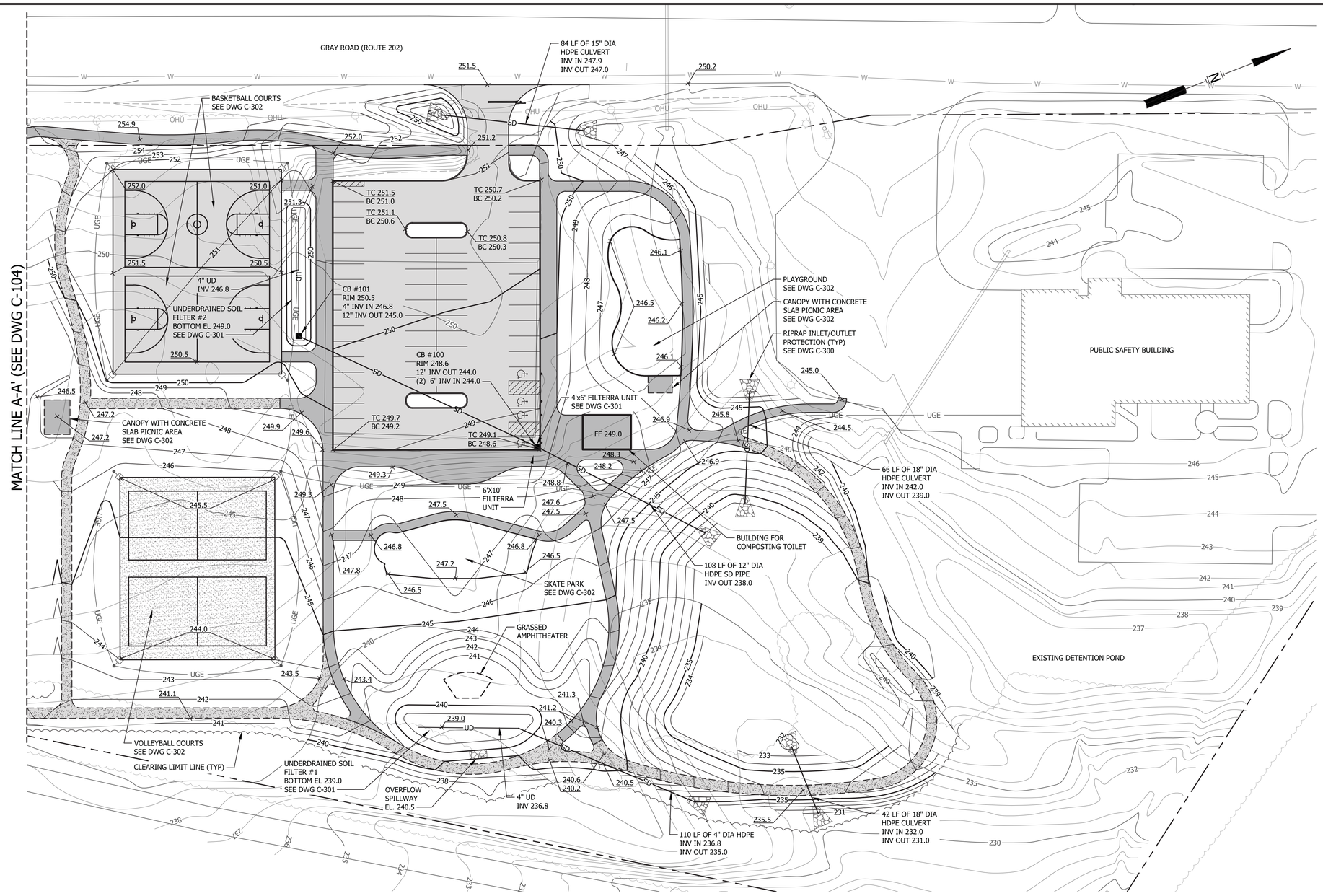
SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY: DPD
DRAWN BY: SJM
DATE: 4/2018
CHECKED BY: BDP
LMN: SITE-UTILS
CTB: SME-STD

JOB NO. 18048.00 DWG FILE BASE

C-102

\\server\windham\Community Park\AutoPlan\AS-Bldg_10202018 11:14 PM, sjm



NOTE:

FOR GENERAL NOTES AND ORIGIN OF EXISTING CONDITIONS, SEE DWG C-100.

15 0 30 60 FEET

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

SITE GRADING AND DRAINAGE PLAN
(SHEET 1 OF 2)

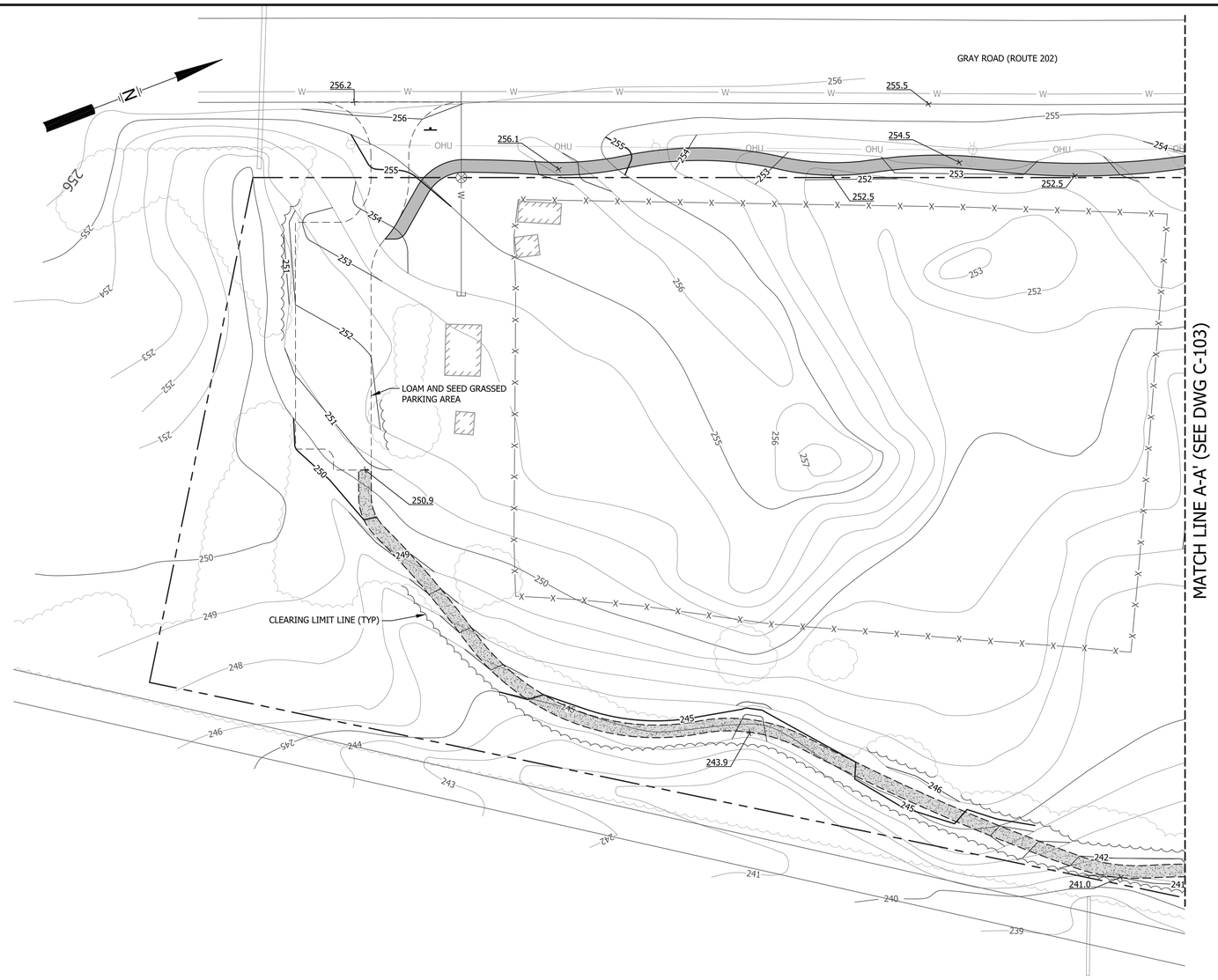
SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY:	DPD
DRAWN BY:	SJM
DATE:	4/2018
CHECKED BY:	BDP
LMN:	SITE/GRAD
CTB:	SME-STD

JOB NO. 18048.00 DWG FILE BASE

C-103

\\Server\d\Windham\Community Park\AutoCAD\Plan\BASE.dwg, 10/2/2018 1:14:13 PM, sjm



NOTE:

FOR GENERAL NOTES AND ORIGIN OF EXISTING CONDITIONS, SEE DWG C-100.

