LANDING REAL ESTATE OFFICE

79 TANDBERG TRAIL (RT 115) - WINDHAM, MAINE

RECORD OWNER/APPLICANT:
JACK AND ROSE, LLC
44 EXCHANGE STREET, SUITE 200
PORTLAND, MAINE 04101

PROJECT PARCEL
TOWN OF WINDHAM TAX ASSESSOR'S & ZONING INFORMATION

MAP	LOT	ZONING DISTRICT
67	8	COMMERCIAL-1 (C-1)

LOCATION MAP
SCALE: 1"=500'

GRID NORTH

UTILITIES

WATER
PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PORTLAND, ME 041023
(207) 774-5961

ELECTRIC
CENTRAL MAINE POWER COMPANY
162 CANCO ROAD
PORTLAND, ME 04104
(207) 828-2683

TELEPHONE
FAIRPOINT COMMUNICATIONS
P.O. BOX 11560
PORTLAND, MAINE 04104
1-888-984-1515

CABLE
TIME WARNER CABLE
118 JOHNSON ROAD
PORTLAND, MAINE 04102
(207) 253-2291

DIG SAFE SYSTEM, INC.
TEL. 1-888-DIG-SAFE (344-7233)
FAX 1-781-721-0047
WWW.DIGSAFE.COM

PERMITS

TYPE OF PERMIT	GOVERNING BODY	STATUS
MINOR SITE PLAN APPROVAL	TOWN OF WINDHAM, MAINE STAFF REVIEW COMMITTEE 8 SCHOOL ROAD WINDHAM, ME 04062 TEL. 207-894-5960	PENDING SUBMITTED 8/10/16
BUILDING PERMIT	TOWN OF WINDHAM, MAINE CODE ENFORCEMENT OFFICER 8 SCHOOL ROAD WINDHAM, ME 04062 TEL. 207-894-5960	TO BE SUBMITTED BY OWNER/CONTRACTOR

SHEET INDEX

C-1.0	COVER SHEET
C-2.0	TOPOGRAPHIC SURVEY
C-3.0	SITE LAYOUT & UTILITY PLAN
C-4.0	GRADING, DRAINAGE & UTILITY PLAN
C-5.0	SITE DETAILS
C-5.1	UTILITY & DRAINAGE DETAILS
C-5.2	EROSION & SEDIMENTATION CONTROL NARRATIVE & DETAILS

PREPARED BY:

CIVIL ENGINEER:
TERRADYN CONSULTANTS, LLC
P.O. BOX 339
NEW GLOUCESTER, MAINE 04260
MICHAEL TADEMA-WIELANDT, P.E.
(207) 632-9010

SURVEYOR:
WAYNE T. WOOD & CO.
30 WOOD DRIVE
GRAY, MAINE, 04039
WAYNE WOOD, PLS
(207) 657-3330

GENERAL NOTES

1. THE PROJECT WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF ALL PERMITS ISSUED BY THE TOWN OF WINDHAM AND THE LOCAL UTILITY COMPANIES.
2. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY THE TOWN OF WINDHAM OR THE LOCAL UTILITY COMPANIES SHALL BE COORDINATED BY THE CONTRACTOR.
3. THE LOCATION AND/OR ELEVATIONS OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION. IT SHALL BE THE RESPONSIBLE OF THE CONTRACTOR TO RELOCATE ANY EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
4. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIRED TO PREVENT EROSION AND SEDIMENTATION. ADDITIONAL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY THE OWNER, ENGINEER, OR REGULATING AGENCIES.
5. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
6. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE STRICTEST STANDARDS CONTAINED IN THE MAIN DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE PROJECT SPECIFICATIONS, AND THE UTILITY COMPANY AND TOWN OF WINDHAM REQUIREMENTS.
7. ALL DIMENSIONS, UNLESS OTHERWISE NOTED IS TO THE EDGE OF PAVEMENT, FACE OF CURB, OR THE FACE OF THE BUILDING.
8. ALL HANDICAP PARKING SPACES ARE TO BE CONSTRUCTED IN COMPLIANCE WITH ADA REQUIREMENTS.
9. ALL SIGNAGE SHALL BE SUPPLIED AND INSTALLED IN COMPLIANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

UTILITY NOTES

1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF n=0.012 OR LESS.
2. THE SUBSURFACE WASTEWATER DISPOSAL SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE HHE-200 FORM PREPARED BY JAMES G. MANCINI, LSE #247 AND ALL STATE AND LOCAL REGULATIONS.

LEGEND

- EXISTING PROPERTY LINE
- PROJECT SITE BOUNDARY
- EXISTING SETBACK LINE
- PROPOSED EASEMENT
- 124 — EXISTING MINOR CONTOUR
- 124 — EXISTING MAJOR CONTOUR
- 124 — PROPOSED CONTOUR
- SD — EXISTING STORMDRAIN
- SD — PROPOSED STORMDRAIN
- S — EXISTING SANITARY SEWER
- S — PROPOSED SANITRY SEWER
- W — EXISTING WATER LINE
- W — PROPOSED WATER LINE
- UD — EXISTING UNDERDRAIN
- UD — PROPSED UNDERDRAIN
- OHE — EXISTING OVERHEAD ELECTRIC & TELEPHONE
- OHE — PROPOSED OVERHEAD ELECTRIC & TELEPHONE
- UGE — EXISTING UNDERGROUND ELECTRIC & TELEPHONE
- UGE — PROPOSED UNDERGROUND ELECTRIC & TELEPHONE
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- PROPOSED EDGE OF GRAVEL
- EXISTING CURB
- PROPOSED GRANITE CURB
- PROPOSED BITUMINOUS CURB
- EXISTING FENCE
- SF — SILT FENCE
- TP-A — TEST PIT
- EXISTING VALVE
- PROPOSED VALVE
- EXISTING HYDRANT
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- PROPOSED UTILITY POLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- EXISTING DRAIN MANHOLE
- EXISTING SEWER MANHOLE
- 30.20 — EXISTING SPOT GRADE
- 30.20 — PROPOSED SPOT GRADE
- SURVEY CONTROL POINT
- EXISTING MONUMENT
- EXISTING IRON PIPE
- EXISTING SIGN
- PROPOSED SIGN
- EXISTING BUILDING
- PROPOSED BUILDING
- PROPOSED CONCRETE PAD
- PROPOSED PAVEMENT

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE — MICHAEL E. TADEMA-WIELANDT — LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT

NO.	DATE	REVISIONS	APP'D BY
2	8-30-16	REVISED PER PEER REVIEW COMMENTS	MTW
1	8-10-16	SUBMITTED TO TOWN OF WINDHAM FOR SITE PLAN APPROVAL	MTW

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P.O. Box 339
111 Elderberry Lane
New Gloucester, ME 04260
Office: (207) 926-5111
Fax: (207) 221-1317
www.terradynconsultants.com
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
LANDING REAL ESTATE OFFICE
79 TANDBERG TRAIL, WINDHAM, MAINE

