# SWAN LAKE STATE PARK FOOTBRIDGE REPLACEMENT SWANVILLE, MAINE



BANGOR, MAINE 04401 (207)947-4511 WBRCINC.COM

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<b>CIVIL</b> GI001 C001 CD101 CP101 C301 C501 C502	TITLE SHEET SITE GENERAL NO EXISTING CONDIT SITE LAYOUT PLA SITE SECTIONS EROSION AND SE SITE DETAILS	OTES & ABBRE TONS & SITE R N DIMENT CONTI	VIATIONS EMOVALS PLAN ROL MEASURES	N S		
OWNER:	GNATURE	DATE				
ARCHITECT:			0 IS	SUED FOR BID		27 AUG 2024
HRISTOPHER T MICHAUD No. 12674 08.27.2024 CENSED SIONAL PROMINE			REV. DI	ESCRIPTION		DATE
SHEET	۲No.			PRO	JECT	No.

<b>GE</b> 1.	NERAL CONSTRUCTION NOTES CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.	<u>L</u> /
2.	CONTRACTOR SHALL PERFORM ALL CONSTRUCTION ACTIVITIES WITHIN THE CONFINES OF THE PROPERTY BOUNDARIES AND SECURED EASEMENTS. ANY CONSTRUCTION ACTIVITY, INCLUDING MATERIAL STORAGE, ETC., TAKING PLACE ON PROPERTY NOT OWNED BY THE BY THE CLIENT SHALL BE WITH THE EXPRESS WRITTEN PERMISSION OF THE OWNER.	2.
3.	DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT ON ADJACENT LOTS UNLESS PERMISSION HAS BEEN GRANTED IN WRITING BY TOWN AND/OR LANDOWNER.	3.
4.	CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS AS REQUIRED TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE, AND LOCAL CODES.	4.
5.	CONTRACTOR SHALL MAINTAIN TRAFFIC IN A SAFE MANNER, IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL MAKE EVERY EFFORT TO MAINTAIN CONTINUOUS TRAFFIC FLOW DURING CONSTRUCTION. ROADS SHALL NOT BE CLOSED TO TRAFFIC WITHOUT PERMISSION FROM THE OWNER.	5. <b>R</b>
6.	RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, GATES, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. NO TRENCH SHALL BE LEFT OPEN DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.	1.
7.	CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.	2.
8.	HOURS FOR THE PROJECT WILL BE MONDAY THROUGH FRIDAY, FROM 7:00 AM TO 7:00 PM, UNLESS OTHERWISE AUTHORIZED BY THE OWNER.	3.
9.	CONTRACTOR TO PROVIDE OWNER AND ARCHITECT WITH A WORK PLAN OUTLINING THE WORK SCHEDULE, TRAFFIC CONTROL PLAN, AND WORK AREA BARRICADING PLAN TO BE APPROVED BY THE OWNER AND ARCHITECT PRIOR TO CONSTRUCTION.	4.
10.	CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING A PRE-CONSTRUCTION VIDEO OF THE PROJECT AREA. COST SHALL BE INCIDENTAL TO THE PROJECT. CONTRACTOR SHALL PROVIDE A COPY OF THE VIDEO TO THE OWNER AND ARCHITECT PRIOR TO MOBILIZATION.	5.
11.	CONTRACTOR SHALL NOTIFY THE OWNER AND ARCHITECT IN WRITING OF ANY CONDITION OR OCCURRENCE THAT REPRESENTS A CHANGE IN PROJECT SCOPE. VERBAL NOTIFICATION IS REQUIRED PRIOR TO PROCEEDING WITH THE WORK OF THE PROJECT AND WRITTEN NOTIFICATION DESCRIBING THE CHANGE IN PROJECT SCOPE MUST BE PROVIDED AS SOON AS POSSIBLE. REQUESTS FOR FEE ADJUSTMENTS WILL NOT BE CONSIDERED UNLESS PROPER NOTICE IS GIVEN.	6. 7.
12.	ANY WORK PERFORMED WITHOUT WRITTEN APPROVAL OF THE OWNER AND/OR ARCHITECT IS SUBJECT TO NOT BEING REIMBURSED OR REMOVAL AT CONTRACTOR'S EXPENSE.	8.
13.	CONTRACTOR SHALL SUPERVISE AND INSPECT THE WORK OF THIS PROJECT IN AN EFFICIENT AND COMPETENT MANNER. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO COMPLETE THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE WORK IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. A REPRESENTATIVE OF THE GENERAL CONTRACTOR SHALL BE PRESENT DURING ALL PHASES OF THE WORK.	<b>G</b> 1.
14.	ALL SIGNING, SIGNAL, AND STRIPING MATERIALS AND PLACEMENT SHALL CONFORM TO THE [MAINE DOT STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND STANDARD DETAILS (MOST RECENT REVISION) AND] WITH FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".	2. 3.
15.	ANY WORK PERFORMED AND/OR MATERIAL NOT IN CONFORMANCE WITH THE PLANS AND SPECIFICATION IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.	4.
16.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY SURVEY OR RIGHT-OF-WAY MONUMENTS DISTURBED DURING CONSTRUCTION. THE CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO RESTORE ALL DISTURBED MONUMENTS TO THEIR ORIGINAL LOCATION.	5.
17.	PEDESTRIAN RAMP DETECTABLE WARNING DEVICES SHALL BE IMPLEMENTED AT ALL CROSSWALK LOCATIONS AND PARKING LOT DRIVES CONSISTING OF 10 OR MORE PARKING SPACES.	<b>U</b> 1.
<b>LA</b> 1.	NDSCAPE AND SITE RESTORATION NOTES: 4" LOAM AND SEED SHALL BE PLACED OVER ALL DISTURBED AREAS NOT SHOWN AS LANDSCAPED, PAVED, OR OTHERWISE STABILIZED.	
2.	WHENEVER POSSIBLE, EXISTING PLANTINGS SHALL BE PRESERVED BY WHATEVER METHOD NECESSARY INCLUDING TRANSPLANTING AND/OR TEMPORARY RELOCATION.	2.
<u>SU</u> 1.	<b>RVEY NOTES</b> EXISTING CONDITIONS AND TOPOGRAPHY OBTAINED FROM PLAN ENTITLED "TOPOGRAPHIC SURVEY OF STREAM CROSSING AT SWAN LAKE STATE PARK, WEST PARK LANE, SWANVILLE, MAINE, PREPARED FOR WBRC, INC. 44 CENTRAL STREET, BANGOR, MAINE 04401." PLAN PREPARED BY PLISGA & DAY LAND SURVEYORS. DATED SEPTEMBER 5, 2023.	3.
2.	THE LOCATIONS OF ALL PROPERTY LINES AND RIGHT OF WAYS ARE APPROXIMATE (SHOWN FOR REFERENCE ONLY), UNLESS NOTED OTHERWISE. PROPERTY LINES AND RIGHT OF WAYS SHOWN ARE NOT INTENDED TO REPRESENT LEGAL BOUNDARIES.	