15 0 30 60 FEET

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

SITE GRADING AND DRAINAGE PLAN
(SHEET 2 OF 2)

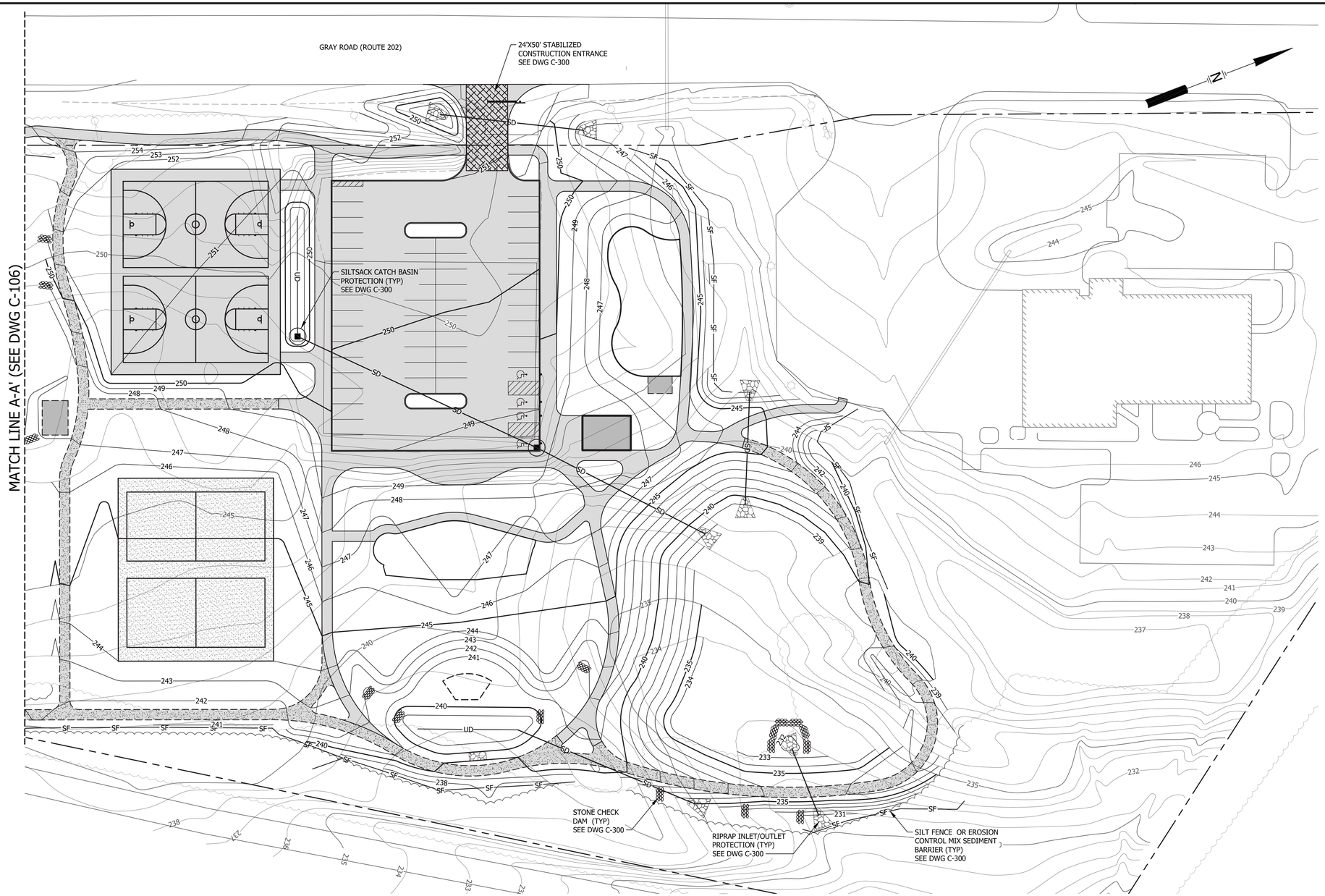
SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY:	DPD
DRAWN BY:	SJM
DATE:	4/2018
CHECKED BY:	BDP
LMN:	SITE/GRAD
CTB:	SME-STD

JOB NO. 18048.00 DWG FILE BASE

C-104

Wadsworth/Windham/Community Park/Acad/Plans/BASE.dwg, 10/22/2018 10:03:13 PM, lm



NOTE:

FOR GENERAL NOTES AND ORIGIN OF EXISTING CONDITIONS, SEE DWG C-100.

15 0 30 60 FEET

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

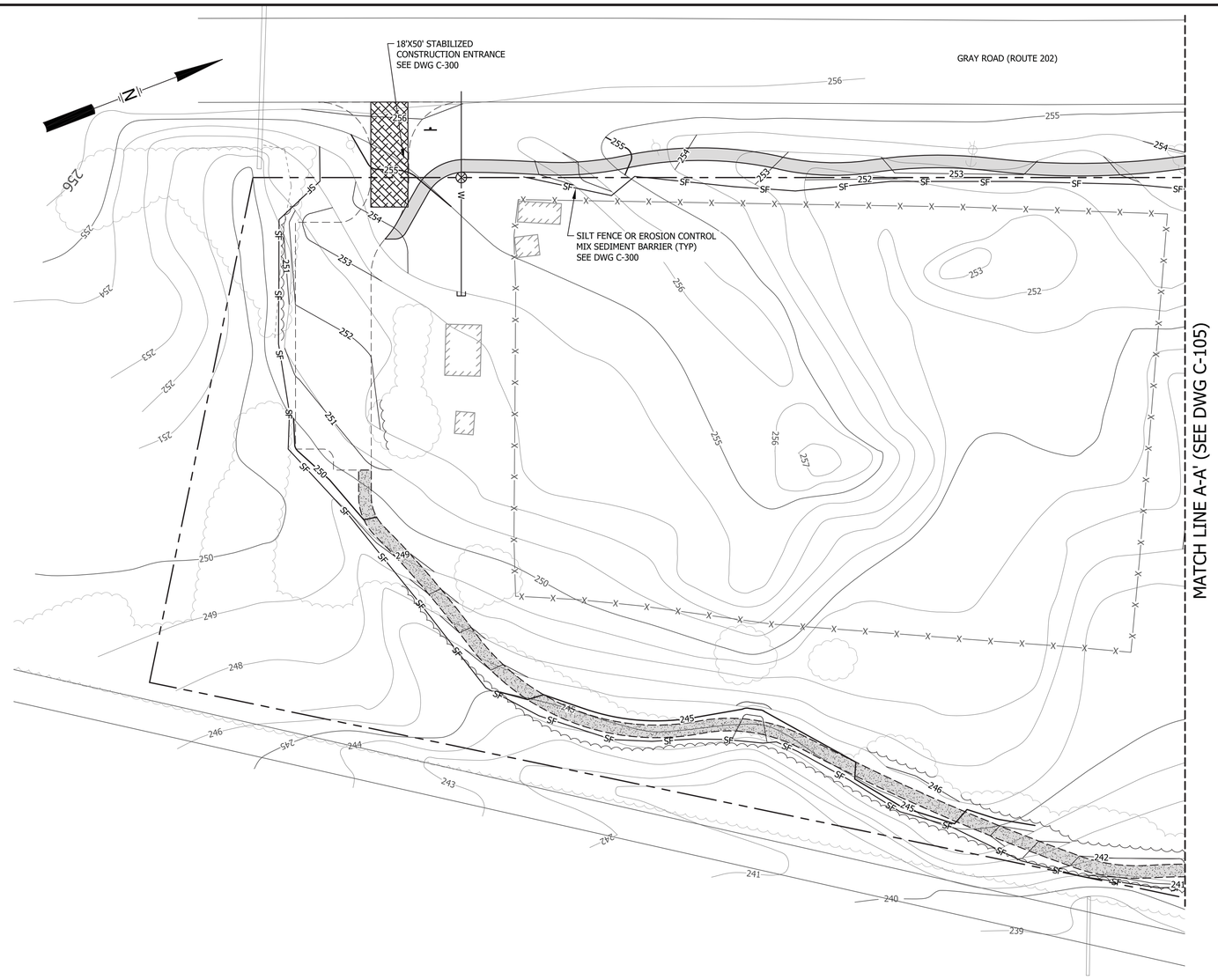
SITE EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 1 OF 2)

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY:	DPD
DRAWN BY:	SJM
DATE:	4/2018
CHECKED BY:	BDP
LMN:	EROS
CTB:	SME-STD

JOB NO. 18048.00 DWG FILE BASE

C-105



NOTE:

FOR GENERAL NOTES AND ORIGIN OF EXISTING CONDITIONS, SEE DWG C-100.

