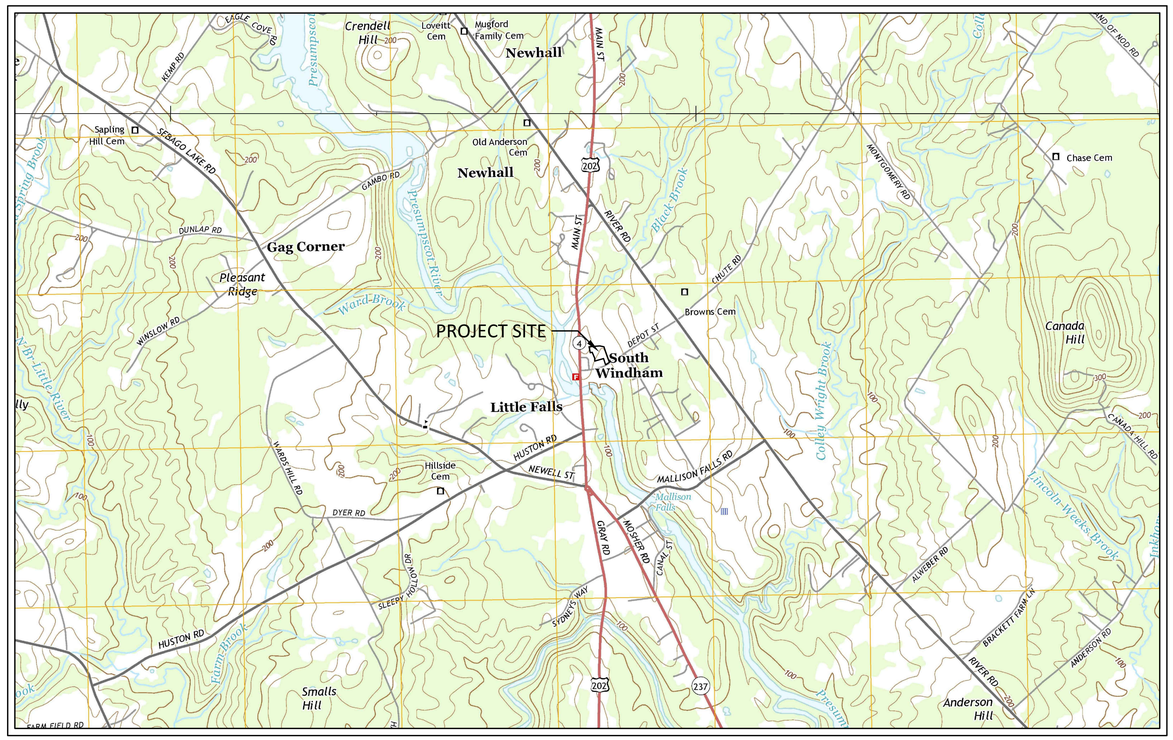
DEPOT STREET RESIDENTIAL DEVELOPMENT

DEPOT STREET
WINDHAM, MAINE

CONSULTANTS

CIVIL ENGINEER	DM ROMA CONSULTING ENGINEERS
WETLAND SCIENTIST	MAINELY SOILS, LLC
TRAFFIC ENGINEER	TRAFFIC SOLUTIONS



PROJECT VICINITY MAP

REVISED PER TOWN REVIEW - NOT FOR CONSTRUCTION

JUNE 22, 2020

PREPARED BY:

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

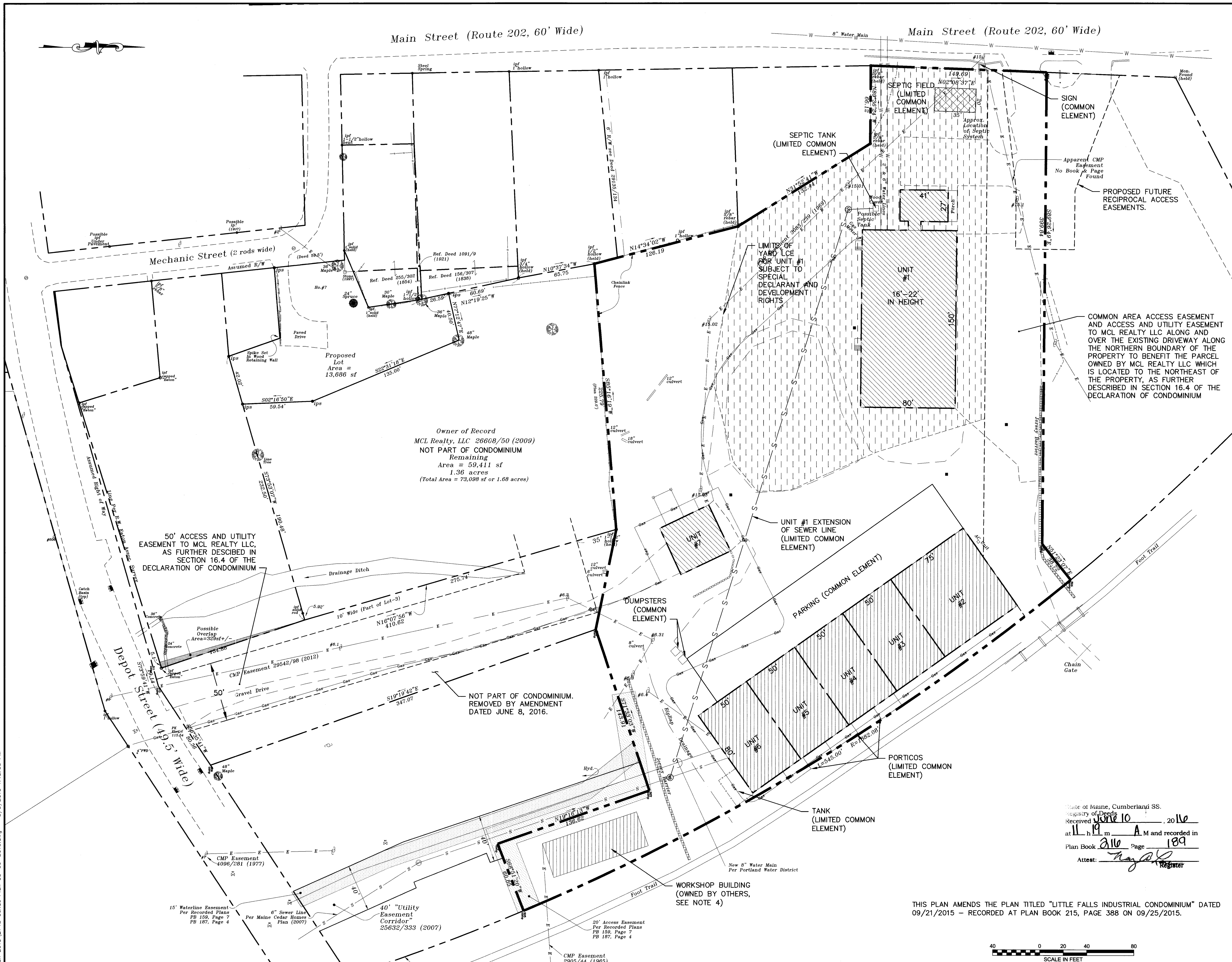
APPLICANT:

MCL REALTY, LLC
PO BOX 1206
WINDHAM,MAINE 04062

DEPOT STREET RESIDENTIAL DEVELOPMENT

DRAWING SHEET INDEX

PAGE NO.	DESCRIPTION
1	TITLE SHEET
2	AMENDED PLAN - LITTLE FALLS INDUSTRIAL CONDOMINIUM PLAT
3	SUBDIVISION PLAN
4	SITE AND LANDSCAPING PLAN
5	GRADING AND UTILITY PLAN
6	DETAILS
7	DETAILS
8	DETAILS



THIS PLAN AMENDS THE PLAN TITLED "LITTLE FALLS INDUSTRIAL CONDOMINIUM" DATED 09/21/2015 – RECORDED AT PLAN BOOK 215, PAGE 388 ON 09/25/2015.

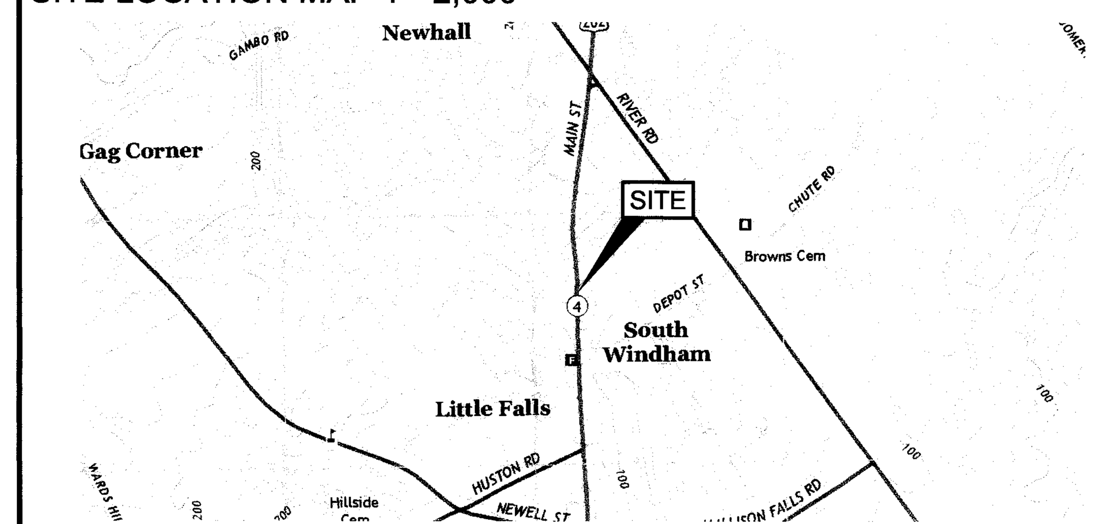
40 0 20 40 80
SCALE IN FEET
1"=40'

State of Maine, Cumberland SS.
Registry of Deeds
Received June 10, 2016
at 11 h 19 m A M and recorded in
Plan Book 216 Page 189
Attest: [signature] Register

SEAL

[signature]

SITE LOCATION MAP 1"=2,000'



REFERENCE:
USGS SERIES 7.5 TOPOGRAPHIC MAP, GORHAM, ME 2014 QUADRANGLE.

LEGEND:

EXISTING — PROPOSED

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- CONDOMINIUM UNIT LINE
- EASEMENT
- RIGHT–OF–WAY
- YARD LCE FOR UNIT 1
- MONUMENT
- IRON PIN SET
- IRON PIN FOUND
- EDGE OF GRAVEL
- EDGE OF PAVEMENT
- BUILDINGS
- FENCES
- ELECTRIC
- UTILITY POLE
- SEWER & MANHOLE
- GAS
- WATER LINE & VALVE
- STORM DRAIN INLETS
- CULVERT
- JERSEY BARRIER
- WALLS
- TREES

NOTES:

1. BEARINGS ARE BASED ON GRID NORTH, HORIZONTAL AND VERTICAL DATUM DERIVED FROM SURVEY GRADE GPS. HORIZONTAL DATUM IS MAINE STATE COORDINATES, NAD 83 (WEST) AND VERTICAL DATUM IS NAVD 88.
2. DEED AND PLAN BOOK REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
3. INFORMATION SHOWN IS BASED PRIMARILY ON PLAN MADE FOR L.C. ANDREWS, BY JAMES C. LAUZIER, RECORDED IN PLAN BOOK 146, PAGE 22, MONUMENTATION, AS SHOWN ON THIS PLAN, WAS POOR AT BEST.
4. THE WORKSHOP BUILDING IS OWNED BY LYNN MERRIFIELD AND IS NOT PART OF THE CONDOMINIUM. THE LAND UPON WHICH THE WORKSHOP BUILDING IS LOCATED IS LEASED TO MR. MERRIFIELD BY THE ASSOCIATION.
5. THE LOCATIONS OF THE WATER AND GAS LINES AS DEPICTED HEREON ARE APPROXIMATE BASED UPON INFORMATION PROVIDED BY THE DECLARANT.
6. TOTAL AREA = 223,546 SF = 5.13 AC

PLAN REFERENCES:

1. PLAN OF LITTLE FALLS, PRESUMPSCOTT RIVER, MAINE RECORDED IN PLAN BOOK 3, PAGE 24.
2. RIGHT OF WAY TRACK MAP, THE PORTLAND & OGDENSBURG RAILROAD OPERATED BY THE MAINE CENTRAL RAILROAD CO., JUNE 30, 1916 V16/4.
3. TOWN OF WINDHAM ORIGINAL LAYOUT PLAN BOOK 24, PAGE 13 (1935).
4. MAINE STATE HIGHWAY COMMISSION, RIGHT OF WAY MAP (1952) RECORDED IN PLAN BOOK 43, PAGE 32 & 34, S.H.C. FILE NO. 3–91.
5. PLAN OF LAND IN SOUTH WINDHAM, MAINE FOR GRINNELL COMPANY, INC. BY OWEN HASKELL, INC. (1969) RECORDED IN PLAN BOOK 81, PAGE 13.
6. PLAN OF LAND MADE FOR L.C. ANDREWS, INC., CO. BY JAMES C. LAUZIER (1985) RECORDED IN PLAN BOOK 146, PAGE 22.
7. AMENDED PLAN OF DEPOT STREET COMMERCIAL CONDOMINIUM (1990) RECORDED IN PLAN BOOK 187, PAGE 4, SEE ALSO PLAN BOOK 159, PAGE 7.
8. SUBDIVISION PLAN, LITTLE FALLS LANDING, BY NORTHEAST CIVIL SOLUTIONS (2005) RECORDED IN PLAN BOOK 205, PAGE 686.
9. PLAN FOR CHARLES DICKINSON, BY DANIEL J. DELFONSO, PLS DATED JUNE 4, 1997 (UNRECORDED PLAN).
10. BOUNDARY SURVEY, MECHANIC STREET & DEPOT STREET, WINDHAM, MAINE MADE FOR ALBERT BRESETTE, (2006) BY R.W. EATON ASSOCIATES (UNRECORDED PLAN).
11. SUBDIVISION PLAN "LITTLE FALLS LANDING" MADE FOR SOUTH WINDHAM HOUSING CORPORATION, BY NORTHEAST CIVIL SOLUTIONS, DATED AUGUST 4, 2005, RECORDED IN PLAN BOOK 205, PAGE 686.
12. MAJOR SUBDIVISION / SITE PLAN, AMENDMENT TO VILLAGE AT LITTLE FALLS COLE COURT CONDOMINIUMS ON DEPOT STREET, WINDHAM, MAINE, MADE FOR J & J DEPOT STREET, LLC, BY WAYNE WOOD & CO. DATED JUNE 2012, RECORDED IN PLAN BOOK 214, PAGE 108.
13. MAINE CEDAR LOG HOMES "SITE PLAN" BY ASSOCIATED DESIGN PARTNERS, INC. DATED MAY 7, 2007 (UNRECORDED PLAN).
14. PLAN TITLED "FINAL SITE PLAN, FORMER L.C. ANDREW LUMBER MILL" DATED 09/05/01, REV 09/17/01 BY ST.GERMAIN & ASSOCIATES, INC.