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING TOPOGRAPHY AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

## AYOUT NOTES

- TEMPORARY BENCHMARKS (TBM'S) ARE GENERALLY SPIKES DRIVEN INTO THE BASE OF UTILITY POLES OR HYDRANT VALVE NUTS UNLESS OTHERWISE NOTED.
- LAYOUT OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE APPROVED BY THE ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GRADE AND LAYOUT CONTROL. LAYOUT SHALL BE PERFORMED WITH SURVEY EQUIPMENT AND OVERSEEN BY A LICENSED SURVEYOR.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING GRADES, UTILITY LOCATIONS, AND SITE FEATURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER/ARCHITECT OF CONDITIONS VARYING FROM THOSE SHOWN ON THE DRAWING SHEET PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL EMPLOY A REGISTERED LAND SURVEYOR IN THE LAYOUT OF BUILDING, DRIVES, AND SITE ELEMENTS.
- CONTRACTOR SHALL VERIFY AND CLEARLY MARK THE LOCATIONS OF ALL PROPERTY LINES PRIOR TO COMMENCING WORK.

## EMOVAL NOTES

- IF UNEXPECTED HAZARDOUS WASTE OF MATERIALS CONTAINING HAZARDOUS WASTE ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY CEASE WORK AND CONTACT THE OWNER, ARCHITECT, CONTRACTING OFFICER, AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION (MDEP). WHEN A MDEP APPROVED ACTION PLAN IS DETERMINED, WORK SHALL CONTINUE AND ALL HAZARDOUS WASTE AND MATERIALS CONTAINING HAZARDOUS WASTE SHALL BE DISPOSED OF IN COMPLIANCE WITH THE APPROVED ACTION PLAN AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS.
- THE OWNER HAS THE FIRST RIGHT AND REFUSAL FOR ANY DEMOLITION MATERIALS, SURPLUS SOILS AND GRAVELS FROM EXCAVATION, AND UTILITY INFRASTRUCTURE.
- ALL MATERIALS SCHEDULED FOR REMOVAL SHALL BE DISPOSED OF IN A LEGAL MANNER OFFSITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- DISPOSAL OF SURPLUS SOIL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SURPLUS MATERIAL SHALL NOT BE DISPOSED OF ON THE PROJECT SITE UNLESS OTHERWISE INDICATED ON THE PLANS. DISPOSAL SHALL BE MADE ONLY AT WASTE AREAS WHICH ARE LICENSED TO ACCEPT SUCH MATERIALS, UNLESS THE MATERIAL IS ACCEPTABLE FOR USE AS FILL IN OTHER AREAS OF THE PROJECT.
- REMOVE ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED MARKINGS.
- TREE CANOPY AS SHOWN ON PLANS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED BY THE SITE CONTRACTOR.
- EXISTING FACILITIES AND IMPROVEMENTS (I.E. TREES, LIGHT POLES, SIGNS, ETC.) SHALL BE REMOVED AND REPLACED OR PROTECTED AS REQUIRED DURING CONSTRUCTION. THE ASSOCIATED COSTS ARE INCIDENTAL TO THE PROJECT.
- WHERE PAVEMENT UNDER THIS CONTRACT JOINS AN EXISTING PAVEMENT OR CONCRETE, THE EXISTING PAVEMENT OR CONCRETE SHALL BE SAW CUT ALONG A SMOOTH LINE TO A VERTICAL JOINT. BROKEN EDGES SHALL BE REPAIRED PRIOR TO FINAL STABILIZATION. FINISH JOINTS BETWEEN NEW PAVEMENT OR CONCRETE TO EXISTING SURFACE SHALL BE PER PLAN.

# **GRADING NOTES**

- RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL CONDITION (GRAVEL, PAVEMENT, GRASS, ETC.) UNLESS NOTED OTHERWISE ON PLANS AT NO ADDITIONAL COST TO THE OWNER.
- ALL FINISH SURFACES SHALL BE INSTALLED TO PROMOTE POSITIVE DRAINAGE AT A MINIMUM SLOPE OF 1%. NO PONDING SHALL OCCUR AT NEW CULVERT INLETS, CATCH BASIN LOCATIONS, LAWNS OR PAVED AREAS.
- THE CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY COVERS, GRATES, FRAMES, AND BOXES TO MATCH NEW ELEVATIONS ON THE DRAWINGS, FIELD ADJUSTED TO FINISHED GRADES.
- DRIVEWAY APRONS SHALL BE PAVED TO MATCH PROPOSED ROADWAY. APRON DIMENSIONS SHALL BE APPROVED BEFORE PAVING. APRON AREAS SHOWN ON THE PLANS ARE APPROXIMATE.
- WALKWAYS, SIDEWALKS, AND CROSSWALKS SHALL NOT EXCEED 2% CROSS-SLOPE.

