

193-E-1

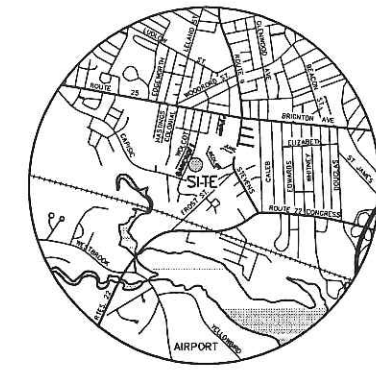
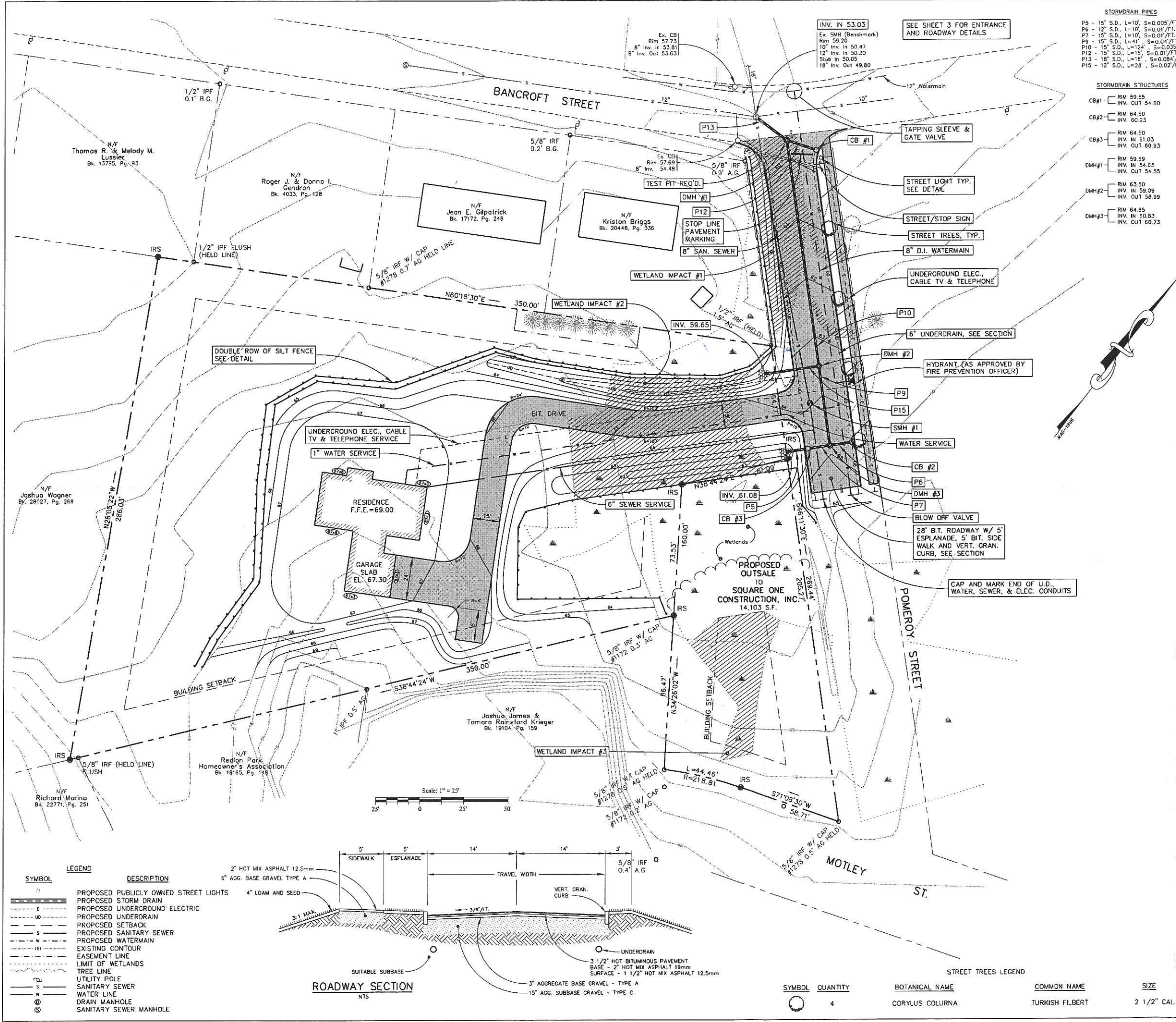
#2012-471

11 Pomeroy Street

Single Family and Street Construction

Chabad Lubavitch of Maine, Inc.

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- NOTES:**
- OWNER/APPLICANT: CHABAD LUBAVITCH OF MAINE INC. POMEROY STREET PORTLAND, MAINE
 - ENGINEER: LESTER S. BERRY, PE#3341 BH2M
 - SURVEYOR: ROBERT LIBBY JR., PL#2190 BH2M
 - WETLAND DELINEATION: MARK HAMPTON & ASSOCIATES PORTLAND, MAINE. A TIER ONE WETLAND PERMIT WAS GRANTED BY THE MAINE DEP (L22414-19-A-N) FOR 13,028 S.F. ON AUG. 16, 2005 FOR THIS PROJECT. CURRENT PROJECT RESULTS IN FOLLOWING WETLAND IMPACTS:

WETLAND IMPACT #1	2,716 S.F.
WETLAND IMPACT #2	5,768 S.F.
WETLAND IMPACT #3	1,978 S.F.
TOTAL IMPACTS	10,462 S.F.
 - TAX MAP REFERENCE: MAP 193, BLOCK E, LOT 1
 - DEED REFERENCES: BK. 21417, PG. 198
 - ZONING: R-3
 - PROPOSED USE: SINGLE FAMILY RESIDENCE
 - MINIMUM STANDARDS: MINIMUM LOT AREA = 6500 S.F. MINIMUM FRONTAGE = 50' MINIMUM SETBACKS: FRONT & REAR = 25' SIDE (SIDE ST.) = 20'
 - PROJECT AREA: 73,821 SQUARE FEET
 - PLAN REFERENCE: INFORMATION PROVIDED BY APPLICANT AND FROM PLAN OF PROPERTY MADE FOR STUART B. HERRICK JR., BANCROFT STREET, PORTLAND, MAINE JULY 31, 1986, R.P. TITCOMB ASSOC. INC.
 - "SITE PLANS FOR CHABAD LUBAVITCH OF MAINE INC. POMEROY STREET PORTLAND," BY BH2M DATED MARCH 2004 WITH REVISIONS THROUGH JULY 2, 2007.
 - SOLID WASTE: CURBSIDE BY CITY OF PORTLAND
 - PARKING: PRIVATE RESIDENCE = 2 SPACES
 - IF LEDGE IS ENCOUNTERED DURING CONSTRUCTION A PRE-BLAST INVENTORY SHALL BE CONDUCTED AND SUBMITTED TO THE ENGINEERING DEPARTMENT.
 - ALL CONSTRUCTION AND SITE ALTERATIONS SHALL BE DONE IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTATION CONTROL BMP'S, LATEST REVISION.
 - WAIVERS: A. A WAIVER IS REQUESTED TO ELIMINATE ONE SIDE OF SIDEWALK ALONG POMEROY STREET.
 - ALL PERMITS FOR BLASTING MUST BE COORDINATED WITH BOTH THE FIRE AND ENGINEERING DEPARTMENTS.
 - PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORKS REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRE-CONSTRUCTION MEETING.
 - IF WORK WILL OCCUR WITHIN THE PUBLIC RIGHT-OF-WAY SUCH AS UTILITIES, CURB, SIDEWALK AND DRIVEWAY CONSTRUCTION, A STREET OPENING PERMIT(S) IS REQUIRED FOR SITE WORK. PLEASE CONTACT CAROL MERRITT AT 674-8300, EXT. 8828. (ONLY EXCAVATORS LICENSED BY CITY OF PORTLAND ARE ELIGIBLE.)
 - ALL REQUIRED DIG SAFE REQUIREMENTS MUST BE FOLLOWED PRIOR TO THE CONSTRUCTION BEGINNING.
 - THE PROPOSED PUBLICLY OWNED STREET LIGHT (WITHIN THE POMEROY STREET ROW) WILL BE PROVIDED BY CENTRAL MAINE POWER COMPANY AND WILL MEET ALL APPLICABLE CITY OF PORTLAND STANDARDS.
 - BENCHMARK: RIM OF SEWER MANHOLE AT INTERSECTION OF BANCROFT AND POMEROY STREETS, EL. 59.20 CITY OF PORTLAND DATUM

STORMDRAIN PIPES

P5 - 15" S.D., L=10', S=0.005'/FT.
 P6 - 12" S.D., L=10', S=0.01'/FT.
 P7 - 15" S.D., L=10', S=0.01'/FT.
 P8 - 15" S.D., L=41', S=0.04'/FT.
 P10 - 15" S.D., L=124', S=0.035'/FT.
 P12 - 18" S.D., L=15', S=0.01'/FT.
 P13 - 18" S.D., L=18', S=0.084'/FT.
 P15 - 12" S.D., L=28', S=0.02'/FT.

STORMDRAIN STRUCTURES

CB#1 - RIM 59.55
INV. OUT 54.80

CB#2 - RIM 64.50
INV. 60.93

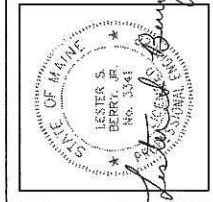
CB#3 - RIM 64.50
INV. IN 51.03
INV. OUT 60.93

DMH#1 - RIM 59.69
INV. IN 54.65
INV. OUT 54.55

DMH#2 - RIM 63.50
INV. IN 59.09
INV. OUT 58.99

DMH#3 - RIM 64.85
INV. IN 60.83
INV. OUT 60.73

NO.	DATE	REVISION	DESCRIPTION
1	1/24/12	Submitted	Amended Site Plan
2	3/12/12	Submitted	Level 1 & II Site Plans



BH2M
Engineers, Surveyors

Berry, Huff, MacDonald, Milligan, Inc.
28 State Street
Portland, Maine 04208
Tel: (207) 839-2771
Fax: (207) 839-6250

FOR
Chabad Lubavitch
Bancroft Street
Portland, Maine

SITE PLAN
LEVEL I-MINOR RESIDENTIAL DEV.
LEVEL II-ROAD IMPROVEMENTS

LAND OF
CHABAD LUBAVITCH OF MAINE INC.
POMEROY STREET
PORTLAND, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB NO.
W. Thompson	11093

SHEET
1

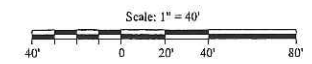
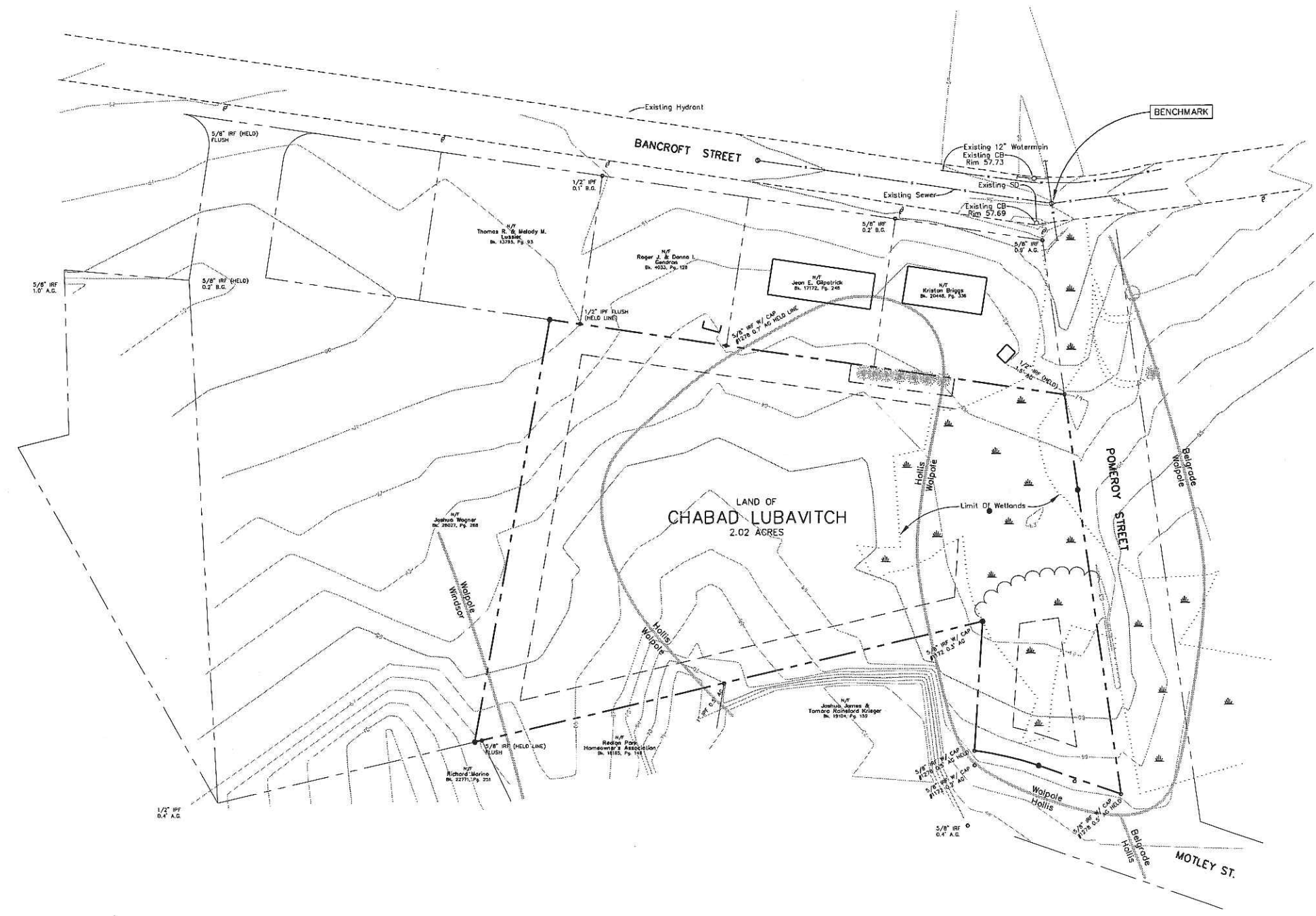
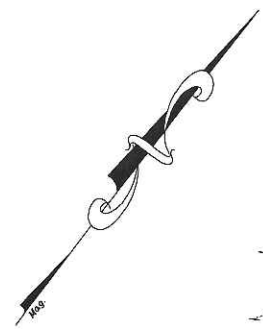
I CERTIFY THAT THIS SURVEY CONFORMS TO THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS TECHNICAL STANDARDS OF PRACTICE FOR A STANDARD BOUNDARY SURVEY WITH THE FOLLOWING EXCEPTIONS:

1. NO SURVEYORS REPORT

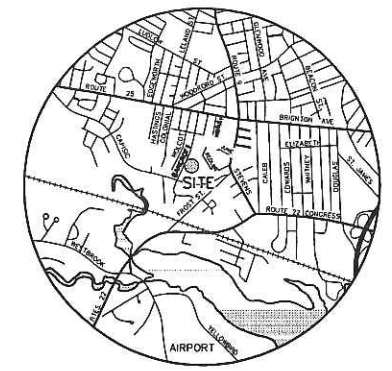
ROBERT C. LIBBY JR. PLS #2190

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
(Symbol)	4	CORYLUS COLURNA	TURKISH FILBERT	2 1/2" CAL.

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SYMBOL	DESCRIPTION
○ IRF	IRON ROD FOUND
○ IPF	IRON PIPE FOUND
□ GMP	GRANITE MONUMENT FOUND
● IRS	5/8" IRON ROD W/ CAP TO BE SET
□ GMS	GRANITE MONUMENT SET
---	LIMIT OF WETLANDS
---	EXISTING CONTOUR
---	SOIL BOUNDARY
N/F	NOW OR FORMERLY



LOCATION MAP
SCALE: 1" = .5 MILES

NOTES:

- OWNER/APPLICANT: CHABAD LUBAVITCH OF MAINE INC. POMEROY STREET PORTLAND, MAINE
- SURVEYOR: ROBERT LIBBY JR., PLS#2190 BH2M INC.
- WETLAND MAPPING: MARK HAMPTON ASSOCIATES PORTLAND, MAINE
- TAX MAP REFERENCE: MAP 193, BLOCK E, LOT 1
- DEED REFERENCES: BK. 21417, PG. 198
- ZONING: R-3
- PLAN REFERENCE: INFORMATION FOR THIS PLAN WAS PROVIDED BY APPLICANT AND FROM PLAN OF PROPERTY MADE FOR STUART B. HERRICK JR., BANCROFT STREET, PORTLAND, MAINE, JULY 31 1986, R.F. TITCOMB ASSOCIATES INC.
- SOIL MAPPING FROM CUMBERLAND COUNTY MEDIUM INTENSITY SOIL MAP.
- BENCHMARK: RIM OF SEWER MANHOLE INTERSECTION OF BANCROFT AND POMEROY, EL. 59.20 CITY OF PORTLAND DATUM

I CERTIFY THAT THIS SURVEY CONFORMS TO THE MAINE BOARD OF REGISTRATION FOR LAND SURVEYORS STANDARD BOUNDARY SURVEY CATEGORY I, WITH THE FOLLOWING EXCEPTIONS:

- NO SURVEYOR'S REPORT



ROBERT C. LIBBY JR. PLS #2190

NO.	DATE	REVISION DESCRIPTION
1	1/24/12	Submitted Amended Site Plan
2	3/12/12	Submitted Level 1 & II Site Plans



BH2M
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 Engineers, Surveyors
 28 State Street
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 Fax: (207) 839-8250

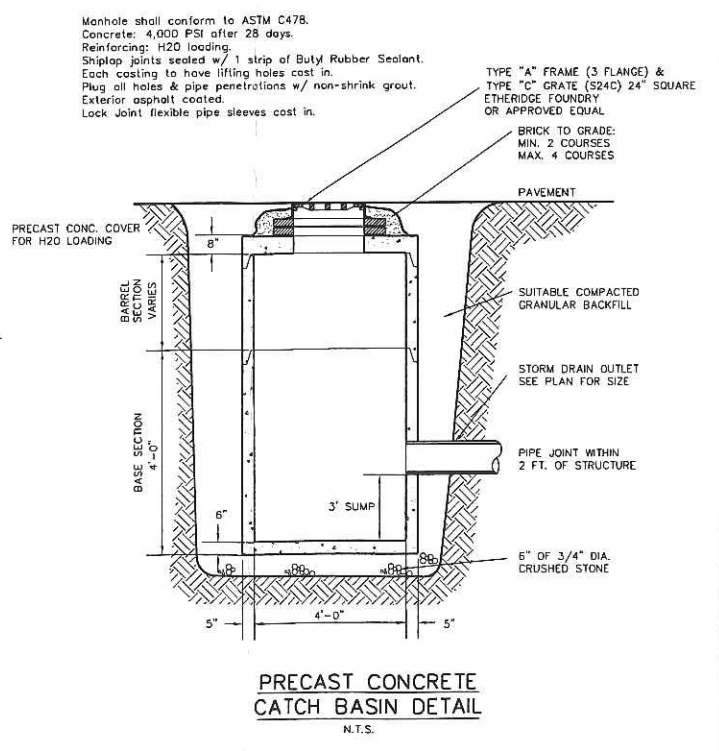
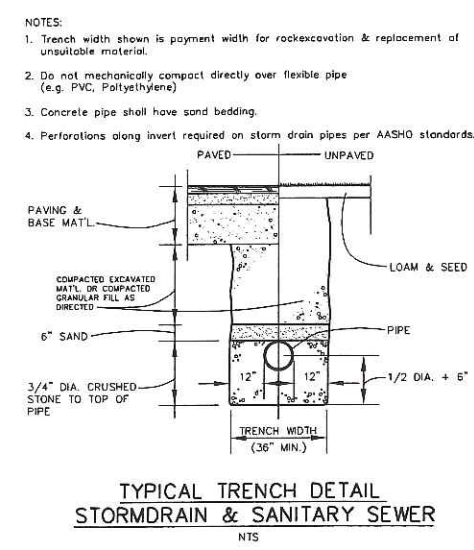
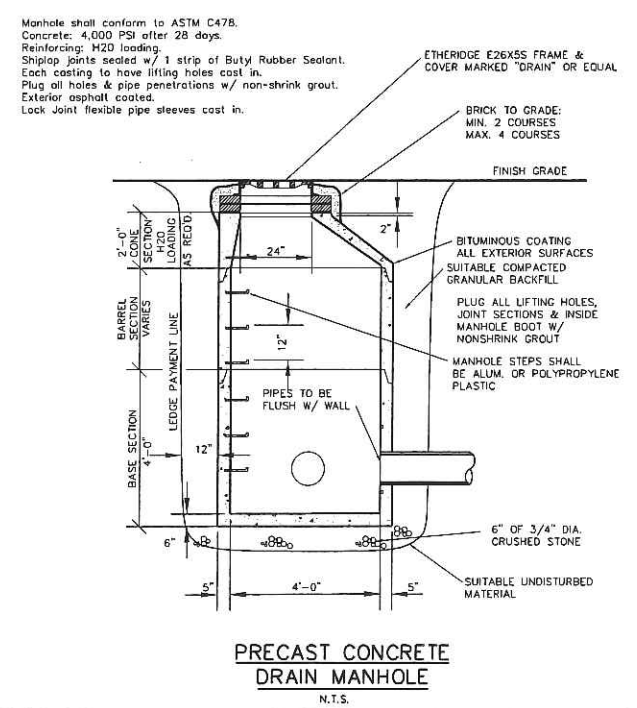
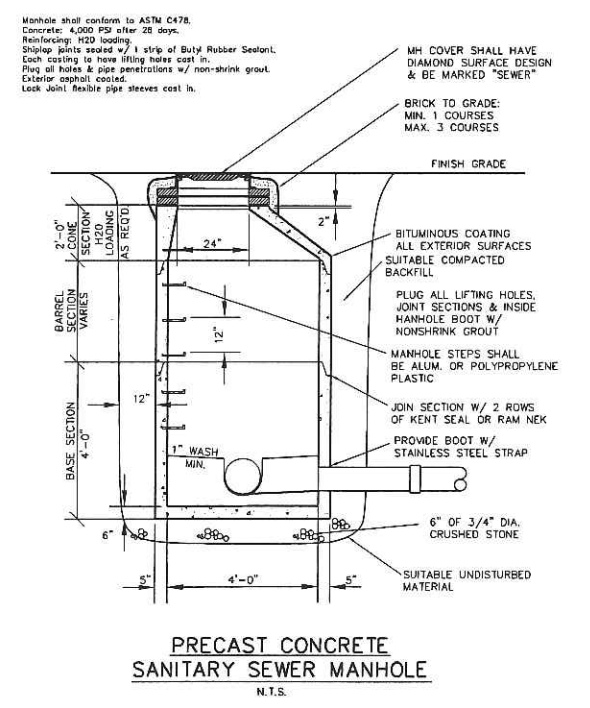
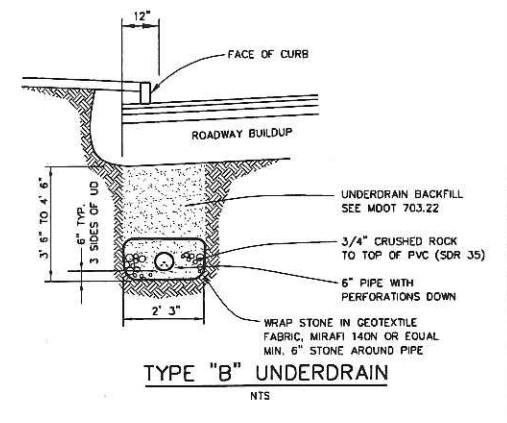
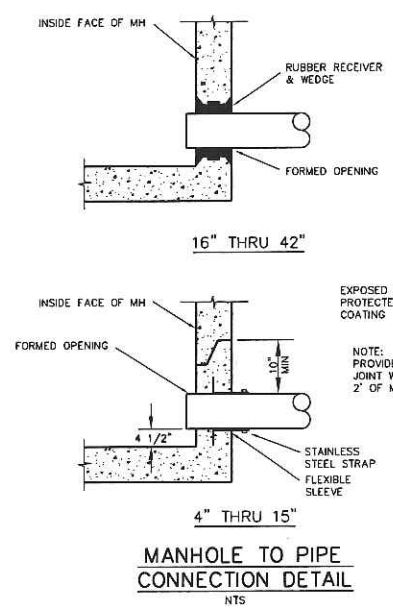
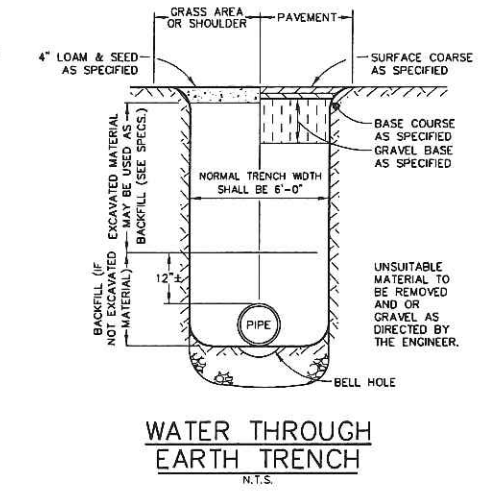
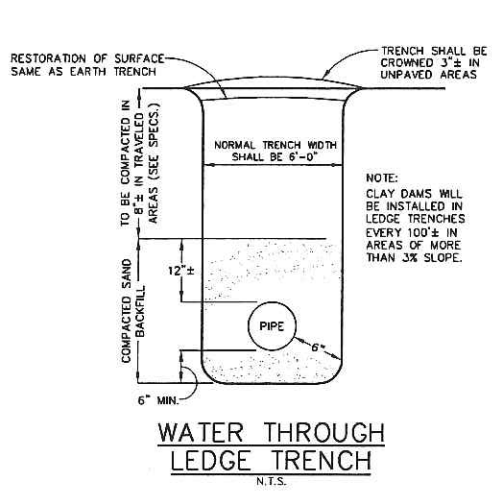
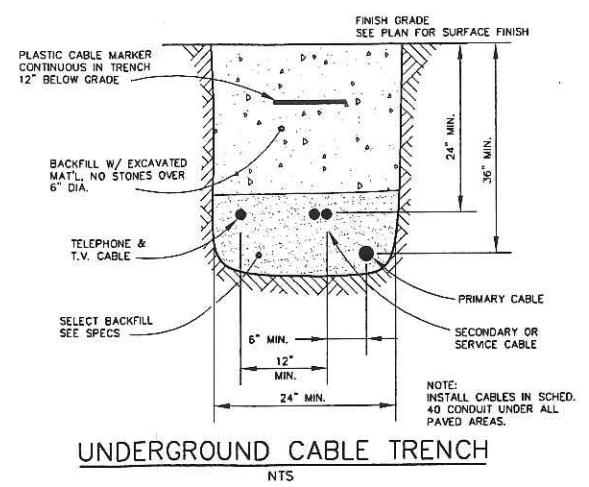
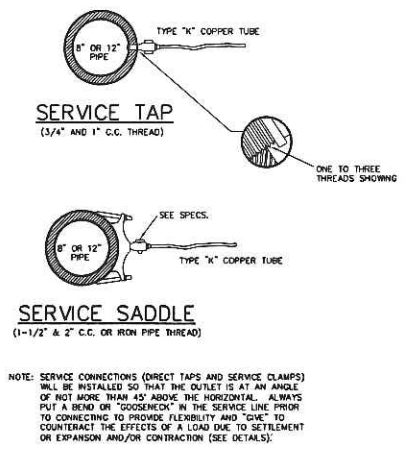
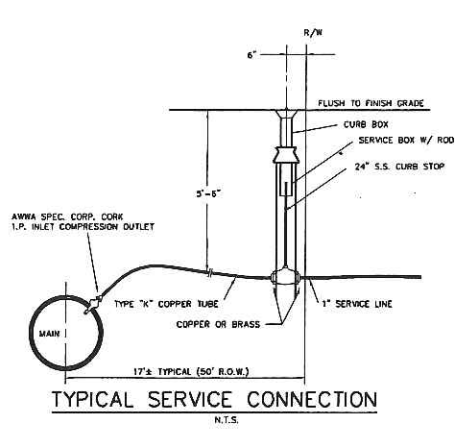
FOR
 Chabad Lubavitch
 Bancroft Street
 Portland, Maine