15 0 30 60 FEET

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

SITE EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 2 OF 2)

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY:	DPD
DRAWN BY:	SJM
DATE:	4/2018
CHECKED BY:	BDP
LMN:	EROS
CTB:	SME-STD

JOB NO. 18048.00 DWG FILE BASE

C-106

Wadsworth\Windham\Community Park\Acad\Plans\BASE.dwg, 10/2/2018 1:09:41 PM, tjm

EROSION CONTROL NOTES:

A. GENERAL

1. All soil erosion and sediment control will be done in accordance with: (1) the Maine Erosion and Sediment Control Handbook: Best Management Practices, Maine Department of Environmental Protection (MEDEP), October 2016.

2. The site Contractor (to be determined) will be responsible for the repair/replacement/maintenance of all erosion control measures until all disturbed areas are stabilized.

3. Disturbed areas will be permanently stabilized within 7 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance will be temporarily stabilized within 7 days of the disturbance.

4. In all areas, removal of trees, bushes and other vegetation, as well as disturbance of topsoil will be kept to a minimum while allowing proper site operations.

5. Any suitable topsoil will be stripped and stockpiled for reuse as directed by the Owner. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed and no off-site sediment damage will result. In any event, stockpiles will not be located within 100 feet of wetlands and will be at least 50 feet upgradient of the stockpile's perimeter silt fence. The sideslopes of the topsoil stockpile will not exceed 2:1. Silt fence will be installed around the perimeter of all topsoil stockpiles. Topsoil stockpiles will be surrounded with siltation fencing and will be temporarily seeded with Aroostook rye, annual or perennial ryegrass within 7 days of formation, or temporarily mulched.

B. TEMPORARY MEASURES

1. STABILIZED CONSTRUCTION ENTRANCE/EXIT

A crushed stone stabilized construction entrance/exit will be placed at any point of vehicular access to the site, in accordance with the detail shown on this sheet.

2. SILT FENCE

a. Silt fence will be installed prior to all construction activity, where soil disturbance may result in erosion. Silt fence will be erected at locations shown on the plans and/or downgradient of all construction activity.

b. Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.

c. Silt fences will be inspected immediately after each rainfall and at least daily during prolonged rainfall. They will be inspected if there are any signs of erosion or sedimentation below them. Any required repairs will be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, they will be replaced with a temporary crushed stone check dam.

d. Sediment deposits will be removed after each storm event if significant build-up has occurred or if deposits exceed half the height of the barrier.

3. STONE CHECK DAMS

Stone check dams will be installed in grass-lined swales and ditches during construction.

4. BARK MULCH SEDIMENT BARRIER

a. Where approved, bark mulch sediment barriers may be used as a substitute for silt fence. See the details in this drawing set for specifications.

b. Rock Filter Berms: To provide more filtering capacity or to act as a velocity check dam, a berm's center can be composed of clean crushed rock ranging in size from the check dam stone to riprap.

5. TEMPORARY SEEDING

Stabilize disturbed areas that will not be brought to final grade for a year or less and reduce problems associated with mud and dust production from exposed soil surface during construction with temporary vegetation.

6. TEMPORARY MULCHING

Use temporary mulch in the following locations and/or circumstances:

- In sensitive areas (within 100 feet of streams, wetlands and in lake watersheds) temporary mulch will be applied within 7 days of exposing spill or prior to any storm event.
- Apply temporary mulch within 14 days of disturbance or prior to any storm event in all other areas.
- Areas which have been temporarily or permanently seeded will be mulched immediately following seeding.
- Areas which cannot be seeded within the growing season will be mulched for over-winter protection and the area will be seeded at the beginning of the growing season.
- Mulch can be used in conjunction with tree, shrub, vine, and ground cover plantings.
- Mulch anchoring will be used on slopes greater than 5 percent in late fall (past October 15), and over-winter (October 15 - April 15).

The following materials may be used for temporary mulch:

a. Hay or Straw material shall be air-dried, free of seeds and coarse material. Apply 2 bales/1,000 sf or 1.5 to 2 tons/acre to cover 90% of ground surface.

b. Erosion Control Mix: It can be used as a stand-alone reinforcement:
- on slopes 2 horizontal to 1 vertical or less;
- on frozen ground or forested areas; and
- at the edge of gravel parking areas and areas under construction.

c. Erosion control mix alone is not suitable:
- on slopes with groundwater seepage;
- at low points with concentrated flows and in gullies;
- at the bottom of steep perimeter slopes exceeding 100 feet in length;
- below culvert outlet aprons; and around catch basins and closed storm systems.

d. Chemical Mulches and Soil Binders: Wide ranges of synthetic spray-on materials are marketed to protect the soil surface. These are emulsions that are mixed with water and applied to the soil. They may be used alone, but most often are used to hold wood fiber, hydro-mulches or straw to the soil surface.

e. Erosion Control Blankets and Mats: Mats are manufactured combinations of mulch and netting designed to retain soil moisture and modify soil temperature. During the growing season (April 15 to October 15) use mats indicated on drawings or North American Green (NAG) S75 (or mulch and netting) on:
- the base of grassed waterways;
- steep slopes (15 percent or greater); and
- any disturbed soil within 100 feet of lakes, streams, or wetlands.

During the late fall and winter (October 15 to April 15) use heavy grade mats indicated on drawings for NAG SC250 on all areas noted above plus use lighter grade mats NAG S75 (or mulch and netting) on:
- sideslopes of grassed waterways; and moderate slopes (between 8 and 15 percent).

C. TEMPORARY DUST CONTROL

To prevent the blowing and movement of dust from exposed soil surfaces, and reduce the presence of dust, use water or calcium chloride to control dusting by preserving the moisture level in the road surface materials.

D. CONSTRUCTION DE-WATERING

1. Water from construction de-watering operations shall be cleaned of sediment before reaching wetlands, water bodies, streams or site boundaries. Utilize temporary sediment basins, erosion control soil filter berms backed by staked hay bales, A Dirt Bag 55" sediment filter bag by ACF Environmental, or other approved Best Management Practices (BMP's).

2. In sensitive areas near streams or ponds, discharge the water from the de-watering operation into a temporary sediment basin created by a surrounding filter berm of uncompacted erosion control mix immediately backed by staked hay bales (see the site details). Locate the temporary sediment basin at lease 100 feet from the nearest water body, such that the filtered water will flow through undisturbed vegetated soil areas prior to reaching the water body or property line.

E. PERMANENT MEASURES

1. Riprapped Aprons: All storm drain pipe outlets and the inlet and outlet of culverts will have riprap aprons to protect against scour and deterioration.

2. Topsoil, Seed, and Mulch: All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.) will be loamed, limed, fertilized, seeded, and mulched.

Seeded Preparation: Use stockpiled materials spread to the depths shown on the plans, if available. Approved topsoil substitutes may be used. Grade the site as needed.

a. Seeding will be completed by August 15 of each year. Late season seeding may be done between August 15 and October 15. Areas not seeded or which do not obtain satisfactory growth by October 15, will be seeded with Aroostook Rye or mulched. After November 1, or the first killing frost, disturbed areas will be seeded at double the specified application rates, mulched, and anchored.

PERMANENT SEEDING SPECIFICATIONS

Mixture:	Roadside (lbs/acre)	Lawn (lbs/acre)
Kentucky Bluegrass	20	55
White Clover	5	0
Creeping Red Fescue	20	55
Perennial Ryegrass	5	15

b. Mulch in accordance with specifications for temporary mulching.

c. If permanent vegetated stabilization cannot be established due to the season of the year, all exposed and disturbed areas not to undergo further disturbance are to have dormant seeding applied and be temporarily mulched to protect the site.

3. Ditches and Channels: All ditches on-site will be lined with North American Green S75 erosion control mesh (or an approved equal) upon installation of loam and seed.