PREPARED FOR
ROBIE BUILDERS
472 ROOSEVELT TRAIL
WINDHAM, MAINE 04062

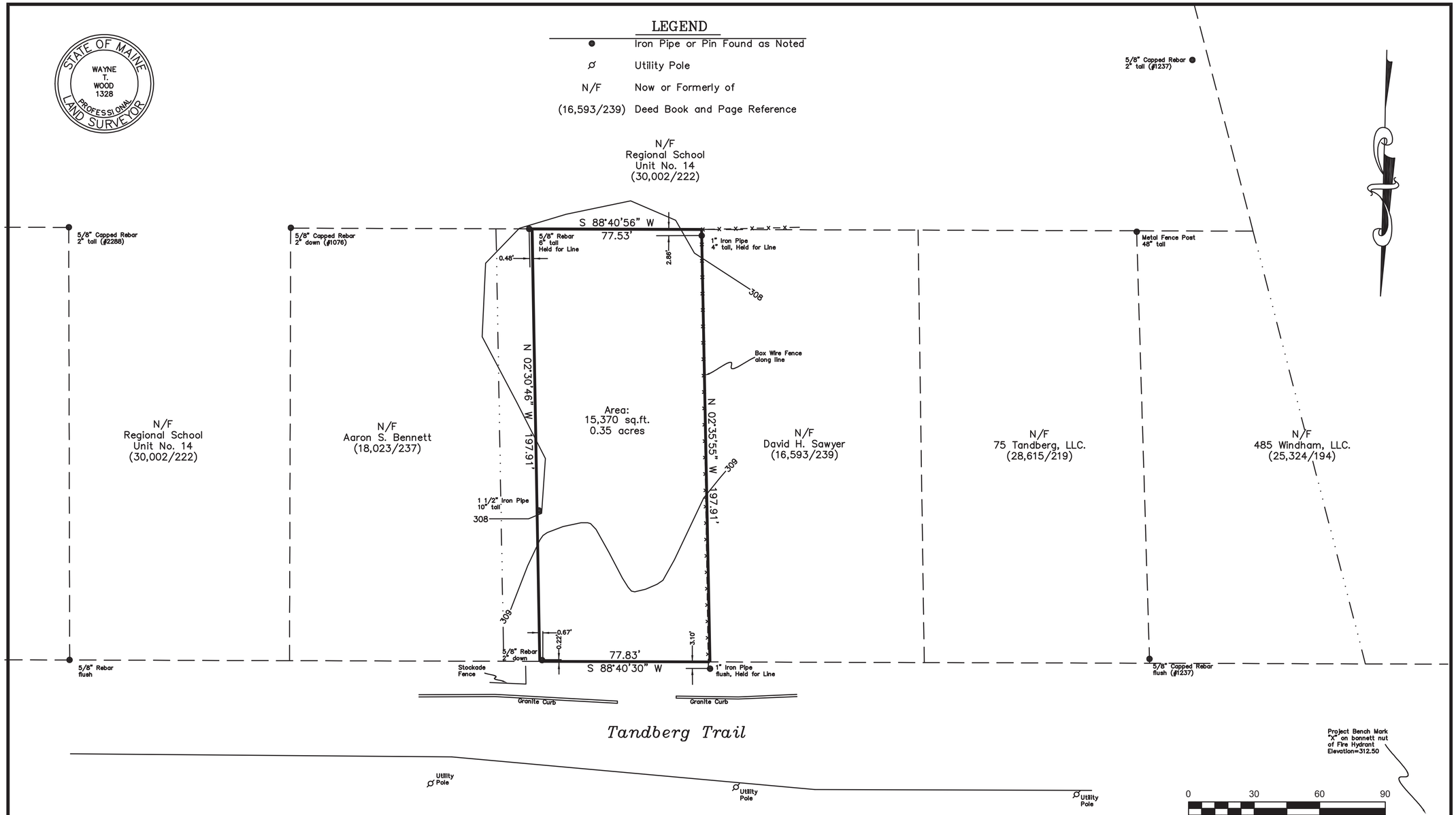
DATE:	3-3-2016
SCALE:	AS NOTED
DESIGNED:	MTW
JOB NO:	1565
FILE: 1562-COVER.DWG	

SHEET C-1.0

STATE OF MAINE
WAYNE T. WOOD 1328
PROFESSIONAL LAND SURVEYOR

LEGEND

●	Iron Pipe or Pin Found as Noted
ø	Utility Pole
N/F	Now or Formerly of
(16,593/239)	Deed Book and Page Reference



PLAN REFERENCES

1. "Composite Boundary Survey ~ Tandberg Trail (Route 115), Roosevelt Trail (Route 302) and Sposedo Road Town of Windham, Cumberland County, State of Maine for Record Owner: Windham Raymond School District Regional School Unit No. 14" dated January 2015 by Lewis & Wasina, Inc.
2. "ALTA/ACSM Land Title Survey ~ Route 302 and Route 115 ~ Windham, Maine Made For Richmond Windham Development, LLC." dated J\March 2006 by Titcomb Associates, recorded in the Cumberland County Registry of Deeds in Plan Book 206 on Page 322.
3. "State of Maine Department of Transportation Right of Way Map State Aid Highway No. 3 (RTE 115/Tandberg Trail) Windham, Cumberland County ~ Federal Aid Project No STO–1021(400)X" dated June 2003 Sheets 4–5 D.O.T. File No. 3–494.
4. "Boundary Survey ~ Tandberg Trail ~ Town of Windham, County of Cumberland, State of Maine for Record Owners: Town of Windham" dated December 2002 by Lewis & Wasina, Inc.
5. "State of Maine Department of Transportation Right of Way Map State Highway "113" Windham, Cumberland County Federal Aid Project No. RS–STP–113S(9)" dated December 1993 Sheets 2–3 D.O.T. No. 3–407.