STANDARD BOUNDARY SURVEY AND EXISTING CONDITIONS PLAN
 LAND OF CHABAD LUBAVITCH OF MAINE INC.
 POMEROY STREET
 PORTLAND, MAINE

DESIGNED Survey	DATE Jan. 2012
DRAWN Dept.	SCALE As Noted
CHECKED R. Libby Jr.	JOB. NO. 11093

SHEET
2

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- NOTES:
1. Trench width shown is payment width for rockexcavation & replacement of unsuitable material.
 2. Do not mechanically compact directly over flexible pipe (e.g. PVC, Polyethylene).
 3. Concrete pipe shall have sand bedding.
 4. Perforations along invert required on storm drain pipes per AASHTO standards.

Manhole shall conform to ASTM C478.
 Concrete: 4,000 PSI after 28 days.
 Reinforcing: H20 loading.
 Shipap joints sealed w/ 1 strip of Butyl Rubber Sealant.
 Each casting to have lifting holes cast in.
 Plug all holes & pipe penetrations w/ non-shrink grout.
 Exterior asphalt coated.
 Lock joint flexible pipe sleeves cast in.

NO.	DATE	DESCRIPTION
1	1/24/12	Submitted Amended Site Plan
2	3/12/12	Submitted Level I & II Site Plans



BH2M
 Engineers, Surveyors
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 28 State Street
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 Fax: (207) 859-8250

FOR
 Chabad Lubavitch
 Barneff Street
 Portland, Maine

LAND OF
 CHABAD LUBAVITCH OF MAINE INC.
 FOREBENT STREET
 PORTLAND, MAINE

DESIGNED	DATE
W. Thompson	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB. NO.
W. Thompson	11093

DETAIL SHEET
 SHEET
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EROSION AND SEDIMENT CONTROL PLAN

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS AS CONTAINED IN THE "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES", CUMBERLAND COUNTY S.W.C.D. DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED MARCH 2003.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE SITE PLAN.

- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES", CUMBERLAND COUNTY S.W.C.D. DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED 2003.
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 15 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
- SEDIMENT BARRIERS (SILT FENCE, HAY BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
- INSTALL SILT FENCE AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #5.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY BEFORE AND FOLLOWING ANY SIGNIFICANT RAINFALL (0.5 INCHES) OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2 TO 1).
- IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED BY AUG. 15 OR 45 DAYS PRIOR TO THE FIRST KILLING FROST (OCT. 1) TO PROTECT FROM SPRING RUNOFF PROBLEMS.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
 - FOUR INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
 - APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10-20-20 (N-P205-K20) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SQ. FT.).
 - FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS. SEEDING RATE IS 1.03 LBS PER 1,000 SQ. FT. LAWN QUALITY SOG MAY BE SUBSTITUTED FOR SEED. SEED MIX SHALL CONTAIN 10% ANNUAL RYE GRASS.
 - HAY MULCH AT THE RATE OF 70-90 LBS PER 1,000 SQUARE FEET OR A HYDRO-APPLICATION OF ASPHALT, WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS WILL BE USED ON HAY MULCH FOR WIND CONTROL.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED. TEMPORARY EROSION AND SEDIMENT CONTROL BLANKET SHALL BE USED IN ALL DITCHES AND SWALES AS SHOWN IN DETAILS.
- WETLANDS WILL BE PROTECTED WITH HAYBALES AND/OR SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.

MULCH AND MULCH ANCHORING

MULCH

LOCATION	MULCH	RATE (1000 S.F.)
PROTECTED AREA	STRAW OR HAY *	100 POUNDS
WINDY AREAS	SHREDED OR CHOPPED CORNSTALKS STRAW OR HAY (ANCHORED) *	185-275 POUNDS 100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES (GREATER THAN OR EQUAL TO 3:1)	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED AS REQUIRED

(GREATER THAN OR EQUAL TO 3:1)

* A HYDRO-APPLICATION OF ASPHALT, WOOD, OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS SHALL BE USED ON HAY MULCH FOR WIND CONTROL.

MULCH ANCHORING

ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD./BLOCK); MULCH NETTING (AS PER MANUFACTURER); ASPHALT EMULSION (0.04 GALLONS PER SQ. YD.); LIQUID ASPHALT (0.10 GALLONS PER SQ. YD.); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE FERTILIZED.

Additional temporary seed mixture (for periods less than 12 months).

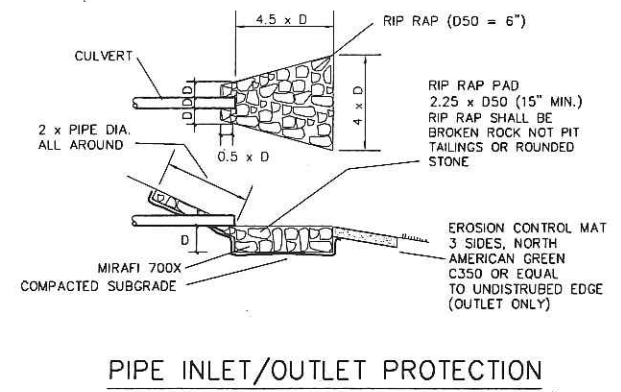
Season	Seed	Rate
Summer (5/15 - 8/15)	Sudongrass	40 lbs/acre
Late Summer/Early Fall (8/15 - 9/15)	Oats	80 lbs/acre
	Annual Ryegrass	40 lbs/acre
	Perennial Ryegrass	40 lbs/acre
Fall (9/15 - 11/1)	Winter Rye	112 lbs/acre
Winter (11/1 - 4/1)	Mulch w/ Dormant Seed	40 lbs/acre*
Spring (4/1 - 7/1)	Oats	80 lbs/acre
	Annual Ryegrass	40 lbs/acre

*Seed Rate Only

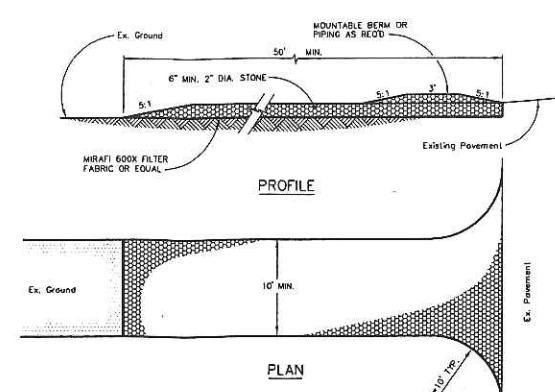
EROSION CONTROL DURING CONSTRUCTION

WINTER CONSTRUCTION

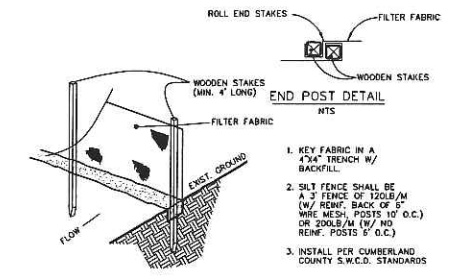
- WINTER CONSTRUCTION PERIOD: OCTOBER 1 THROUGH APRIL 15
- WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRES OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
- CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO MORE THAN ONE ACRE OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION.
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDING, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES MULCH SHALL BE APPLIED SUCH THAT THE SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
- BETWEEN THE DATES OF OCTOBER 15 AND APRIL 15, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 15TH AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDING AT A RATE OF 200 - 300X HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
- A) BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION, CHEMICAL, TRACK OR WOOD CELLULOSE FIBER.
B) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGEWAYS WITH A SLOPE GREATER THAN 3%, FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
- AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY DORMANT SEEDING OR MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
- DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.
- AREAS WITHIN 100 FEET OF STREAMS THAT ARE NOT STABILIZED WITH VEGETATION BY DEC. 1 SHALL BE MULCHED AND ANCHORED WITH NETTING. IF WORK CONTINUES IN THIS AREA DURING THE WINTER, A DOUBLE LINE OF SEDIMENT BARRIERS MUST BE USED.



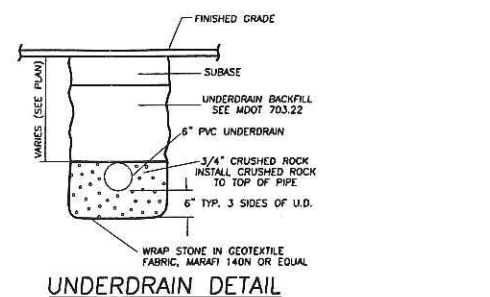
PIPE INLET/OUTLET PROTECTION
N.T.S.



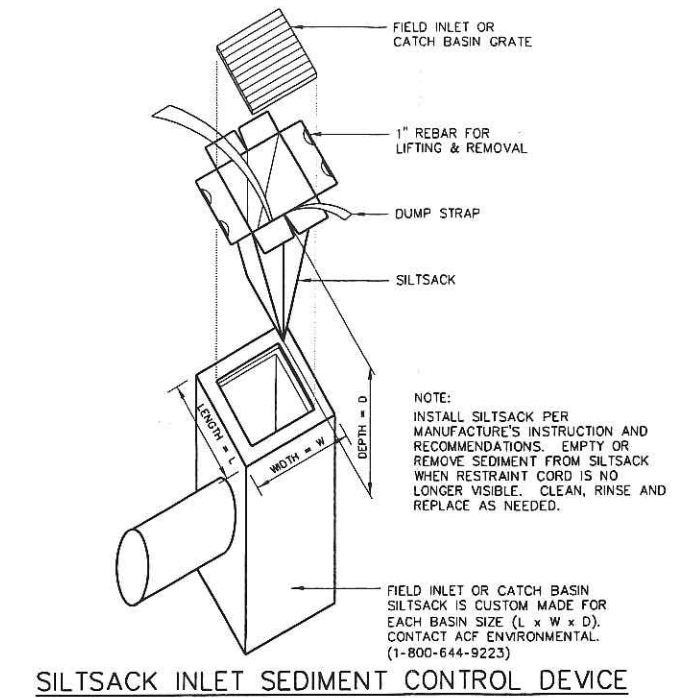
STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



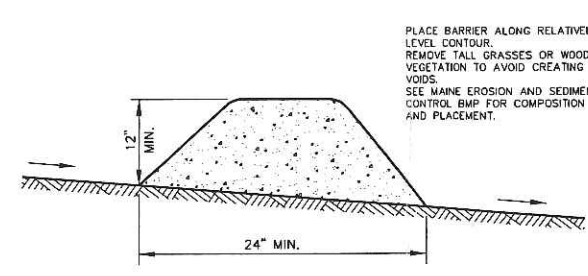
SILT FENCE DETAIL
N.T.S.



UNDERDRAIN DETAIL
N.T.S.



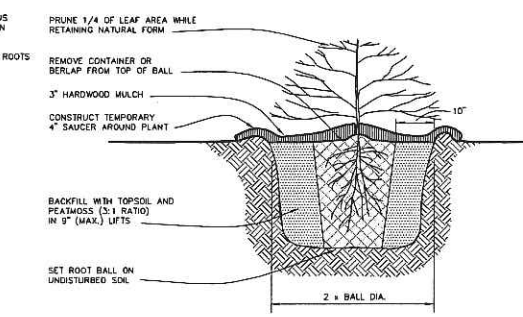
SILTSACK INLET SEDIMENT CONTROL DEVICE
N.T.S.