## **JTILITY NOTES**

- UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND REQUIRE FIELD VERIFICATION BY THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT UTILITIES WITHIN THE PROJECT CORRIDOR AND OBTAIN A DIG SAFE STAKE-OUT (TELEPHONE NUMBER 800-225-4977) PRIOR TO COMMENCING CONSTRUCTION. DAMAGE TO UNDERGROUND UTILITIES FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
- THE LOCATION, TYPE, AND SIZE OF EXISTING PIPES, DUCTS, CONDUITS, AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS ARE NOT WARRANTED TO BE EXACT NOR IT IS WARRANTED THAT ALL UNDERGROUND STRUCTURES ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY PIPE SIZES PRIOR TO MOBILIZATION AND PRIOR TO ORDERING NEW STRUCTURES, PIPES, DUCTS, OR CONDUITS.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE TOWN, UTILITY COMPANIES, DIG SAFE, EMERGENCY SERVICES, AND MAINE DEPARTMENT OF TRANSPORTATION (MAINE DOT) WHERE APPLICABLE. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK TO ALLOW SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF ALL BURIED UTILITIES.

				ТВМ
4.	CONTRACTOR SHALL BACKFILL TRENCH FOLLOWING EACH DAY'S CONSTRUCTION. NO OPEN TRENCHES WILL BE ALLOWED OVERNIGHT UNLESS APPROVED BY ARCHITECT AND PROPERLY BARRICADED (IE. SNOW FENCING, CHAIN LINK FENCING, JERSEY BARRIER OR APPROVED EQUAL, CAUTION RIBBON AND	ACP ADD. ALT. AE ARCH.	ASBESTOS CEMENT PIPE ADDITIVE ALTERNATE BID ITEM AERIAL ELECTRIC ARCHITECTURAL	TEL T.O.\ T.C. TEM THK.
	EQUIPMENT PLACEMENT WILL NOT BE APPROVED AS BARRICADING. CONTRACTOR IS RESPONSIBLE TO MAINTAIN TRENCH AS DIRECTED BY THE ARCHITECT.	B.C. BIT. BLDG.	BOTTOM OF CURB BITUMINOUS BUILDING	TV TYP T.S.
5.	CONTRACTOR SHALL CONTACT UTILITY POLE OWNERS ADJACENT TO AREAS OF EXCAVATION TO ARRANGE POLE SUPPORT DURING	BOT. BW	BOTTOM BOTTOM OF WALL	UGE UGS UGP
	EXCAVATION. BRACING OF UTILITY POLES WHERE REQUIRED SHALL BE INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT SHALL BE MADE UNLESS OTHERWISE NOTED.	CL CB C.I.	CENTERLINE CATCH BASIN CAST IRON, CONTRACTOR INST'D. CAST IN PLACE	UGU VER
6.	THE OWNER REQUIRES THAT UPON COMPLETION OF CONSTRUCTION, A COMPLETE SET OF "AS-BUILT" DRAWINGS THAT REFLECT ANY AND ALL MODIFICATIONS WITHIN THE LIMITS	CMP C C.O. CONC	CORRUGATED METAL PIPE, CENTER CLEANOUT CONCRETE	W W/ W/O
	OF WORK INCLUDING MODIFICATIONS TO THE WATER SYSTEM AND THE SANITARY AND STORM SEWER SYSTEMS WITHIN THE PROJECT LIMITS BE SUBMITTED TO THE MUNICIPALITY AND MUNICIPAL WATER DISTRICT. THESE DRAWINGS SHALL BE SUBMITTED IN BOTH DIGITAL (CAD) DRAWING AND HARD COPY	CPP CTV CFS	CORRUGATED PLASTIC PIPE CABLE TELEVISION CUBIC FEET PER SECOND	WSC W.W W V
7		DII. DTL. DIA.	DETAIL DIAMETER	
7.	CONSTRUCTION OF CONCRETE OR PAVING ITEMS SHALL NOT COMMENCE UNTIL ALL UNDERGROUND WORK HAS BEEN INSPECTED AND TESTED.	DIM. DMH DN	DIMENSION DRAIN MANHOLE,DROP MANHOLE DOWN	-
8.	ALL UTILITY FACILITIES, INCLUDING VALVES AND POLES, SHALL BE OPERATED AND ADJUSTED BY THE RESPECTIVE UTILITIES UNLESS OTHERWISE INDICATED.	E E.P.	EAST EDGE OF PAVEMENT	
9.	ALL UNDERGROUND SECONDARY SHALL BE RUN IN SCH. 40 CONDUIT UNLESS SPECIFIED OTHERWISE.	E.L. ELEV. EQ. EXIST. EXP	ELEVATION EQUAL EXISTING EXPANSION	
10.	ALL UNDERGROUND ELECTRICAL FOR SITE LIGHTING SHALL BE RUN IN SCH. 40 PVC CONDUIT UNLESS SPECIFIED OTHERWISE.	EAF. FD E G	FOOTING DRAIN	<u></u>