F. WINTER CONSTRUCTION AND STABILIZATION

1. Winter excavation and earthwork will be completed so as to minimize exposed areas while satisfactorily completing the project. Limit exposed areas to those areas in which work is to occur during the following 15 days and that can be mulched in one day prior to any snow event. All areas will be considered denuded until the subbase gravel is installed in roadway areas or the areas of future loam and seed have been loamed, seeded, and mulched.

Install any added measures necessary to control erosion/sedimentation. The particular measure used will be dependent upon site conditions, the size of the area to be protected, and weather conditions.

To minimize areas without erosion control protection, continuation of earthwork operations on additional areas will not begin until the exposed soil surface on the area being worked has been stabilized.

2. Natural Resource Protection: During winter construction, a double-row of sediment barriers (i.e., silt fence backed with hay bales or erosion control mix) will be placed between any natural resource and the disturbed area. Projects crossing the natural resource will be protected a minimum distance of 100 feet on either side from the resource.

3. Sediment Barriers: During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

4. Mulching:

- All areas will be considered to be denuded until seeded and mulched. Hay and straw mulch will be applied at a rate of twice the normal accepted rate.
- Mulch will not be spread on top of snow.
- After each day of final grading, the area will be properly stabilized with anchored hay or straw or erosion control matting.
- Between the dates of November 1 and April 15, all mulch will be anchored by either mulch netting, emulsion chemical, tracking or wood cellulose fiber.

5. Soil Stockpiling: Stockpiles of soil or subsoil will be mulched for over-winter protection with hay or straw at twice the normal rate or with a 4-inch layer of erosion control mix. This will be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpiles shall not be placed (even covered with mulch) within 100 feet from any natural resources.

6. Seeding: Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas will receive 4 inches of loam and seed at an application rate of three times the rate for permanent seeding. All areas seeded during the winter will be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75 percent catch) will be revegetated by replacing loam, seed, and mulch.

If dormant seeding is not used for the site, all disturbed areas will be revegetated in the spring.

7. Maintenance: Maintenance measures will be applied as needed during the entire construction season. After each rainfall, snow storm, or period of thawing and runoff, the site Contractor will perform a visual inspection of all installed erosion control measures and perform repairs as needed to ensure their continuous function.

Following the temporary and/or final seeding and mulching, the Contractor will, in the spring, inspect and repair any damages and/or bare spots. An established vegetative cover means a minimum of 85 to 90 percent of areas vegetated with vigorous growth.

G. OVER-WINTER CONSTRUCTION EROSION CONTROL MEASURES

1. Stabilization of Disturbed Soil: By October 15, all disturbed soils on areas having a slope less than 15 percent will be seeded and mulched. If the Contractor fails to stabilize these soils by this date, then the Contractor shall stabilize the soil for late fall and winter, by using either temporary seeding or mulching.

2. Stabilization of Disturbed Slopes: All slopes to be vegetated will be completed by October 15. The Owner will consider any area having a grade greater than 15 percent (6.5H:1V) to be a slope. Slopes not vegetated by October 15 will receive one of the following actions to stabilize the slope for late fall and winter:

a. Stabilize the soil with temporary vegetation and erosion control mesh.
b. Stabilize the slope with erosion control mix.
c. Stabilize the slope with stone riprap.

3. Stabilization of Ditches and Channels: All stone-lined ditches and channels to be used to convey runoff through the winter will be constructed and stabilized by November 15. Grass-lined ditches and channels will be complete by September 15. Grass-lined ditches not stabilized by September 15 shall be lined with either sod or riprap.

H. MAINTENANCE PLAN

1. Routine Maintenance: Inspection will be performed as outlined in the project's Erosion Control Plan. Inspection will be by a qualified person during wet weather to ensure that the facility performs as intended. Inspection priorities will include checking erosion controls for accumulation of sediments.

I. Housekeeping

1. Spill prevention. Controls must be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

2. Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

3. Fugitive sediment and dust. Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

4. Debris and other materials. Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

5. Trench or foundation de-watering. Trench de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the department.

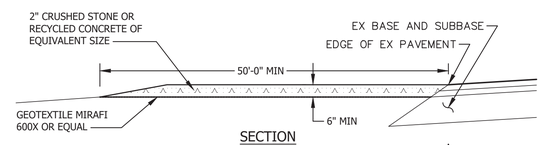
6. Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges.

7. Additional requirements. Additional requirements may be applied on a site-specific basis.

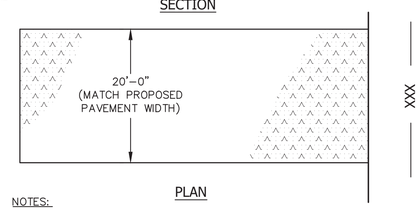
J. CONSTRUCTION SEQUENCE

In general, the expected sequence of construction for each phase is provided below. Construction is proposed to start in Fall 2017 and be complete in Spring 2018.

- Mobilization
- Install temporary erosion control measures
- Clearing and grubbing
- Site Grading
- Construct storm drains
- Construct underdrained soil filters
- Construct access drive, parking and plaza areas
- Site stabilization, pavement, loam and seed, and landscaping
- Remove temporary erosion control measures



SECTION



PLAN

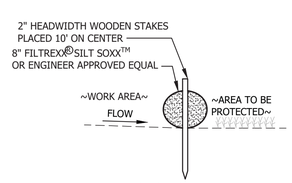
NOTES:

1. MAINTAIN ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. IF WASHING IS REQUIRED PREVENT SEDIMENT FROM ENTERING WATERWAYS, DITCHES OR STORM DRAINS.

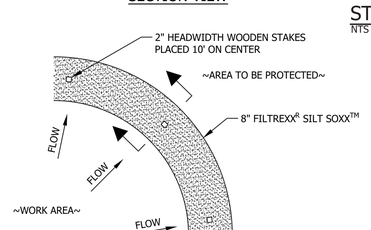
2. REMOVE STABILIZED CONSTRUCTION ENTRANCE TO FINISH ROAD CONSTRUCTION & PAVEMENT.

STABILIZED CONSTRUCTION ENTRANCE

NTS



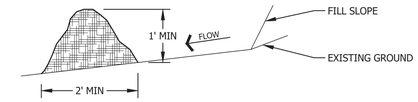
SECTION VIEW



PLAN

SILT SOCK

NTS



EROSION CONTROL MIX SEDIMENT BARRIER

NOTES:

1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR FLUME GRIT AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS. WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS OR BARK CHIPS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER.
EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH.
THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
   A. ORGANIC MATERIAL: BETWEEN 20% - 100% (DRY WEIGHT BASIS)
   B. PARTICLE SIZE: BY WEIGHT, 100% PASSING 6" SCREEN, 70-85% PASSING 0.75" SCREEN
   C. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
   D. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
   E. SOLUBLE SALTS CONTENT SHALL BE LESS THAN 4.0 MMHOS/CM.
   F. PH: 5.0 - 8.0

2. ON SLOPES LESS THAN 5% OR AT THE BOTTOM OF SLOPES 2:1 OR LESS UP TO 20 FEET LONG, THE BARRIER MUST CONFORM TO THE ABOVE DIMENSIONS. ON THE LONGER OR STEEPER SLOPES, THE BARRIER SHOULD BE WIDER TO ACCOMMODATE THE ADDITIONAL FLOW.

3. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL ELEVATION. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.

4. LOCATIONS WHERE OTHER BMP'S SHOULD BE USED:
   A. AT LOW POINTS OF CONCENTRATED FLOW
   B. BELOW CULVERT OUTLET APRONS
   C. WHERE A PREVIOUS STAND-ALONE EROSION CONTROL MIX APPLICATION HAS FAILED
   D. AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM (LARGE UPGRADIENT WATERSHED)
   E. AROUND CATCH BASINS AND CLOSED STORM DRAIN SYSTEMS.

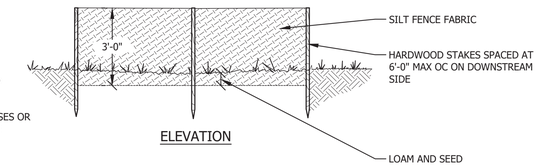
5. THE EROSION CONTROL MIX BARRIERS SHOULD BE INSPECTED REGULARLY AND AFTER EACH LARGE RAINFALL. REPAIR ALL DAMAGED SECTIONS OF BERM IMMEDIATELY BY REPLACING OR ADDING ADDITIONAL MATERIAL PLACED ON THE BERM TO THE DESIRED HEIGHT AND WIDTH.