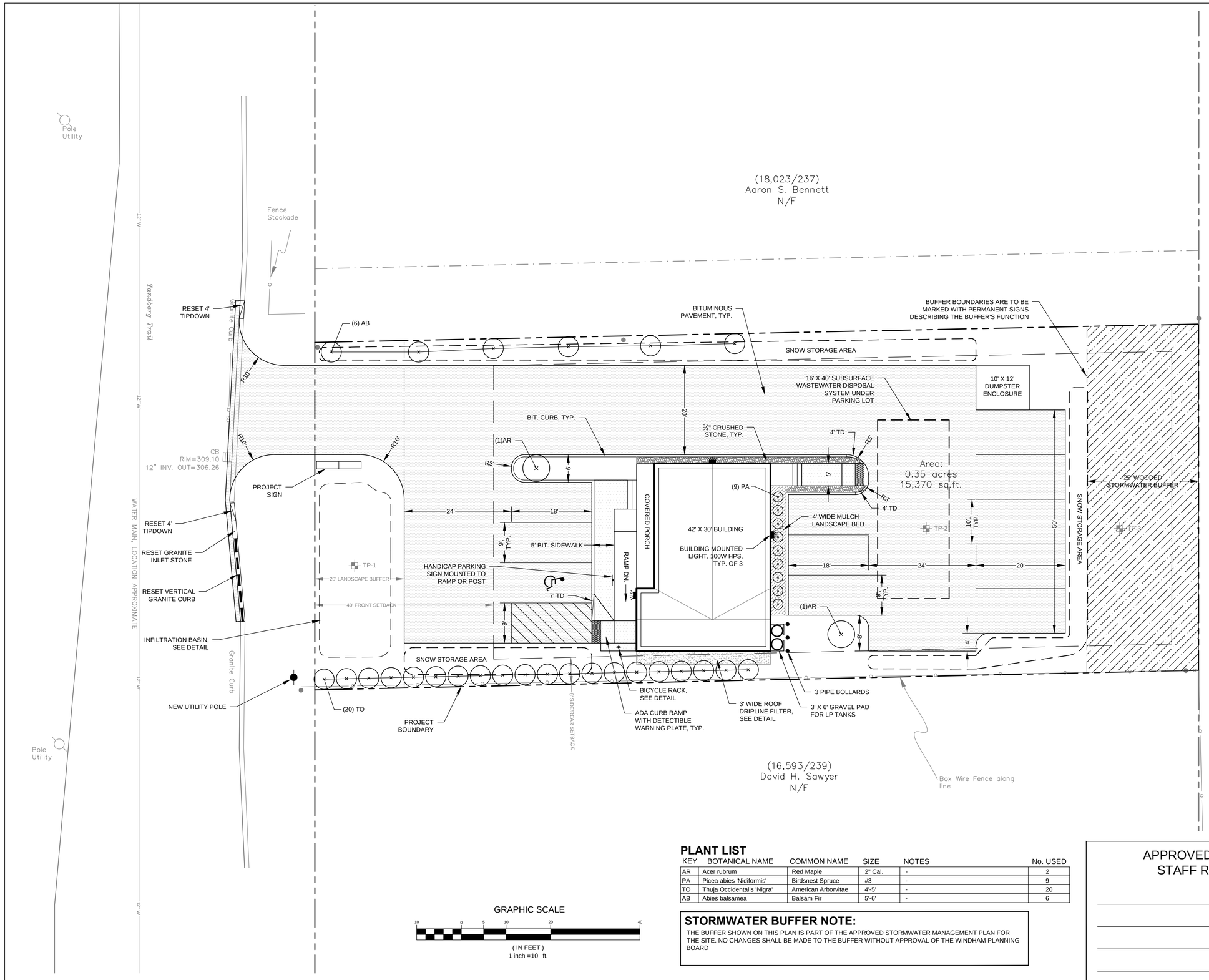
NOTES

1. Owners of record are Ronald A. Glantz, Andrea G. Littlefield and Richard M. Littlefield by quitclaim deed of Forrest Jaynes recorded in the Cumberland County Registry of Deeds in Book 26,033 on Page 293.
2. All bearings are referenced to Magnetic North of the Year 1997 per the plan in Plan Reference #4 and are calculated from angles of an actual on the ground survey.
3. The subject parcel is shown on the Town of Windham Tax Map #67 as Lot #8 and is situated in the Commercial District 1 Zone.
4. Elevations are referenced to NGVD 1929.

Existing Conditions Plan
Of
79 Tandberg Trail
In
Windham, Maine
For
Robie Builders, LLC
P.O. Box 1463 ~ Windham, ME 04062

WAYNE WOOD &CO.
Gray, Maine 04039
(207)657–3330

Drawn By: KLW/WTW	Date February 2016
Scale: 1" = 30'	Job No. 215155
Checked By: WTW	
Book No. 142	



PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES	No. USED
AR	Acer rubrum	Red Maple	2" Cal.	-	2
PA	Picea abies 'Nidiformis'	Birdsnest Spruce	#3	-	9
TO	Thuja Occidentalis 'Nigra'	American Arborvitae	4'-5'	-	20
AB	Abies balsamea	Balsam Fir	5'-6'	-	6

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

STORMWATER BUFFER NOTE:

THE BUFFER SHOWN ON THIS PLAN IS PART OF THE APPROVED STORMWATER MANAGEMENT PLAN FOR THE SITE. NO CHANGES SHALL BE MADE TO THE BUFFER WITHOUT APPROVAL OF THE WINDHAM PLANNING BOARD

APPROVED: TOWN OF WINDHAM
STAFF REVIEW COMMITTEE

DATE:

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
NO. 7891
LICENSED
PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT

NO.	DATE	REVISIONS	APP'D BY
2	8-30-16	REVISED PER PEER REVIEW COMMENTS	MTW
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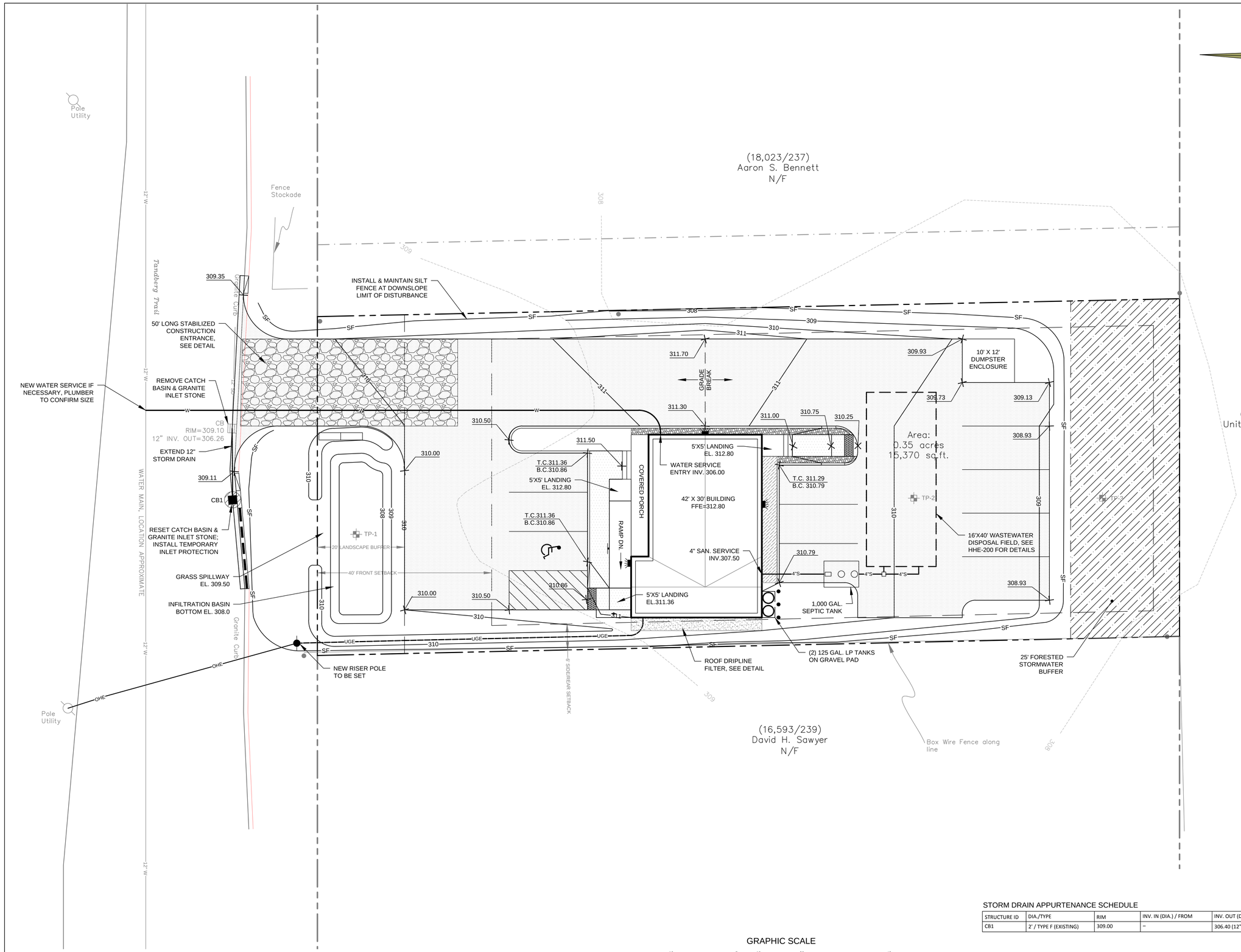
www.terradynconsultants.com
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
LANDING REAL ESTATE OFFICE
79 TANDBERG TRAIL, WINDHAM, MAINE
SITE LAYOUT PLAN

PREPARED FOR
ROBIE BUILDERS
472 ROOSEVELT TRAIL
WINDHAM, MAINE 04062

DATE:	3-3-2016
SCALE:	1"=10'
DESIGNED:	MTW
JOB NO:	1565
FILE: 1607-SITE.DWG	
SHEET	C-3.0



STORM DRAIN APPURTENANCE SCHEDULE

STRUCTURE ID	DIA./TYPE	RIM	INV. IN (DIA.) / FROM	INV. OUT (DIA.) / TO
CB1	2' / TYPE F (EXISTING)	309.00	–	306.40 (12") / EAST

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
NO. 7890
LICENSED
PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT

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79 TANDBERG TRAIL, WINDHAM, MAINE
GRADING, DRAINAGE & UTILITY PLAN

PREPARED FOR
ROBIE BUILDERS
472 ROOSEVELT TRAIL
WINDHAM, MAINE 04062

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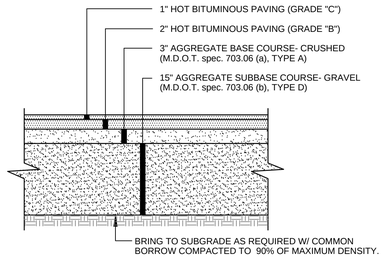
DESIGNED:	MTW
JOB NO:	1565
FILE: 1607-GRADING.DWG	
SHEET	C-4.0

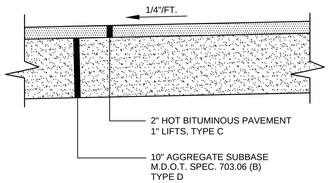


NOTES:

1. COMPACT GRAVEL SUBBASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

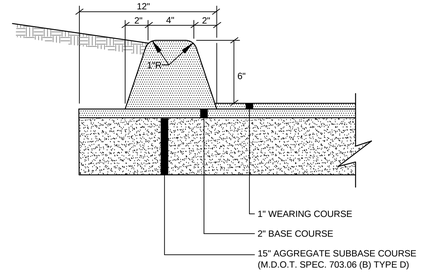
TYP. PAVED PARKING LOT SECTION

NOT TO SCALE



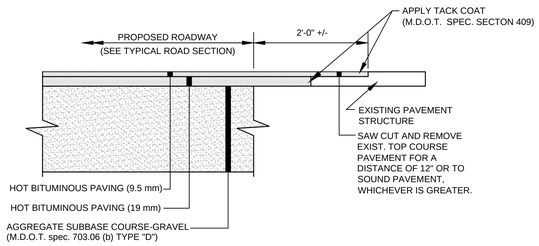
BITUMINOUS SIDEWALK

NOT TO SCALE



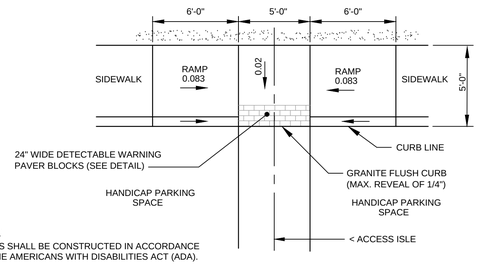
TYPE 3 -BITUMINOUS CURB(MOLD #1) SECTION

NOT TO SCALE



TYPICAL PAVEMENT JOINT

NOT TO SCALE

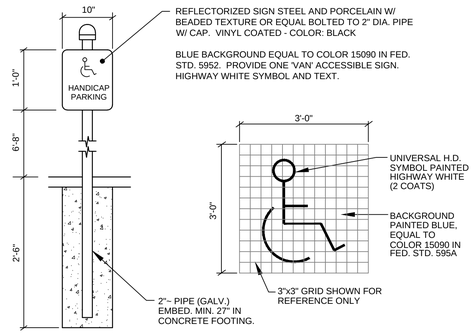


NOTES:

1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
2. ALL RAMPS SHALL HAVE DETECTABLE WARNINGS THE FULL DEPTH AND WIDTH OF THE RAMP PER SECTION 4.29 OF THE ADA.
3. A TACTILE WARNING STRIP IS REQUIRED WHERE RAMP ABUTS AN AREA USED BY VEHICLES.

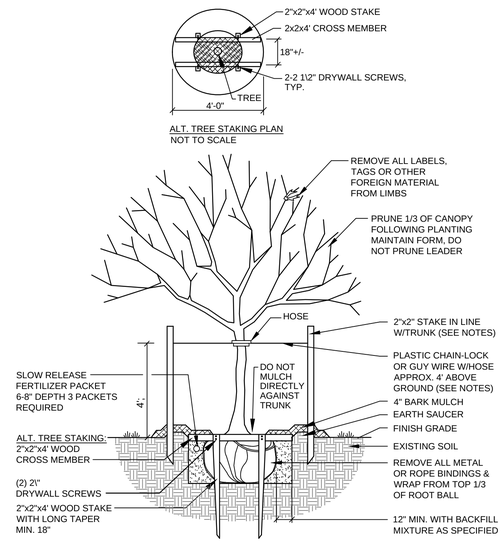
HANDICAP RAMP

NOT TO SCALE



HANDICAP SIGNS

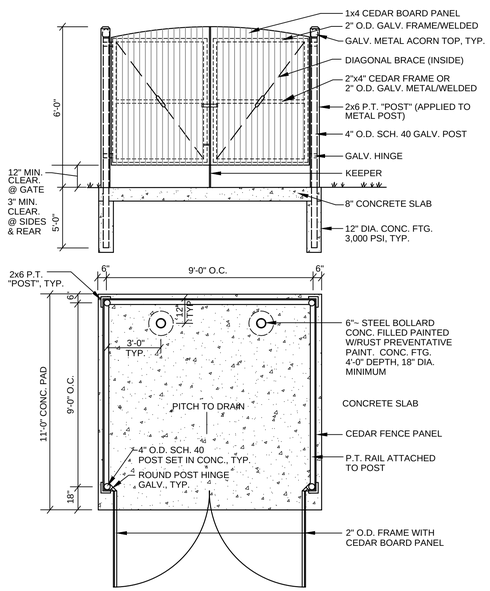
NOT TO SCALE



NOTES:
INSTALL STAKES AND GUYS TO TREES IF THE FOLLOWING APPLY:
1. THE TREE IS OF SUBSTANTIAL SIZE.
2. THE PLANTING LOCATION IS EXTREMELY WINDY, AS ON OPEN UNDEVELOPED SITES.
3. THE PLANTING LOCATION IS COMPRISED OF SAND OR OTHER LOOSE TEXTURED SOILS.
4. IF STAKES AND GUYS ARE REQUIRED, REMOVE AFTER ONE YEAR TIME.

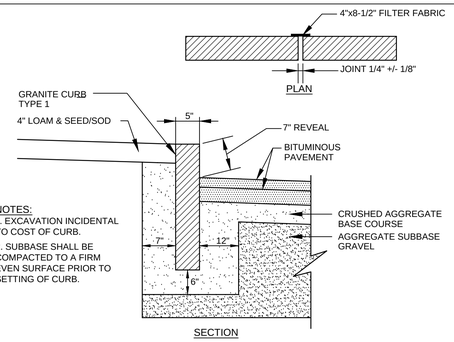
DECIDUOUS TREES 2" TO 4" CALIPER

NOT TO SCALE



TYPICAL DUMPSTER ENCLOSURE

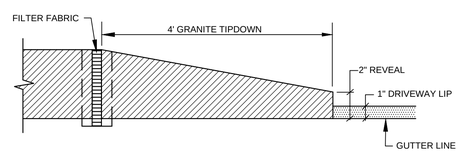
NOT TO SCALE



NOTES:
1. EXCAVATION INCIDENTAL TO COST OF CURB.
2. SUBBASE SHALL BE COMPACTED TO A FIRM EVEN SURFACE PRIOR TO SETTING OF CURB.