11.	ALL CABLE TELEVISION/TELEPHONE/COMMUNICATIONS LINES SHALL BE RUN IN SCH. 40 PVC UNLESS SPECIFIED OTHERWISE.	F.H. FIN.	FIRE HYDRANT FINISH	
12.	PROVIDE PULL WIRE IN ALL UNDERGROUND CONDUITS. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCHING AND BACKFILLING OF ALL CONDUIT. CONDUIT AND WIRING SHALL BE	F.F. FPM FT. FTG.	FEET PER MINUTE FEET FOOTING	SPOT
13.	MAINTAIN 2'-6" COVER OVER CABLE TELEVISION/TELEPHONE	GA. GALV. GPM	GAUGE GALVANIZED GALLONS PER MINUTE	τνοιά
14.	WHERE NEW WATER AND SEWER RUN SIDE BY SIDE, MAINTAIN A TEN FOOT (10') HORIZONTAL SEPARATION. WHERE THEY CROSS,	GRAN G.V. G	GRANULAR GATE VALVE GAS	
	MAINTAIN AND EIGHTEEN INCH (18") VERTICAL SEPARATION WITH WATERLINE ABOVE SEWER. IF WITHIN 18" MINIMUM VERTICAL SEPARATION, ENCASE WATERLINE 10' EITHER SIDE OF SEWER IN CONCRETE 3,000 PSI MIN.	H.C. HDPE HORIZ., HOR. HPS	HANDICAP HIGH DENSITY POLYETHYLENE HORIZONTAL HIGH PRESSURE SODIUM	
15.	MAINTAIN A 5'-6" MINIMUM COVER OVER WATERLINE.	HMA I.D.	IDENTIFICATION, INSIDE	
16.	IN AREAS WHERE MINIMUM COVER OVER UTILITY PIPES IS NOT ACHIEVABLE, CONTRACTOR SHALL PROVIDE 4" RIGID INSULATION.	I.E. INV.	DIAMETER INVERT ELEVATION INVERT	
17.	STATIONS AND OFFSETS FOR MANHOLES, CATCH BASINS, AND OTHER STRUCTURES ARE SHOWN TO THE CENTER OF EACH.	INSUL.		
18.	EXISTING FOUNDATION DRAINS ENCOUNTERED DURING STORM DRAIN SYSTEM INSTALLATION SHALL BE CONNECTED TO THE NEW SYSTEM.	LED LED LF LPS	LIGHT EMITTING DIODE LINEAR FEET LOW PRESSURE SODIUM	
19.	STORM DRAINS AND SEWERS SHALL BE CLEANED BY THE CONTRACTOR PRIOR TO SUBSTANTIAL COMPLETION.	L MAS	LENGTH MASONRY	<u>ANNC</u>
20.	WHEN PROVIDING A NEW CATCH BASIN OR MANHOLE CONNECTION TO EXISTING GRAVITY PIPE, CONNECTION TO EXISTING GRAVITY PIPE SHALL BE MADE ONE 8-FOOT PIPE LENGTH OUTSIDE OF NEW STRUCTURE UNLESS OTHERWISE INDICATED ON THE PLANS.	MATL. MAX. MH MIN MISC.	MATERIAL MAXIMUM MANHOLE MINIMUM MISCELLANEOUS	(XX XX)
21.	PLASTIC END-CAPS SHALL BE PLACED ON ALL PIPE INVERTS NOT TERMINATING IN A STRUCTURE.	N N.I.C. NFD	NORTH, NEW UTILITY NOT IN CONTRACT NEW FOUNDATION DRAIN	
22.	SEWER SERVICE, WHEN ENTERING THE BUILDING, SHALL BE 6'-0" BELOW FINISH FLOOR, UNLESS NOTED OTHERWISE.	NFM NGAS NOM. NO.	NEW FORCE MAIN NATURAL GAS NOMINAL NUMBER	
		NRD NSS NSD	NEW ROOF DRAIN NEW SANITARY SEWER NEW STORM DRAIN	
		NTS NUE	NOT TO SCALE NEW UNDERGROUND ELECTRIC	
		NUD NUP NUS NW	NEW UNDERDRAIN NEW UNDERGROUND PRIMARY NEW UNDERGROUND SECONDARY NEW WATER LINE	
		OC OS/OI OHE OHU OHW	ON CENTER OWNER SUPPLIED/OWNER INST'D OVERHEAD ELECTRIC OVERHEAD UTILITY OVERHEAD WIRE	
		PVMT. PERF.	PAVEMENT PERFORATED	
		PB PI P & I	POLL BOX POINT OF INTERSECTION PROVIDE AND INSTALL	
		PRELIM PSF PSI P.A. PT	PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POINT OF TANGENT POINT	
		PVC R RCP	POLYVINYL CHLORIDE RADIUS REINFORCED CONCRETE PIPE	
		REQ'D S SS SCH	REQUIRED SEWER SANITARY SEWER	
		SD SIM.	STORM DRAIN	
		SMH SPECS SQ. S.F. STA. STYRO.	SEWER MANHOLE SPECIFICATIONS SQUARE SQUARE FEET STATION STYROFOAM	

### TELEPHONE TOP OF WALL 0.W. TOP OF CURB EMP. TEMPORARY THICK ΗK. TELEVISION TYPICAL TOP OF SLAB UNDERGROUND ELECTRIC UNDERGROUND SECONDARY GP UNDERGROUND PRIMARY UNDERGROUND UTILITY GU ERT., VER. VERTICAL WATER WITH WITHOUT //O WATER SHUTOFF (CURB STOP OR /SO GATE VALVE) .W.F. WELDED WIRE FABRIC WATER SHUT OFF / GATE VALVE LAWN WALK CURB TRAVEL WAY T.C. 🦳 – F.G. – E.P. – B.C. /- F.G.