6. IT MAY BE NECESSARY TO REINFORCE THE BARRIER WITH SILT FENCE OR STONE CHECK DAMS IF THERE ARE SIGNS OF UNDERCUTTING OR THE IMPOUNDMENT OF LARGE VOLUMES OF WATER.

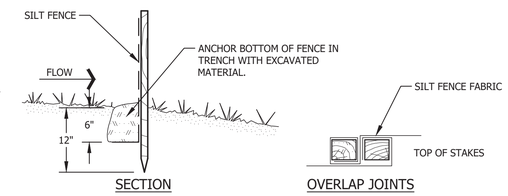
7. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

8. REPLACE SECTIONS OF BERM THAT DECOMPOSE, BECOME CLOGGED WITH SEDIMENT OR OTHERWISE BECOME INEFFECTIVE. THE BARRIER SHOULD BE RESHAPED AS NEEDED.

9. EROSION CONTROL MIX BARRIERS CAN BE LEFT IN PLACE AFTER CONSTRUCTION. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER BARRIER IS NO LONGER REQUIRED SHOULD BE SPREAD TO CONFORM TO THE EXISTING GRADE AND BE SEEDED AND MULCHED. WOODY VEGETATION CAN BE PLANTED INTO THE BARRIERS, OR THEY CAN BE OVER-SEEDED WITH LEGUMES. IF THE BARRIER NEEDS TO BE REMOVED, IT CAN BE SPREAD OUT INTO THE LANDSCAPE.



ELEVATION



SECTION

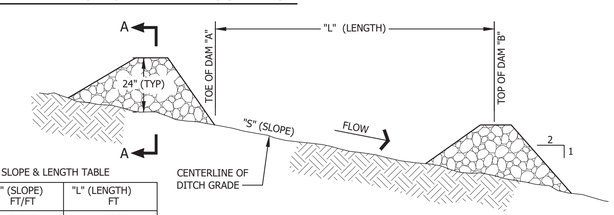
OVERLAP JOINTS

SILT FENCE

NOTE:
CONTRACTORS OPTION TO USE SEDIMENT BARRIER OR SILT FENCE FOR SLOPE PROTECTION.

SURFACE DRAINAGE SEDIMENT CONTROL

NTS

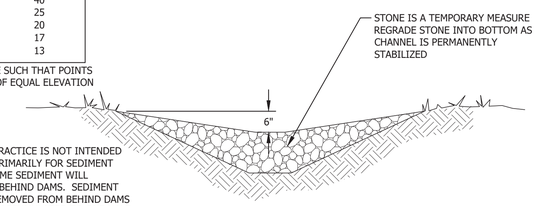


ELEVATION VIEW

SLOPE & LENGTH TABLE

"S" (SLOPE) FT/FT	"L" (LENGTH) FT
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13

L= THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION



SECTION A-A

NOTES:

1. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND DAMS. SEDIMENT SHOULD BE REMOVED FROM BEHIND DAMS WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE DAM.

2. STONE: 2"-3" CRUSHED STONE (MDOT 703.31)

STONE CHECK DAM

NTS

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

EROSION CONTROL NOTES AND DETAILS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY: DPD
DRAWN BY: SJM
DATE: 4/2018
CHECKED BY: BDP
LMN: NONE
CTB: SME-STD

JOB NO. 18048.00 DWG FILE BASE

C-300

\\Server\c\Sites\Windham\Community Park\AutoCAD\Plots\EROSION CONTROL.dwg, 10/22/2018 12:21:49 PM, sjm

THE SANDY LOAM TOPSOIL SHALL BE TESTED AT A SOIL TESTING LAB AND:

- MATCH THE USDA SANDY LOAM TOPSOIL CLASSIFICATION
- HAVE 5-8% HUMIFIED ORGANIC MATTER
- HAVE 20%-70% PASSING THE #200 SIEVE
- HAVE A CLAY CONTENT OF LESS THAN 2%
- BE FREE OF STONES, STUMPS, ROOTS OR OTHER OBJECTS GREATER THAN 2".

IF THE TOPSOIL DOES NOT CONTAIN SUFFICIENT NUTRIENT CONTENT TO SUPPORT GRASS GROWTH, SUPPLEMENT WITH SUPERHUMUS ORGANIC MATTER AND RETEST ORGANIC MATTER AND CLAY CONTENT.

NOTES:

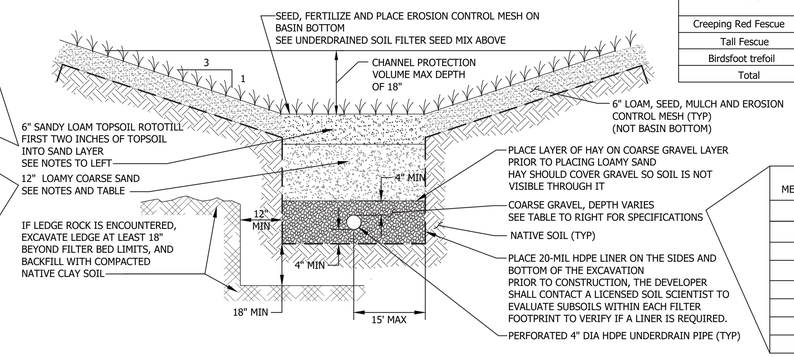
1. FILTER OUTLET DISCHARGE SHALL BE CONTROLLED BY A 1-INCH DIAMETER CONSTRICTIVE ORIFICE TO OBTAIN A 24 TO 48 HOUR RELEASE TIME, IF NECESSARY.
2. AFTER FILTERS ARE PERMANENTLY STABILIZED, THE CONTRACTOR SHALL FLOOD THE FILTER TO THE EMERGENCY SPILLWAY ELEVATION TO VERIFY THE RELEASE TIME IS BETWEEN 24 AND 48 HOURS.

SOIL FOR 12" LOAMY COARSE SAND LAYER (MEDOT #703.01)

SIEVE SIZE	% BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
#200 (CLAY SIZE)	< 2.0

UNDERDRAINED SOIL FILTER

Name	LBS/ACRE
Creeping Red Fescue	20
Tall Fescue	20
Birdsfoot trefoil	8
Total	48



COARSE GRAVEL
MEDOT SPECIFICATIONS FOR UNDERDRAINS (MEDOT #703.22)

SIEVE SIZE	% PASSING BY WEIGHT
UNDERDRAIN TYPE B	
1"	95-100
½"	75-100
#4	50-100
#20	15-80
#50	0-15
#200	0-5

CONSTRUCTION OVERSIGHT:

CONSTRUCTION SEQUENCE: THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA IS DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETE.

COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.

CONSTRUCTION OVERSIGHT: INSPECTION BY A PROFESSIONAL ENGINEER WILL OCCUR AT A MINIMUM:

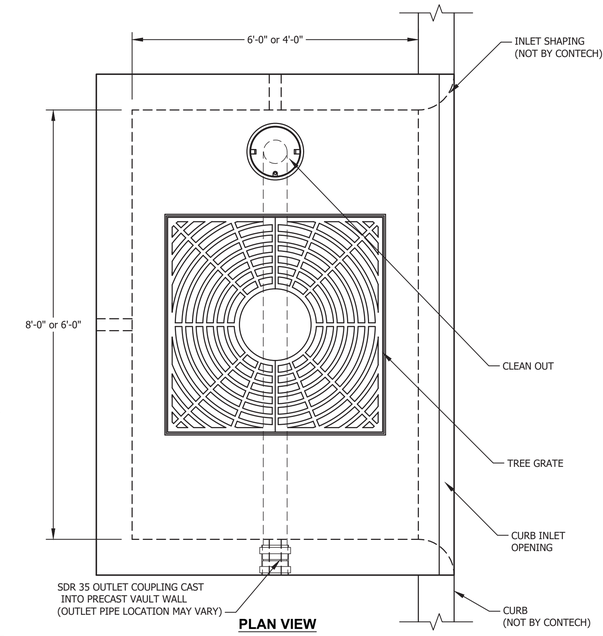
- AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED,
- AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA,
- AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED. BIO-RETENTION CELLS MUST BE STABILIZED PER THE PROVIDED PLANTING SCHEME AND DENSITY OF THE CANOPY COVERAGE OF 30% AND 50%
- AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS, AND
- ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.

TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:

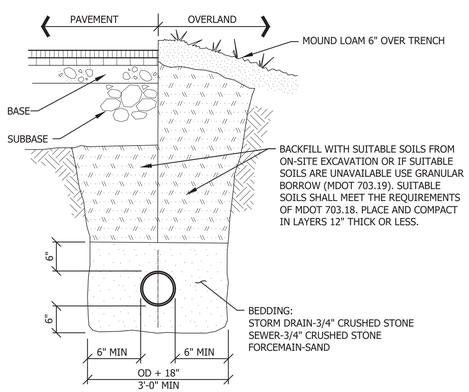
- SELECT SAMPLES OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
- PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL.

TYPICAL UNDERDRAINED SOIL FILTER DETAIL

NTS

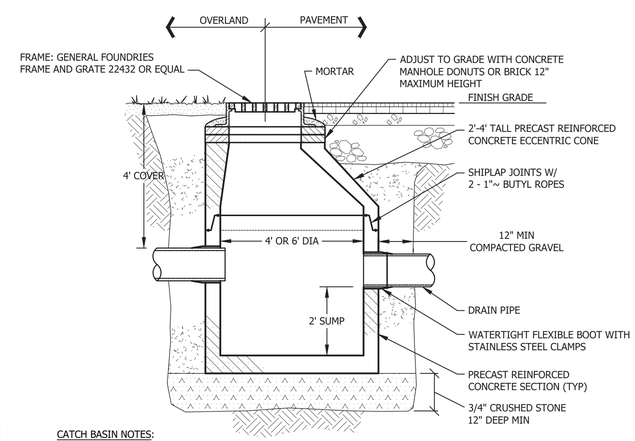


PLAN VIEW



TYPICAL TRENCH SECTION

NTS



CATCH BASIN NOTES:

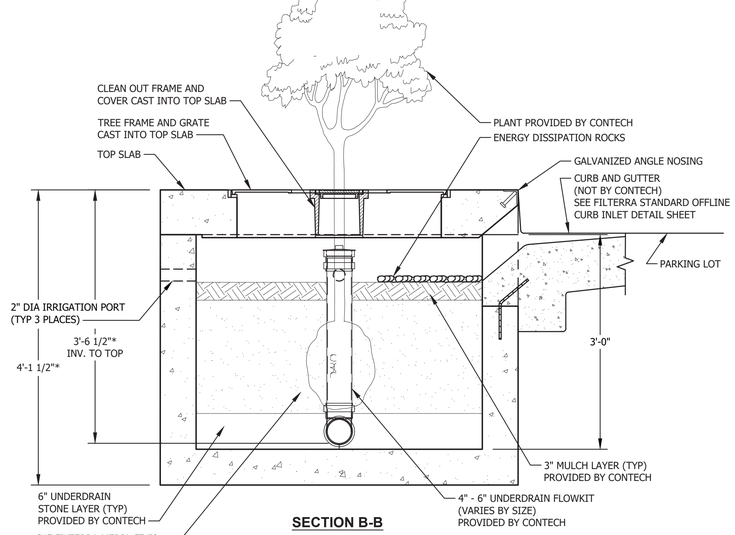
THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER FOR APPROVAL. SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:

PRODUCT DATA: SUBMIT PRODUCT DATA FOR ALL MATERIALS USED ON THE JOB FOR REVIEW FOR LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND DESIGN CONCEPT EXPRESSED IN CONTRACT DOCUMENTS.

SHOP DRAWINGS: SUBMIT FOR REVIEW SHOP DRAWINGS OF ALL PRECAST UNITS. MANUFACTURER'S INFORMATION SHALL BE SUBMITTED FOR JOINT SEALANTS AND WATERPROOFING. MANUFACTURE SHALL PROVIDE ANTI-FLOTATION DESIGN SHOP DRAWINGS AND CALCULATIONS, INCLUDING ANY EXTENDED BASE SLABS AS NECESSARY, FOR PROPOSED MANHOLES. MANUFACTURER SHALL ASSUME GROUNDWATER LEVELS EQUAL TOP OF GROUND ELEVATIONS AND PROVIDE FOR A 1.2 FACTOR OF SAFETY AGAINST FLOTATION.

CATCH BASIN

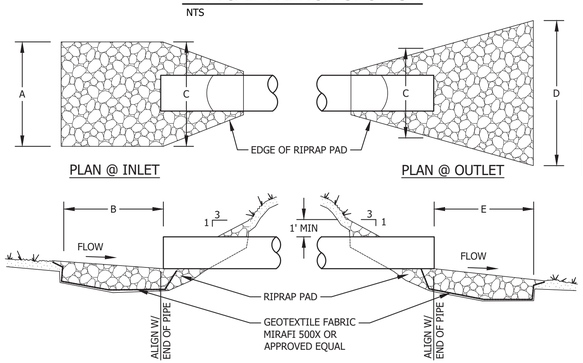
NTS



SECTION B-B

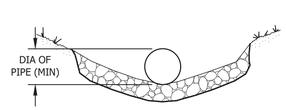
FILTERRA UNIT

NTS



RIPRAP PAD MUST BE INSTALLED WITHIN 48 HOURS OF INSTALLING NEW PIPE OR CULVERT.

PIPE	A	B	C	D	E	RIPRAP THICKNESS	D_{50}
12"~	3 FT.	2 FT.	3 FT.	9 FT.	8 FT.	12"	5"
15"~	3.75 FT.	2.5 FT.	3.75 FT.	11.5 FT.	10 FT.	18"	8"
18"~	4.5 FT.	3 FT.	4.5 FT.	11.5 FT.	10 FT.	18"	8"



CROSS SECTION

RIPRAP INLET/OUTLET PROTECTION

NTS

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE DANIEL P. DIFFIN 11841 LICENSED PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

SECTIONS AND DETAILS

SME SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY: DPD
DRAWN BY: SJM
DATE: 4/2018
CHECKED BY: BDP
LMN: NONE
CTB: SME-STD

JOB NO. 18048.00 DWG FILE BASE

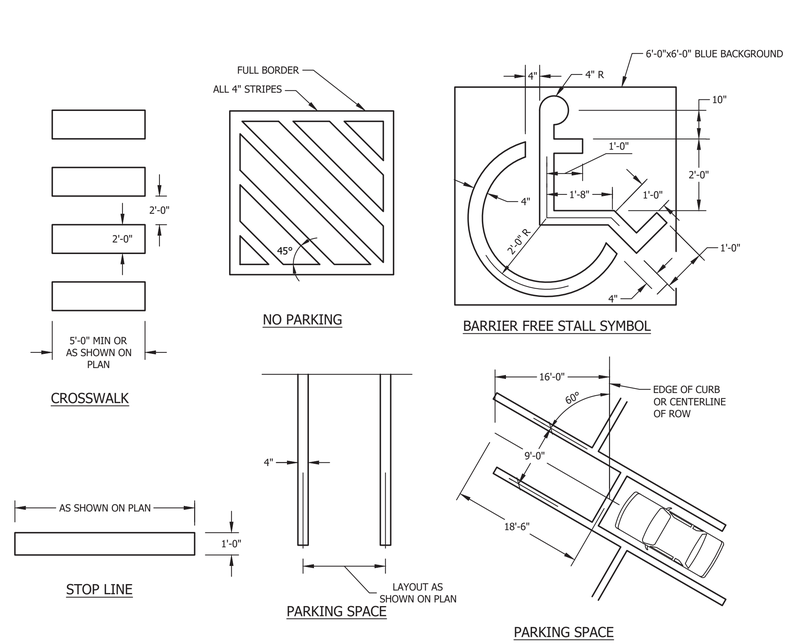
C-301

\\Server\Civil\Projects\Windham\Community Park\Acad\Plans\C8774-3.dwg, 10/2/2018 12:21:58 PM, sjm