AMENDED PLAN
LITTLE FALLS INDUSTRIAL CONDOMINIUM

PLAT AND PLANS
33 MAIN STREET
WINDHAM, MAINE

DECLARANT AND RECORD OWNER:
MCL REALTY LLC
P.O. BOX 1206
WINDHAM, ME 04062

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D
2.	06/09/2016	PLAN AMENDED WITH REVISED BOUNDARY	MCA	PJD
1.	09/21/2015	SUBMITTED FOR REVIEW	MCA	WLE

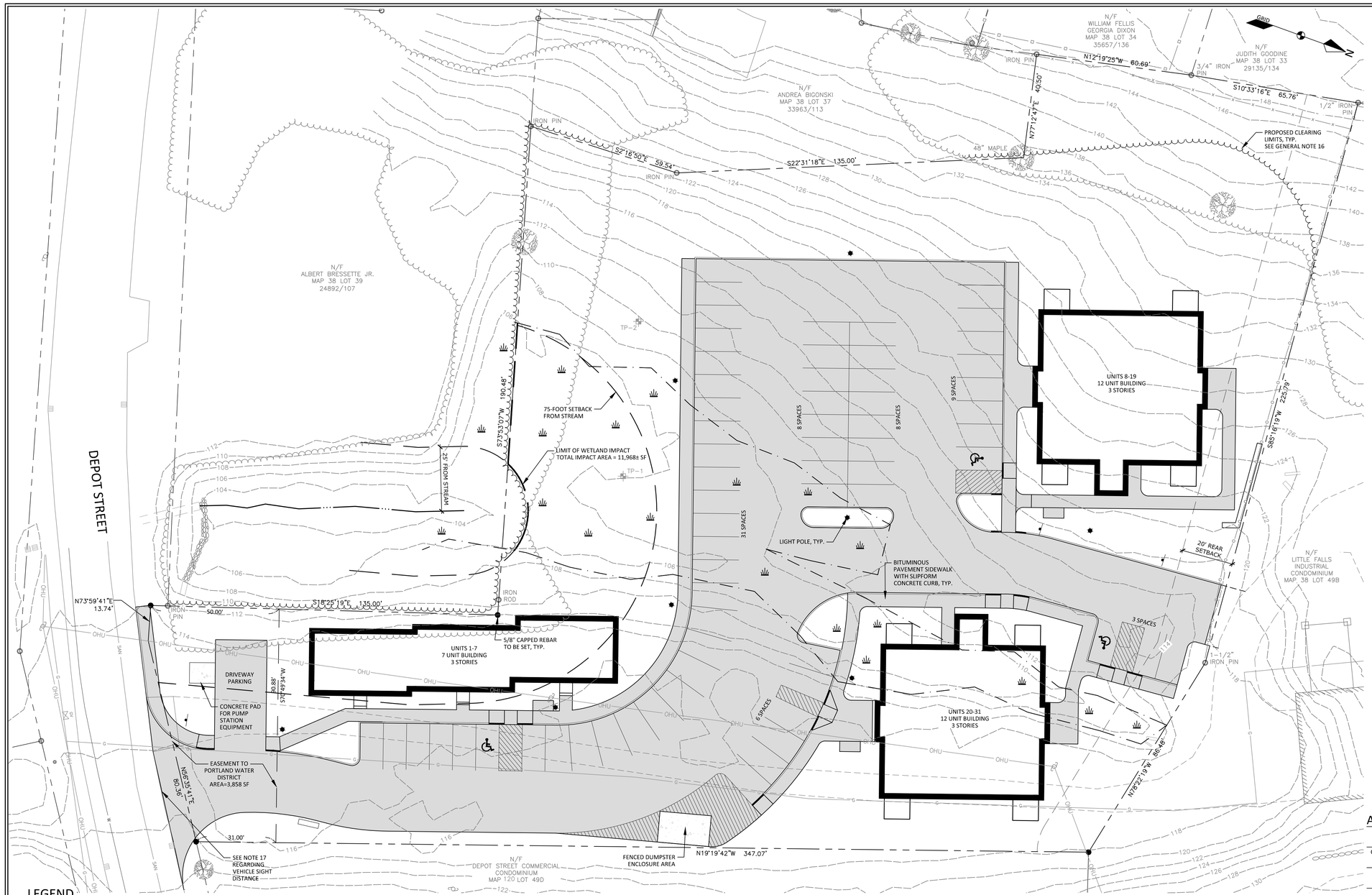
DATE: 08/08/2015 | SCALE: 1"=40' | PROJECT NO.: 2745 | FILE: 2745 Condo Plan 06-09-2016

St.Germain·Collins

SHEET 1 OF 2

846 MAIN ST., SUITE 3, WESTBROOK, ME 04092 TEL:207-591-7000 WWW.STGERMAINCOLLINS.COM

M:\Dwgs\2745 MCL Realty\Condo Plan 2015\2745 Condo Plan 06-09-2016.dwg 6/9/2016 1:13:03 PM



GENERAL NOTES:

1. THE OWNER OF RECORD OF THE PROPERTY IS MCL REALTY, LLC BY DEED RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 26608 PAGE 50.
2. TOTAL AREA OF THE PARCEL IS APPROXIMATELY 91,766 SQUARE FEET (2.1 ACRES).
3. PARCEL TAX MAP REFERENCE: TOWN OF WINDHAM ASSESSORS MAP 38, LOT 37-A.
4. PLAN REFERENCES:
   A) AMENDED PLAN OF LITTLE FALLS INDUSTRIAL CONDOMINIUM, PREPARED FOR MCL REALTY LLC, PREPARED BY ST. GERMAIN COLLINS, RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 216, PAGE 189.
5. HORIZONTAL DATUM: MAINE STATE PLANE, WEST ZONE, NAD83, U.S. FEET.
6. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
7. BOUNDARY AND TOPOGRAPHIC FEATURES SHOWN HEREON IS BASED ON PLAN REFERENCE 4A.
8. TOPOGRAPHIC CONTOURS SHOWN HEREON ARE BASED ON 2 FT LIDAR CONTOURS OBTAINED FROM THE MAINE OFFICE OF GIS.
9. THE PROPERTY IS LOCATED IN THE VILLAGE COMMERCIAL DISTRICT.
10. SPACE AND BULK REQUIREMENTS: VC DISTRICT

MIN LOT SIZE:	5,000 SF (PUBLIC SEWER & WATER)
MIN STREET FRONTAGE:	50 FT
MIN FRONT YARD:	NONE
MIN SIDE YARD:	NONE
MIN REAR YARD:	20 FT
MAX BUILDING HEIGHT:	35 FT
MAX BUILDING COVERAGE:	NONE

11. WETLAND DELINEATION WAS PERFORMED BY MAINELY SOILS, LLC IN SEPTEMBER 2019. AS A RESULT OF THE DEVELOPMENT APPROXIMATELY 11,968 SF OF WETLANDS WILL BE IMPACTED. THE PROJECT IS SUBJECT TO THE NATURAL RESOURCES PROTECTION ACT TIER 1 WETLAND ALTERATION PERMIT ORDER L-28526-TC-B-N AND US ARMY CORPS OF ENGINEERS MAINE GENERAL PERMIT NAE-2020-00604. THE PROJECT IS ALSO SUBJECT TO A NATURAL RESOURCES PROTECTION ACT PERMIT BY RULE FOR ACTIVITIES ADJACENT TO A PROTECTED NATURAL RESOURCE (PBR #69340).
12. TOTAL NUMBER OF PARKING SPACES PROVIDED = 65 SPACES
13. ALL BUILDINGS WILL REQUIRE THE INSTALLATION OF A ROOF DRIP EDGE FILTER FOR STORMWATER TREATMENT.
14. CONTRACTOR AND ALL PROPERTY OWNERS ARE REQUIRED TO COMPLY WITH THE INSPECTION, MAINTENANCE AND HOUSEKEEPING PLAN PREPARED FOR THIS PROJECT.
15. THE PROJECT IS SUBJECT TO MDEP STORMWATER MANAGEMENT LAW PERMIT ORDER L-28526-NJ-A-N.
16. THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE MAINTAINED FOR A PERIOD OF FIVE (5) YEARS FROM THE DATE OF PLANNING BOARD APPROVAL, AND IN ACCORDANCE WITH SECTION 911.E.1.A OF THE LAND USE ORDINANCE.
17. ALL VEGETATION ON THE NORTH SIDE OF DEPOT STREET AND WITHIN THE DEPOT STREET RIGHT-OF-WAY FOR A DISTANCE OF 150 FEET BOTH SIDES OF THE DRIVEWAY CENTERLINE MUST BE REMOVED AND MAINTAINED TO A HEIGHT OF NOT MORE THAN 3 FEET TO ACHIEVE ADEQUATE VEHICLE SIGHT DISTANCE. A TRAFFIC SAFETY STUDY CONDUCTED BY TRAFFIC SOLUTIONS INDICATED THAT ADEQUATE SIGHT DISTANCE IN EXCESS OF 350 FEET WILL EXIST PROVIDED THE VEGETATION IS REMOVED.

NET RESIDENTIAL DENSITY CALCULATIONS:

GROSS LAND AREA:	91,766 S.F.
DEDUCTIONS:	
1. RIGHT-OF-WAY	0 S.F.
2. STEEP SLOPES (OVER 25%)	0 S.F.
3. 100-YEAR FLOOD PLAIN	0 S.F.
4. RESOURCE PROTECTION DISTRICT	0 S.F.
5. VERY POORLY DRAINED SOILS	11,761 S.F.
6. SURFACE WATERBODIES	0 SF
7. SIGNIFICANT WILDLIFE HABITAT	0 S.F.
8. ENDANGERED BOTANICAL RESOURCES	0 S.F.
TOTAL NET AREA:	80,005 S.F.
REQUIRED NET AREA PER DWELLING:	2,500 S.F.
MAXIMUM ALLOWABLE LOTS/DWELLINGS:	32
NUMBER OF LOTS PROPOSED:	31

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER PROPERTY LINE	
	SETBACK	
	EASEMENT LINE	
	GRANITE MONUMENT	
	IRON PIN/DRILL HOLE	
	BUILDING	
	EDGE OF PAVEMENT/CURB	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
	EDGE OF WETLANDS	
	CENTERLINE OF STREAM	
	SIGN	
200 201	CONTOUR LINE	
	CATCHBASIN	
	CULVERT/STORMDRAIN	
	SEWER MANHOLE	
S	SANITARY SEWER PIPE	
FM	FORCE MAIN	
W	WATER MAIN	
WV	WATER VALVE	
	UTILITY POLE	
	LIGHT POLE	
OHU	OVERHEAD UTILITIES	
G	GAS MAIN	
	GAS VALVE	

APPROVED - WINDHAM PLANNING BOARD:

CHAIRPERSON DATE

STATE OF MAINE
_____ COUNTY SS. REGISTRY OF DEEDS
RECEIVED _____, 20____
AT _____h _____m _____M
AND RECORDED IN
PLAN BOOK _____ PAGE _____
ATTEST: _____
REGISTER

STATE OF MAINE
JAYSON R. HASKELL
No. 13002
LICENSED
PROFESSIONAL ENGINEER
6-22-2020

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

REV	DATE	BY	DESCRIPTION
A	11-18-19	DMR	ISSUED FOR PRELIMINARY SUBDIVISION REVIEW
B	1-27-20	DMR	ISSUED FOR MDEP REVIEW
C	2-18-20	DMR	REVISED PER TOWN REVIEW
D	4-28-20	DMR	REVISED PER MDEP REVIEW
E	5-8-20	DMR	REVISED PER MDEP REVIEW
F	6-8-20	DMR	REVISED PER TOWN REVIEW
G	6-22-20	DMR	REVISED PER TOWN REVIEW

SUBDIVISION PLAN

DEPOT STREET RESIDENTIAL DEVELOPMENT

DEPOT STREET
WINDHAM, MAINE
FOR RECORD OWNER:
MCL REALTY, LLC
PO BOX 1206
WINDHAM, ME 04062

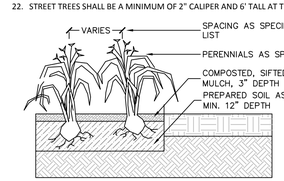
17035	JOB NUMBER:
1" = 20'	SCALE:
6-22-2020	DATE:
SHEET 3 OF 8	
SB-1	

GENERAL NOTES:

1. HORIZONTAL DATUM: MAINE STATE PLANE, WEST ZONE, NAD83, U.S. FEET.
2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
3. WETLAND DELINEATION WAS PERFORMED BY MAINELY SOILS, LLC IN SEPTEMBER 2019. AS A RESULT OF THE DEVELOPMENT APPROXIMATELY 11,968 SF OF WETLANDS WILL BE IMPACTED. THE PROJECT IS SUBJECT TO THE NATURAL RESOURCES PROTECTION ACT TIER 1 WETLAND ALTERATION PERMIT ORDER L-28526-TC-B-N AND US ARMY CORPS OF ENGINEERS MAINE GENERAL PERMIT NAE-2020-00604. THE PROJECT IS ALSO SUBJECT TO A NATURAL RESOURCES PROTECTION ACT PERMIT BY RULE FOR ACTIVITIES ADJACENT TO A PROTECTED NATURAL RESOURCE (PBR #69340).
4. ALL BUILDINGS WILL REQUIRE THE INSTALLATION OF A ROOF DRIPEDGE FILTER FOR STORMWATER TREATMENT. SEE DETAIL SHEET 6 OF 8 FOR LAYOUT.