# PICAL PATTERNS

	BITUMINOUS PAVI
	TOPSOIL, LOAM AN
	GRANULAR FILL M
	COARSE AGGREG
	UNDISTURBED NA
	CONCRETE SECTION
	RIGID INSULATION
$\times \times \times \times$	MULCH BED

# NOTATION SYMBOLS

SECTION

XX XXX DETAIL CALL OUT (DETAIL NUMBER/SHEET NUMBER)

# TEMPORARY BENCH MARK

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EMENT SECTION

- AND SEED, SOD
- **IATERIAL**
- GATE
- ATIVE SOIL
- ON

EXISTING	LEGEND
E	ADA PARKING SYMBOL
$\overline{\mathbf{A}}$	TEMPORARY BENCH MARK LOCA
•	PROPERTY MONUMENT
	CATCH BASIN
T)	TELECOMMUNICATIONS MANHO
	CURB INLET
$\bigcirc$	DRAINAGE MANHOLE
	DUMPSTER
E	ELECTRICAL MANHOLE
$\sim$	FLAG POLE
GV	FLOOD LIGHT
$\bowtie$	GAS VALVE
-••	GUY WIRE
т <del>р</del> б	HYDRANT
<b>X</b>	PROPERTY PIN
	LEDGE
Ē	
	SIGN
$\tilde{\wedge}$	CONTROL STATION
<u> </u>	STREET LIGHT
	TEST PIT
T	TRANSFORMER
$\overline{\bigcirc}$	TRASHCAN
$\overline{\alpha}$	UTILITY POLE
*So	WATER SHUT OFF VALVE
	WATER VALVE
	WELL
OHU	OVERHEAD UTILITY
	UNDERGROUND UTILITY
GAS	GAS LINE
	- EASEMENTS
SD	
110	
102	- 2 FOOT CONTOUR
W	- WATER LINE
• • • • • • • • • • •	WETLAND BOUNDARY

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## **REMOVALS NOTES:**

- 1. SEE REMOVAL NOTES ON SHEET C001 FOR ADDITIONAL REMOVALS INFORMATION.
- 2. CLEARING LIMITS SHALL EXTEND ONLY TO SUCH A POINT NECESSARY TO COMPLETE EARTHWORK ACTIVITIES.
- 3. THE UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE AND IS BASED ON A SURVEY COMPLETED BY PLISGA & DAY LAND SURVEYORS. THE SITE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY SITE CLEARING, GRUBBING AND EARTHWORK ACTIVITIES.
- 4. ALL SOIL AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY WORK. SEE CG101 FOR MORE INFORMATION. THE SITE CONTRACTOR IS RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL SOIL AND EROSION CONTROL MEASURES.
- 5. SOME TREE TRIMMING NOT SHOWN ON THIS PLAN MAY BE NECESSARY FOR CONSTRUCTION PURPOSES. THE SITE CONTRACTOR SHOULD EVALUATE AND SCHEDULE ACCORDINGLY.

LEGEND PROPOSED EXISTING TREE REMOVALS LIMITS OF WETLAND UTILITY POLE Ø  $\sim$ STREET LIGHTING BUILDING LIGHTING  $\mathcal{R}$ ⊕ ₩ WATER SHUTOFF / GATE VALVE T TRANSFORMER PAD DUMPSTER MANHOLE SMH SEWER MANHOLE CATCH BASIN +++++ \*\*\*\* FIRE HYDRANT SIGN <del>\_\_\_\_</del> FENCING \_\_\_o\_\_\_o\_\_\_ **\_\_\_\_** PAVEMENT REMOVALS LIMITS OF CONSTRUCTION ——LW—— PROPERTY SETBACK PROPERTY LINE ABUTTING PROPERTY LINE TREE LINE  $\sim$ ~ ~ ~ ~ / 0 ISSUED FOR BID 27 AUG 2024 REV REV DATE TEOFM OHRISTOPH PROJECT NORTH wbrc WBRCINC.COM SWAN LAKE STATE PARK FOOTBRIDGE REPLACEMENT SWANVILLE, MAINE **EXISTING CONDITIONS &** SITE REMOVALS PLAN 10241.001 1"=10' RAF/MAG CD101 BTH

CTM

OF RECORD



# TREE LINE $\sim$ ~ ~ ~ ~ / 0 ISSUED FOR BID 27 AUG 2024 REV REV DATE TE OF MA OHRISTOPHE MICHAL PROJECT NORTH 15SIONAL F wbrc WBRCINC.COM SWAN LAKE STATE PARK FOOTBRIDGE REPLACEMENT SWANVILLE, MAINE SITE LAYOUT PLAN 10241.001 1"=10' RAF/MAG CP101 BTH CTM E OF RECORD



LEGEND

LIMITS OF WETLAND

EXISTING  PROPOSED

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2. REFER TO PERMATRAX<sup>®</sup> SHEETS FOR NEW FOOTBRIDGE FOUNDATION LAYOUT. COORDINATE LAYOUT WITH CONTRACTOR.

1. SEE LAYOUT NOTES ON SHEET C001 FOR ADDITIONAL LAYOUT INFORMATION.

LAYOUT NOTES:





H. OVERWINTER 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 ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER. a. STABILIZE THE SOIL WITH TEMPORARY VEGETATION, BY OCTOBER 1. SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.

b. STABILIZE THE SOIL WITH SOD. STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1 PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

c. STABILIZE THE SOIL WITH MULCH. BY NOVEMBER 15, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH. ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

MAINTENANCE. 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 TO 90% OF AREAS VEGETATED WITH VIGOROUS

BASIC STABILIZATION SCHEDULE BEFORE WINTER. SEPTEMBER 15 ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET. OCTOBER 1 IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDED. ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND MULCHED. NOVEMBER 15 ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE. DECEMBER 1 ALL DISTURBED AREAS WHERE THE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED BY VEGETATION, MUST BE PROTECTED FOR OVER-WINTER.