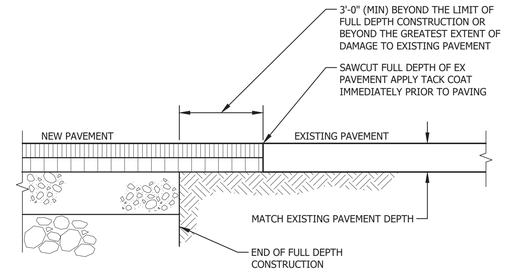
CONSTRUCTION	USE
1 1/4" HMA MDOT 9.5mm 2 1/4" HMA MDOT 19.0mm 4" COMPACTED AGGREGATE BASE, MDOT 703.06(a) TYPE A 14" COMPACTED AGGREGATE SUBBASE, MDOT 703.06(b) TYPE D COMPACTED SUBGRADE	BITUMINOUS PARKING LOT
1 - 2" LAYERS OF HMA MDOT 9.5mm 4" COMPACTED AGGREGATE BASE, MDOT 703.06(a) TYPE A 8" COMPACTED AGGREGATE SUBBASE, MDOT 703.06(a) TYPE D COMPACTED SUBGRADE	BITUMINOUS WALKING PATHS
2" TOPSOIL 4" COMPACTED AGGREGATE BASE, MDOT 703.06(a) TYPE A 14" COMPACTED AGGREGATE SUBBASE, MDOT 703.06(b) TYPE D COMPACTED SUBGRADE	GRASSED PARKING
2" SUPERHUMUS MIX 8" COMPACTED AGGREGATE SUBBASE, MDOT 703.06(b) TYPE D COMPACTED SUBGRADE	GRAVEL PATH
12" 7" CONC. SLAB W/ 6x6 W2.9xW2.9 WWF @ MIDHEIGHT OF SLAB THICKENED SLAB 2 - #4 CONT. 12" COMPACTED AGGREGATE BASE, MDOT 703.06(a) TYPE A COMPACTED SUBGRADE 12" 12"	CONCRETE SKATE PARK AND PICNIC AREAS
4" TOPSOIL, NO STONES OVER 3/4" DIA. GRANULAR MATERIAL IN FILL AREAS COMPACTED SUBGRADE	GRASS ALL DISTURBED AREAS
6" BEACH SAND 12" GRANULAR MATERIAL COMPACTED SUBGRADE	PLAY AREA VOLLEYBALL COURTS
12" SOFT LANDING WOOD CHIP PLAYGROUND SURFACES BY JOLLY GARDENER OR APPROVED EQUAL GEOTEXTILE MIRAFI 140N OR EQUAL 6" SAND PREPARED SUBGRADE	PLAY AREA PLAYGROUND
ACRYLIC (PMMA) OR POLYURETHANE COATING 1" HMA MDOT 9.5mm 2.5" HMA MDOT 19.0mm 4" COMPACTED AGGREGATE BASE, MDOT 703.06(a) TYPE A 8" COMPACTED AGGREGATE SUBBASE, MDOT 703.06(b) TYPE D EXISTING SURFACE OR GRANULAR FILL COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY (ASTM D698)	BITUMINOUS BASKETBALL COURTS

NOTES:
1. HMA = HOT MIX ASPHALT. MDOT = MAINE DEPARTMENT OF TRANSPORTATION.
2. ALL COURSE THICKNESS AFTER FINAL COMPACTION.

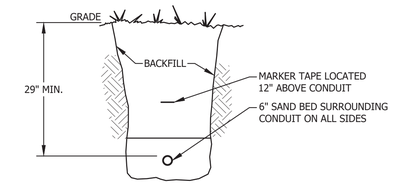
SCHEDULE OF SURFACE FINISHES
NTS



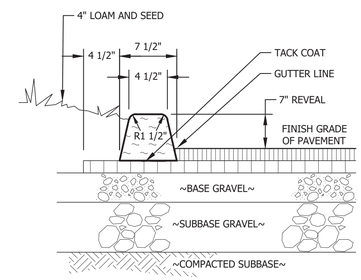
PAVEMENT STRIPING
NTS



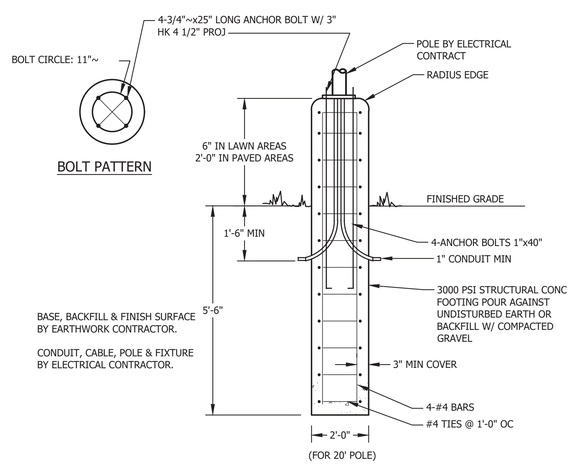
SAWCUT AND MATCH EXISTING PAVEMENT
NTS



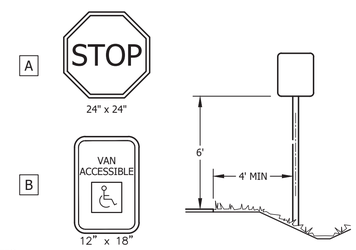
UNDERGROUND LIGHTING CONDUIT
NTS



VERTICAL BITUMINOUS CURB
NTS



LIGHT POLE BASE
NTS



NOTES:
1. SIGNS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES REVISION OF DECEMBER 2002, SECTION 645.
2. ALL PERMANENT SIGNS ON THIS PROJECT ARE CLASSIFIED UNDER SECTION 645.03(b) TYPE 1 REGULATORY WARNING AND ROUTE MARKER ASSEMBLY SIGNS.
3. SIGN MATERIAL SHALL BE AS SPECIFIED IN SECTION 719 OF THE MDOT STANDARD SPECIFICATIONS.
4. POSTS SHALL BE METAL CHANNELS AS SPECIFIED IN SECTION 720.08. ALTERNATE POSTS MAY BE 4"x6" WOOD AS SPECIFIED IN SECTION 720.12, AS APPROVED BY ENGINEER.
5. POSTS IN THE PUBLIC RIGHT-OF-WAY TO BE ON BREAKAWAY POSTS AS SPECIFIED IN SECTION 720 OF THE MDOT STANDARD SPECIFICATIONS.

ROAD SIGN LEGEND
NTS

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

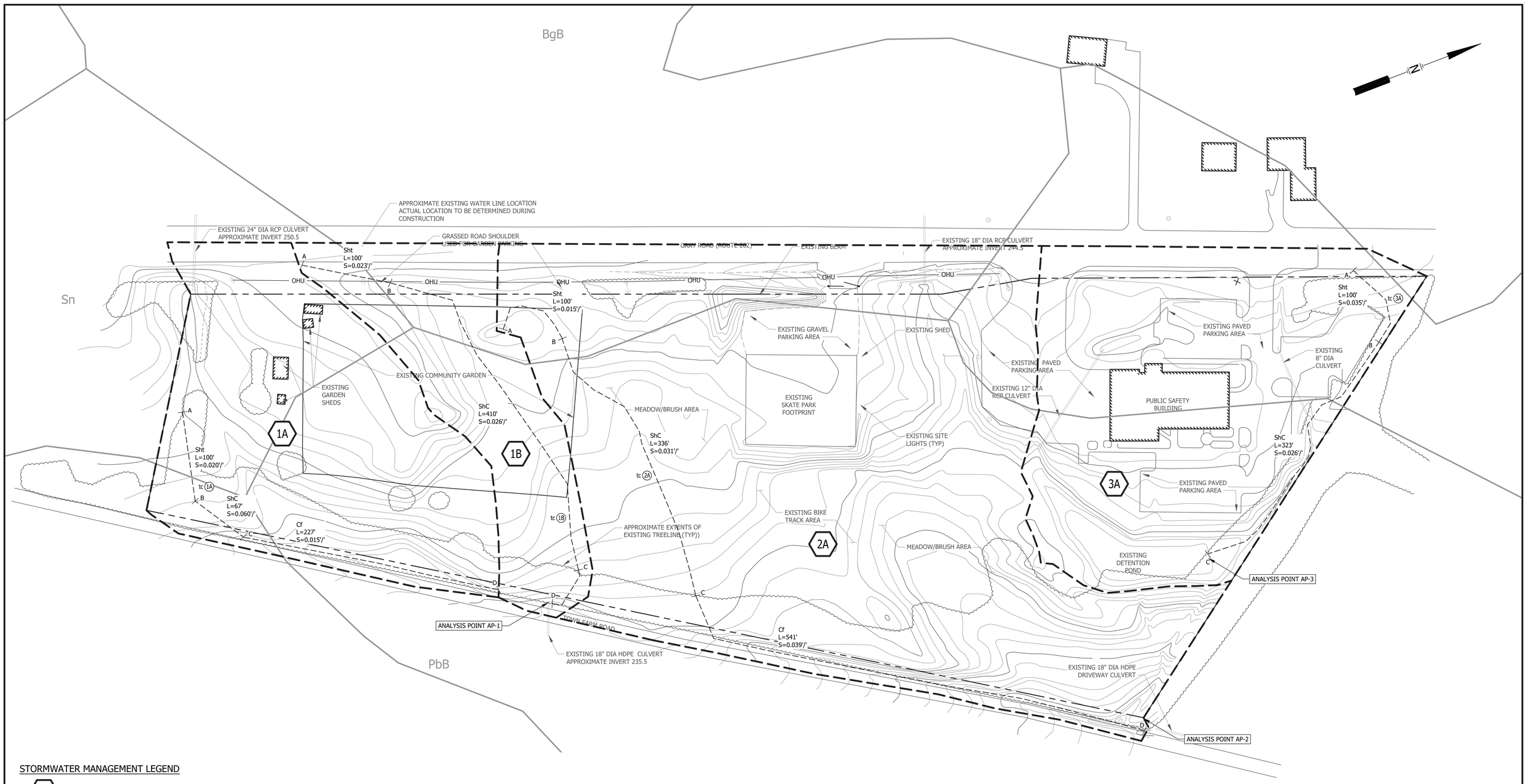
SECTIONS AND DETAILS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY: DPD
DRAWN BY: SJM
DATE: 4/2018
CHECKED BY: BDP
LMN: NONE
CTB: SME-STD