PLANTING NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING PLANT PITS.
2. ALL MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
3. IN THE CASE OF ANY DISCREPANCIES BETWEEN SPECIES AND QUANTITIES CALLED OUT IN THE PLANTING KEY AND THOSE SHOWN ON THE PLAN, QUANTITIES AND SPECIES SHOWN ON THE PLAN SHALL OVER-RIDE.
4. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES.
5. ALL PLANTS SUBJECT TO APPROVAL BY LANDSCAPE DESIGNER. ALL SUBSTITUTIONS MUST BE SUBMITTED FOR APPROVAL BY LANDSCAPE DESIGNER PRIOR TO ORDERING OR DELIVERY OF PLANT MATERIAL ON SITE. LANDSCAPE DESIGNER RESERVES THE RIGHT TO REJECT ANY PLANTINGS THAT DO NOT CONFORM TO THE DRAWINGS OR SPECIFICATIONS OUTLINED HEREIN.
6. LANDSCAPE DESIGNER SHALL APPROVE FINAL PLACEMENT OF ALL PLANT MATERIALS AND RESERVES THE RIGHT TO MAKE FIELD ADJUSTMENTS TO PLANTINGS AS NECESSARY.
7. EXISTING TREES TO REMAIN SHALL BE PROTECTED BY PVC FENCING PLACED AT THE DRIP-LINE OR AS SHOWN ON THE PLANS TO PREVENT DAMAGE AND COMPACTION OF THE ROOT SYSTEM. NO GRADING, SOIL DISTURBANCE, OR STORAGE OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN THE DRIP-LINE UNLESS OTHERWISE SHOWN ON PLANS. ANY EXCAVATION WITHIN SUCH AREAS SHALL BE PERFORMED BY HAND TO AVOID DAMAGE OF THE ROOT SYSTEM.
8. CONTRACTOR SHALL REFER TO GRADING AND UTILITY PLAN FOR SLOPE STABILIZATION AREAS.
9. FINISH GRADE OF PLANTINGS SHALL MATCH ADJACENT FINISH GRADES UNLESS OTHERWISE NOTED ON DRAWINGS OR DIRECTED AND/OR APPROVED BY THE LANDSCAPE DESIGNER.
10. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN FINISHED AND APPROVED BY THE LANDSCAPE DESIGNER OR OWNER'S REPRESENTATIVE.
11. ALL PLANTS SHALL BE SET PLUMB UNLESS OTHERWISE SPECIFIED.
12. ALL PLANTINGS SHALL BE TOPPED WITH A MINIMUM OF 3" OF WELL COMPOSTED, DARK PINE BARK MULCH.
13. DISTURBED AREAS SHALL BE SEEDED WITH PARK MIX OR AS APPROVED. SEEDING AREAS SHALL BE LIGHTLY MULCHED WITH A LAYER OF CLEAN, WEED-FREE STRAW.
14. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED AS REQUIRED THEREAFTER TO ENSURE SURVIVAL AND OPTIMAL GROWTH THROUGH THE FIRST GROWING SEASON.
15. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A 6" MINIMUM DEPTH OF TOPSOIL FOR ALL LAWN AREAS.
16. ALL PLANTING BEDS SHALL HAVE 18" MINIMUM DEPTH OF TOPSOIL.
17. ALL PLANTING BEDS ARE TO REMAIN FREE OF WEEDS DURING THE 1 YEAR GUARANTEE PERIOD.
18. ALL PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL BY THE LANDSCAPE DESIGNER PRIOR TO AND AFTER PLANTING.
19. PLANT SPECIES MAY BE ADJUSTED BASED ON AVAILABILITY AT TIME OF PLANTING. ALL PLANT MATERIAL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY THE LANDSCAPE DESIGNER.
20. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE. MAINTENANCE SHALL INCLUDE WATERING, MULCHING, TIGHTENING & REPLACING OF GUYS, REPLACEMENT OF SICK OR DEAD PLANTS, RESETTING PLANTS TO PROPER GRADE OR UPRIGHT (PLUMB) POSITION, RESTORATION OF SAUCERS, AND ALL OTHER CARE NEEDED FOR PROPER GROWTH OF THE PLANTS.
21. PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF INSTALLATION. DURING THE ONE YEAR GUARANTEE, THE CONTRACTOR SHALL REPLACE, IN KIND, ANY DEAD, DISEASED, OR SUBSTANDARD PLANT MATERIAL AT NO COST TO THE OWNER. THE CONTRACTOR SHALL RECEIVE FINAL ACCEPTANCE FROM THE OWNER FOLLOWING THE ONE YEAR GUARANTEE, PROVIDED THE PROVISIONS OF THE PLANT GUARANTEE HAVE BEEN SATISFACTORILY MET.
22. STREET TREES SHALL BE A MINIMUM OF 2" CALIPER AND 6' TALL AT TIME OF PLANTING.



PERENNIALS INSTALLATION DETAIL

NOT TO SCALE

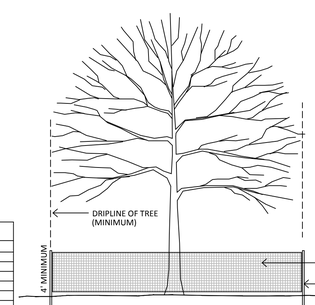
LEGEND

EXISTING	PROPOSED
PROPERTY LINE/R.O.W.	
ABUTTER PROPERTY LINE	
SETBACK	
EASEMENT LINE	
GRANITE MONUMENT	
IRON PIN/DRILL HOLE	
BUILDING	
EDGE OF PAVEMENT/CURB	
EDGE OF GRAVEL	
EDGE OF CONCRETE	
EDGE OF WETLANDS	
CENTERLINE OF STREAM	
CONTOUR LINE	
CATCHBASIN	
CULVERT/STORMDRAIN	
SEWER MANHOLE	
SANITARY SEWER PIPE	
FORCE MAIN	
WATER MAIN	
WATER VALVE	
UTILITY POLE	
LIGHT POLE	
OVERHEAD UTILITIES	
GAS MAIN	
GAS VALVE	
LIMITED DISTURBANCE	
MEADOW BUFFER	

ABBREVIATIONS
REV. = REVISION
QTY. = QUANTITY
HT. = HEIGHT
B&B = BALL AND BURLAP
GAL. = GALLON
CAL. = CALIPER

PLANT LIST

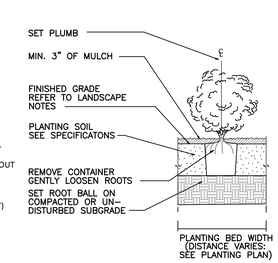
TREES	QTY	KEY	BOTANICAL	COMMON	SIZE
	4	AB	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Shadbush	5'-6' HT
	2	AR	Acer rubrum 'Red Sunset'	Red Maple	2"-3" CAL.
	6	CS	Cornus alba 'Ivory Halo'	Ivory Halo Dogwood	5 GAL.
	7	FS	Fagus sylvatica 'Tricolor'	Tricolor Beech	2"-3" CAL.
	8	MJ	Magnolia liliiflora 'Jane'	Jane Magnolia	7 GAL.
	12	PC	Pinus cembra 'Prairie Statesman'	Prairie Statesman	4'-5' HT.
PERENNIALS & SHRUBS	QTY	KEY	BOTANICAL	COMMON	SIZE
	18	HL	Hydrangea paniculata 'Little Quickfire'	Little Quickfire Hydrangea	3 GAL.
	22	PJM	Rhododendron 'PJM Compacta'	PJM Compacta Rhododendron	18"-24" HT.
	10	TS	Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	3 GAL.
	12	WA	Weigla florida 'Alexandra'	Wine and Roses Weigela	3 GAL.
	52	RSL	Rudibeckia subtomentosa 'Little Henry'	Sweet Cone Flower	6"-7" HT. CLUMP
	52	EMS	Echinacea Purpurea 'Magnus Superior'	Magnus Purple Cone Flower	1 GAL.
	31	PVC	Panicum Virgatum 'Cape Breeze'	Cape Breeze Switch Grass	1 GAL.



NOTES:
1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. INSTALL FENCING TO LIMIT OF THE CRITICAL ROOT ZONE OF TREE
3. DO NOT STORE CONSTRUCTION EQUIPMENT, MATERIALS, TOOLS, ETC. WITHIN PROTECTIVE FENCING.
4. MAINTAIN FENCING IN A NEAT AND ORDERLY FASHION THROUGHOUT CONSTRUCTION PERIOD.

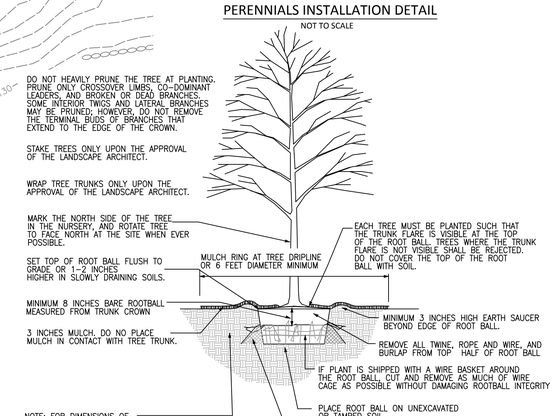
TREE PROTECTION DETAIL - TEMPORARY FENCE

NOT TO SCALE



SHRUB INSTALLATION DETAIL

NOT TO SCALE



TREE INSTALLATION DETAIL - BALL & BURLAP

NOT TO SCALE

STATE OF MAINE
JAYSON R. HASKELL
No. 13002
LICENSED
PROFESSIONAL ENGINEER
6-22-2020

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

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G	6-22-20	DMR	REVISED PER TOWN REVIEW

SITE AND LANDSCAPING PLAN

DEPOT STREET RESIDENTIAL DEVELOPMENT

DEPOT STREET
WINDHAM, MAINE

FOR RECORD OWNER:
MCL REALTY, LLC
PO BOX 1206
WINDHAM, ME 04062

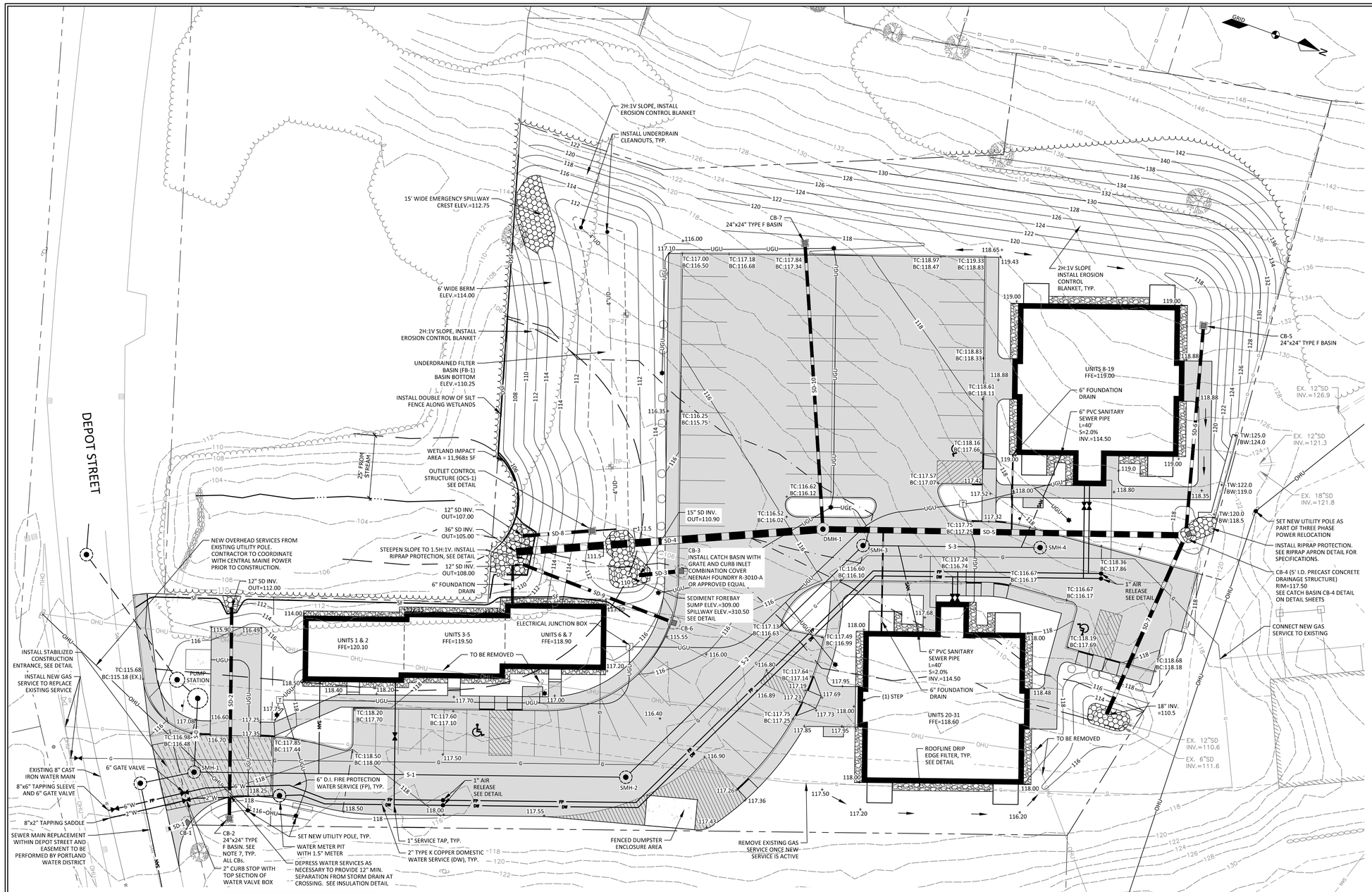
17035
JOB NUMBER:

1" = 20'
SCALE:

6-22-2020
DATE:

SHEET 4 OF 8

S-1



CONSTRUCTION NOTES:

1. ALL UTILITY WORK WITHIN DEPOT STREET AND THE PORTLAND WATER DISTRICT (PWD) EASEMENT SHALL BE COORDINATED WITH PWD PRIOR TO CONSTRUCTION.
2. ELECTRICAL SERVICES SHOWN INCLUDING, BUT NOT LIMITED TO, UTILITY POLE PLACEMENT, TRANSFORMERS AND CONDUIT LOCATIONS ARE THE ENGINEER'S SUGGESTED LOCATIONS BUT MUST BE COORDINATED WITH CENTRAL MAINE POWER COMPANY. REFER TO PLANS ISSUED BY CMP FOR APPROVED LOCATIONS OF ELECTRICAL INFRASTRUCTURE.
3. THE PROJECT WILL REQUIRE THE RELOCATION OF AN EXISTING GAS MAIN. CONTRACTOR TO COORDINATE WITH MAINE NATURAL GAS PRIOR TO CONSTRUCTION.
4. THE PUBLIC WATER SERVICE DESIGN HAS BEEN REVIEWED AND APPROVED BY THE PORTLAND WATER DISTRICT. CONTRACTOR/OWNER SHALL COORDINATE WITH PWD PRIOR TO ORDERING MATERIALS AND INSTALLING WATER INFRASTRUCTURE.
5. PRIOR TO CONSTRUCTION, THE OWNER SHALL COORDINATE A PRE-CONSTRUCTION MEETING WITH THE TOWN OF WINDHAM. CONTACT THE PLANNING DEPARTMENT TO SCHEDULE THE MEETING AND COORDINATE ANY OTHER REQUIRED PRE-CONSTRUCTION ACTIVITIES.
6. EXISTING UTILITIES SHOWN HEREON ARE BASED ON RECORD DRAWINGS. OTHER UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THIS PLAN. PRIOR TO CONSTRUCTION, THE CONTRACTOR/OWNER IS RESPONSIBLE FOR CONTACTING DIG SAFE.
7. ALL NEW CATCH BASINS (CB) AND EXISTING CATCH BASINS DOWNGRADIENT OF THE PROJECT SITE WILL REQUIRE THE INSTALLATION OF CATCH BASIN INLET PROTECTION DURING CONSTRUCTION. SEE INLET PROTECTION DETAIL AND SPECIFICATIONS ON DETAIL SHEET 6 OF 8 OF THIS PLAN SET.
8. ALL NEW BUILDINGS SHALL INSTALL ROOF DRIP EDGE FILTERS AS SHOWN ON PLAN.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER PROPERTY LINE	
	TIE LINE	
	SETBACK	
	EASEMENT LINE	
	GRANITE MONUMENT	
	IRON PIN/DRILL HOLE	
	CENTERLINE	
	BUILDING	
	EDGE OF PAVEMENT/CURB	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
	EDGE OF WETLANDS	
	CENTERLINE OF STREAM	
200 201	CONTOUR LINE	200 201
	TREELINE	
	CATCHBASIN	
	DRAINAGE MANHOLE	
	CULVERT/STORMDRAIN	
	UNDERDRAIN	UD
	SEWER MANHOLE	
S	SANITARY SEWER PIPE	S
FM	FORCE MAIN	FM
W	WATER MAIN	W
	WATER VALVE	
	HYDRANT	
	UTILITY POLE	
	LIGHT POLE	
OHU	OVERHEAD UTILITIES	OHU
UGU	UNDERGROUND UTILITIES	UGU
	TRANSFORMER PAD	T
G	GAS MAIN	G
	GAS VALVE	
	RIPRAP	
	SILT FENCE	SF
	DOUBLE ROW SILT FENCE	DSF