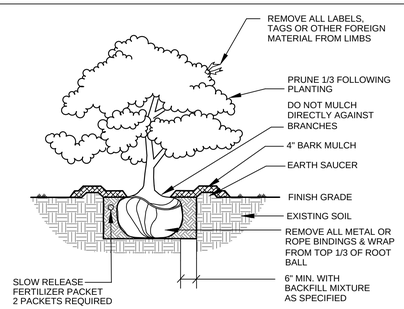
VERTICAL GRANITE CURB

NOT TO SCALE



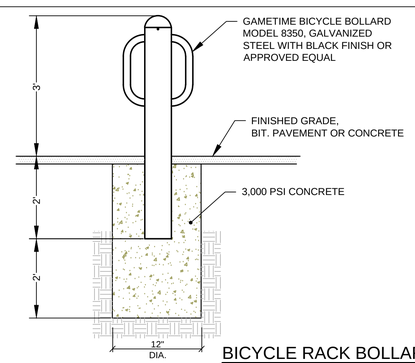
TYPICAL TIPDOWN CURB INSTALLATION

NOT TO SCALE



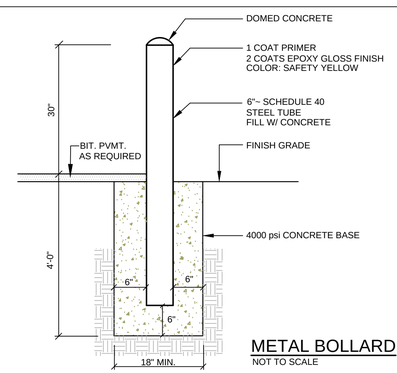
DECIDUOUS & EVERGREEN SHRUB

NOT TO SCALE



BICYCLE RACK BOLLARD

NOT TO SCALE



METAL BOLLARD

NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
NO. 12191
LICENSED
PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT

NO.	DATE	REVISIONS	APP'D BY
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SITE DETAILS

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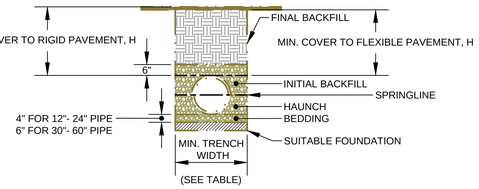
DATE:	3-3-2016
SCALE:	1"=10'
DESIGNED:	MTW
JOB NO:	1565
FILE:	1607-DETAIL.DWG

SHEET C-5.0



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

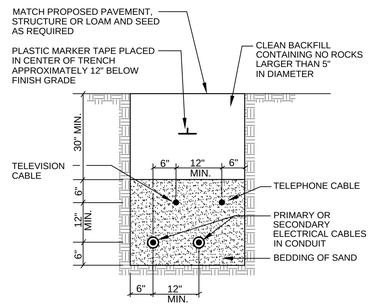
MINIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TYPICAL TRENCH DETAIL

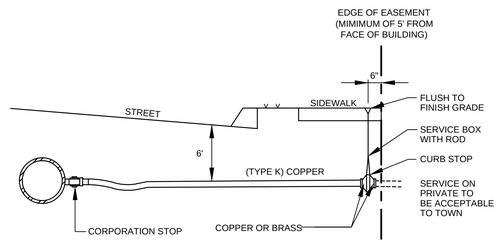
NOT TO SCALE



CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.

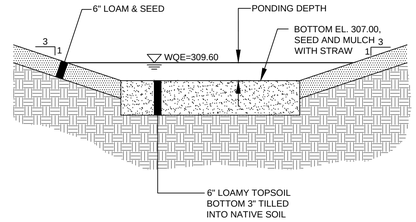
TYPICAL UNDERGROUND CABLE INSTALLATION

NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE



GENERAL NOTES:
1. TEST PIT TP1 WAS CONDUCTED WITHIN THE FOOTPRINT OF THE PROPOSED BIORETENTION FILTER. THE TEST PIT WAS EXCAVATED TO A DEPTH OF 48". NO EVIDENCE OF SEASONAL HIGH GROUNDWATER WAS FOUND.

TEST PIT DATA				
TEST PIT	APPROX. EXISTING GROUND EL.	DEPTH TO EVIDENCE OF SEASONAL HIGH GROUNDWATER	SEASONAL HIGH GROUNDWATER ELEV.	BOTTOM OF INFILTRATION BASIN
TP1	308.50	>48"	<304.50	307.00

MATERIAL SPECIFICATION NOTES:
1. LOAMY TOPSOIL LAYER SHALL BE A NON-CLAYEY (<2% CLAY CONTENT), LOAMY TOPSOIL SUCH AS USDA LOAMY SAND TOPSOIL WITH 5-8% HUMIFIED ORGANIC MATTER. TOPSOIL FROM THE SITE MAY BE APPROPRIATE BUT MUST BE TESTED FOR ORGANIC CONTENT AND CLAY CONTENT (HYDROMETER TEST). THE SOIL MUST BE SCREENED, LOOSE, FRIABLE, AND SHALL BE FREE FROM ADMIXTURES OF SUBSOIL, REFUSE, STONES (GREATER THAN 2 INCHES IN DIAMETER), CLOGS, ROOT AND OTHER UNDESIRABLE FOREIGN MATTER.

2. TOPSOIL SHALL BE TILLED INTO THE NATIVE SAND AND GRAVEL SOILS TO A DEPTH OF 3".

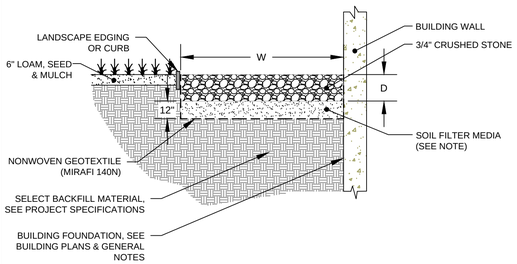
CONSTRUCTION PHASE NOTES:
1. CONSTRUCTION SEQUENCE: THE TOPSOIL AND SEED MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS THE RUNOFF FROM THE CONTRIBUTING DRAINAGE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

2. FILL PLACEMENT: LIMIT FILL COMPACTION TO THE WORK NECESSARY TO UNIFORMLY SPREAD THE FILL WITHIN THE STRUCTURE. DO NOT DRIVE ROLLERS OR OTHER EQUIPMENT OVER THE FILL TO COMPACT IT.

3. ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE INFILTRATION BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING SPECIFICATIONS.

INFILTRATION BASIN DETAILS AND NOTES

NOT TO SCALE



DRIP EDGE LOCATION	WIDTH (W)	DEPTH (D)
EAST SIDE OF BUILDING	36"	9"

GENERAL NOTES:
1. THE BACKFILL FOR THE FOUNDATION MAY BE USED AS THE FILTER MEDIA AS LONG AS THE MATERIAL IS A MINERAL SOIL WITH BETWEEN 4% & 7% FINES (PASSING #200 SIEVE).

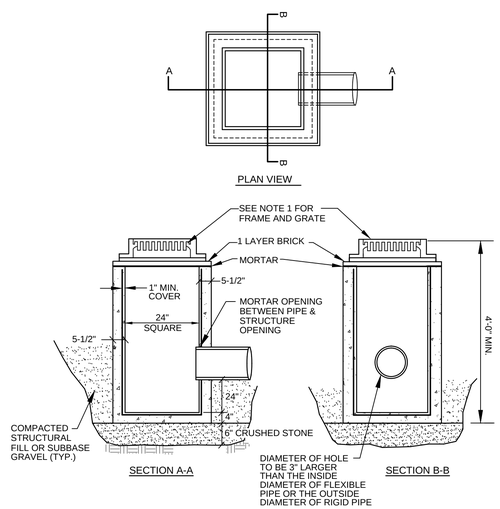
2. CONTRACTOR RESPONSIBLE FOR INSTALLING FOUNDATION DRAIN IN ACCORDANCE WITH RECOMMENDATION FROM GEOTECHNICAL ENGINEER

3. FOUNDATION WATERPROOFING IS THE RESPONSIBILITY OF THE CONTRACTOR

CONSTRUCTION INSPECTION NOTES:
1. INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE FILTER.

ROOF DRIPLINE FILTER BED

NOT TO SCALE



NOTES:
1. FRAME SHALL BE FOR 24" SQUARE GRATE - LEBARON TYPE "F" SQUARE FRAME (LF 245) 4 FLANGE OR ETHERIDGE SQUARE FRAME S24G. GRATE SHALL BE 24"x24" CAST IRON.

2. ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK FRAME AND GRATE TO BE PRECAST AS SINGLE PORTLAND CEMENT CONCRETE UNIT.

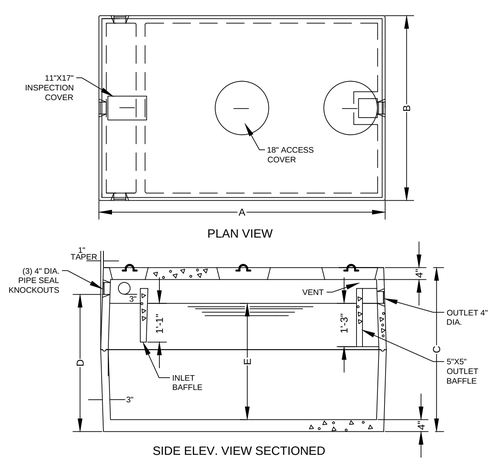
TYP. TYPE "F" CATCH BASIN

NOT TO SCALE

DATA CHART

	ITEM NO. STD.	ITEM NO. HD.	GALLON CAPACITY	A	B	C	D	E	APPROX. WEIGHT
	RST 0750-LB	RST 0750-LB-HD	750	8'-0"	6'-0"	4'-0"	3'-1"	2'-10"	7,100 LBS.
	RST 1000	RST 1000-HD	1,000	8'-0"	6'-0"	4'-7"	3'-10"	3'-7"	8,100 LBS.
	RST 1000-LB	RST 1000-LB -HD	1,000	10'-6"	6'-4"	4'-0"	3'-1"	2'-10"	8,100 LBS.
	RST 1250	RST 1250-HD	1,250	8'-0"	6'-0"	5'-5"	4'-8"	4'-8"	8,800 LBS.
	RST 1500	RST 1500-HD	1,500	8'-0"	6'-0"	6'-3"	5'-6"	5'-3"	9,200 LBS.
THIS PROJECT →	RST 2000	RST 2000-HD	2,000	10'-6"	6'-4"	6'-2"	5'-3"	5'-0"	11,200 LBS.

* NOTE: FOR HEAVY-DUTY TANKS (HD), ADD 6" TO DIMENSIONS IN COLUMN C AND 3" TO THOSE IN COLUMN D.

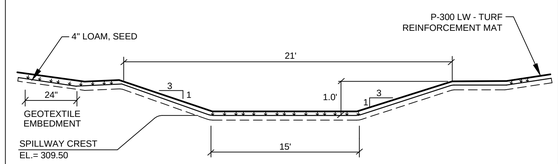


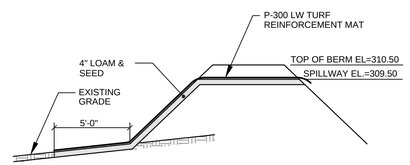
SIDE ELEV. VIEW SECTIONED

NOTES
1) CONCRETE: 4,000 PSI @ 28 DAYS.
2) CEMENT: PORTLAND TYPE III PER ASTM C150
3) REINFORCING: 6X6X10WWM OR FIBERS
4) DESIGN LOADING: H-10
5) CONSTRUCTION JOINTS: SEALED W/BUTYL SEAL
6) HEAVY-DUTY TANK TOPS: REINFORCED W/ 5/8" REBAR @ 12" O.C. EACH WAY

RESIDENTIAL SEPTIC TANK

NOT TO SCALE





EMBANKMENT CONSTRUCTION
1. CONSTRUCTION OF COMMON BORROW MATERIAL MEETING M.D.O.T. SPECIFICATION 703.
2. PLACE BORROW MATERIAL IN 12" LIFTS COMPACTED TO 95% OF MAXIMUM DRY DENSITY.
3. INSTALL RIPRAP AND EROSION CONTROL MESH WHERE SPECIFIED ON PLANS
4. LOAM, SEED, AND STABILIZE IN ACCORDANCE WITH SEDIMENTATION AND EROSION CONTROL PLAN.

TURF SPILLWAY DETAIL

NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
NO. 12164
LICENSED
PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT

NO.	DATE	REVISIONS	APP'D BY
2	8-30-16	REVISED PER PEER REVIEW COMMENTS	MTW
1	8-10-16	SUBMITTED TO TOWN OF WINDHAM FOR SITE PLAN APPROVAL	MTW

TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting
P.O. Box 339
111 Elderberry Lane
New Gloucester, ME 04260
Office: (207) 926-5111
Fax: (207) 221-1317
www.terradynconsultants.com

SHEET DESCRIPTION
LANDING REAL ESTATE OFFICE
79 TANDBERG TRAIL, WINDHAM, MAINE
UTILITY & DRAINAGE DETAILS

PREPARED FOR
ROBIE BUILDERS
472 ROOSEVELT TRAIL
WINDHAM, MAINE 04062

DATE:	3-3-2016
SCALE:	1"=10'
DESIGNED:	MTW
JOB NO:	1565
FILE:	1607-DETAIL.DWG
SHEET	C-5.1

EROSION AND SEDIMENT CONTROL PLAN

INTRODUCTION:
A PERSON WHO CONDUCTS, OR CAUSES TO BE CONDUCTED, AN ACTIVITY THAT INVOLVES FILLING, DISPLACING OR EXPOSING SOIL OR OTHER EARTHEN MATERIALS SHALL TAKE MEASURES TO PREVENT UNREASONABLE EROSION OF SOIL OR SEDIMENT BEYOND THE PROJECT SITE OR INTO A PROTECTED NATURAL RESOURCE AS DEFINED IN 38 MRSA § 480-B. EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE THE ACTIVITY BEGINS. MEASURES MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL THE SITE IS PERMANENTLY STABILIZED. ADEQUATE AND TIMELY TEMPORARY AND PERMANENT STABILIZATION MEASURES MUST BE TAKEN. THE SITE MUST BE MAINTAINED TO PREVENT UNREASONABLE EROSION AND SEDIMENTATION. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE.

GENERAL REQUIREMENTS
A. POLLUTION PREVENTION: MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE. CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE SOIL EROSION. MINIMIZE THE DISTURBANCE OF STEEP SLOPES. CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOW RATES AND VOLUME, TO MINIMIZE EROSION AT OUTLETS. THE DISCHARGE MAY NOT RESULT IN EROSION OF ANY OPEN DRAINAGE CHANNELS, SWALES, STREAM CHANNELS OR STREAM BANKS, UPLAND, OR COASTAL OR FRESHWATER WETLANDS OFF THE PROJECT SITE.

WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.

TEMPORARY EROSION CONTROL BMPS
A. SEDIMENT BARRIERS. PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE EDGE OF ANY DOWNGRADIENT DISTURBED AREA AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE PROPOSED DISTURBED AREA. MAINTAIN THE SEDIMENT BARRIERS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

B. CONSTRUCTION ENTRANCE: PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT THE INTERSECTION WITH THE PROPOSED ACCESS DRIVE AND THE EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE.

C. INLET PROTECTION: PRIOR TO DISTURBANCE, INSTALL SILT SACK SEDIMENT BARRIERS OR OTHER INLET PROTECTION AT CATCH BASIN INLETS RECEIVING RUNOFF FROM DISTURBED AREAS. INLET PROTECTION SHALL BE INSPECTED WEEKLY AND SEDIMENT SHALL BE REMOVED AND LEGALLY DISPOSED OF WHEN IT REACHES 1/2 OF THE HEIGHT OR DEPTH OF THE BARRIER.