JOB NO. 18048.00 DWG FILE BASE

C-302



STORMWATER MANAGEMENT LEGEND

1	SUBCATCHMENT DESIGNATION
	SUBCATCHMENT BOUNDARY
A B C	TIME OF CONCENTRATION SEGMENT DESIGNATION TIME OF CONCENTRATION PATH
	HYDROLOGIC SOIL GROUP BOUNDARY
PbB	SOIL NAME ABBREVIATION
Sht L=50' S=0.005	TIME OF CONCENTRATION TYPE, LENGTH, AND SLOPE
Sht	SHEET FLOW
Shc	SHALLOW CONCENTRATED FLOW
Cf	CHANNEL FLOW
	DRAINAGE REACH
R4	REACH DESIGNATION (HYDROCAD)
P9	POND/STRUCTURE DESIGNATION (HYDROCAD)
tc 1	TIME OF CONCENTRATION WITH SUBCATCHMENT DESIGNATION

25 0 50 100 FEET

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

NOTE:

FOR GENERAL NOTES AND ORIGIN OF EXISTING CONDITIONS, SEE DWG C-100.

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

PRE-DEVELOPMENT STORMWATER MANAGEMENT PLAN

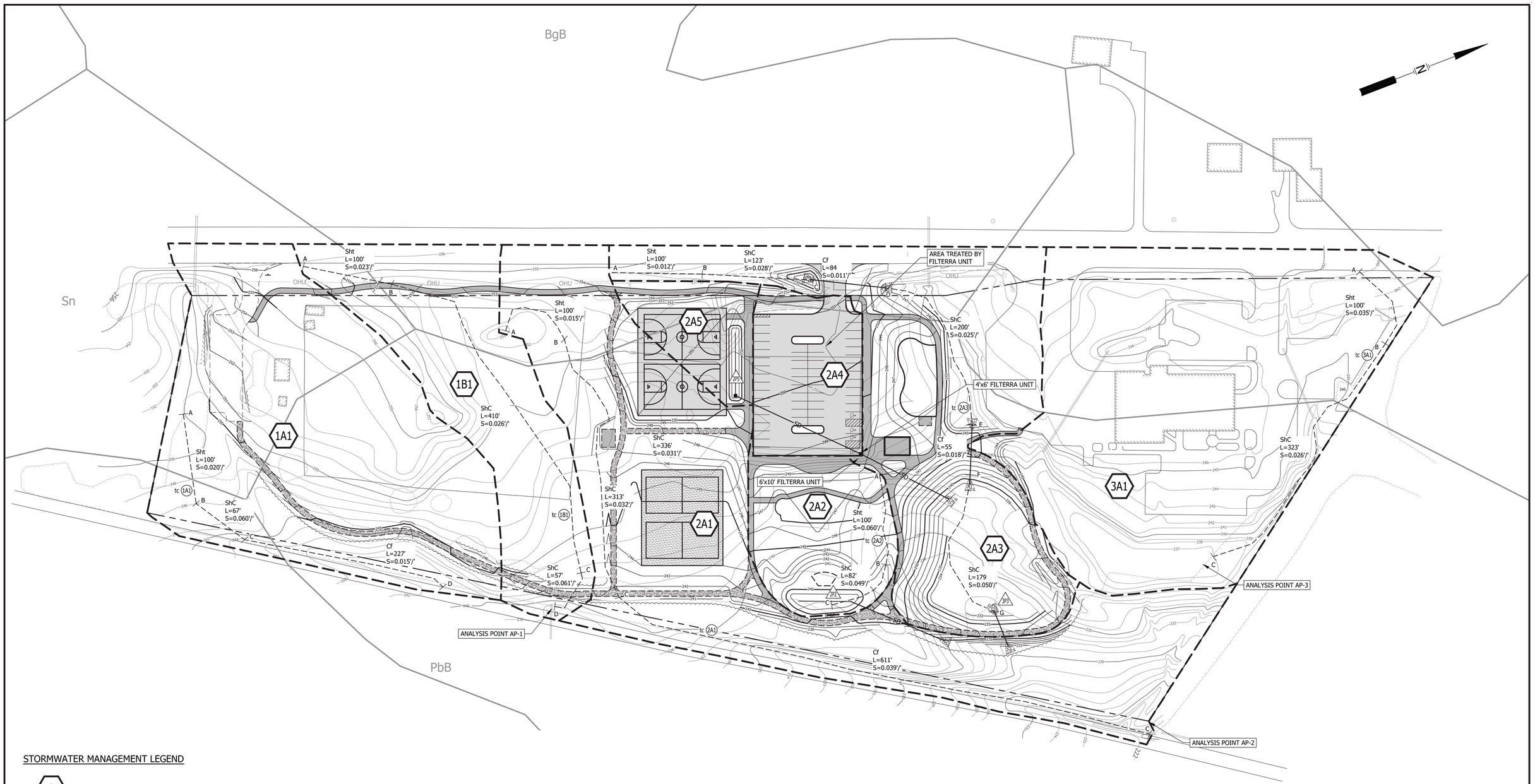
SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY: DPD
DRAWN BY: SJM
DATE: 4/2018
CHECKED BY: BDP
LMN: E-SMP
CTB: SME-STD

JOB NO. 18048.00 DWG FILE BASE

D-100

\\Server4\Windham\Community Park\AutoCAD\Plan\BASE.dwg, 10/2/2018 12:08:57 PM, sjm



STORMWATER MANAGEMENT LEGEND

2	SUBCATCHMENT DESIGNATION
	SUBCATCHMENT BOUNDARY
A B C	TIME OF CONCENTRATION SEGMENT DESIGNATION TIME OF CONCENTRATION PATH
	HYDROLOGIC SOIL GROUP BOUNDARY
PbB	SOIL NAME ABBREVIATION
Sht L=100' S=0.035	TIME OF CONCENTRATION TYPE, LENGTH AND SLOPE
Sht	SHEET FLOW
Shc	SHALLOW CONCENTRATED FLOW
Cf	CHANNEL FLOW
	DRAINAGE REACH
R5	REACH DESIGNATION (HYDROCAD)
P44	POND/STRUCTURE DESIGNATION (HYDROCAD)
tc 2	TIME OF CONCENTRATION WITH SUBCATCHMENT DESIGNATION

25 0 50 100 FEET

NOTE:

FOR GENERAL NOTES AND ORIGIN OF EXISTING CONDITIONS, SEE DWG C-100.

REV.	BY	DATE	STATUS
	DPD	10/2018	ISSUED FOR SITE PLAN REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED
PROFESSIONAL ENGINEER

WINDHAM COMMUNITY PARK
TOWN OF WINDHAM
WINDHAM, MAINE

POST DEVELOPMENT STORMWATER MANAGEMENT PLAN

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

DESIGN BY:	DPD
DRAWN BY:	SJM
DATE:	4/2018
CHECKED BY:	BDP
LMN:	P-SMP
CTB:	SME-STD

JOB NO. 18048.00 DWG FILE BASE

D-101