SEWER STRUCTURE TABLE

STRUCTURE	RIM	INV. IN	INV. OUT
SMH-1	117.40	109.65 (S-1)	109.55 (S-0)
SMH-2	117.00	111.05 (S-2)	110.95 (S-1)
SMH-3	116.40	112.15 (S-3)	112.05 (S-2)
SMH-4	117.20		112.70 (S-3)

SEWER PIPE TABLE

NAME	SIZE	LENGTH	SLOPE
S-0	8"	29'	2.01%
S-1	8"	171'	0.78%
S-2	8"	132'	0.78%
S-3	8"	70'	0.83%

STORM DRAIN STRUCTURE TABLE

STRUCTURE	RIM	INV. IN	INV. OUT
CB-1	118.75		111.70 (SD-1)
CB-2	115.30		112.50 (SD-2)
CB-3	114.95		111.00 (SD-3)
CB-4	117.50	110.00 (SD-7) 110.25 (SD-6)	109.25 (SD-5)
CB-5	117.50		113.50 (SD-6)
CB-6	115.40		111.40 (SD-9)
CB-7	117.50		113.50 (SD-10)
DMH-1	116.22	106.15 (SD-5) 107.15 (SD-10)	105.65 (SD-4)
OCS-1	112.50		107.41 (SD-8) 108.08 (UD)

STORM DRAIN PIPE TABLE

NAME	SIZE	LENGTH	SLOPE
SD-1	12"	8'	1.71%
SD-2	12"	84'	0.60%
SD-3	15"	17'	0.68%
SD-4	30"	122'	0.54%
SD-5	24"	144'	2.22%
SD-6	12"	84'	4.06%
SD-7	15"	78'	0.67%
SD-8	12"	27'	1.55%
SD-9	12"	64'	5.47%
SD-10	12"	114'	5.73%
UD	4"	10'	0.00%

STATE OF MAINE
JAYSON R. HASKELL
No. 13002
LICENSED
PROFESSIONAL ENGINEER
6-22-2020

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

REV	DATE	BY	DESCRIPTION
E	1-21-20	DMR	REVISED ELECTRICAL LAYOUT
F	1-22-20	DMR	REVISED CB-2 & SD-2
G	1-27-20	DMR	ISSUED FOR MDEP REVIEW
H	2-18-20	DMR	REVISED PER TOWN REVIEW
I	5-8-20	DMR	REVISED PER MDEP REVIEW
J	5-22-20	DMR	REVISED WATER MAIN CONNECTION
K	6-22-20	DMR	REVISED PER TOWN REVIEW

GRADING AND UTILITY PLAN

DEPOT STREET RESIDENTIAL DEVELOPMENT

DEPOT STREET
WINDHAM, MAINE

FOR RECORD OWNER:
MCL REALTY, LLC
PO BOX 1206
WINDHAM, ME 04062

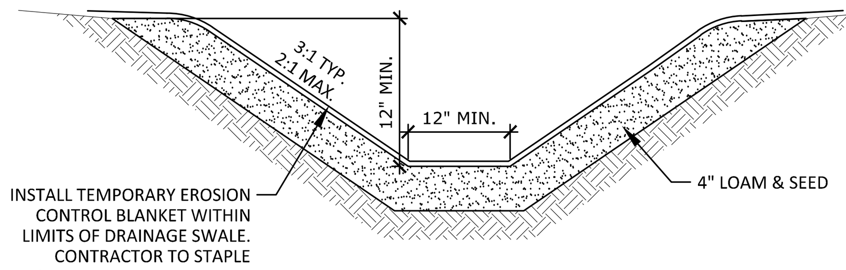
17035
JOB NUMBER:

1" = 20'
SCALE:

6-22-2020
DATE:

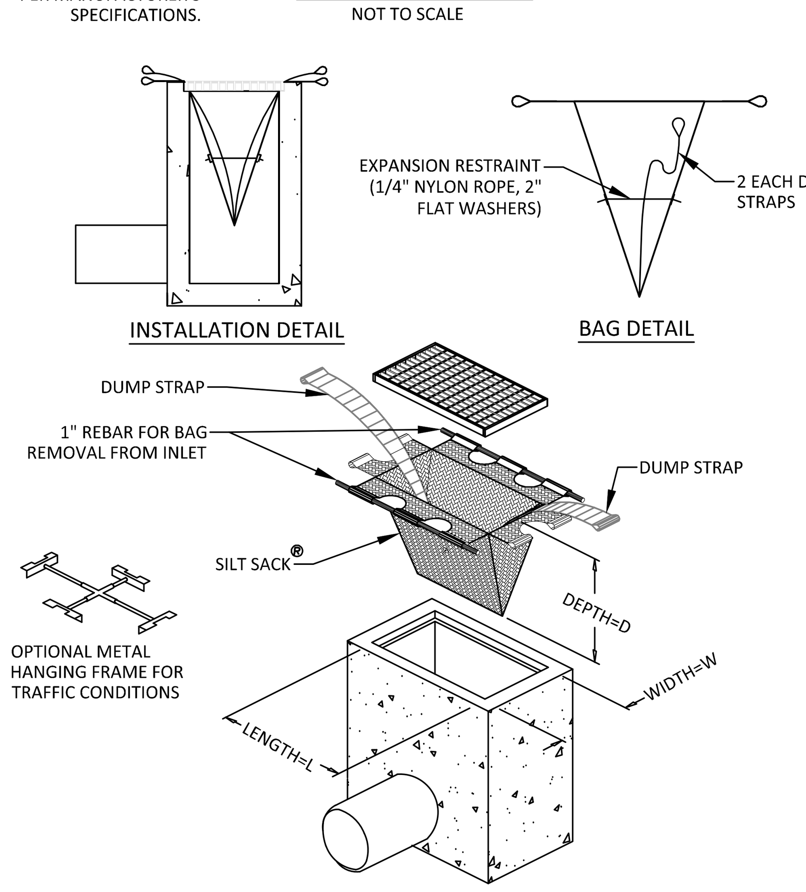
SHEET 5 OF 8

GU-1



DRAINAGE SWALE

NOT TO SCALE



INLET PROTECTION

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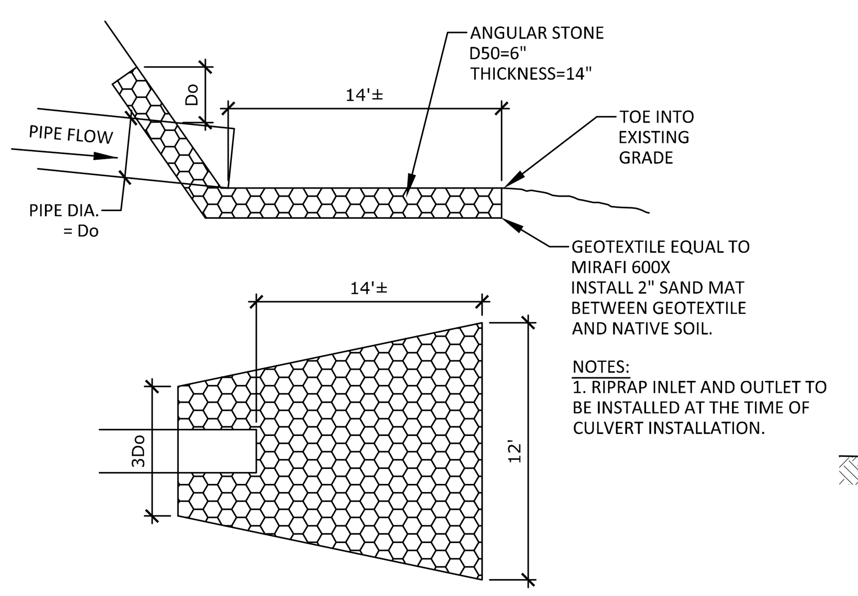
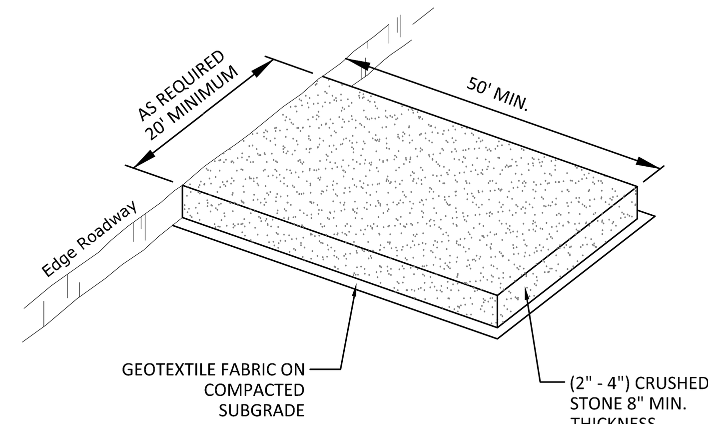


RIPRAP APRON AT PIPE

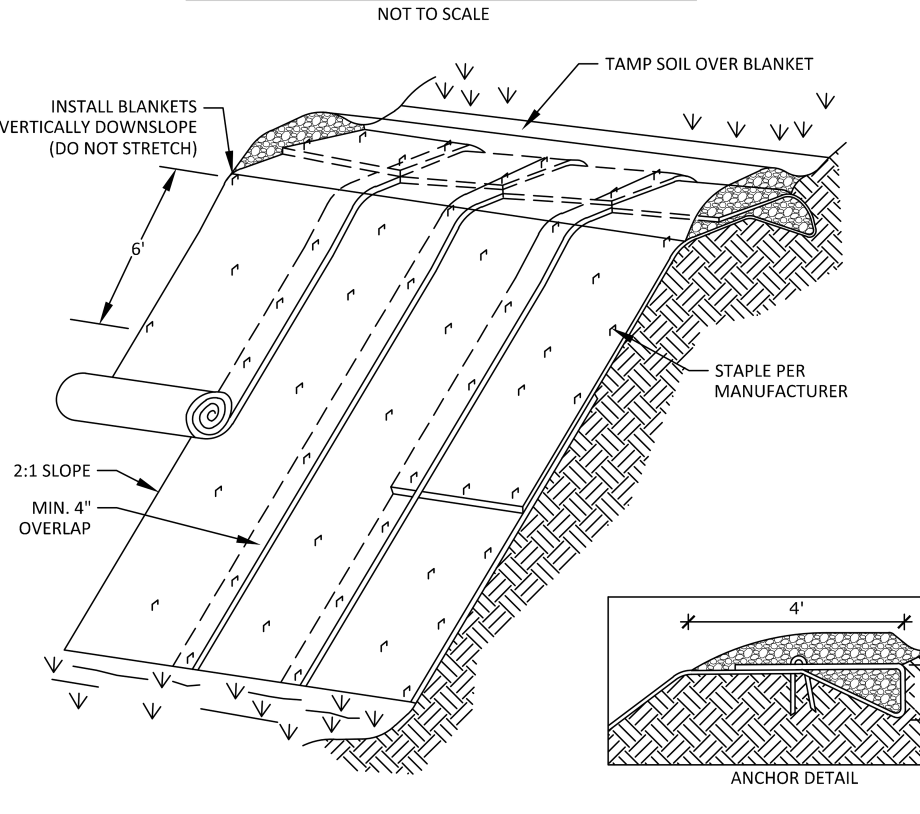
NOT TO SCALE



NOTES:
1. VACUUM REMOVAL OF ANY TRACKED SEDIMENTS ONTO ROADWAYS SHALL BE PERFORMED AS NEEDED AND PRIOR TO A RAIN EVENT EXCEEDING 0.5 INCH OF RAINFALL OVER A 24-HOUR PERIOD.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



EROSION CONTROL BLANKET

NOT TO SCALE

HOUSEKEEPING NOTES

1. SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

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. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

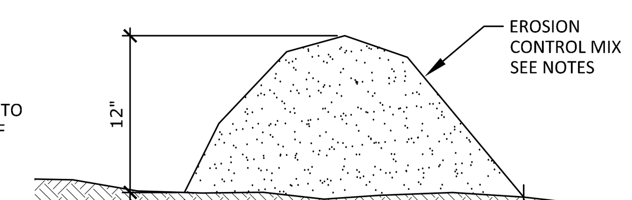
3. FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

4. DEBRIS AND OTHER MATERIALS: MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. EXCAVATION DE-WATERING: EXCAVATION 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 REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, 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. AUTHORIZED NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
(a) DISCHARGES FROM FIREFIGHTING ACTIVITY;
(b) FIRE HYDRANT FLUSHINGS;
(c) VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
(d) DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
(e) ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
(f) PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
(g) UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
(h) UNCONTAMINATED GROUNDWATER OR SPRING WATER;
(i) FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
(j) UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5));
(k) POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
(l) LANDSCAPE IRRIGATION.