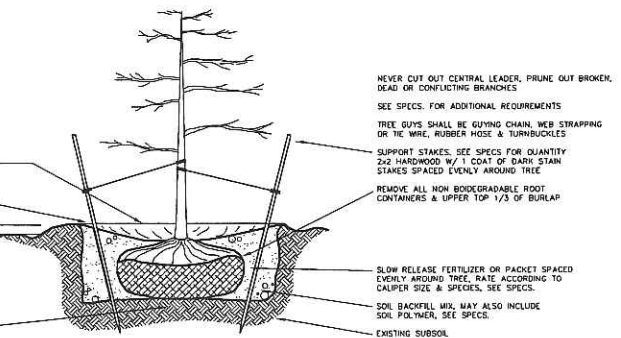
EROSION CONTROL MIX BERM
N.T.S.

LANDSCAPING NOTES:

- ALL PROPOSED PLANTING LOCATIONS SHALL BE STAKED CAREFULLY AS SHOWN ON THE PLANS FOR FIELD REVIEW BY THE ENGINEER OR CITY.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL UTILITIES AND NOTIFY OWNER'S REPRESENTATIVE OF CONFLICTS.
- NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- INSTALL 3" OF BARK MULCH AT ALL PLANTING LOCATIONS.
- ALL TREES SHALL BE BALLED AND BURLAPPED, UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE.
- FINAL QUANTITY FOR EACH PLANT TYPE SHALL BE AS SHOWN ON THE PLAN. THIS NUMBER SHALL TAKE PRECEDENCE IN CASE OF ANY DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND ON THE PLAN.
- ANY PROPOSED PLANT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE CITY.
- ALL PLANT MATERIALS INSTALLED SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE MAINE NURSERY AND LANDSCAPE ASSOCIATION.
- ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE.
- EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TEMPORARY SNOW FENCE, ERECT SNOW FENCE (OR EQUAL) AT THE DRIP LINE OF THE TREE. CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS WITHIN THE LANDSCAPE AREAS. ANY DAMAGE TO EXISTING TREES, SHRUBS, OR LAWNS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- AREAS DESIGNATED "LOAM & SEED" SHALL RECEIVE 4" OF LOAM AND SPECIFIED SEED MIX. LAWNS OVER 3:1 SLOPE SHALL BE PROTECTED WITH EROSION CONTROL FABRIC.
- THE CONTRACTOR SHALL HAVE ALL FALL TRANSPLANTING HAZARD PLANTS DUG IN THE SPRING AND STORED FOR FALL PLANTING.
- LOAM AND SEED ALL AREAS NOT OTHERWISE TREATED.
- THE PLAN IS INTENDED FOR LANDSCAPING PURPOSES ONLY. REFER TO SITE/CIVIL DRAWINGS FOR ALL OTHER SITE CONSTRUCTION INFORMATION.
- THE LIMITS OF WORK FOR AREAS OF VEGETATION TO BE PRESERVED NEED TO BE FLAGGED PRIOR TO DOING AND SITE WORK. THE CITY ARBORIST SHOULD BE CONTACTED TO CONFIRM THE FLAGGED AREAS AND PRESERVATION TECHNIQUES CONTAINED IN NOTE #10.

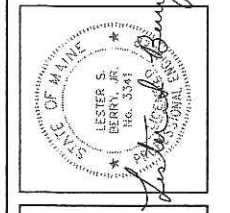


SHRUB PLANTING DETAIL
N.T.S.



TREE PLANTING & STAKING DETAIL
N.T.S.

NO.	DATE	DESCRIPTION
1	1/24/12	Submitted Amended Site Plan
2	3/12/12	Submitted Level 1 & II Site Plans



BH2M
Engineers, Surveyors
Berry, Huff, MacDonald, Milligan, Inc.
38 State Street
Portland, Maine 04108
Tel: (603) 859-9371
Fax: (603) 859-8250

FOR
Chabad Lubavitch
Baroness Street
Portland, Maine

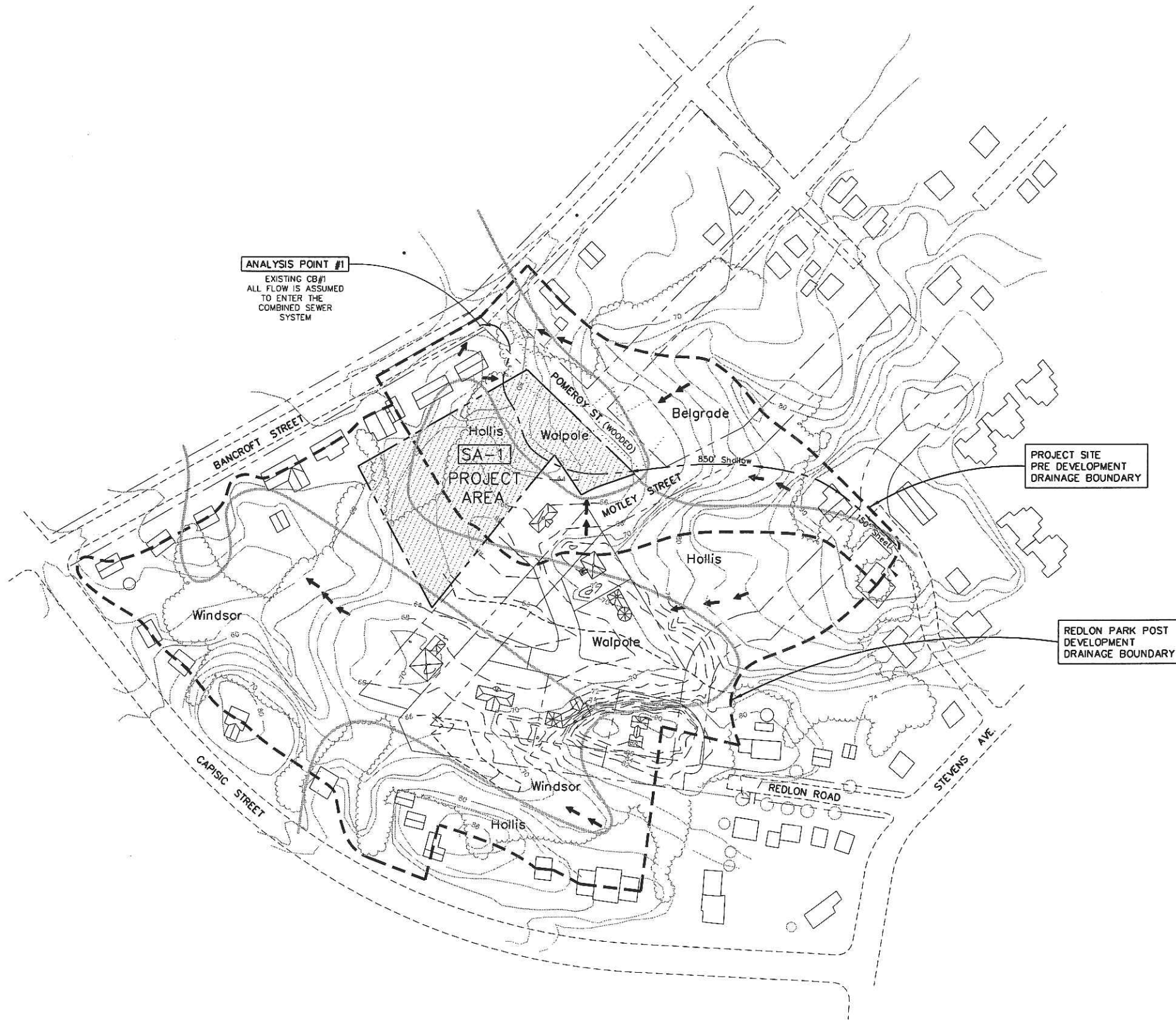
DETAIL SHEET
LAND OF
CHABAD LUBAVITCH OF MAINE INC.
POMEROY STREET
PORTLAND, MAINE

DESIGNED	DATE
W. Thompson	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB. NO.
W. Thompson	11093

SHEET
5
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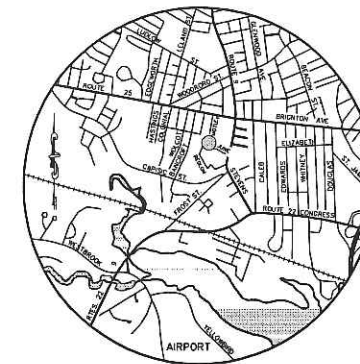
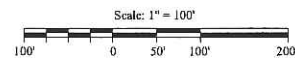


SOILS LEGEND

SYMBOL	DESCRIPTION
--- (dashed line)	SOIL BOUNDARY LINES
--- (dotted line)	LIMIT OF WETLANDS
--- (long dashed line)	DRAINAGE BOUNDARY
← (arrow)	FLOW DIRECTION

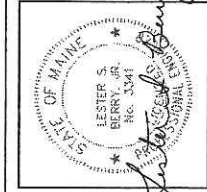
HYDROLOGIC SOIL GROUP

SOIL	GROUP
HOLLIS	C/D
WINDSOR	A
WALPOLE	C
BELGRADE	B



LOCATION MAP
SCALE: 1" = .5 MILES

NO.	DATE	REVISION DESCRIPTION
1	3/12/12	Submitted Level 1 & II Site Plans



BH2M
Berry, Fitz, MacDonald, Milligan Inc.
Engineers, Surveyors
28 State Street
Gorham, Maine 04038
Tel: (603) 839-2771
Fax: (603) 839-8250

Chabad Lubavitch
Bancroft Street
Portland, Maine

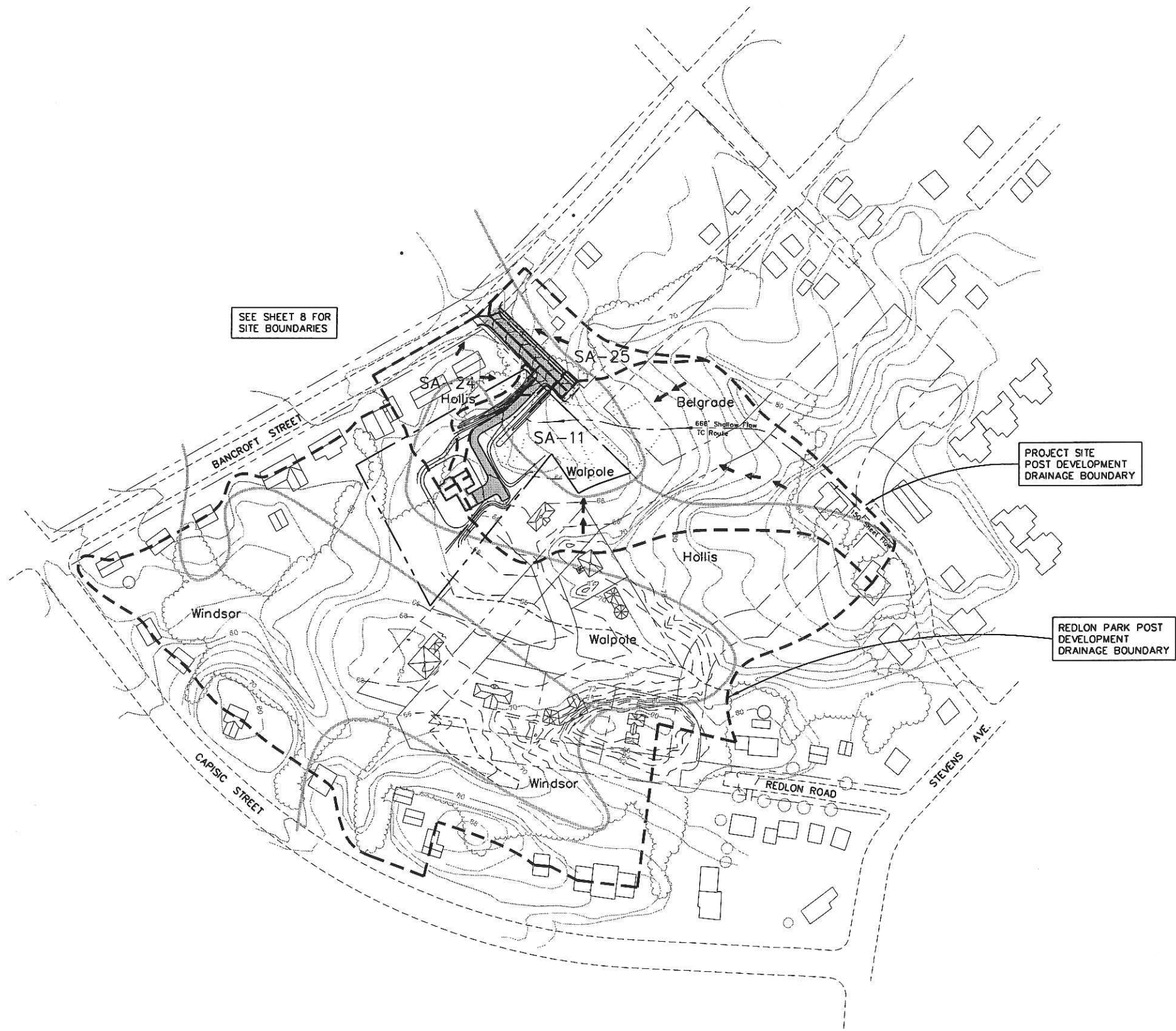
PRE DEVELOPMENT DRAINAGE PLAN
LAND OF
CHABAD LUBOVITCH OF MAINE INC.
POMEROY STREET
PORTLAND, MAINE

DESIGNED L. Berry	DATE Jan. 2012
DRAWN Dept.	SCALE As Noted
CHECKED L. Berry	JOB. NO. 11093

SHEET
6

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- NOTES:**
- TOPOGRAPHY: PLAN ENTITLED "DRAINAGE ANALYSIS, REDLON PARK" DATED JUNE 4, 1997, BY PINKHAM & GREER.
 - BOUNDARY: BH2M ROBER C. LIBBY JR. PLS #2190 28 STATE STREET GORHAM, MAINE
 - WETLAND DELINEATION: MARK HAMPTON & ASSOCIATES PORTLAND, MAINE
 - BENCHMARK: SEWER MANHOLE RIM, INTERSECTION OF BANCROFT AND POMEROY STREET, ELEV. 59.20, CITY OF PORTLAND DATUM
 - SOILS: CUMBERLAND COUNTY SOILS SURVEY, MEDIUM INTENSITY SOILS MAPS.