D. RIPRAP: SINCE RIPRAP IS USED WHERE EROSION POTENTIAL IS HIGH, CONSTRUCTION MUST BE SEQUENCED SO THAT THE RIPRAP IS PUT IN PLACE WITH THE MINIMUM DELAY. DISTURBANCE OF AREAS WHERE RIPRAP IS TO BE PLACED SHOULD BE UNDERTAKEN ONLY WHEN FINAL PREPARATION AND PLACEMENT OF THE RIPRAP CAN FOLLOW IMMEDIATELY BEHIND THE INITIAL DISTURBANCE. WHERE RIPRAP IS USED FOR OUTLET PROTECTION, THE RIPRAP SHOULD BE PLACED BEFORE OR IN CONJUNCTION WITH THE CONSTRUCTION OF THE PIPE OR CHANNEL SO THAT IT IS IN PLACE WHEN THE PIPE OR CHANNEL BEGINS TO OPERATE. MAINTAIN TEMPORARY RIPRAP, SUCH AS TEMPORARY CHECK DAMS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

E. TEMPORARY STABILIZATION. STABILIZE WITH TEMPORARY SEEDING, MULCH, OR OTHER NON-ERODABLE COVER ANY EXPOSED SOILS THAT WILL REMAIN UNWORKED FOR MORE THAN 7 DAYS EXCEPT, STABILIZE AREAS WITHIN 75 FEET OF A WETLAND OR WATERBODY WITHIN 48 HOURS OR PRIOR TO A PREDICTED STORM EVENT, WHICHEVER COMES FIRST. IF HAY OR STRAW MULCH IS USED, THE APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SF OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE. HAY MULCH MUST BE KEPT MOIST OR ANCHORED TO PREVENT WIND BLOWING. AN EROSION CONTROL BLANKET OR MAT SHALL BE USED AT THE BASE OF GRASSED WATERWAYS, STEEP SLOPES (15% OR GREATER) AND ON ANY DISTURBED SOIL WITHIN 100 FEET OF LAKES, STREAMS AND WETLANDS. GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE SECOND PHASE, AND SO ON.

PERMANENT STABILIZATION
IF AN AREA WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, THEN PERMANENTLY STABILIZE THE AREA WITHIN 7 DAYS BY PLANTING VEGETATION, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT MULCH, OR RIPRAP, OR ROAD SUB-BASE. PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY, EROSION CONTROL BLANKETS; AND SCHEDULE SODDING, PLANTING, AND SEEDING SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL-ESTABLISHED WITH 90% COVER BY HEALTHY VEGETATION. IF NECESSARY, AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT. ONE OR MORE OF THE FOLLOWING MAY APPLY TO A PARTICULAR SITE.

A. SEEDED AREAS. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS AN 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

B. SODDED AREAS. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

C. PERMANENT MULCH. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.

D. RIPRAP. FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. DETAILS ARE PROVIDED IN THE PLAN SET.

E. PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.

F. DITCHES, CHANNELS, AND SWALES. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH A 90% COVER OF HEALTHY VEGETATION, WITH A WELL-GRADED RIPRAP LINING, TURF REINFORCEMENT MAT, OR WITH ANOTHER NON-EROSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE CHANNEL BANKS, OR DOWN-CUTTING OF THE CHANNEL.

GENERAL CONSTRUCTION REQUIREMENTS
THE FOLLOWING EROSION CONTROL MEASURES SHALL BE FOLLOWED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION OF THIS PROJECT:

A. ALL TOPSOIL SHALL BE COLLECTED, STOCKPILED, SEEDED WITH RYE AT 3 POUNDS/1,000 SF AND MULCHED, AND REUSED AS REQUIRED. SILT FENCING SHALL BE PLACED DOWN GRADIENT FROM THE STOCKPILED LOAM. STOCKPILE TO BE LOCATED BY DESIGNATION OF THE OWNER AND INSPECTING ENGINEER.

B. THE INSPECTING ENGINEER AT HIS/HER DISCRETION, MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES AND/OR SUPPLEMENTAL VEGETATIVE PROVISIONS TO MAINTAIN STABILITY OF EARTHWORKS AND FINISH GRADED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY SUPPLEMENTAL MEASURES AS DIRECTED BY THE INSPECTING ENGINEER. FAILURE TO COMPLY WITH THE ENGINEER'S DIRECTIONS WILL RESULT IN DISCONTINUATION OF CONSTRUCTION ACTIVITIES.

C. EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISH SEEDED AREAS AS SPECIFIED ON THE DESIGN PLANS.

D. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE ADEQUATELY STABILIZED.

E. ALL EROSION, AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE DETAILS PROVIDED ON THE PLANS AND MANUFACTURER'S RECOMMENDATIONS.

F. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL.

G. REMOVE ANY TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.

PERMANENT VEGETATION
PERMANENT VEGETATIVE COVER SHOULD BE ESTABLISHED ON DISTURBED AREAS WHERE PERMANENT, LONG LIVED VEGETATIVE COVER IS NEEDED TO STABILIZE THE SOIL, TO REDUCE DAMAGES FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE ENVIRONMENT.

PERMANENT LAWN SEED MIXTURE SHALL CONTAIN THE FOLLOWING PERCENTAGES OF SEED TYPES:
50% BARON BLUEGRASS
35% PENNLAWN FESCUE
15% MANHATTAN II PERENNIAL RYE
SEE THE PROJECT SPECIFICATIONS FOR ADDITIONAL SEED REQUIREMENTS.

SEEDBED PREPARATION
A. GRADE AS FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.

B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS SUCH AS THOSE OFFERED BY THE UNIVERSITY OF MAINE SOIL TESTING LABORATORY. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL COOPERATIVE EXTENSION SERVICE OFFICE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10-20-20 (N-P2O5-K2O) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT
A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQ. FT).

C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.D. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.

E. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.

F. PERMANENT SEEDING SHOULD BE MADE 45 DAYS PRIOR TO THE FIRST KILLING FROST OR AS A DORMANT SEEDING WITH MULCH AFTER THE FIRST KILLING FROST AND BEFORE SNOWFALL. WHEN CROWN VETCH IS SEEDED IN LATER SUMMER, AT LEAST 35% OF THE SEED SHOULD BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SEEDING DATES, MULCH ACCORDING TO THE TEMPORARY MULCHING BMP AND OVERWINTER STABILIZATION AND CONSTRUCTION TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

G. FOLLOWING SEED BED PREPARTATION, SWALE AREAS, FILL AREAS AND BACK SLOPES SHALL BE SEEDED AT A RATE OF 3 LBS./1,000 S.F. WITH A MIXTURE OF 35% CREEPING RED H. FESCUE, 6% RED TOP, 24% KENTUCKY BLUEGRASS, 10% PERENNIAL RYEGRASS, 20% ANNUAL RYEGRASS AND 5% WHITE DUTCH CLOVER.

I. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING.

J. AREAS WHICH CANNOT BE SEEDED WITHIN THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION AND THE AREA SHOULD BE SEEDED AT THE BEGINNING OF THE GROWING SEASON.

WINTER CONSTRUCTION
"WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF DISTURBED AREAS ARE NOT STABILIZED WITH PERMANENT MEASURES BY NOVEMBER 1 OR NEW SOIL DISTURBANCE OCCURS AFTER NOVEMBER 1, BUT BEFORE APRIL 15, THEN THESE AREAS MUST BE PROTECTED AND RUNOFF FROM THEM MUST BE CONTROLLED BY ADDITIONAL MEASURES AND RESTRICTIONS.

A. PERMANENT STABILIZATION CONSISTS OF AT LEAST 90% VEGETATION, PAVEMENT/GRAVEL BASE OR RIPRAP.

B. DO NOT EXPOSE SLOPES OR LEAVE SLOPES EXPOSED OVER THE WINTER OR FOR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY PROTECTED WITH MULCH.

C. APPLY HAY MULCH AT TWICE THE STANDARD RATE (150 LBS. PER 1,000 SF). THE MULCH MUST BE THICK ENOUGH SUCH THAT THE GROUND SURFACE WILL NOT BE VISIBLE AND MUST BE ANCHORED.