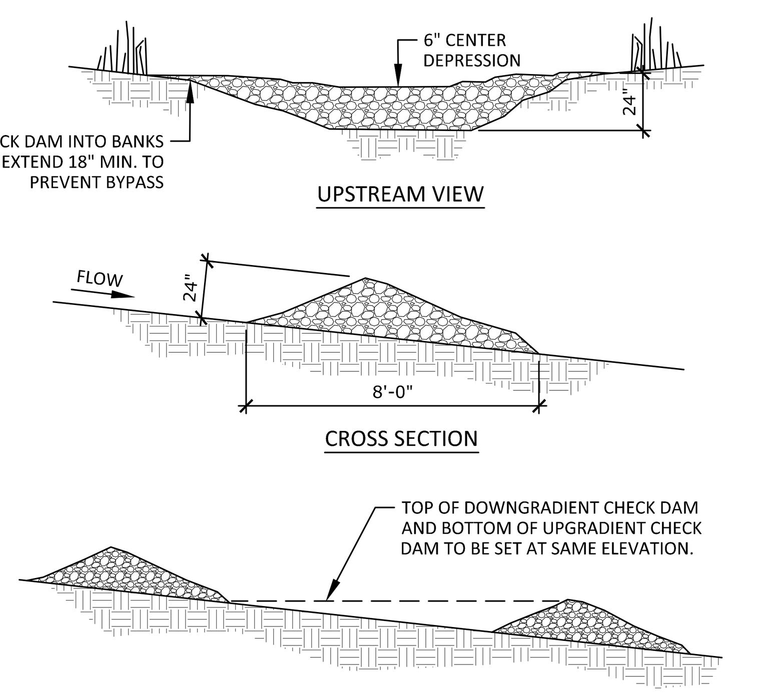
7. UNAUTHORIZED NON-STORMWATER DISCHARGES: APPROVAL FROM THE MDEP DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON_STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH SECTION 6 ABOVE. SPECIFICALLY, THE MDEP'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:
(a) WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
(b) FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
(c) SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
(d) TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.



NOTES:
1. EROSION CONTROL MIX BERM INSTALLED 12" HIGH AND 24" WIDE CONSISTING OF STUMP GRINDINGS WITH NO ROCKS GREATER THAN 4" OR LARGE AMOUNTS OF FINES.

EROSION CONTROL MIX BERM

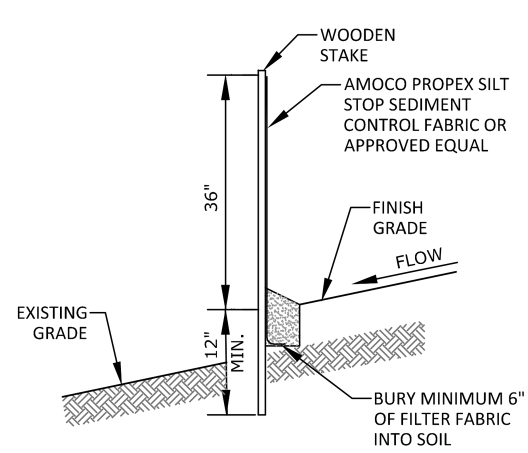
NOT TO SCALE



NOTES:
1. CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE.
2. THE AREA AROUND THE CHECK DAM SHOULD BE FREE OF DEBRIS.
3. A STONE CHECK DAM SHOULD BE COMPRISED OF WELL-GRADED CRUSHED ROCK WITH A MAXIMUM SIZE OF 6" AND A MINIMUM STONE SIZE OF 1".
4. THE MAXIMUM HEIGHT OF A CHECK DAM SHOULD BE 2' WITH A 6" DEPRESSION AT ITS CENTER FOR OVERFLOW. THE EDGES OF THE DAM SHOULD BE KEYED INTO THE EMBANKMENTS TO PREVENT SIDE EROSION.
5. MECHANICAL PLACEMENT FOLLOWED BY HAND PLACEMENT WILL BE NECESSARY TO ACHIEVE A TIGHT MASS WITHIN THE CHANNEL AND TO ENSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES.
6. ANY EROSION DOWNGRADIENT OR AROUND THE EDGES OF STONE CHECK DAMS SHOULD BE CORRECTED IMMEDIATELY.
7. THE CHECK DAMS MAY BE REMOVED WHEN THE SWALE IS STABILIZED WITH VEGETATION (90% COVERAGE.

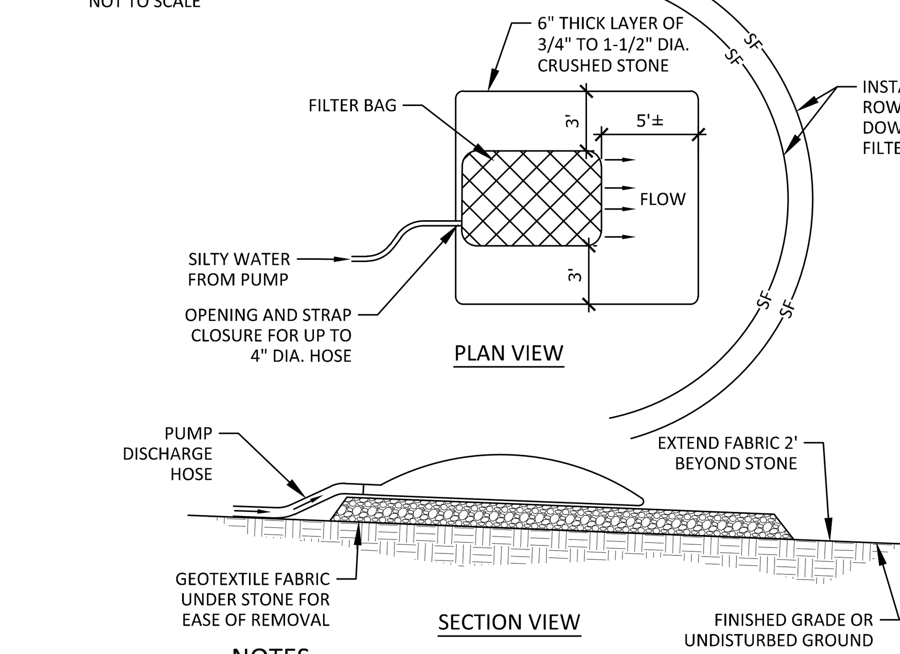
STONE CHECK DAM

NOT TO SCALE



SEDIMENT FILTER FENCE

NOT TO SCALE



NOTES:
1. FILTER BAG TO BE LOCATED AT LEAST 25 FEET FROM THE UPLAND EDGE OF ANY NATURAL RESOURCES AND THE LOCATION SHALL BE SELECTED SUCH THAT IT CAN EASILY BE REMOVED AFTER CONSTRUCTION.

DEWATERING GEOTEXTILE FILTER BAG

NOT TO SCALE

EROSION AND SEDIMENTATION CONTROL NOTES:

EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS TO OCCUR DURING THE FOLLOWING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY.

IN ORDER TO EFFECTIVELY PREVENT AND CONTROL EROSION RELATED TO SOIL DISTURBANCE, THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) SHALL BE EMPLOYED:

1. 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.

2. TEMPORARY SOIL STABILIZATION BMPS

TEMPORARY MULCHING SHALL BE APPLIED IMMEDIATELY TO ANY AREAS THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED. ANY DISTURBED SOIL WITHIN 75' OF A STREAM, WATER BODY OR WETLAND MUST RECEIVE TEMPORARY MULCH WITHIN 48 HOURS FOLLOWING DISTURBANCE AND BEFORE ANY STORM EVENT. ALL OTHER AREAS SHALL RECEIVE TEMPORARY MULCH WITHIN 7 DAYS OF DISTURBANCE. AREAS WHICH CANNOT BE SEEDED DURING THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION. THE FOLLOWING ARE ACCEPTABLE TEMPORARY MULCHING METHODS:

HAY OR STRAW MULCHES NEED TO BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS. APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SQ FT OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75-90% OF THE GROUND SURFACE. HAY OR STRAW CAN BE DRIVEN INTO THE GROUND WITH TRACKED EQUIPMENT IF SLOPES ARE LESS THAN 3%, OR CAN BE ANCHORED WITH JUTE, WOOD FIBER OR PLASTIC NETTING ON STEEPER SLOPES.

EROSION CONTROL MIX MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND WILL INCLUDE ANY OF THE FOLLOWING: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK OR OTHER ACCEPTABLE PRODUCTS BASED ON A SIMILAR RAW SOURCE. WOOD OR BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS ARE NOT ACCEPTABLE. EROSION CONTROL MIX CAN BE USED AS A STAND-ALONE REINFORCEMENT ON SLOPES OF 2 HORIZONTAL TO 1 VERTICAL OR LESS AND DRAINING IN SHEET FLOW. IT CAN BE PLACED WITH A HYDRAULIC BUCKET, WITH A PNEUMATIC BLOWER OR BY HAND, AND MUST PROVIDE 100% SOIL COVERAGE.

EROSION CONTROL MIX SHALL MEET THE FOLLOWING SPECIFICATIONS:
-ORGANIC MATTER CONTENT SHALL BE BETWEEN 80-100%, DRY WEIGHT BASIS.
-PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6 IN. SCREEN AND BETWEEN 70-85% PASSING 0.75 IN. SCREEN
-ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
-LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX

WHEN USED AS MULCH, THE THICKNESS OF THE ERISION CONTROL MIX IS BASED UPON THE FOLLOWING:

LENGTH OF SLOPE	3:1 SLOPE OR LESS	BETWEEN 2:1 AND 3:1 SLOPE
LESS THAN 20 FT	2.0 IN.	4.0 IN.
BETWEEN 20 - 60 FT	3.0 IN.	5.0 IN.
BETWEEN 60 - 100 FT	4.0 IN.	6.0 IN.

CHEMICAL MULCHES AND SOIL BINDERS MAY BE USED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER TO DETERMINE ADEQUATE APPLICATION RATES AND METHODS.

TEMPORARY MULCH SHALL BE INSPECTED FOLLOWING ANY SIGNIFICANT RAINFALL EVENT. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. ERISION CONTROL MATS AND MULCH ANCHORING MUST BE INSPECTED AFTER RAINFALL EVENTS FOR DISLOCATION OR FAILURE, AND REPAIRED IMMEDIATELY. INSPECTIONS SHALL TAKE PLACE UNTIL 95% OF THE SOIL SURFACE IS COVERED WITH PERMANENT VEGETATION. WHERE MULCH IS USED WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE, AND REPAIR AS NEEDED.

TEMPORARY VEGETATION SHALL BE ESTABLISHED ON SOILS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 DAYS. IF TEMPORARY VEGETATION CANNOT BE ESTABLISHED PRIOR TO OCTOBER 15, TEMPORARY MULCH SHALL BE APPLIED THROUGH THE WINTER AND TEMPORARY VEGETATION SHALL BE PLANTED AT THE BEGINNING OF THE GROWING SEASON THE FOLLOWING YEAR. TO PREPARE THE SEEDBED, THE CONTRACTOR SHALL APPLY FERTILIZER AT A RATE OF 600 POUNDS PER ACRE OF 10-10-10 (N-P205-K20) OR EQUIVALENT AND LIMESTONE AT A RATE OF 3 TONS PER ACRE, IF NECESSARY. LOOSEN SOIL TO A DEPTH OF 2 INCHES IN AREAS THAT HAVE BEEN COMPACTED BY CONSTRUCTION ACTIVITIES. GRASS SEED SHALL BE SELECTED BASED UPON THE TIME OF YEAR THE PLANTING WILL TAKE PLACE AS SUMMARIZED IN THE FOLLOWING TABLE:

SEED	LB. PER ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	112	8/15 - 10/1
OATS	80	4/1 - 7/1 8/15 - 9/15
ANNUAL RYEGRASS	40	4/1 - 7/1

TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED TO MAINTAIN AT LEAST 95% VEGETATIVE COVER OF SOIL SURFACE. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES SHALL BE USED IN THE INTERIM SUCH AS TEMPORARY MULCH, FILTER BARRIERS, ETC.

3. SEDIMENT BARRIER BMPS

PRIOR TO CONSTRUCTION TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED AT THE DOWNGRADIENT EDGE OF ANY AREA TO BE DISTURBED AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA . SEDIMENT BARRIERS INCLUDE ANY OF THE FOLLOWING:

FILTER BARRIER FENCE, ALSO CALLED SILT FENCE, SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. THE FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL PROVIDE A MINIMUM OF 6 MONTHS USABLE CONSTRUCTION LIFE INCLUDING PROTECTION AGAINST ULTRA-VIOLET LIGHT. THE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES INSTALLED AND POST SPACING SHALL NOT EXCEED 6 FEET. JOINTS IN THE FENCE SHALL BE AVOIDED TO THE EXTENT POSSIBLE, AND IF NECESSARY SHALL BE SPLICED TOGETHER AT A SUPPORT POST WITH A MINIMUM 6 INCH OVERLAP. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES WIDE AND 6 INCHES DEEP, AND THE BOTTOM 6-8 INCHES OF FABRIC SHALL BE "TOED-IN" TO THE TRENCH AND COMPACTED. THE TRENCH SHOULD BE UPHILL OF THE FABRIC PRIOR TO BURIAL.

EROSION CONTROL MIX BERMS ARE LINEAR BARRIERS COMPOSED OF EROSION CONTROL MIX AS SPECIFIED ABOVE. THE BERM MUST BE A MINIMUM OF 12 INCHES TALL AND 24 INCHES WIDE AT THE BASE IF UPHILL SLOPES ARE LESS THAN 5%. STEEPER SLOPES OR SLOPES GREATER THAN 20 FEET LONG MAY REQUIRE A LARGER WIDTH BERM. EROSION CONTROL MIX BERMS SHALL BE PROHIBITED AT THE BASE OF A LONG OR STEEP SLOPE (8% OR GREATER) WITHOUT THE ADDITIONAL SUPPORT OF A FILTER FENCE INSTALLED ON THE DOWNHILL SIDE OF THE BERM.

SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRADIENT OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER PREVENTED RUNNING ONTO THE STOCKPILE. SEDIMENT BARRIERS SHALL BE INSPECTED AFTER ANY SIGNIFICANT RAINFALL EVENT AND REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE BARRIERS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR EDGES OF THE BARRIER, OR IF LARGE VOLUMES OF WATER ARE IMPOUNDED BEHIND THE BARRIER, IT MAY BE NECESSARY TO REPLACE THE BARRIER WITH A SEDIMENT BASIN OR OTHER ONSITE STORAGE UPGRADIENT OF THE SEDIMENT BARRIER. SEDIMENT SHALL BE REMOVED ONCE IT REACHES HALF THE BARRIER HEIGHT. AFTER THE BARRIER IS REMOVED, ANY REMAINING SILT SHALL EITHER BE REMOVED OR GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

4. STORM DRAIN INLET PROTECTION

STORM DRAIN INLETS THAT ARE MADE OPERATIONAL BEFORE THEIR DRAINAGE AREA IS STABILIZED SHALL BE PROTECTED WITH A FILTER UNTIL THE DRAINAGE AREA IS EITHER PAVED OR STABILIZED WITH 95% VEGETATIVE GROWTH. THE FOLLOWING ARE ACCEPTABLE BMPS ASSOCIATED WITH STORM DRAIN INLET PROTECTION:

MANUFACTURED SEDIMENT FILTERS ARE THE PREFERRED METHOD FOR PROTECTING CATCH BASIN INLETS IN PAVED OR GRAVEL ROADWAYS. THE FILTERS TYPICALLY CONSIST OF A FABRIC OR OTHER PERVIOUS MATERIAL THAT IS PLACED ABOVE OR BELOW THE GRATE THAT TRAPS SEDIMENT ON THE SURFACE AND ALLOWS WATER TO FLOW THROUGH THE GRATE. CONSIDERATIONS SUCH AS WEATHER CONDITIONS, SLOPES, TRIBUTARY WATERSHED AREA AND EXPECTED SEDIMENT ACCUMULATION SHOULD BE FACTORED INTO MAKING A DECISION ON ANY PARTICULAR PRODUCT, AND THE MANUFACTURER'S RECOMMENDATIONS ON INSTALLATION AND MAINTENANCE SHALL BE STRICTLY ADHERED TO.