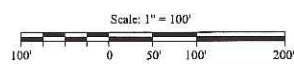
LOCATION MAP
SCALE: 1" = .5 MILES

SEE SHEET 8 FOR SITE BOUNDARIES

PROJECT SITE POST DEVELOPMENT DRAINAGE BOUNDARY

REDLON PARK POST DEVELOPMENT DRAINAGE BOUNDARY

SOILS LEGEND	
SYMBOL	DESCRIPTION
	SOIL BOUNDARY LINES
	LIMIT OF WETLANDS
	DRAINAGE BOUNDARY FLOW DIRECTION
HYDROLOGIC SOIL GROUP	
SOIL	GROUP
HOLLIS	C/D
WINDSOR	A
WALPOLE	C
BELGRADE	B



- NOTES:
- TOPOGRAPHY: PLAN ENTITLED "DRAINAGE ANALYSIS, REDLON PARK" DATED JUNE 4, 1997, BY PINKHAM & GREER.
 - BOUNDARY: BH2M
ROBER C. LIBBY JR. PLS #2190
28 STATE STREET
GORHAM, MAINE
 - WETLAND DELINEATION: MARK HAMPTON & ASSOCIATES
PORTLAND, MAINE
 - BENCHMARK: SEWER MANHOLE RIM, INTERSECTION OF BANCROFT AND POMEROY STREET, ELEV. 59.20, CITY OF PORTLAND DATUM
 - SOILS: CUMBERLAND COUNTY SOILS SURVEY, MEDIUM INTENSITY SOILS MAPS.

NO.	DATE	REVISION DESCRIPTION
1	3/12/12	Submitted Level I & II Site Plans



BH2M
 Berry, Huff, McDonald, Milligan, Inc.
 Engineers, Surveyors
 28 State Street
 Gorham, Maine 04038
 Tel: (207) 839-2771
 Fax: (207) 839-8250

FOR
 Chabad Lubovitch
 28 State Street
 Portland, Maine

VICINITY
 POST DEVELOPMENT
 LAND OF
 POMEROY STREET
 PORTLAND, MAINE
 CHABAD LUBOVITCH OF MAINE INC.

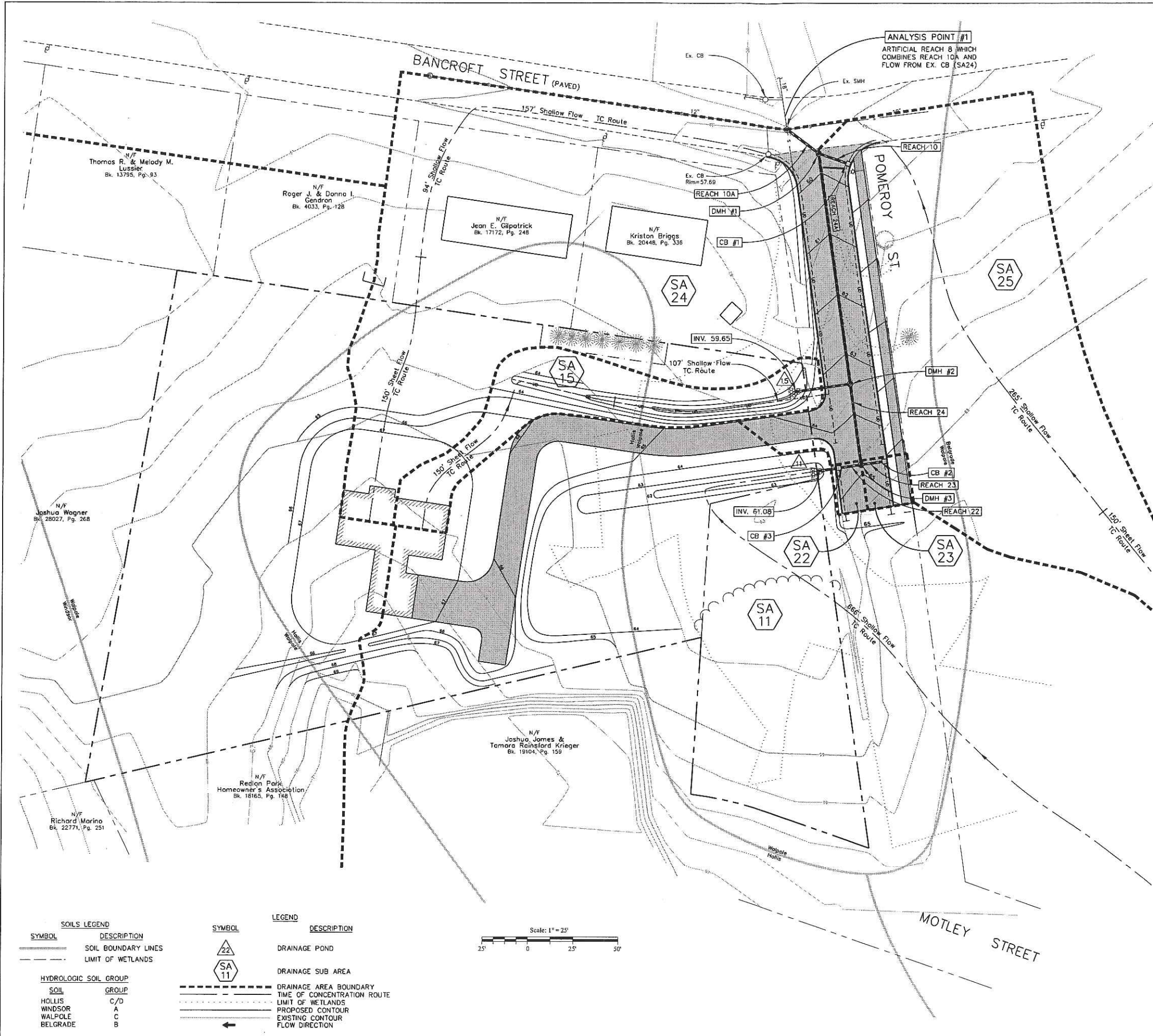
DESIGNED	DATE
L. Berry	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB NO.
L. Berry	11093

SHEET
7

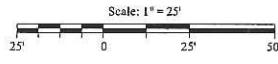
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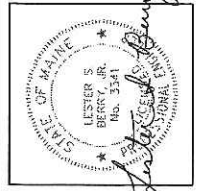


SOILS LEGEND		LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---	SOIL BOUNDARY LINES	22	DRAINAGE POND
- - - -	LIMIT OF WETLANDS	SA 11	DRAINAGE SUB AREA
HYDROLOGIC SOIL GROUP		---	DRAINAGE AREA BOUNDARY
SOIL	GROUP	- - - -	TIME OF CONCENTRATION ROUTE
HOLLIS	C/D	- - - -	LIMIT OF WETLANDS
WINDSOR	A	- - - -	PROPOSED CONTOUR
WALPOLE	C	- - - -	EXISTING CONTOUR
BELGRADE	B	←	FLOW DIRECTION



- NOTES:
- TOPOGRAPHY: BH2M ROBER C. LIBBY JR. PLS #2190 28 STATE STREET GORHAM, MAINE
 - BOUNDARY: BH2M ROBER C. LIBBY JR. PLS #2190 28 STATE STREET GORHAM, MAINE
 - WETLAND DELINEATION: MARK HAMPTON & ASSOCIATES PORTLAND, MAINE
 - BENCHMARK: SEWER MANHOLE RIM, INTERSECTION OF BANCROFT AND POMEROY STREET, ELEV. 59.20, CITY OF PORTLAND DATUM
 - SOILS: CUMBERLAND COUNTY SOILS SURVEY, MEDIUM INTENSITY SOILS MAPS.
 - PROPOSED IMPERVIOUS: SITE - 19,317 S.F. POMEROY STREET - 14,553 S.F.

NO.	DATE	REVISION DESCRIPTION
1	3/7/12	Submitted Level 1 & 11 Site Plans



BH2M
 Bert J. Huff, Donald J. Milligan, Inc.
 Engineers, Surveyors
 28 State Street
 Gorham, Maine 04038
 Tel: (207) 839-2771
 Fax: (207) 839-8250

FOR
 Chabad Lubovitch
 Portland, Maine

POST DEVELOPMENT
 DRAINAGE PLAN
 LAND OF
 CHABAD LUBOVITCH OF MAINE INC.
 POMEROY STREET
 PORTLAND, MAINE

DESIGNED L. Berry	DATE Jan. 2012
DRAWN Dept.	SCALE As Noted
CHECKED L. Berry	JOB. NO. 11093

SHEET
 8

REPRODUCTION OR RELEASE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED

PROJECT NAME: Site Plan - Chabad Lubavitch of Maine Inc.

PROPOSED DEVELOPMENT ADDRESS:
11 Pomeroy Street

PROJECT DESCRIPTION:
Construction of approximately 200 feet of Pomeroy Street

CHART/BLOCK/LOT: 193/E/1 **PRELIMINARY PLAN** _____ (date)
FINAL PLAN _____ (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Chabad Lubavitch of Maine Inc. Business Name, if applicable: N/A Address: Bancroft Street City/State : Portland, Me. Zip Code: 04102	Applicant Contact Information Work # N/A Home# Cell # N/A Fax# N/A e-mail: N/A
Owner – (if different from Applicant) Name: Address: Same as Above City/State : Zip Code:	Owner Contact Information Work # Home# Same as Above Cell # Fax# e-mail:
Agent/ Representative Name: William Thompson, BH2M Address: 28 State St. City/State : Gorham, Me. Zip Code: 04038	Agent/Representative Contact information Work # (207) 839-2771 Cell # N/A e-mail: wthompson@bh2m.com
Billing Information Name: King Weinstein Address: 198 Saco Ave. City/State : Zip Code: Old Orchard Beach, Me. 04064	Billing Information Work # N/A Cell # N/A Fax# N/A e-mail:

Engineer Name: Lester Berry, BH2M Address: 28 State Street City/State: Gorham, Me. Zip Code: 04038	Engineer Contact Information Work # (207) 839-2771 Cell # _____ Fax# (207) 839-8250 e-mail: N/A lberry@bh2m.com
Surveyor Name: Robert Libby Jr. Address: 28 State Street City/State: Gorham, Me. Zip Code: 04038	Surveyor Contact Information Work # (207) 839-2771 Cell # _____ Fax# (207) 839-8250 e-mail: N/A r1libby@bh2m.com
Architect Name: Gleason Architects Address: 152 Portsmouth Ave. City/State: Stratham, NH Zip Code: 03885-2418	Architect Contact Information Work # (603) 770-2882 Cell # _____ Fax# _____ e-mail: _____
Attorney Name: N/A Address: _____ City/State: _____ Zip Code: _____	Attorney Contact Information Work # _____ Cell # N/A Fax# _____ e-mail: _____

APPLICATION FEES:

Check all reviews that apply. (Payment may be made by Cash or Check payable to the City of Portland.)