D. USE MULCH AND MULCH NETTING OR AN EROSION CONTROL MULCH BLANKET OR ALL SLOPES GREATER THAN 8 % OR OTHER AREAS EXPOSED TO DIRECT WIND.

E. INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGEWAYS (BOTTOM AND SIDES) WITH A SLOPE GREATER THAN 3 %.

F. SEE THE VEGETATION MEASURES FOR MORE INFORMATION ON SEEDING DATES AND TYPES.

G. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SO THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

H. AN AREA WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIER.

I. TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKDAY IN AREAS WITHIN 100 FEET FROM A PROTECTED NATURAL RESOURCE.

J. AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE PERMANENTLY MULCHED THAT SAME DAY.

K. IF SNOWFALL IS GREATER THAN 1 INCH (FRESH OR CUMULATIVE), THE SNOW SHALL BE REMOVED FROM THE AREAS DUE TO BE SEEDED AND MULCHED.

L. LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE IT IS APPLIED.

M. ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT.

MAINTENANCE AND INSPECTION
A. MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE

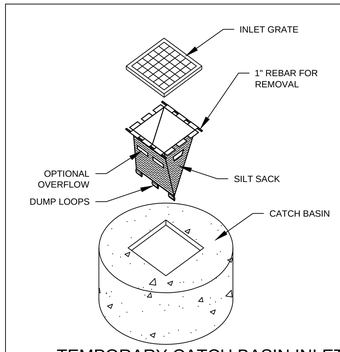
B. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. INSPECT THESE AREAS AT LEAST ONCE A WEEK AS WELL AS BEFORE AND WITHIN 24 HOURS AFTER A STORM EVENT (RAINFALL), AND PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS.

C. A LOG (REPORT) MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPS THAT NEED TO BE MAINTAINED; LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION; AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

THE LOG MUST BE MADE ACCESSIBLE TO DEPARTMENT STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.

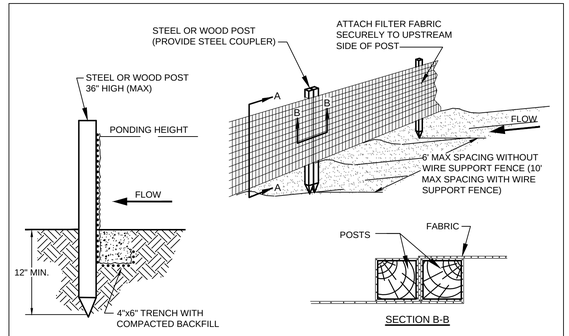
DEWATERING
A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL EVENTS OR WHERE THE EXCAVATION MAY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. THE COLLECTED WATER NEEDS TREATMENT AND A DISCHARGE POINT THAT WILL NOT CAUSE DOWNGRADIENT EROSION AND OFFSITE SEDIMENTATION OR WITHIN A RESOURCE.

PRELIMINARY - NOT FOR CONSTRUCTION

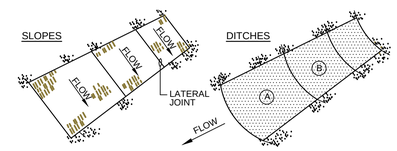


NOTES:
1. SILT SACKS TO BE INSTALLED IN ALL CATCH BASINS RECEIVING RUNOFF FROM DISTURBED AREA
2. SILT SACK TO BE MAINTAINED UNTIL TRIBUTARY ARE IS FULLY STABILIZED

TEMPORARY CATCH BASIN INLET PROTECTION DETAIL
NOT TO SCALE

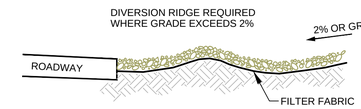


SILT FENCE
NOT TO SCALE

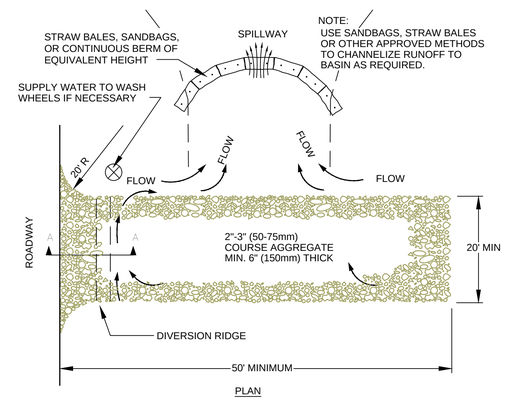


NOTES:
1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2' ON CENTER.
5. WIRE STAPLES TO BE MIN. OF #11 WIRE, 6" LONG & 1-1/2" WIDE.
6. USE NORTH AMERICAN GREEN DS 150 (OR APPROVED EQUAL) ON SLOPES BETWEEN 4:1-2:1. USE NORTH AMERICAN GREEN VMAX SC250 PERMANENT TURF REINFORCEMENT MAT (OR APPROVED EQUAL) ON SLOPES 2:1 AND STEEPER..

EROSION CONTROL BLANKET
NOT TO SCALE



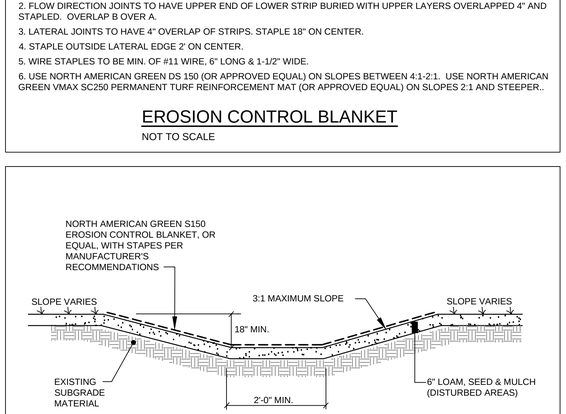
SECTION A - A



PLAN

NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

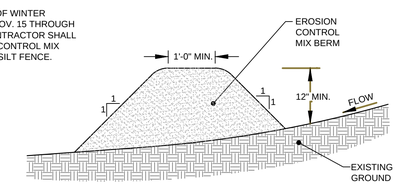
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



NOTE: REFER TO GRADING PLAN FOR DITCH WIDTH AND SIDE SLOPES

GRASSED SWALE
NOT TO SCALE

NOTE:
DURING PERIODS OF WINTER CONSTRUCTION (NOV. 15 THROUGH APRIL 15), THE CONTRACTOR SHALL INSTALL EROSION CONTROL MIX BERMS IN LIEU OF SILT FENCE.



EROSION CONTROL MIX:
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES & 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:
- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80% - 100% DRY WEIGHT BASIS
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85% PASSING A 0.75" SCREEN
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 mmhos/cm.
- ph SHALL FALL BETWEEN 5.0 - 8.0.

EROSION CONTROL MIX BERM
NOT TO SCALE

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
NO. 12194
LICENSED
PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT

NO.	DATE	REVISIONS	APP'D BY
1	8-30-16	REVISED PER PEER REVIEW COMMENTS	MTW
2	8-10-16	SUBMITTED TO TOWN OF WINDHAM FOR SITE PLAN APPROVAL	MTW

Permitting

TERRADYN CONSULTANTS, LLC
P.O. Box 339
111 Elderberry Lane
New Gloucester, ME 04260
Office: (207) 926-5111
Fax: (207) 221-1317
www.terradynconsultants.com
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION
LANDING REAL ESTATE OFFICE
79 TANDBERG TRAIL, WINDHAM, MAINE
SITE DETAILS

PREPARED FOR
ROBIE BUILDERS
472 ROOSEVELT TRAIL
WINDHAM, MAINE 04062

DATE:	3-3-2016
SCALE:	1"=10'
DESIGNED:	MTW
JOB NO:	1565
FILE: 1607-DETAIL.DWG	

SHEET C-5.0