5. STABILIZED CONSTRUCTION ENTRANCE/EXIT

TO REDUCE THE TRACKING OF SEDIMENT ONTO ROADWAYS, A STABILIZED CONSTRUCTION EXIT SHALL BE INSTALLED AT ALL POINTS OF EGRESS WHERE VEHICLES MAY TRAVEL FROM THE PROJECT SITE TO A PUBLIC ROAD OR OTHER PAVED AREA. THE STONE PAD SHALL CONSIST OF A MINIMUM 6-INCH DEPTH OF 2-3 INCH CRUSHED STONE, AND SHALL BE PLACED ON A GEOTEXTILE FABRIC. THE PAD SHALL EXTEND AT LEAST 50 FEET INTO THE PROJECT SITE AND BE A MINIMUM OF 10 FEET WIDE. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, AND THE CONTRACTOR SHALL VACUUM PAVEMENT AT EXITS THAT HAVE EXPERIENCED ANY MUD-TRACKING PRIOR TO THE NEXT STORM EVENT. MAINTAIN THE PAD UNTIL ALL DISTURBED AREAS ARE STABILIZED.

6. DUST CONTROL

THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST ON THE PROJECT SITE AND ON ADJACENT ROADWAYS. EXPOSED SOIL SURFACES SHALL BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST. GRAVEL SURFACES SHALL EITHER BE TREATED WITH AN APPLICATION OF CALCIUM CHLORIDE OR COVERED WITH CRUSHED STONE IF DUST CONTROL BECOMES DIFFICULT WITH NORMAL WATER APPLICATIONS.

7. LAND GRADING AND SLOPE PREPARATION

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 NEXT PHASE. ANY EXPOSED AREA THAT WILL NOT BE FINISH GRADED WITHIN 7 DAYS SHALL BE TREATED WITH MULCH OR PLANTED WITH TEMPORARY VEGETATION. PROVISIONS SHALL BE MADE TO SAFELY CONVEY SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASS SHALL NOT BE STEEPER THAN 2:1. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES. ALL FILLS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS. FILL MATERIAL SHALL BE FREE OF STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED APPROPRIATELY. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

8. TOPSOIL

IF POSSIBLE, TOPSOIL SHALL BE STOCKPILED ON THE PROJECT SITE AND REUSED. HIGH QUALITY TOPSOIL SHALL BE FRIABLE AND LOAMY (LOAM, SANDY LOAM, SILT LOAM, SANDY CLAY LOAM, CLAY LOAM), AND SHALL BE FREE OF DEBRIS, TRASH, STUMPS, ROCKS, ROOTS AND NOXIOUS WEEKS. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATELY PRIOR TO SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENED BY SCARIFYING TO A DEPTH OF AT LEAST 2 INCHES TO ENSURE BONDING WITH SUBSOIL. THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED TO A MINIMUM COMPACTED DEPTH OF 4 INCHES. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. IT IS NECESSARY TO COMPACT THE TOPSOIL ENOUGH TO ENSURE GOOD CONTACT WITH THE UNDERLYING SOIL, BUT UNDUE COMPACTION IS TO BE AVOIDED.

9. PERMANENT SOIL STABILIZATION

IF THE 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. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS; AMEND AREAS OF DISTURBED SUBSOILS WITH TOPSOIL, COMPOST, OR FERTILIZERS; 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.

SEEDED AREAS: TO PREPARE THE SEEDBED, APPLY 10-20-20 FERTILIZER AT A RATE OF 800 POUNDS PER ACRE AND GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE. WORK THE FERTILIZER AND LIMESTONE INTO THE TOPSOIL TO A DEPTH OF 4 INCHES AND REMOVE ANY STONES, ROOTS OR OTHER VISIBLE DEBRIS. SELECT A SEED MIXTURE THAT IS APPROPRIATE FOR THE SOIL TYPE AND MOISTURE CONTENT AS FOUND AT THE SITE, AND FOR THE AMOUNT OF SUN EXPOSURE AND FOR LEVEL OF USE. REFER TO THE USDA SOIL CONSERVATION SERVICE OR THE LOCAL SOIL AND WATER CONSERVATION DISTRICT FOR APPROPRIATE SEED MIXTURES. APPLY SEED UNIFORMLY IN ACCORDANCE WITH SUPPLIER RECOMMENDATIONS AND IMMEDIATELY COVER WITH MULCH AS DESCRIBED IN THE TEMPORARY MULCHING SECTION OF THIS PLAN.

HYDROSEEDING SHALL BE DONE IN ACCORDANCE WITH SUPPLIERS RECOMMENDATIONS. FOR SEEDED AREAS TO BE PERMANENTLY STABILIZED, 90% OF THE DISTURBED SOIL SHALL BE COVERED WITH MATURE HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

SOD STRIPS SHALL BE LAID AT RIGHT ANGLES TO DIRECTION OF SLOPE OR FLOW OF WATER STARTING AT LOWEST ELEVATION. JOINTS SHALL BE STAGGERED, AND ALL STRIPS SHALL BE ROLLED OR TAMPED INTO PLACE. ON SLOPES, SOD SHALL BE ANCHORED WITH STAPLES, WIRE OR PINS. IRRIGATE SODDED AREA IMMEDIATELY AFTER INSTALLATION. FOR SODDED AREAS TO BE PERMANENTLY STABILIZED, THE ROOTS OF THE SOD MUST BE COMPLETELY BOUND INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

PERMANENT MULCH IS A LONG TERM COVER THAT PROVIDES A GOOD BUFFER AROUND DISTURBED AREAS. THE EROSION CONTROL MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS OR COMPOSTED BARK. WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS OR BARK CHIPS ARE NOT ACCEPTABLE. THE EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS AND MATERIAL TOXIC TO PLANT GROWTH.

RIPRAP STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNEVEN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE DEPTH OF STONE SHALL BE A MINIMUM OF 2.2 TIMES THE MAXIMUM STONE DIAMETER. A GRAVEL OR GEOTEXTILE FILTER BLANKET SHALL BE PLACED BETWEEN THE RIPRAP AND UNDERLYING SOIL SURFACE. GRAVEL FILTER BLANKETS SHALL MEET MDOT TYPE-C UNDERDRAIN MATERIAL SPECIFICATIONS AND BE AT LEAST 6 INCHES THICK. GEOTEXTILE FILTER BLANKETS SHALL BE SPECIFIED BASED ON SITE CONDITIONS. RIPRAP SLOPES SHALL BE TOED INTO THE BASE OF THE EMBANKMENT BY EXCAVATING A TRENCH AT THE BOTTOM OF THE SLOPE AND INSTALLING A STABLE BASE OF RIPRAP TO GRADE.

DITCHES, CHANNELS AND SWALES ARE CONSIDERED PERMANENTLY STABILIZED WHEN THE CHANNEL HAS 90% COVER OF HEALTHY VEGETATION WITH A WELL GRADED RIPRAP LINING, EROSION CONTROL BLANKET, 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 BANKS, OR DOWNCUTTING OF THE CHANNEL.

10. STORMWATER CHANNELS

EACH CHANNEL SHOULD BE CONSTRUCTED IN SECTIONS SO THAT THE SECTION'S GRADING, SHAPING, AND INSTALLATION OF THE PERMANENT LINING CAN BE COMPLETED THE SAME DAY. IF A CHANNEL'S FINAL GRADING OR LINING INSTALLATION MUST BE DELAYED, THEN DIVERSION BERMS MUST BE USED TO DIVERT STORMWATER AWAY FROM THE CHANNEL, PROPERLY-SPACED CHECK DAMS MUST BE INSTALLED IN THE CHANNEL TO SLOW THE WATER VELOCITY, AND A TEMPORARY LINING INSTALLED ALONG THE CHANNEL TO PREVENT SCOURING.

11. INSPECTION & MAINTENANCE

THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE ALL CONSTRUCTION OPERATIONS COMPLY WITH THE INSPECTION AND MAINTENANCE PROCEDURES FOR THE PROJECT, INCLUDING, BUT NOT LIMITED TO THOSE INCLUDED IN THIS PLAN SET, THE "INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN", AND THE "MAINE EROSION AND SEDIMENTATION CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS".

INSPECTION SHALL OCCUR ON ALL DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, MATERIAL STORAGE AREAS, AND CONSTRUCTION VEHICLE ENTRANCE(S) AND OR EXIT(S). THESE AREAS SHALL BE INSPECTED AT LEAST ONCE PER WEEK, AS WELL AS 24 HOURS BEFORE AND AFTER A STORM EVENT PRODUCING MORE THAN 0.5 INCH OF RAIN WITHIN A 24-HOUR PERIOD, AND PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES. INSPECTIONS ARE TO BE CONDUCTED BY A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING STANDARDS AND CONDITIONS IN THE PERMIT. INSPECTION LOGS ARE TO BE AVAILABLE ON-SITE DURING CONSTRUCTION AND RETAINED FOR AT LEAST THREE YEARS AFTER THE COMPLETION OF PERMANENT STABILIZATION.

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

WINTER EROSION AND SEDIMENTATION CONTROL NOTES:

THE WINTER CONSTRUCTION PERIOD TYPICALLY BEGINS IN EARLY NOVEMBER AND ENDS IN MID APRIL. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA 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. AN AREA SHALL BE CONSIDERED DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN THE ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. A COVER OF EROSION CONTROL MIX IS THE PREFERRED TEMPORARY MULCH DURING WINTER CONDITIONS.

1. NATURAL RESOURCE PROTECTION

ANY AREAS WITHIN 75 FEET FROM ANY REGULATED NATURAL RESOURCES SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH AN EROSION CONTROL COVER. DURING WINTER CONSTRUCTION, A DOUBLE ROW OF SEDIMENT BARRIERS (FOR EXAMPLE, SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY REGULATED NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE REGULATED NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

2. 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.

3. MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE (TWICE THE NORMAL ACCEPTED RATE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCHES THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. SNOW MUST BE REMOVED DOWN TO A ONE-INCH DEPTH PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERTY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WITH THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4. SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RAT EOR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STACKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED WITHIN 100 FEET FROM ANY REGULATED NATURAL RESOURCE.

5. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1 AND IF THE EXPOSED AREA HAS BEEN LOOMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF DORMANT SEEDING IS USED, ALL DISTURBED AREAS SHALL RECEIVE 4 INCHES OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS PER 1,000 S.F. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75%) IN THE SPRING SHALL BE REVEGETATED.

6. OVER-WINTER STABILIZATION OF DITCHES AND CHANNELS

ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED BY NOVEMBER 1. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A GRASS-LINED DITCH OR CHANNEL IS STABILIZED BY SEPTEMBER 1, THEN EITHER A SOD LINING SHALL BE INSTALLED PRIOR TO OCTOBER 1 OR THE DITCH MUST BE LINED WITH STONE RIPRAP BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE PRIOR TO NOVEMBER 1.

7. OVER-WINTER STABILIZATION OF DISTURBED SLOPES

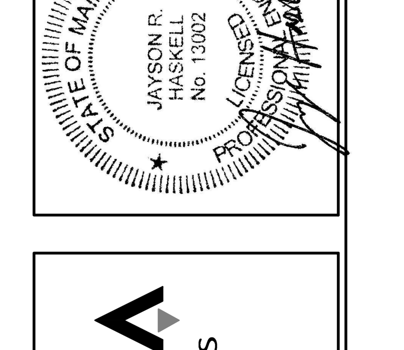
ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. ALL AREAS HAVING A GRADE STEEPER THAN 8% SHALL BE CONSIDERED A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN THE SLOPE SHALL EITHER BE STABILIZED WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS BY OCTOBER 1, SOD BY OCTOBER 1, EROSION CONTROL MIX BY NOVEMBER 1 OR STONE RIPRAP BY NOVEMBER 15. SEE APPLICABLE SECTIONS UNDER EROSION AND SEDIMENTATION CONTROL NOTES FOR PROPER INSTALLATION METHODS.

8. OVER-WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% MUST BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN THE AREA SHALL EITHER BE STABILIZED WITH TEMPORARY VEGETATION BY OCTOBER 1, SOD BY OCTOBER 1, OR MULCH BY NOVEMBER 15. SEE APPLICABLE SECTIONS UNDER EROSION AND SEDIMENTATION CONTROL NOTES FOR PROPER INSTALLATION METHODS.

9. MAINTENANCE

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM, PERIOD OF THAWING AND RUNOFF AND AT LAST ONCE A WEEK, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85% OF AREAS VEGETATED WITH VIGOROUS GROWTH.



DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

REV	DATE	BY	DESCRIPTION
A	11-18-19	DMR	ISSUED FOR PRELIMINARY SUBDIVISION REVIEW
B	1-27-20	DMR	ISSUED FOR MDEP REVIEW
C	2-18-20	DMR	REVISED PER TOWN REVIEW
D	4-28-20	DMR	REVISED PER MDEP REVIEW
E	5-8-20	DMR	REVISED PER MDEP REVIEW
F	6-22-20	DMR	REVISED PER TOWN REVIEW

DETAILS

DEPOT STREET RESIDENTIAL DEVELOPMENT

DEPOT STREET
WINDHAM, MAINE

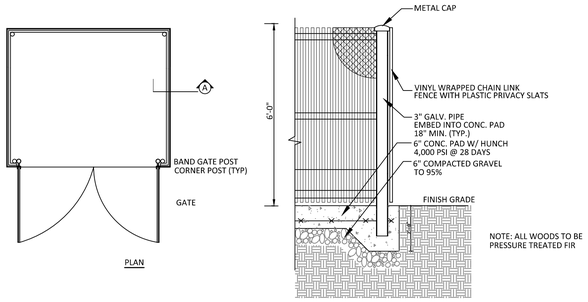
FOR RECORD OWNER:
MCL REALTY, LLC
PO BOX 1206
WINDHAM, ME 04062

17035
JOB NUMBER:

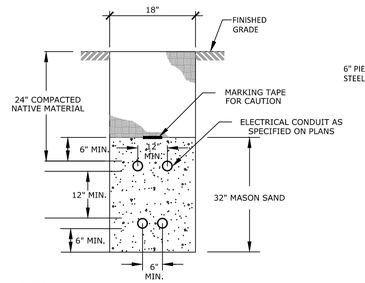
AS NOTED
SCALE:

6-22-2020
DATE:

D-1

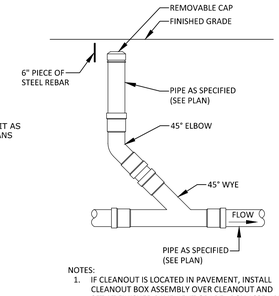


DUMPSTER SCREEN
NOT TO SCALE



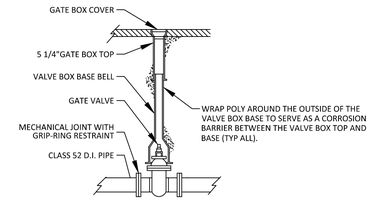
NOTES:
1. ALL CONDUITS SHALL BE 4" DIA. PVC SCH 40 EXCEPT FOR ROAD CROSSINGS SHALL BE PVC SCH 80
2. INSTALLATION SHOULD NOT ALLOW THE INTER-TWINING OF CABLES.
3. BEDDING AND BACKFILL SHALL BE FREE OF ROOTS, STUMPS AND OTHER DEBRIS.
4. COMMUNICATION CABLE AND POWER CABLE SHALL HAVE NO LESS THAN 12 INCHES OF RADIAL SEPARATION.