NOTE: THE DATES GIVEN ARE FOR PROJECTS IN SOUTH-CENTRAL MAINE. ADJUST THE DATES GIVEN BASED ON THE PROJECT'S LOCATION WITHIN THE STATE - REDUCING TIMES UP TO THREE WEEKS FOR PROJECTS IN NORTHERN MAINE AND EXTENDING TIMES UP TO TWO WEEKS FOR PROJECT'S ON THE COAST AND IN EXTREME SOUTHERN MAINE

8. <u>STORMWATER CHANNELS</u>. DITCHES, SWALES, AND OTHER OPEN STORMWATER CHANNELS MUST BE CONSTRUCTED AND STABILIZED USING MEASURES THAT ACHIEVE LONG-TERM EROSION CONTROL. 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.

9. ROADS. GRAVEL AND PAVED ROADS MUST BE CONSTRUCTED WITH CROWNS OR OTHER MEASURES, SUCH AS WATER BARS, TO ENSURE THAT STORMWATER IS DELIVERED IMMEDIATELY TO ADJACENT STABLE DITCHES, VEGETATED BUFFER AREAS, CATCH BASIN INLETS, OR STREET GUTTERS.

10. CULVERTS. CULVERT INLETS MUST BE PROTECTED WITH APPROPRIATE MATERIALS AND PROTECTION MUST EXTEND AT LEAST AS HIGH AS THE EXPECTED MAXIMUM ELEVATION OF STORAGE BEHIND THE CULVERT. CULVERT OUTLETS MUST INCORPORATE MEASURES, SUCH AS APRONS OR PLUNGE POOLS, TO PREVENT SCOUR OF THE CHANNEL 11. PARKING AREAS. PARKING AREAS MUST BE CONSTRUCTED TO ENSURE RUNOFF IS DELIVERED TO ADJACENT SWALES, CATCH BASINS, CURB GUTTERS, OR BUFFER AREAS WITHOUT ERODING AREAS DOWNSLOPE. THE PARKING AREA'S SUBBASE COMPACTION AND GRADING MUST BE DONE TO ENSURE RUNOFF IS EVENLY DISTRIBUTED TO ADJACENT BUFFERS OR SIDE SLOPES. CATCH BASINS MUST BE LOCATED AND SET TO PROVIDE ENOUGH STORAGE DEPTH AT THE INLET TO ALLOW INFLOW OF PEAK RUNOFF RATES WITHOUT BY-PASS OF RUNOFF TO OTHER AREAS.

## INSPECTION AND MAINTENANCE PLAN:

1. DURING CONSTRUCTION. THE FOLLOWING STANDARDS MUST BE MET DURING CONSTRUCTION: A. INSPECTION AND CORRECTIVE ACTION. 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 AFTER A STORM EVENT, 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.

B. MAINTENANCE. MAINTAIN ALL MEASURES IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED. IF BEST MANAGEMENT PRACTICES (BMPS) NEED TO BE MAINTAINED OR MODIFIED, ADDITIONAL BMPS ARE NECESSARY, OR OTHER CORRECTIVE ACTION IS NEEDED, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL).

C. DOCUMENTATION. KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE(S) OF THE INSPECTIONS. AND MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPS THAT NEED MAINTENANCE, BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMPS, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN. 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.

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND

APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION 2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF

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

NOTE: AN EXAMPLE OF THE USE OF BMPS TO CONTROL FUGITIVE SEDIMENT AND DUST IS AS FOLLOWS. OPERATIONS DURING WET MONTHS THAT EXPERIENCE TRACKING OF MUD OFF THE SITE ONTO PUBLIC ROADS SHOULD PROVIDE FOR SWEEPING OF ROAD AREAS AT LEAST ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. WHERE CHRONIC MUD TRACKING OCCURS, A STABILIZED CONSTRUCTION ENTRANCE SHOULD BE PROVIDED. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN THE ACCESS ROADS ONCE A WEEK OR

NOTE: DEWATERING A STREAM WITHOUT A PERMIT FROM THE DEPARTMENT VIOLATES STATE WATER QUALITY STANDARDS AND THE NATURAL RESOURCES PROTECTION ACT. 4. DEBRIS AND OTHER MATERIALS. LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE

PREVENTED FROM BECOMING A POLLUTANT SOURCE. NOTE: TO PREVENT THESE MATERIALS FROM BECOMING A SOURCE OF POLLUTANTS, CONSTRUCTION AND

POST-CONSTRUCTION ACTIVITIES RELATED TO A PROJECT MAY BE REQUIRED TO COMPLY WITH APPLICABLE PROVISION OF RULES RELATED TO SOLID, UNIVERSAL, AND HAZARDOUS WASTE, INCLUDING, BUT NOT LIMITED TO, THE MAINE SOLID WASTE AND HAZARDOUS WASTE MANAGEMENT RULES: MAINE HAZARDOUS WASTE MANAGEMENT RULES; MAINE OIL CONVEYANCE AND STORAGE RULES; AND MAINE PESTICIDE REQUIREMENTS.

5. TRENCH OR FOUNDATION DE-WATERING. TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFERDAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER. AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, AND MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT

## EROSION CONTROL NOTES RELATED TO PERMITTING

1. CONSTRUCTION OVERSIGHT, THE CONTRACTOR WILL RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPRET THE STORMWATER SYSTEMS CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS TO STATE THAT THE STRUCTURE HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.

2. UNDERDRAINED FILTER BASINS. INSPECTION BY A PROFESSIONAL ENGINEER 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. BIO-RETENTION CELLS MUST BE STABILIZED PER THE PROVIDED PLANTING SCHEME AND DENSITY FOR THE CANOPY COVERAGE OF 30 AND 50%

D. AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS, AND 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 DEP SPECIFICATIONS.