Level II Development (check applicable reviews)	Fees Paid (office use)	Other Reviews (check applicable reviews)	Fees Paid (office use)
<input checked="" type="checkbox"/> Less than 10,000 sq. ft. (\$400.00) <input type="checkbox"/> After-the-fact Review (\$1,000.00 plus applicable application fee)	_____	<input type="checkbox"/> Traffic Movement (\$1,000) <input type="checkbox"/> Stormwater Quality (\$250) <input type="checkbox"/> Section 14-403 Review (\$400 + \$25/lot) # of Lots _____ x \$25/lot = _____ <input type="checkbox"/> Other _____ <input type="checkbox"/> Change of Use <input type="checkbox"/> Flood Plain <input type="checkbox"/> Shoreland <input type="checkbox"/> Design Review <input type="checkbox"/> Housing Replacement <input type="checkbox"/> Historic Preservation	_____
The City invoices separately for the following: <ul style="list-style-type: none"> • Notices (\$.75 each) • Legal Ad (% of total Ad) • Planning Review (\$40.00 hour) • Legal Review (\$75.00 hour) Third party review is assessed separately.	_____		
Plan Amendments (check applicable reviews) <input type="checkbox"/> Planning Staff Review (\$250) <input type="checkbox"/> Planning Board Review (\$500)	Fees Paid (office use) _____		

PROJECT DATA

The following information is required where applicable, in order complete the application

Total Site Area	73,821	sq. ft.
Proposed Total Disturbed Area of the Site	11,500	sq. ft.
(If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland)		
IMPERVIOUS SURFACE AREA		
• Proposed Total Paved Area	7131	sq. ft.
• Existing Total Impervious Area	0	sq. ft.
• Proposed Total Impervious Area	7731	sq. ft.
• Proposed Total Impervious Area	7731	sq. ft.
• Proposed Impervious Net Change	7731	sq. ft.
BUILDING AREA		
• Proposed Building Footprint	N/A	sq. ft.
• Proposed Building Footprint Net change	N/A	sq. ft.
• Existing Total Building Floor Area	N/A	sq. ft.
• Proposed Total Building Floor Area	N/A	sq. ft.
• Proposed Building Floor Area Net Change	N/A	sq. ft.
• New Building	N/A	(yes or no)
ZONING		
• Existing	R-3	
• Proposed, if applicable	R-3	
LAND USE		
• Existing	Wood Lot	
• Proposed	Single Family House Lot	
RESIDENTIAL, IF APPLICABLE		
• Proposed Number of Affordable Housing Units	N/A	
• Proposed Number of Residential Units to be Demolished	N/A	
• Existing Number of Residential Units	N/A	
• Proposed Number of Residential Units	N/A	
• Subdivision, Proposed Number of Lots	N/A	
PARKING SPACES		
• Existing Number of Parking Spaces	N/A	
• Proposed Number of Parking Spaces	N/A	
• Number of Handicapped Parking Spaces	N/A	
• Proposed Total Parking Spaces	N/A	
BICYCLE PARKING SPACES		
• Existing Number of Bicycle Parking Spaces	N/A	
• Existing Number of Bicycle Parking Spaces	N/A	
• Proposed Number of Bicycle Parking Spaces	N/A	
• Total Bicycle Parking Spaces		
ESTIMATED COST OF PROJECT	\$50,000	

APPLICATION SUBMISSION

As of December 1, 2010, all site plans and written application materials must be uploaded to a website for review. At the time of application, instructions for uploading the plans will be provided to the applicant. One paper set of the plans, written materials and application fee must be submitted to the Planning Division Office to start the review process.

Until December 1, 2010, submissions shall include seven (7) packets with folded plans containing the following materials:


1. **Seven (7) full size site plans** that must be **folded**.
2. Seven (7) copies of all written materials or as follows, unless otherwise noted:
 - a. Application form that is completed and signed.
 - b. Cover letter stating the nature of the project.
 - c. All Written Submittals (Sec. 14-525 2. (c), including evidence of right, title and interest.
5. A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 100 feet.
6. Plans and maps based upon the boundary survey and containing the information found in the attached sample plan checklist.
7. Copy of the checklist completed for the proposal listing the material contained in the submitted application.
8. One (1) set of plans reduced to 11 x 17.

Refer to the application checklist for a detailed list of submittal requirements.

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14), which includes the Subdivision Ordinance (Section 14-491) and the Site Plan Ordinance (Section 14-521). Portland's Land Use Code is on the City's web site: www.portlandmaine.gov Copies of the ordinances may be purchased through the Planning Division.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Level II Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

Signature of Applicant:  - agent	Date: 3/15/12
--	------------------

**General Submittal Requirements – Preliminary Plan (Optional)
Level II Site Plan
Preliminary Plan Phase Check list (if elected by applicant)**

Applicant Checklist	Planner Checklist	Number of Copies	Written Submittal Requirements
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Completed application form
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Application fees
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Written description of project
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Evidence of right, title and interest.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Copies of required State and/or Federal permits.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 ((1 paper copy as of Dec. 1)	Written assessment of zoning.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Written description of existing and proposed easements or other burdens.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Written requests for waivers from individual site plan and/or technical standards, where applicable.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Traffic analysis (may be preliminary, in nature, during the preliminary plan phase).
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Written summary of significant natural features located on the site.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Written summary of project's consistency with related city master plans.
Applicant Checklist	Planner Checklist	Number of Copies	Site Plan Submittal Requirements
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Boundary Survey meeting the requirements of Section 13 of the City of Portland Technical Manual.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Preliminary Site Plan Including the following: (*information provided may be preliminary in nature during preliminary plan phase):
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Existing and proposed structures with distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone).
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		▪ Location of adjacent streets and intersections and approximate location of structures on abutting properties.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		▪ Proposed site access and circulation.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		▪ Proposed grading and contours.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		▪ Location and dimension of existing and proposed paved areas including all parking areas and vehicle, bicycle and pedestrian access ways.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		▪ Preliminary landscape plan including existing vegetation to be preserved, proposed site landscaping and street trees.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		▪ Existing and proposed utilities (preliminary layout).
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		▪ Preliminary infrastructure improvements (e.g. - curb and sidewalk improvements, roadway intersection modifications, utility connections, transit infrastructure, roadway improvements).
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		▪ Preliminary stormwater management and erosion control plan.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		▪ Existing significant natural features located on the site (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features listed in Section 14-526 (b) 1. of the Land Use Code).

- Proposed alterations to and protection measures for significant natural features located on the site (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features listed in Section 14-526 (b)1. of the Land Use Code).

- Existing and proposed easements or public or private rights of way.

General Submittal Requirements – Final Plan (Required)

Level II Site Plan

Final Plan Phase Check list (including items listed above in General Requirements for Preliminary Plan, if applicant did not elect to submit for a preliminary plan review)

Applicant Checklist	Planner Checklist	Number of Copies	Written Submittal Requirement
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	Evidence of financial and technical capacity. <i>Windsor construction? sing for</i>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	Evidence of utilities' capacity to serve the development.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	Written summary of fire safety (referencing NFPA fire code and Section 3 of the City of Portland Technical Manual).
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	Construction management plan.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Traffic Plan (if development will (1) generate 100 or more PCE or (2) generate 25 or more PCE and is located on an arterial, within 1/2 mile of a high crash location, and/or within 1/4 mile of an intersection identified in a previous traffic study as a failing intersection).
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	Stormwater management plan.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	Written summary of solid waste generation and proposed management of solid waste.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	Written assessment of conformity with applicable design standards.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Manufacturer's verification that HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

Final Plan Phase

<input checked="" type="checkbox"/>	<input type="checkbox"/>	7 (1 paper copy as of Dec. 1)	Final Site Plan Including the following
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Existing and proposed structures on the site with distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone).
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Location of adjacent streets and intersections and approximate location of structures on abutting properties.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Proposed site access and circulation.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Proposed grading and contours.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Location and dimension of existing and proposed paved areas including all parking areas and vehicle, bicycle and pedestrian access ways. Proposed curb lines must be shown.
<input type="checkbox"/> N/A	<input type="checkbox"/>		Proposed loading and servicing areas, including applicable turning templates for delivery vehicles
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Proposed snow storage areas or snow removal plan.
<input type="checkbox"/> N/A	<input type="checkbox"/>		Proposed trash and recycling facilities.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Landscape plan including existing vegetation to be preserved, proposed site landscaping and street trees.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Existing and proposed utilities.

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Location and details of proposed infrastructure improvements (e.g. - curb and sidewalk improvements, roadway intersection modifications, utility connections, public transit infrastructure, roadway improvements).
<input type="checkbox"/> N/A	<input type="checkbox"/>	<ul style="list-style-type: none"> Proposed septic system, if not connecting to municipal sewer. (Portland Waste Water Application included in this application)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Proposed finish floor elevation (FFE).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Exterior building elevation(s) (showing all 4 sides).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Proposed stormwater management and erosion controls.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Exterior lighting plan, including street lighting improvements..
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Proposed signage.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Identification of existing significant natural features located on the site (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features listed in Section 14-526 (b)1. of the Land Use Code). Wetlands must be delineated.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Proposed alterations to and protection measures for of existing significant natural features located on the site (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features listed in Section 14-526 (b)1. of the Land Use Code).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Total area and limits of proposed land disturbance.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Soil type and location of test pits and borings.
<input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	<ul style="list-style-type: none"> Details of proposed pier rehabilitation (Shoreland areas only).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Existing and proposed easements or public or private rights of way.



Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

LESTER S. BERRY
WILLIAM A. THOMPSON
ROBERT C. LIBBY, Jr.
WALTER E. PELKEY
ANDREW S. MORRELL

March 16, 2012

City of Portland
Planning Division
389 Congress Street
Portland, ME 04103

RE: Level II-Preliminary and Final Site Plan Development Review
Pomeroy Street Construction
Bancroft Street

To whom it may concern:

On behalf of the applicant, Chabad Lubavitch of Maine Inc. , our office is submitting a Level II-Preliminary and Final Site Plan Development Review for the above referenced project. Please find attached seven (7) copies of the following information in support of this submission:

- Level II-Preliminary and Final Site Plan Development Review Application & Checklist
- Subject Parcel Deed (Book 21417 Page 198)
- Financial Capacity Information
- Fees (\$400 Submitted previously by applicant on 2/3/12)
- Tax Map 193 (Block E, Lot 1)
- Site Plans (Sheets 1 through 8-Full size and reduced)
- BH2M Technical Capacity Information
- U.S.G.S. Map
- Medium Intensity Soils Map
- NRPA Tier I Wetland Permit with Maine DEP (L22414-TB-A-N)
- Stormwater Management Report
- Maine DEP Permit-By-Rule-Stormwater
- Utility Capacity letters
- Wetland Delineation Logs (Mark Hampton Associates)

The parcel is located on the Southern side of the undeveloped paper right of way known as Pomeroy Street North of Capisic Street and is known as Tax Map 193, Block E, Lot 1. This parcel currently exists as an undeveloped wood lot owned by Chabad Lubavitch of Maine Inc. The total parcel consists of 73,821 s.f. and is zoned R-3 Residential (see Existing Conditions Plan-Sheet 2 for more information). This parcel was previously approved for a Site Plan and Conditional Use Permit back in August of 2005 by the City of Portland for a single family residence with attached synagogue, however, these permits have since expired. The applicant is proposing to develop this parcel with a single family home only and has proposed to exclude the previously proposed synagogue portion of the project. The project will also propose an outsale lot to be sold to Square One Construction Inc. for possible development as shown on the attached Site Plans. The proposed Lot will be served by public sewer, water and underground utilities from Bancroft Street. The development of this parcel will also involve the construction of approximately 200 feet of Pomeroy Street from Bancroft Street. This roadway extension work requires a Level II Preliminary and Final Site Plan Development Review permit as included within this submission. The work described above for the construction of the single family house lot requires a Level I Minor Residential Development Review Site Plan. This permit will be submitted concurrently with this application to the Inspection Division for review. Please note that these permits have been submitted as two separate permits as requested by the City of Portland. The site design is very similar to the previously approved site plan, with the major differences being the reduction in the proposed building footprint for the removal of the synagogue portion of the building and associated parking. The design of the Pomeroy Street Improvements have not changed much at all since the previously approved plans. The current design does not require any storm water permits, therefore, the proposed vegetated under drained soil filter field has been removed from the design. All appropriate erosion control techniques have been utilized to assure no adverse impacts are created to any abutters as a result of this project (see Details Sheet for Erosion Control Details and Notes and see Stormwater Management Report).

The prior approved project required the following permits:

- Conditional Use Permit-City of Portland
The current project requires a Level 1 Minor Residential Site Plan approval for the construction of the Single Family residence (to be reviewed by the Inspection Division) and a Level II Preliminary and Final Site Plan Permit for the construction of the Pomeroy Street extension (to be reviewed by the Planning Division).
- NRPA Wetlands Permit(Tier 1)-Maine DEP
The original permit was granted for the disturbance of 13,028 s.f. of wetlands. The current amended project requires the disturbance of only 10,462 s.f. Once this project is closer to City Approvals our office will work with the Maine DEP to coordinate the update of this permit for the current Site Design.

- Storm water Permit by Rule-Maine DEP
The current project does not require any state storm water permits since the disturbed area and impervious area have been reduced below current permitting thresholds. Please find attached a Stormwater Management Report meeting City of Portland Standards.

The following is a list of the Fire Department Items required as part of this submission:

- Applicant: Chabad Lubavitch of Maine Inc.
11 Pomeroy Street
Portland, Maine 04102
- Architect: Gleason Architects
152 Portsmouth Avenue
Stratham, NH 03885-2418
(603) 770-2882
- Proposed Use: Single Family Residence-Pomeroy Street Extension
- Building Footprint: 780 s.f. (2-Story)
- Fire Protection: New House will contain sprinkler system meeting City Ordinance
- Hydrant location: Hydrant proposed as part of Pomeroy Street construction located on the Northern Side of Pomeroy Street approximately 140 feet East of Bancroft Street and across from the proposed driveway of the proposed single family residence.

A copy of this application and supporting information has been submitted to the Fire Department.

The following are some additional submission requirements for this application:

Descriptions of Easements on parcel:

The subject parcel contains no existing easements onsite (see sheet 2) .

Waivers:

The work associated with the extension of Pomeroy Street will require a waiver for a sidewalk on one side of Pomeroy Street.

Traffic Analysis:

The construction of one single family residence will result in the following traffic counts according to Trip generation, 3rd Edition by Institute of Transportation Engineers:

Average Weekday Trips (In and Out)	10
AM Peak Hour (In and Out)	0.8
PM Peak Hour (In and Out)	1.0
Peak Hour Generator	1.0

Natural Resource Summary:

The site contains some existing wetlands as delineated by Mark Hampton Associates. The wetlands are not classified as wetlands of special significance and flow from South to North across the Site (See sheet 2 of the plans for more information).

Master Plan Conformance:

The proposed work is a permitted use within the R-3 District and we are not aware of any conflicts between the proposed work and the City's Master Plan. Pomeroy Street is a undeveloped existing City Right of Way.