TRENCH DETAIL - ELECTRICAL CONDUIT
NOT TO SCALE

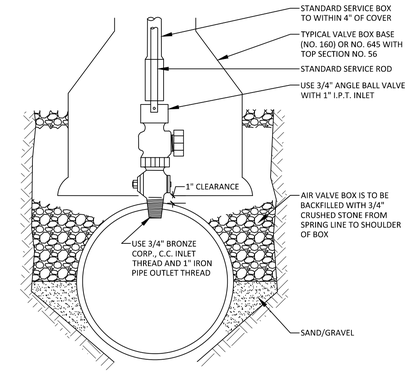


NOTES:
1. IF CLEANOUT IS LOCATED IN PAVEMENT, INSTALL CLEANOUT BOX ASSEMBLY OVER CLEANOUT AND SET AT FINISHED PAVEMENT GRADE. BOX ASSEMBLY TO BE PRODUCT NO. 00156452W01 AS MANUFACTURED BY EAST JORDAN IRON WORKS, INC. OR APPROVED EQUAL.

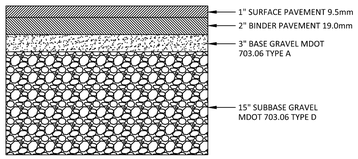
UNDERDRAIN CLEANOUT DETAIL
NOT TO SCALE



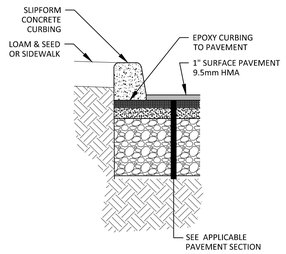
GATE VALVE
NOT TO SCALE



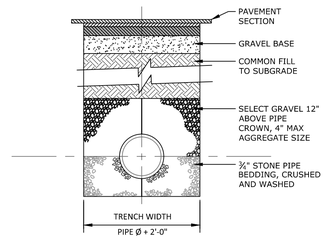
TYPICAL AIR VALVE (1")
NOT TO SCALE



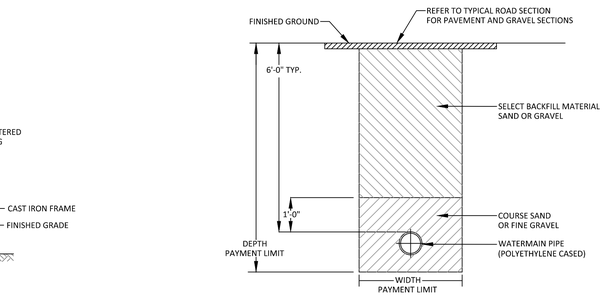
TYPICAL PAVEMENT SECTION
NOT TO SCALE



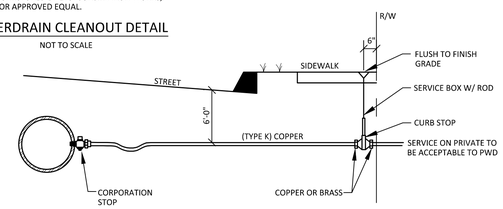
TYPICAL CURB SECTION
NOT TO SCALE



TYPICAL TRENCH SECTION
NOT TO SCALE



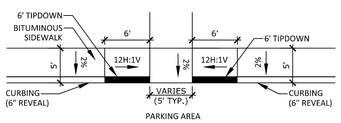
WATERMAIN TYPICAL TRENCH CROSS-SECTION
NOT TO SCALE



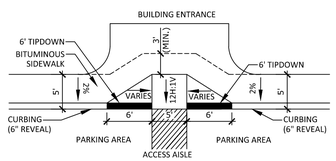
TYPICAL SERVICE CONNECTION
NOT TO SCALE

CONCRETE THRUST BLOCK SIZE REQUIREMENTS				
		SQ. FT. OF BEARING ON UNDISTURBED SOIL		
FITTINGS		90°BENDS	45°BENDS	TEES AND PLUGS
PIPE SIZE	6"	4.0	2.0	3.0
	8"	8.0	4.0	6.0
	12"	15	9	12
	16"	26	14	19
	20"	40	22	28

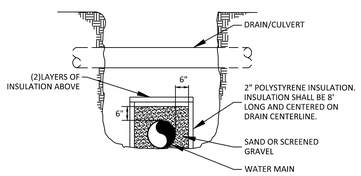
BASED ON SOIL BEARING PRESSURE OF 2000PSF AND 100PSI LINE PRESSURE. COMPACT COURSE TO FINE SANDS AND CLAYS REQUIRE ENGINEERED BLOCKS. ENGINEERED BLOCKS WILL TYPICALLY REQUIRE REINFORCING STEEL OF #5 AT 12".



PEDESTRIAN / DRIVEWAY RAMP DETAIL
OPTION 1
NOT TO SCALE

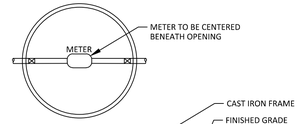


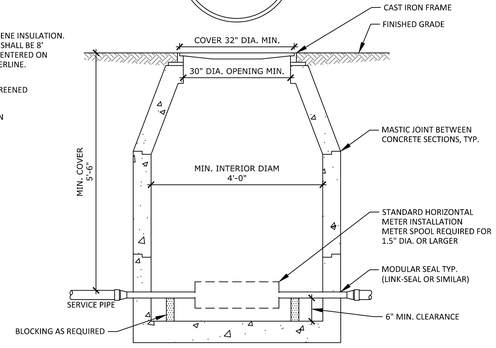
PEDESTRIAN / DRIVEWAY RAMP DETAIL
OPTION 2
NOT TO SCALE



NOTES: INSULATION IS REQUIRED AT ALL DRAIN & CULVERT CROSSINGS THAT DO NOT PROVIDE A MINIMUM OF 18" OF VERTICAL SEPARATION

INSULATION DETAIL
NOT TO SCALE





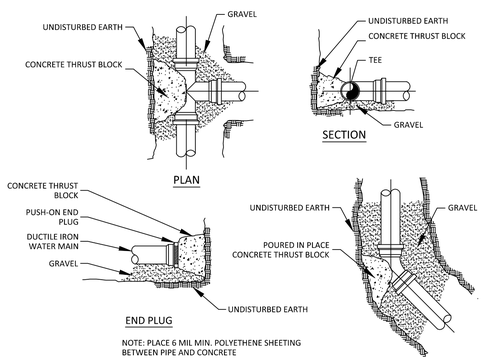
METER PIT AND COVER NOTES:

1. SPECIAL APPROVAL BY PWD IS REQUIRED, PRIOR TO CONSTRUCTION, FOR ALL PROPOSED METER PIT INSTALLATIONS.
2. BACKFLOW PREVENTION DEVICES MAY NOT BE INSTALLED WITHIN SMALL METER PITS.
3. A METER PIT MAY HOUSE UP TO TWO 5/8", 3/4" OR 1" METERS WITH PRIOR APPROVAL FROM PWD.
4. METER PIT SHALL BE LOCATED ON PRIVATE PROPERTY BETWEEN 10' AND 20' FROM PROPERTY LINE UNLESS OTHERWISE APPROVED BY PWD .
5. THE METER PIT SHALL BE MADE OF PRECAST CONCRETE OF SUFFICIENT SIZE TO PROVIDE 5.5' MIN. GROUND COVER FROM FINISHED GRADE TO THE TOP OF THE SERVICE PIPE.
6. ALL SEAMS BETWEEN CONCRETE SECTIONS SHALL BE SEALED WITH MASTIC JOINT. ALL OPENINGS IN THE CONCRETE FOR SERVICE PIPING SHALL BE SEALED WITH A MODULAR SEAL (LINK-SEAL OR SIMILAR).
7. METER PIT INTERIOR MUST BE AT LEAST 48" IN DIAMETER. THE OPENING MUST BE AT LEAST 30" IN DIAMETER, WITH A CAST IRON FRAME. THE COVER SHALL BE CAST IRON OR STEEL, 32" MIN. IN DIAMETER, AND BE EITHER PERMANENTLY LABELED "WATER" OR HAVE NO LABEL. STEEL PLATE MATERIAL SHALL BE COATED WITH A RUST INHIBITOR PAINT.
8. WALL-MOUNTED LADDER RUNGS ARE NOT TO BE INSTALLED WITHIN METER PIT.
9. ALL PIPING INSIDE AND EXTENDING THROUGH THE METER PIT WILL BE MADE OF COPPER, WITH A MIN. OF 6" CLEARANCE FROM THE METER PIT FLOOR. USE BLOCKING AS NEEDED TO SUPPORT THE PIPE.
10. CUSTOMER SHALL ENSURE THE METER PIT AND COVER ARE PROPERLY RATED FOR TRAFFIC FLOW, IF APPLICABLE

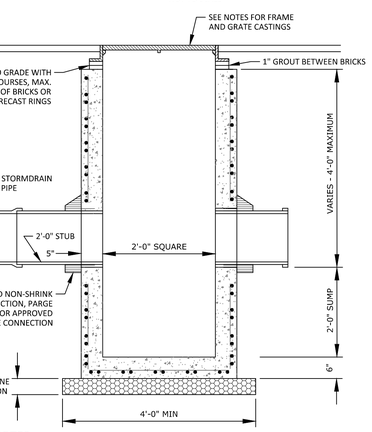
METER INSTALLATION NOTES:

11. ONLY PWD PERSONNEL ARE AUTHORIZED TO INSTALL WATER METERS. PWD PERSONNEL ARE ADDITIONALLY AUTHORIZED TO OPERATE METER VALVES AS NEEDED FOR INSTALLATION AND MAINTENANCE.
12. PWD WILL SUPPLY THE WATER METER. ALL OTHER FITTINGS, INCLUDING A METER RESETTER FOR 1" OR SMALLER METERS SHALL BE SUPPLIED AND INSTALLED BY CUSTOMER.
13. FOR 1.5" AND 2" METERS, CUSTOMER WILL INSTALL A FLANGED METER SPOOL PIECE SUPPLIED BY PWD AT NO ADDITIONAL CHARGE, PRIOR TO METER SET. THE METER SPOOL WILL BE MADE AVAILABLE FOR CUSTOMER PICKUP AT PWD CUSTOMER SERVICE, 225 DOUGLAS STREET, PORTLAND DURING NORMAL BUSINESS HOURS.
14. CUSTOMER WILL INSTALL TWO BALL VALVES AT LEAST 24" APART FOR METER INSTALLATION, ALLOWING FOR THE WATER METER TO BE CENTERED UNDER THE METER PIT OPENING. THE BALL VALVES SHALL BE SOLDERED IN PLACE.

SMALL METER PIT (5/8" TO 2" METER)
NOT TO SCALE



THRUST BLOCK DETAIL
NOT TO SCALE

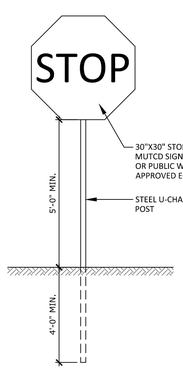


NOTES:

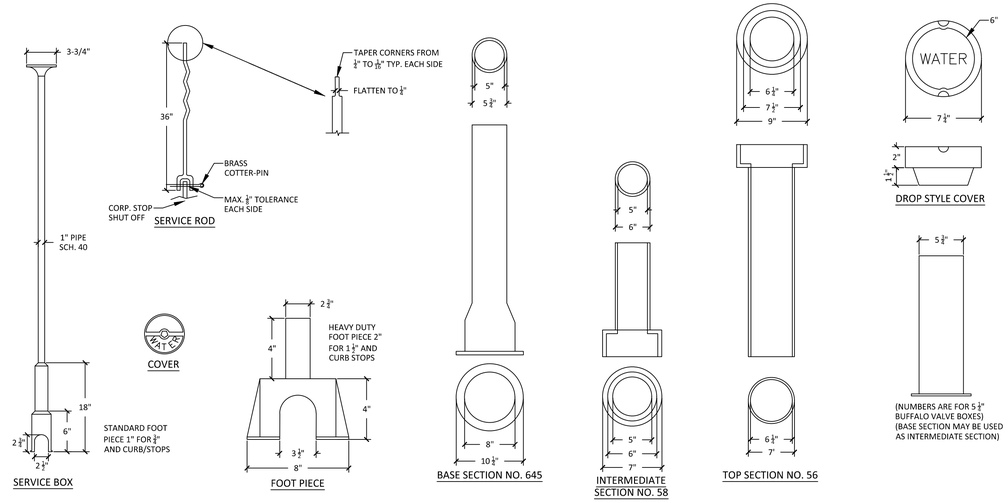
1. CAST IRON FRAME SHALL BE EQUAL TO EAST JORDAN IRON WORKS, PRODUCT NO. 45622011, REVERSIBLE FRAME AND GRATE SHALL BE EQUAL TO EAST JORDAN IRON WORKS, PRODUCT NO. 45622531, HEAVY DUTY GRATE.