3. WETPONDS. INSPECTION BY A PROFESSIONAL ENGINEER WILL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE INSTALLATION OF EACH POND'S EMBANKMENT CONSTRUCTION, STORMWATER INLET, UNDERDRAINED GRAVEL OUTLET, GRAVEL OUTLET FILTER MATERIAL MAKEUP AND PLACEMENT, OUTLET CONTROL STRUCTURE, CLAY LINER (IF APPLICABLE), AND EMERGENCY SPILLWAY CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE POND. AN INSPECTION OF THE UNDERDRAINED GRAVEL OUTLET SHALL ALSO BE PERFORMED

ONE YEAR AFTER THE FINAL STABILIZATION OF THE POND. 4. INFILTRATION BASINS. INSPECTIONS A PROFESSIONAL ENGINEER WILL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE PROPOSED SOIL LINER MATERIAL. TOPSOIL CAP. FROM INITIAL GROUND DISTURBANCE TO FINAL

- STABILIZATION OF THE INFILTRATION BASIN. 5. LOT GRADING AND DRIVEWAY LOCATION. INSPECTIONS BY A PROFESSIONAL ENGINEER WILL CONSIST OF A VISIT TO THE SITE PRIOR TO CONSTRUCTION TO CONSULT WITH THE EARTHWORK CONTRACTOR AND A POST CONSTRUCTION MEETING TO CONFIRM GRADING ON LOTS AND FOR ALL DRIVEWAYS TO ENSURE RUNOFF IS DIRECTED ACCORDING TO
- PLANS AND TO OVERSEE THE RE-STABILIZATION OF THE LOT INTO A VEGETATED COVER. 6. BUFFERS. GENERAL FOREST USE MEANS THAT THE LAND MUST BE MAINTAINED WITH A FOREST COVER AND UNDISTURBED SOIL, DUFF LAYER GROUND COVER VEGETATION, AND UNDERSTORY VEGETATION. TIMBER MAY BE HARVESTED ON A SELECTIVE BASIS PROVIDED THAT NO MORE THAN 40% OF THE VOLUME IS HARVESTED WITHIN ANY 10 YEAR PERIOD.
- 7. STONE BERMED LEVEL LIP SPREADER. INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT EACH LEVEL SPREADERS CONSTRUCTION, STONE BERM MATERIAL AND PLACEMENT, SETTLING BASIN FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE LEVEL SPREADER.
- 8. ROAD DITCH TURNOUTS. INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT EACH TURNOUT CONSTRUCTION, TURNOUT'S STONE BERM MATERIAL AND PLACEMENT, FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE LEVEL SPREADER.
- 9. PERVIOUS PAVEMENT. INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE CONSTRUCTION AND STABILIZATION OF THE PROPOSED PERVIOUS PAVEMENT AND ITS FILTER COURSE MATERIAL TO BE BUILT ON THE SITE. INSPECTIONS SHALL CONSIST OF AN APPROPRIATE NUMBER OF VISITS TO THE SITE TO INSPECT THE FILTER BED MATERIAL PLACEMENT AND COMPACTION, STORAGE COURSE, PAVEMENT ALTERNATIVE PLACEMENT, FABRIC LAYMENT, AND STORMWATER OVERFLOW BYPASS CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL PAVEMENT COMPACTION.
- 10. ROOF DRIP EDGE FILTERS. INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT EACH THE ROOF DRIP EDGE FILTER'S UNDERDRAIN CONSTRUCTION. FILTER MATERIAL PLACEMENT AND OVERFLOW FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE FILTER.
- CONSIST OF AN APPROPRIATE NUMBER OF VISITS TO THE SITE TO INSPECT THE SUBGRADE PREPARATION, GENERAL CONSTRUCTION, FILTER MATERIAL PLACEMENT AND COMPACTION, CHAMBER PLACEMENT, FABRIC LAYMENT, AND STORMWATER OVERFLOW BYPASS CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE MEASURE. IN THE CASE OF THE STORMTREAT SYSTEMS AN ADDITIONAL VISIT WILL BE NECESSARY TO SET THE UNIT'S PEAK OUTFLOW RATE APPROPRIATELY TO NO MORE THAN ONE GALLON PER MINUTE.
- 12. DEWATERING. A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DEWATERING 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. PLEASE FOLLOW THE DETAILS OF SUCH A PLAN.

## STANDARD DESIGN NOTES ON FILTER BASINS

1. SOIL FILTER MEDIA. THE SOIL FILTER MATERIAL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES. NO OTHER MATERIAL OR SUBSTANCE THAT MAY BE HARMFUL TO PLANT GROWTH OR PROVE A HINDRENCE TO THE PLANTING OR MAINTENANCE OPERATION CAN BE MIXED WITH THE FILTER. A. TESTING: GRADATION TESTS AND PERMEABILITY TESTING OF THE SOIL FILTER MATERIAL SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE PLACEMENT AND