Construction Management Plan:

The construction of the Pomeroy Street Extension will be monitored by our office. BH2M will work with the contractor and the City of Portland to assure the construction is completed as designed on the plans. A weekly construction report will be generated by our office for the contractor and the City to review. Prior to the commencement of construction the contractor, our office and the City will hold a Pre-Construction meeting to coordinate the details of the construction process.

Waste Management Plan:

The owners of the proposed Single Family house as part of this project will be responsible for delivering all solid waste to a local waste disposal facility. The Pomeroy Street Extension will be offered to the City for acceptance as a public street. If accepted by the City, then the waste disposal for this home can be collected by the City. The contractor building the project is responsible for removing all construction waste to an approved local waste facility.

Design Standards Conformity:

The design meets all applicable design standards except for the need for a sidewalk on both sides of the Roadway (Pomeroy Street). The applicant has requested a waiver from this requirement (sidewalk proposed on Northern Side of Pomeroy Street only).

HVAC Emissions Requirements:

The HVAC system that will accompany the single family residence portion of this project will meet all applicable state and federal emission requirements.

Signage:

The only sign proposed for this project is the street sign proposed at the intersection of Pomeroy Street and Bancroft Street as shown on the Site Plan (Sheet 1). The sign will meet all applicable City requirements.

Lighting:

The only street light proposed for this project is the light proposed at the intersection of Pomeroy Street and Bancroft Street as shown on the Site Plan (Sheet 1). The light will meet all applicable City requirements.

Zoning Summary:

Single Family House Lot-Site Plan (Sheet 1)

This lot is not part of this application, however, all applicable zoning information for this lot can be found on the above referenced plan.

Outsale Lot-Site Plan (Sheet 1)

This lot is also not part of this application, however, all applicable zoning information for this lot can be found on the above referenced plan. The plans have allocated a building window in case this lot was to be developed by the owner. The wetland impacts associated with this work have been included in the impacts stated for this project.

This project had previously been submitted to the City back in January (with a subsequent submission in February). Our office received a letter from the City dated February 15, 2012 summarizing the submission process required for this project. This submission along with the separate submission for the Level I Minor Residential Site Plan Review permit for the construction of a single family home has been prepared as requested by the City of Portland.

We look forward to working with City Staff and the Fire Department on this project. Please contact our office if you have any questions or if you need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew S. Morrell". The signature is fluid and cursive, with the first name being the most prominent.

Andrew S. Morrell, E.I.

Cc: Frederick Lamontagne, City of Portland Fire Chief

Level II Preliminary and Final Site Plan Submission-3-16-2012



Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

LESTER S. BERRY
WILLIAM A. THOMPSON
ROBERT C. LIBBY, Jr.
WALTER E. PELKEY
ANDREW S. MORRELL

June 6, 2012

City of Portland
Inspection Office
389 Congress Street
Portland, ME 04103

RE: Level I-Minor Residential Development Review Site Plan
Single Family Lot
11 Pomeroy Street

To whom it may concern:

On behalf of the applicant, Chabad Lubavitch of Maine Inc. , our office is submitting a Level 1-Minor Residential Development Review Site Plan for the above referenced project. Please find attached three (3) copies of the following information in support of this submission:

- Level 1-Minor Residential Development Review Application & Checklist
- Subject Parcel Deed (Book 21417 Page 198)
- Financial Capacity Information
- Fees (\$300 Application Fee, \$100 Inspection Fee, \$75 Certificate of Occupancy Fee and \$1,820 Building Permit Fee- Total \$2,295)
- Tax Map 193 (Block E, Lot 1)
- Site Plans (Sheets 1 through 8-Full size)
- BH2M Technical Capacity Information
- U.S.G.S. Map
- Medium Intensity Soils Map
- NRPA Tier I Wetland Permit with Maine DEP (L22414-TB-A-N)
- Building Elevations/Structural Plans (including all building permit submittal requirements)
- Stormwater Management Report
- Maine DEP Permit-By-Rule-Stormwater
- All Submissions in electronic format (cd)

The parcel is located on the Southern side of the undeveloped paper right of way known as Pomeroy Street North of Capisic Street and is known as Tax Map 193, Block E, Lot 1.

The following is a list of the Fire Department Items required as part of this submission:

- Applicant: Chabad Lubavitch of Maine Inc.
11 Pomeroy Street
Portland, Maine 04102

- Architect: Gleason Architects
152 Portsmouth Avenue
Stratham, NH 03885-2418
(603) 770-2882

- Proposed Use: Single Family Residence

- Building Footprint: 2680 s.f. (3-Story)

- Fire Protection: New House will contain sprinkler system meeting City Ordinance

- Hydrant location: Hydrant proposed as part of Pomeroy Street construction located on the Northern Side of Pomeroy Street approximately 140 feet East of Bancroft Street and across from the proposed driveway of the proposed single family residence.

The following are some additional submission requirements for this application:

Descriptions of Easements on parcel:

The subject parcel contains no existing easements onsite (see sheet 2) .

Waivers:

This project does not require any waivers from City Standards. The work associated with the extension of Pomeroy Street will require a waiver for a sidewalk on one side of Pomeroy Street (see Level II Application for more information).

This project had previously been submitted to the City back in January (with a subsequent submission in February). Our office received a letter from the City dated February 15, 2012 summarizing the submission process required for this project. This submission along with the separate submission for the Level II Preliminary and Final Site

Project Address: <u>Pomeroy Street</u>		
Total Square Footage of Proposed Structure/Area: 2680 s.f.	Area of lot (total sq. ft.): Garage: Yes <u>X</u> No _____ Attached <u>X</u> Detached _____ Sq. Ft.: <u>624</u> s.f.	Number of Stories: <u>3</u> Number of Bathrooms: <u>6</u> Number of Bedrooms: <u>11</u>
Tax Assessor's Chart, Block & Lot(s):		
<u>Chart#</u>	<u>Block #</u>	<u>Lot #</u>
193	E	001
Current legal use: <u>Undeveloped wood lot</u>		
Number of Residential Units <u>0</u>		
If vacant, what was the previous use? <u>wood lot</u>		
Is property part of a subdivision? <u>No</u> If yes, please name <u>N/A</u>		
Project Description: <u>Single Family Residence</u>		
Applicant – must be owner, Lessee or Buyer		Applicant Contact Information
Name: <u>Chabad Lubavitch of Maine, Inc.</u>		Work # <u>N/A</u>
Business Name, if applicable: <u>N/A</u>		Home# <u>N/A</u>
Address: <u>Bancroft Street</u>		Cell # <u>N/A</u>
City/State: <u>Portland, Me.</u> Zip Code: <u>04102</u>		e-mail: <u>N/A</u>
Owner – (if different from Applicant)		Owner Contact Information
Name:		Work #
Address: <u>Same as above</u>		Home# <u>Same as above</u>
City/State: Zip Code:		Cell #
		e-mail:
Billing Information		Contact when Building Permit is Ready:
Name: <u>King Weinstein</u>		Name: <u>King Weinstein</u>
Address: <u>198 Saco Avenue</u>		Address: <u>198 Saco Avenue</u>
City/State: <u>Old Orchard Beach</u> Zip Code: <u>04064</u>		City/State: <u>Old Orchard Beach</u> Zip Code: <u>04064</u>
Phone Number: <u>N/A</u>		Phone Number: <u>N/A</u>

(A CD or PDF (e-mailed to buildinginspections@portlandmaine.gov) of the entire application, including all plans, must be submitted with the application.)

General Submittal Requirements – Level I Minor Residential			
Applicant Checklist	Planner Checklist (internal)	Number of Copies	Submittal Requirement
X		2	Completed application form and check list.
X		1	Application fees.
X		2	Evidence of right, title and interest.
X		2	Copies of required state and/or federal permits.
X		2	Written Description of existing and proposed easements or other burdens.
X		2	Written requests for waivers from individual site plan and/or technical standards.
X		2	Written summary of fire safety (referencing NFPA fire code and Section 3 of the City of Portland Technical Manual). Refer to Fire Department Checklist on page 6 of this application..

Site Plans and Boundary Survey Requirements – Level I Minor Residential			
Applicant Checklist	Planner Checklist (internal)	Number of Copies	Submittal Requirement
X		3	Boundary survey meeting the requirements of section 13 of the City of Portland Technical Manual with the site plan information listed below shown on the plan, including a north arrow and a scale greater than or equal to 1"=20'. (Photocopies of the plat or hand drawn building footprints will not be accepted.)
X			▪ Zoning district, setbacks and dimensional requirements. Show zone lines and overlay zones that apply to the property, including Shoreland Zone &/or Stream Protection Zone.
X			▪ Existing and proposed structures (including location of proposed piers, docks or wharves if in Shoreland Zone).
X			▪ Location and dimension of existing and proposed paved areas.
X			▪ Proposed ground floor area of building.
X			▪ Finish floor elevation (FEE) or sill elevation.
X			▪ Exterior building elevations (show all 4 sides).
X			▪ Existing and proposed utilities (or septic system, where applicable)
X			▪ Existing and proposed grading and contours.
X			▪ Proposed stormwater management and erosion controls.
X			▪ Total area and limits of proposed land disturbance.
X			▪ Proposed protections to or alterations of watercourses.
X			▪ Proposed wetland protections or impacts.
X			▪ Existing vegetation to be preserved and proposed site landscaping and street trees (2 trees per unit for a single or two-family house).

WARRANTY DEED

KNOW ALL PERSONS BY THESE PRESENTS, that MOSHE WILANSKY and CHANA WILANSKY of Portland, Maine, for consideration paid, GRANTS TO CHABAD LUBAVITCH OF MAINE, INC., a Maine non-profit corporation whose mailing address is 101 Craigie Street, Portland, ME 04102, with WARRANTY COVENANTS, the premises situated in the City of Portland, County of Cumberland and State of Maine, described as follows:

A certain lot or parcel of land located on the southwesterly sideline of Pomeroy Street, so-called, in the City of Portland, County of Cumberland and State of Maine; said parcel being more particularly described as follows:

Beginning at an 1/2" iron rod found on the southwesterly sideline of said Pomeroy Street at the southeasterly corner of land now or formerly of Kriston Briggs;

Thence South 46° 11' 30" East along the southwesterly sideline of said Pomeroy Street a distance of 269.44 feet to a capped iron rod found (PLS #1278) and the northerly sideline of Motley Street, so-called;

Thence South 71° 08' 30" West along the northerly sideline of said Motley Street a distance of 58.71 feet to a point;

Thence in a general southwesterly direction along the northerly sideline of said Motley Street and along a circular curve to the left, circumscribed by a radius of 218.81 feet, an arc length of 44.47 feet to a capped iron rod found (PLS #1278) and land now or formerly of Joshua James and Tamara Rainsford Krieger; said capped iron rod found being South 65° 19' 13" West a tie distance of 44.39 feet from said previous capped iron rod found;

Thence North 34° 26' 02" West along the land of said Krieger a distance of 86.47 feet to a capped 5/8" iron rod found (PLS #1172);

Thence South 38° 44' 24" West along the land of said Krieger, along land now or formerly of the Redlon Park Homeowner's Association, and along land now or formerly of Nancy A. Roy a distance of 350.00 feet to a point and remaining land of Stuart B. Herrick, Jr.;

Thence North 28° 05' 22" West along the remaining land of Stuart B. Herrick, Jr. a distance of 286.03 feet to a point and land now or formerly of Thomas and Melody Lussier;

Thence North 60° 18' 30" East along the land of said Lussier, along land now or formerly of Roger and Donna Gendron, along land now or formerly of Jean Gilpatrick and along land of said Briggs a distance of 350.00 feet to the point of beginning.

The above-described parcel contains 87,924 square feet. All bearings refer to Magnetic North as observed in 1973.

Reference is made to an unrecorded plan entitled Plan of Property, Bancroft Street, Portland, Maine, dated July 31, 1986, by R.F. Titcomb Associates, Inc. (Job #8660), as revised by unrecorded plan entitled Standard Boundary Survey and existing Conditions Plan for Stuart B. Herrick, Jr., dated March 2004, by BH2M (Job #03217).

March 26, 2012

City of Portland Planning office.
Congress St.
Portland, ME 04101

RE: Chabad House

Dear Planning Department,

Windsor Construction has the financial and technical experience to construct this project per plans and approvals. If you need any additional information I can be reached at (207) 518-5792.

Sincerely,



Betty J. Olson
Senior Vice President



Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

LESTER S. BERRY
WILLIAM A. THOMPSON
ROBERT C. LIBBY, Jr.
WALTER E. PELKEY
ANDREW S. MORRELL

November 12, 2012

City of Portland
Inspection Office & Planning Division
389 Congress Street
Portland, ME 04103

RE: Level I-Minor Residential Development Review Site Plan Revisions
Level II-Preliminary & Final Site Plan Development Revisions
Chabad Lubavitch of Maine LLC.
Pomeroy Street

Dear Nell Donaldson:

On behalf of the applicant, Chabad Lubavitch of Maine Inc., our office is submitting revisions for the above referenced project for both the Level I Site Plan application with the Inspection Division and the Level II Site Plan application with the Planning Division for the above referenced project. These revisions come in response to comments from the City. Please find attached five copies (4 copies for Level I application and 1 copy for Level II application) of the following information in support of this submission as well as digital copies of this information on cd. Our responses to the comments received from the City have been sorted by the source of the comment and we are utilizing the same numbering system for clarity:

- Letter from Gorham Savings Bank-10-30-2012
- Revised Storm Water Management Report
- Revised Site Plans
- All Submissions in electronic format (cd)

Comments from Nell Donaldson, City Planner, dated September 26, 2012:

Transportation Standards

1. The plans have been revised to include a turnaround as required with associated easement (see Sheet 1).
2. The City crosswalk details and ADA Warning Strip Detail has also been added to the details (see Sheet 3).