2. SUBMIT SHOP DRAWINGS AND CASTING SPECIFICATIONS TO ENGINEER FOR APPROVAL.

PRECAST CONCRETE CATCH BASIN
STRUCTURE - TYPE F
NOT TO SCALE



STOP SIGN INSTALLATION
NOT TO SCALE



VALVE BOX & COVER
NOT TO SCALE

STATE OF MAINE
JAYSON R. HASKELL
No. 13002
LICENSED
PROFESSIONAL ENGINEER
6-22-2020

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

REV.	DATE	BY	DESCRIPTION
A	11-18-19	DMR	ISSUED FOR PRELIMINARY SUBDIVISION REVIEW
B	1-27-20	DMR	ISSUED FOR MDEP REVIEW
C	2-18-20	DMR	REVISED PER TOWN REVIEW
D	4-28-20	DMR	REVISED PER MDEP REVIEW
E	5-8-20	DMR	REVISED PER MDEP REVIEW
F	6-22-20	DMR	REVISED PER TOWN REVIEW

DETAILS

DEPOT STREET RESIDENTIAL DEVELOPMENT

DEPOT STREET
WINDHAM, MAINE

FOR RECORD OWNER:
MCL REALTY, LLC
PO BOX 1206
WINDHAM, ME 04062

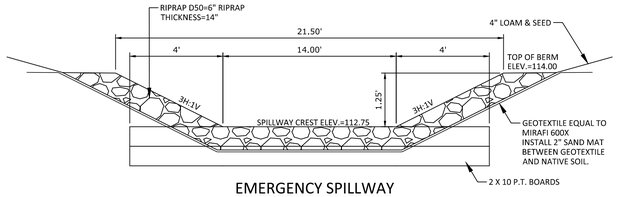
17035
JOB NUMBER:

AS NOTED
SCALE:

6-22-2020
DATE:

SHEET 7 OF 8

D-2



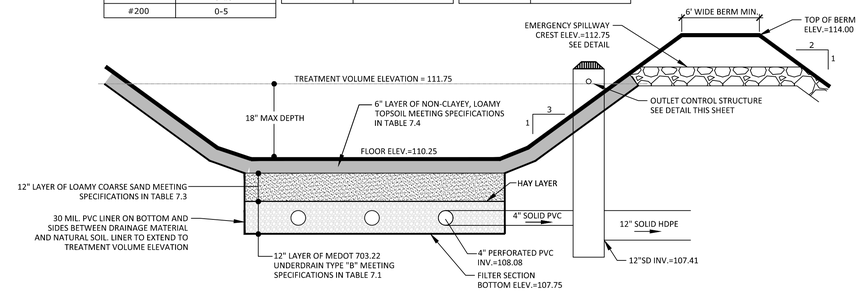
EMERGENCY SPILLWAY

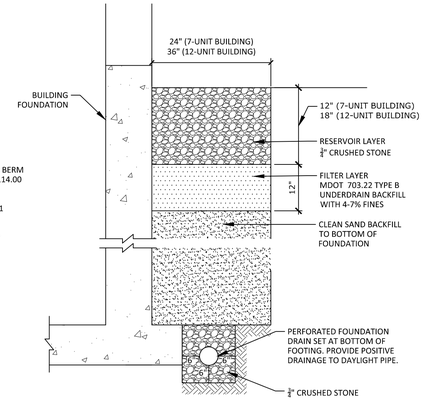
NOT TO SCALE

TABLE 7.1 UNDERDRAIN 703.22 TYPE "B"	
SIEVE SIZE	% PASSING BY WEIGHT
1"	90-100
1/2"	75-100
#4	50-100
#20	15-80
#50	0-15
#200	0-5

TABLE 7.3 LOAMY COARSE SAND	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
200 CLAY	<2.0

TABLE 7.4 SANDY LOAM	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75-95
#10	60-90
#40	35-85
#200	20-70
200 CLAY	<2.0



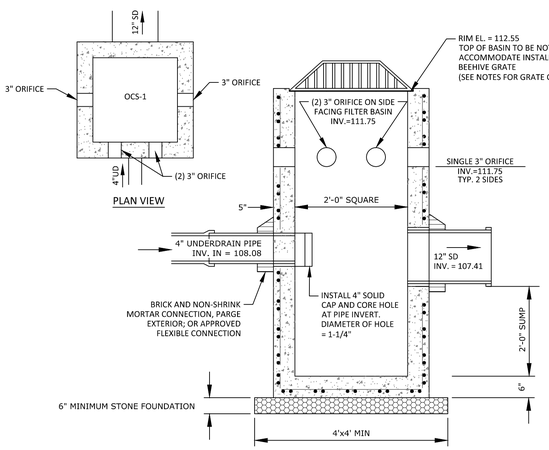


DRIP EDGE NOTES:

1. ALL BUILDINGS REQUIRE THE INSTALLATION OF A ROOF DRIP EDGE FILTER AS SHOWN ON THE GRADING AND UTILITY PLAN (GU-1).

ROOF DRIP EDGE FILTER

NOT TO SCALE



NOTES:

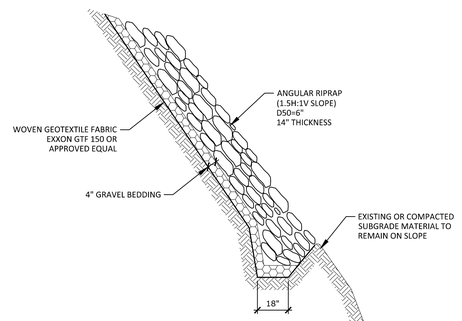
1. OUTLET CONTROL STRUCTURE SHALL BE CONSTRUCTED UTILIZING A PRECAST CATCH BASIN (24"x 24" ~ TYPE F).

2. CAST IRON GRATE SHALL BE EQUAL TO NEENAH FOUNDRY, PRODUCT NO. R-4345, BEEHIVE LIGHT DUTY GRATE, OR APPROVED EQUIVALENT.

3. SUBMIT SHOP DRAWINGS AND CASTING SPECIFICATIONS TO ENGINEER FOR APPROVAL.

OUTLET CONTROL STRUCTURE

NOT TO SCALE



RIPRAP SLOPE

NOT TO SCALE

FILTER BASIN NOTES:

1. 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 COMPLETED.

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

3. ONCE FILTER MEDIA IS INSTALLED, VEHICLES AND HEAVY EQUIPMENT SHALL BE PROHIBITED FROM DRIVING THROUGH, STAGED OR PARKED WITH THE UNDERDRAINED FILTER BASIN.

4. FILTER BASINS SHALL NOT BE UITILIZED FOR SNOW STORAGE. NO SNOW SHALL BE PLOWED OR DUMPED INTO THE FILTER BASINS.

FILTER BASIN CONSTRUCTION OVERSIGHT NOTES:

1. INSPECTION BY THE DESIGN ENGINEER OR SUITABLE THIRD PARTY WILL OCCUR AT A MINIMUM:
   A) AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED.
   B) AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA.
   C) AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED.
   D) AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS.
   E)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 MDEP SPECIFICATIONS.

2. 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:
   A) SELECT SAMPLES FOR SAMPUNG 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.
   B) PERFORM A SIEVE ANALYSIS CONFORMING TO STM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE 8% TO 12% BY WEIGHT PASSING THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2% (DETERMINED BY HYDROMETER GRAIN SIZE ANALYSIS) AND HAVE 10% DRY WEIGHT OF ORGANIC MATTER.
   C) PERFORM A PERMIABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698

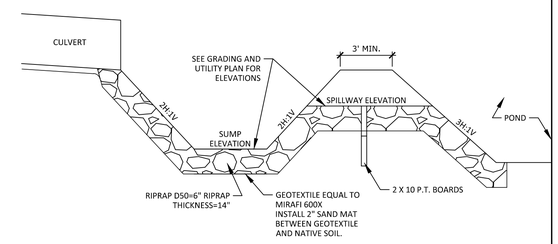
FILTER BASIN SECTION

NOT TO SCALE

DRIP EDGE FILTER CONSTRUCTION OVERSIGHT NOTES:

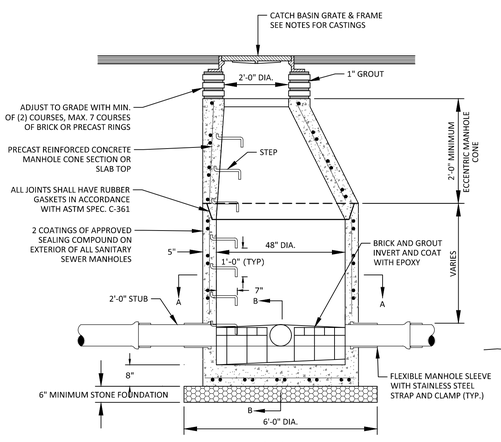
1. INSPECTION BY THE DESIGN ENGINEER OR SUITABLE THIRD PARTY WILL OCCUR AT A MINIMUM:
   A) AFTER THE INSTALLATION OF THE BUILDING FOUNDATION AND ONCE THE FOUNDATION DRAINS ARE INSTALLED BUT NOT BACKFILLED.
   B) AFTER THE FOUNDATION WALL IS BACKFILLED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA.
   C) AFTER THE FILTER MEDIA HAS BEEN INSTALLED.
   D) AFTER THE RESERVOIR LAYER HAS BEEN INSTALLED.
   E)ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE DRIP EDGE FILTER MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING MDEP SPECIFICATIONS.

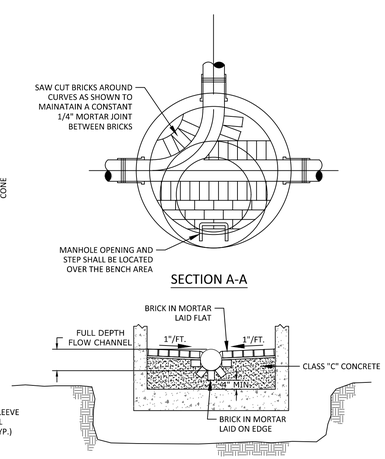
2. TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:
   A) SELECT SAMPLES OF THE FILTER LAYER MATERIAL AND SAND BACKFILL. 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.
   B) 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. THE FILTER MEDIA MUST HAVE 4% TO 7% BY WEIGHT PASSING THE #200 SIEVE.
   C) PERFORM A PERMEABILITY TEST ON THE FILTER MEDIA CONFORMING TO ASTM D2434 COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698



SEDIMENT FOREBAY

NOT TO SCALE





NOTES:

1. SOLID COVER TO BE EAST JORDAN IRON WORKS PRODUCT NUMBER 00104175 OR APPROVED EQUAL AND SHALL BE MARKED "SANITARY SEWER". FRAME TO BE EAST JORDAN IRONWORKS PRODUCT NUMBER 00104510 OR APPROVED EQUAL.

2. CONNECTIONS TO EXISTING SANITARY MANHOLES TO BE APPROVED BY SEWER DISTRICT AND CORE DRILLED WITH FLEXIBLE BOOT.

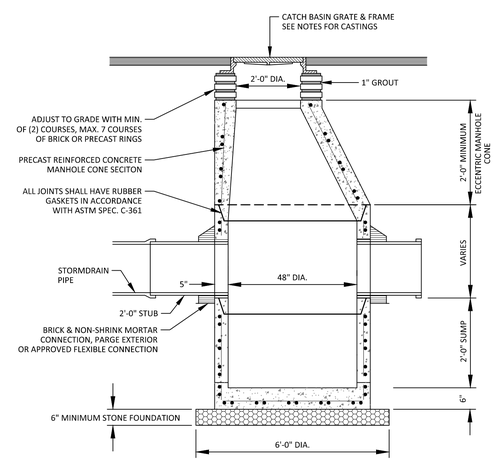
3. MANHOLE CHANNELS REQUIRING CHANGE IN ALIGNMENT ARE TO BE BUILT ON A SMOOTH RADIUS. IF SIDE PIPES ENTER CHANNEL, SHAPE TO RECEIVE ADDED SIDE FLOW (SEE SECTION A-A).

4. USE FLAT SLAB TOP MANHOLE WHEN THE DIFFERENCE BETWEEN INVERT AND RIM IS LESS THAN 6'-0" AND WHEN MANHOLE DIAMETER IS GREATER THAN 4'-0".

5. AVERAGE STRENGTH OF CONCRETE TO BE 4,000 PSI AT 28 DAYS. STRUCTURE TO BE DESIGNED FOR H-20 LOADING.

PRECAST CONCRETE SANITARY MANHOLE

NOT TO SCALE



NOTES:

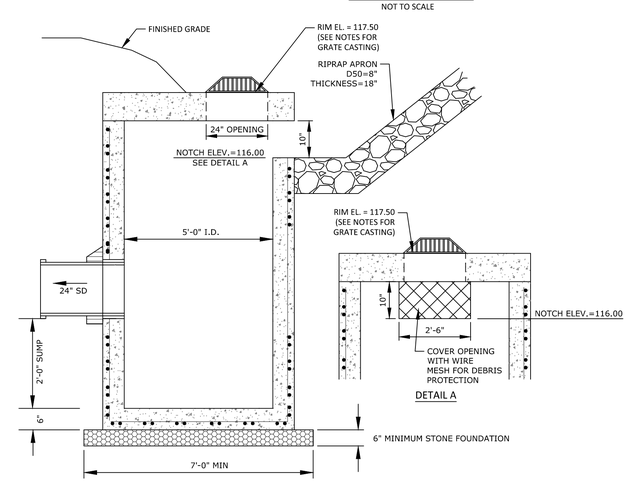
1. LARGER DIAMETER STRUCTURES MAY BE REQUIRED DUE TO SIZE OR GEOMETRY OF PIPE CONNECTIONS AT MANHOLE. WALL THICKNESS TO INCREASE BY 1" FOR EACH 1'-0" DIA. INCREASE. PROVIDE SHOP DRAWINGS.

2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.

3. CAST IRON GRATES SHALL BE EQUAL TO EAST JORDAN IRON WORKS, PRODUCT NO. 45622531C01, HEAVY DUTY GRATE OR ENGINEER APPROVED EQUAL. SUBMIT CATALOG SHEETS TO ENGINEER FOR APPROVAL.

PRECAST CONCRETE CATCH BASIN

NOT TO SCALE



NOTES:

1. OUTLET CONTROL STRUCTURE SHALL BE CONSTRUCTED UTILIZING A PRECAST CATCH BASIN WITH A 5' INSIDE DIAMETER.

2. CAST IRON GRATE SHALL BE EQUAL TO NEENAH FOUNDRY, PRODUCT NO. R-4345, BEEHIVE LIGHT DUTY GRATE, OR APPROVED EQUIVALENT.

3. SUBMIT SHOP DRAWINGS AND CASTING SPECIFICATIONS TO ENGINEER FOR APPROVAL.

CATCH BASIN CB-4

NOT TO SCALE

STATE OF MAINE
JAYSON R. HASKELL
No. 13002
LICENSED
PROFESSIONAL ENGINEER
6-22-2020

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

REV	DATE	BY	DESCRIPTION
A	11-18-19	DMR	ISSUED FOR PRELIMINARY SUBDIVISION REVIEW
B	1-27-20	DMR	ISSUED FOR MDEP REVIEW
C	2-18-20	DMR	REVISED PER TOWN REVIEW
D	4-28-20	DMR	REVISED PER MDEP REVIEW
E	5-8-20	DMR	REVISED PER MDEP REVIEW
F	6-22-20	DMR	REVISED PER TOWN REVIEW

DETAILS

DEPOT STREET RESIDENTIAL DEVELOPMENT

DEPOT STREET
WINDHAM, MAINE

FOR RECORD OWNER:
MCL REALTY, LLC
PO BOX 1206
WINDHAM, ME 04062

17035
JOB NUMBER:

AS NOTED
SCALE:

6-22-2020
DATE:

SHEET 8 OF 8

D-3