- COMPACTION. B. MIXTURE: THE MIXTURE SHALL CONTAIN BY VOLUME THE FOLLOWING: a. 50% OF SANDY SOIL - MEDOT #703.01 WILL NOT CONTAIN SUFFICIENT FINE AND TOPSOIL/LOAM WILL HAVE TO COMPENSATE THE DEFICIENCY
- b. 20% OF LOAMY TOPSOIL
- c. 30% OF SUPERHUMUS OR EQUIVALENT COMPOSTED WOODY FIBERS AND FINE SHREDDED BARK C. GRADATION: THE BLENDED SOIL FILTER MIXTURE OF BARK MULCH, SAND AND LOAM SHALL HAVE 8% TO 12% PASSING
- SHALL BE PERFORMED BY A QUALIFIED LABORATORY AND SUBMITTED TO THE ENGINEER FOR REVIEW. D. PERMEABILITY: SOIL FILTER MEDIA MIXTURE SHALL HAVE A PERMEABILITY OF 2.4 IN/HR TO 4 IN/HR UPON COMPACTION BETWEEN 90 AND 92% STANDARD PROCTOR (ASTM D698).
- 2. UNDERDRAIN BEDDING. THE UNDERDRAIN BEDDING MATERIAL (12 INCHES MINIMUM) SHALL BE CLEAN GRAVEL MEETING THE GRADATION MEDOT SPECIFICATION 703.22 UNDERDRAIN TYPE C GRADATION MEDOT SPECIFICATIONS 703.22 UNDERDRAIN TYPE B.
- 3. TRANSITION LAYER. THE TRANSITION LAYER (6 INCH MINIMUM) SHALL MEET THE GRADATION MEDOT SPECIFICATION 703.22 UNDERDRAIN TYPE B. THE SAND SHALL HAVE LESS THAN 5% FINES PASSING THE #200 SIEVE. 4. TESTING AND SUBMITTALS. THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL TESTING RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE
- PROJECT ENGINEER FOR CONFIRMATION: A. SUBMIT SAMPLES OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS)
- FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY. B. PERFORM A SIEVE ANALYSIS CONFORMING TO ATSM 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 HYDROMETER GRAIN SIZE ANALYSIS) AND HAVE 10% DRY WEIGHT OF ORGANIC MATTER.
- C. PERFORM A PERMEABILITY TEST ON TEH SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2435 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698. 5. CONSTRUCTION.
- AND UNDERDRAIN. STABILIZED IS DEFINED AS PAVED IN A PARKING AREA OR ROADWAY, AND 90% GRASS CATCH IF IN A VEGETATED AREA. UNSTABILIZED AREAS WILL CAUSE PREMATURE FAILURE OF THE FILTER.
- B. THE AREA OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLATION OF THE UNDERDRAIN AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE. AFTER EXCAVATION OF THE BASIN, THE OUTLET STRUCTURE AND PIPING SYSTEM MUST BE INSTALLED AT THE APPROPRIATE ELEVATION AND PROTECTED WITH A SEDIMENT BARRIER. IF THE BASIN IS TO BE USED AS A SEDIMENT TRAP, THE SIDES OF THE EMBANKMENTS MUST BE MULCHED AND MAINTAINED TO PREVENT EROSION.
- C. FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL SHALL BE COMPACTED TO BETWEEN 90 AND 92% STANDARD PROCTOR.
- D. PERFORATED UNDERDRAIN PIPE SHALL BE 6" SCHEDULE 40, SDR 35 PVC PIPE OR EQUIVALENT SPACED 8 FEET ON CENTER MAXIMUM STRUCTURE JOINTS SHALL BE SEALED SO THAT THEY ARE WATERTIGHT. E. OUTFLOW OF THE FILTER BASIN UNDERDRAIN SHALL BE CONTROLLED BY A 2" PLASTIC BALL VALVE (TYPE 346) WITH A BALL VALVE HANDLE EXTENSION (TYPE 615). A THREE-PIECE VALVE BOX SHALL BE INSTALLED OVER THE VALVE. UPON COMPLETION OF THE INSTALLATION OF THE SOIL FILTER MEDIA AND THE ESTABLISHMENT OF 90% CATCH OF
- WITH CLEAN WATER AND ADJUST THE VALVE TO OBTAIN A 24 HOUR TO 32 HOUR RELEASE TIME 6. LINER. NONWOVEN GEOTEXTILE FABRIC SHALL BE INSTALLED ON ALL SIDES AND BOTTOM. GEOTEXTILE FABRIC SHALL
- BE MIRAFI 170n OR APPROVED EQUIVALENT.
- STORM EVENTS A. DEBRIS AND SEDIMENT BUILDUP SHALL BE REMOVED FROM TEH FOREBAY AND BASIN AS NEEDED. MOWING OF
- GRASSED BASIN CAN OCCUR SEMI-ANNUALLY TO A HEIGHT OF NO LESS THAN 6 INCHES. B. ANY BARE AREA OR EROSION RILLS SHALL BE REPAIRED WITH NEW FILTER MEDIA OR SANDY LOAM, SEEDED AND MULCHED OR SODDED.
- C. MAINTAINING GOOD GRASS COVER WILL MINIMIZE CLOGGING WITH FINE SEDIMENTS AND IF PONDING EXCEEDS 48 HOURS, THE TOP OF THE FILTER BED MUST BE ROTOTILLED TO REESTABLISH THE SOIL'S FILTRATION CAPACITY. D. IN BIORETENTION CELLS, RAKING AND REPLACING THE DEGRADED MULCH BETWEEN PLANTS WILL BE NECESSARY ON AN ANNUAL BASIS. PLANTS THAT ARE NOT ESTABLISHED WITH NEED TO BE REPLACED.

11. MANUFACTURED SYSTEMS. INSPECTION BY A PROFESSIONAL ENGINEER APPROVED BY THE MANUFACTURER SHALL

THE #200 SIEVE. THE MIXTURE SHALL HAVE A CLAY CONTENT OF LESS THAN 2%. THE TESTING OF ALL MATERIALS

A. CONTRIBUTING DRAINAGE AREAS SHALL BE STABILIZED PRIOR TO INSTALLATION OF THE SOIL FILTER MEDIA MIXTURE

GRASS OVER THE FILTER MEDIA, THE CONTRACTOR SHALL FLOOD THE VEGETATED BASIN TO THE DESIGN ELEVATION

7. MAINTENANCE. DURING THE FIRST YEAR, THE BASIN WILL BE INSPECTED SEMI-ANNUALLY AND FOLLOWING MAJOR