3. A waiver is sought by the applicant for the elimination of sidewalk along Pomeroy Street on the southwestern side only. Sidewalk is proposed along the Northeastern side of the roadway (see Sheet 1 of plans). The following is justification for this waiver citing the specific waiver criteria listed in the City of Portland Land Use Ordinance-Section 14-506:
 - A. Pedestrian Usage: Pomeroy Street is not expected to experience heavy pedestrian traffic. Sidewalk on one side of the roadway is more than adequate to handle the expected pedestrian traffic. Pomeroy Street is not anticipated to collect pedestrian traffic from Bancroft Street as the southerly sides of all of Kenilworth Street, Pomeroy Street and Motley Street remain undeveloped.
 - B. Existing Sidewalk: Bancroft Street currently does not have any existing sidewalk or any planned in the future that our office is aware of in the area of Pomeroy Street and this project.
 - C. Safe Alternative- A safe alternative to a sidewalk along the southwestern side of the proposed Pomeroy Street exists as a sidewalk is proposed along the Northeastern side of Pomeroy Street that is anticipated to adequately handle the limited pedestrian traffic within this area.
 - D. Capital Improvement Program: This project is not part of the City Capital Improvement Program.
 - E. Recent Construction: Pomeroy Street is currently undeveloped.
 - F. Site Features: A sidewalk constructed on the Southwestern side of Pomeroy Street would need to be constructed for the most part entirely within wetlands. The elimination of sidewalk on this side of Pomeroy Street reduces the impacts to the wetlands. A Tier One NRPA Permit for wetland alteration is required for the construction of this project.

Environmental Quality Standards

1. Our office has worked closely with David Margolis-Pineo of the City's Department of Public Services to resolve this issue. At Mr. Pineo's recommendation we have made the following design changes in an attempt to limit the amount of runoff and groundwater flow that is directed to the City's combined sewer/drainage line within Bancroft Street:

- A. The proposed drainage system and subsequent curbing within Pomeroy Street has been eliminated except for the catch basin at the intersection of Pomeroy and Bancroft Street.
- B. The elimination of the storm drain system within Pomeroy Street includes the elimination of the drainage inlets that the City was concerned with collecting groundwater and subsequently permanently affecting the hydrology of the area.
- C. A culvert was added below the proposed driveway. The culvert will direct runoff from the upstream wetlands under the driveway and into the wetlands on the other side of the site that flow overland to the existing catch basin within Bancroft Street. This culvert was proposed at grade to assure no groundwater from the surrounding wetlands was directed to Bancroft Street and the subsequent combined sewer/drainage line.

The benefits of this design are as follows:

- A. By keeping the proposed Catch Basin #1 to collect sheet flow from the entire length of Pomeroy Street along with the existing catch basin this design assures no runoff shall enter the intersection at Bancroft Street, thus increasing the safety of this intersection especially in the winter season.
- B. The current design will discourage the collection of groundwater associated with the onsite wetlands. This will limit the potential for directing groundwater from the area and thus affecting the hydrology of the upstream resources to the combined sewer/drainage system within Bancroft Street. It is our understanding that limiting the volume of runoff directed to the City's combined sewer/drainage system within Bancroft Street is of paramount importance for the development of this parcel.
- C. The current design will encourage infiltration of onsite runoff within the abutting wetlands. This will be accomplished by the elimination of the storm drain system within Pomeroy Street and thus proposing a culvert below the driveway that will encourage all onsite runoff to flow along the existing wetlands towards Bancroft Street as it does in the current pre development conditions. The use of

this existing wetland will ultimately reduce the volume of runoff directed to the combined sewer/drainage system within Bancroft Street.

The elimination of the curbing proposed along Pomeroy Street will require a waiver from the Department. This waiver is strongly recommended by Mr. Pineo. A waiver is sought by the applicant for the elimination of curbing along the entire length of Pomeroy Street as shown on the Plans. The following is justification for this waiver citing the specific waiver criteria listed in the City of Portland Land Use Ordinance-Section 14-506:

- A. Costs: In our experience a road meeting the specifications proposed for Pomeroy Street (as previously designed with curbing) would cost approximately \$400 per linear foot. With a total length of 200 feet, it is estimated the costs to construct this roadway would be \$80,000. A total of approximately 400 linear feet of Vertical Granite Curbing was previously been proposed. At a current construction cost of \$45 per linear foot, the total costs anticipated for this curbing is \$ 18,000. The vertical granite curbing costs would therefore account for approximately 22% of the project costs.
- B. Capital Improvement Program: This project is not part of the City Capital Improvement Program.
- C. Recent Construction: Pomeroy Street is currently undeveloped.
- D. Site Features: The construction of curbing would not have a significant effect on the existing site features as they relate to greater public value.
- E. Runoff: As described above, runoff from Pomeroy Street is not required to be collected within a closed drainage system as needed with curbing. In fact, the use of sheet flow and the elimination of the curbing will be a benefit to the City, as this will encourage infiltration within the wetlands, thus reducing the volume of runoff directed to the City's combined sewer/drainage system within Bancroft Street.

2. The following is a summary of the Urban Impaired Stream Compensation Fee as described within Maine DEP Chapter 500 Standards:

Development Areas

Non-roof Impervious Area (inc. porches)=3,092 s.f. (0.07 Ac.)

Roof Impervious Area=13,408 s.f. (0.31 Ac.)

Landscaped Area=26,425 s.f. (0.61 Ac.)

Total Disturbance=42,925 s.f. (0.99 Ac.)

Compensation Fees

Non-roof Impervious Area=\$5,000 per acre

Roof Impervious Area=\$2,000 per acre

Landscaped Area=\$1,000 per acre

Calculation of Fee

Non-roof Impervious Area=\$5,000 * 0.07=\$350

Roof Impervious Area=\$2,000 *0.31=\$620

Landscaped Area=\$1,000 *0.61=\$610

Total Compensation Fee=\$1,580

3. Please find attached a revised Storm Water Management Report that addresses these comments.
4. The Appendix D within the Storm Water Management Report has been revised to include Chapter 32 of the City of Portland Code of Ordinances.

Public Infrastructure and Community Safety Standards

1. The detail on Sheet 4 has been revised to meet the City of Portland Technical Manual Standards.

Site Design Standards

1. Note #21 on the Site Plan has been revised to reflect these requirements.

Additional Submittals Required

1. Note #28 on the Site Plan has been revised as requested.
2. The City Engineering Department gave us the elevation of a sewer manhole within Bancroft Street at the Intersection with Pomeroy Street on the City datum. This information was used along with our on the ground survey to set the above project benchmark.
3. The above described revisions have removed a lot of information from the Site Plan. It is our opinion that a separate roadway survey plan which

shows the bearings and distances associated with the portion of Pomeroy Street to be offered to the City is no longer needed as this information is now clear on the Site Plan (Sheet 1).

- ✓ 4. Please find attached a letter from Gorham Savings Bank as requested.

Zoning

- ✓ 1. The applicant understands that prior to the issuance of a certificate of occupancy for the single family house lot proposed a recorded deed of the outsale lot will be required.
- ✓ 2. The covered porch has been added to the plans as requested.

Comments from David Margolis-Pineo, Dept. of Public Services, dated September 19, 2012:

1. See Comment 1 within Environmental Quality Standards from Nell Donaldson above.
2. The detail on Sheet 4 has been updated as requested.
3. Please refer to Note #26 on the Site Plan (Sheet 1).
4. The plans have been revised to include a turnaround as required with associated easement (see Sheet 1).
5. Please refer to details on Sheet 4 of plans.
6. Please refer to details on Sheet 4 of plans.
7. The City crosswalk details and ADA Warning Strip Detail has also been added to the details (see Sheet 3).
8. Note #21 on the Site Plan (Sheet 1) has been revised to reflect these requirements.
9. Please refer to Note #28 on the Site Plan (Sheet 1).
10. The plans are on Maine State Coordinate System, see Site Plan (Sheet 1) for more information.
11. The City Engineering Department gave us the elevation of a sewer manhole within Bancroft Street at the Intersection with Pomeroy Street on the City datum. This information was used along with our on the ground

survey to set the above project benchmark.

12. No drainage easements are required for this design.
13. The above described revisions have removed a lot of information from the Site Plan. It is our opinion that a separate roadway survey plan which shows the bearings and distances associated with the portion of Pomeroy Street to be offered to the City is no longer needed as this information is now clear on the Site Plan (Sheet 1).
14. Please see above for waiver requests for both sidewalks on one side of Pomeroy Street as well as for the elimination of curbing.

Comments from David Senus, Woodard & Curran, dated September 20, 2012:

1. Comment addressed previously.
2. This permit will be provided once it has been received from the Maine DEP.
3. See Comment 1 within Environmental Quality Standards from Nell Donaldson above.
4. Comments addressed previously.
5. See Comment 1 within Environmental Quality Standards from Nell Donaldson above. All other comments as part of this section have been addressed previously.
6. See Comment 2 within Environmental Quality Standards from Nell Donaldson above.
7. See Comment 1 within Environmental Quality Standards from Nell Donaldson above. All other comments as part of this section have been addressed previously. Please also find attached a revised Storm Water Management Report that has been updated per the revisions made to the plans as well as to meet the revisions requested.
8. The Appendix D within the Storm Water Management Report has been revised to include Chapter 32 of the City of Portland Code of Ordinances.

We believe these revisions address all of the outstanding issues remaining for this project. Please contact our office if you have any questions or if you need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew S. Morrell". The signature is written in a cursive style with a large, sweeping initial "A".

Andrew S. Morrell, E.I.

Level I&II Revisions-11-12-2012



October 30, 2012

To: Portland Planning Office:

RE: King Weinstein / Windsor Construction

Dear Ladies & Gentlemen:

King Weinstein has been a great customer of Gorham Savings Bank since August of 2005. To the best of our knowledge King Weinstein does have the adequate financial ability to construct the proposed Wiliansky single family residence off Pomroy Street with all associated site improvements, access road, water and sewer ect.

While this is in no way to be construed as a commitment to lend funds, we believe that the Buyer has adequate financial capacity and management skills.

If you should need further information or clarification, please contact me at 839-3342, extension 1108.

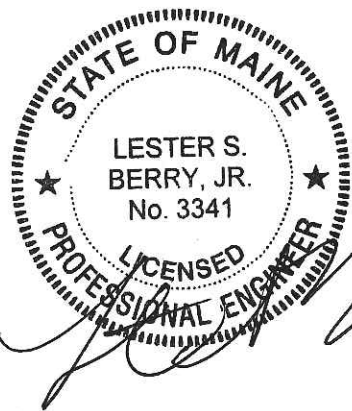
Sincerely,

A handwritten signature in black ink, appearing to read "Matthew W. Early", written over a circular scribble.

Matthew W. Early
Senior Vice President – Commercial Services

**STORMWATER MANAGEMENT REPORT
FOR
CHABAD LUBAVITCH OF MAINE INC.
POMEROY STREET
PORTLAND, MAINE**

**April 2005
Revised March 2012
Revised November 2012**



Prepared By:

**BH2M Engineers
Engineers Surveyors Planners
28 State Street
Gorham, ME 04038
207-839-2771
FAX 207-839-8250
lberry@bh2m.com**

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- B. Maps**
- C. Pre-development Site Plan**
- D. Post-development Site Plan**
- E. Runoff Analysis**

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Appendix B – Maps

Appendix C – Stormwater Calculations (HydroCAD)

Appendix D – O & M Plan

STORMWATER MANAGEMENT REPORT

For: **Chabad Lubavitch of Maine, Inc.**
Portland, Maine

Introduction

Chabad Lubavitch of Maine, Inc. is proposing to construct a single-family residence on his parcel. This project also includes the construction of approximately 200 feet of Pomeroy Street. This site is a 1.69-acre parcel of land located off of Pomeroy Street in Portland. See attached USGS Location Map.

Pomeroy Street is an un-constructed public way. Part of the proposed development includes constructing Pomeroy Street to the City of Portland standards.

The project site will be served by public water and public sewer. Both utilities shall be extended to the site from Bancroft Street.

The total impervious area of the residence, driveway and Pomeroy Street equals 16,500 s.f. This is below the threshold for a DEP Stormwater Permit. Therefore, this report is for City of Portland Site Plan approval only.

A. Narrative

This site will house the residence of Rabbi Wilansky of Chabad Lubavitch of Maine, Inc. The building will be served by public water and sewer.

Construction of this building and related site improvements will not require a DEP Stormwater Permit. A similar project on this site was previously approved by the City of Portland for a single family home with attached assembly space (Site Plan and Conditional Use permits) back in August of 2005. These permits have since expired so the applicant is seeking to get new permits for the project with the removal of the assembly space. The original project received a DEP Tier I Wetland Alteration Permit (L22414-TB-A-N) for the filling of 13,028 s.f. of wetlands. An amendment to the Wetland Alteration Permit is required for this revised project since the wetland impacts have been reduced for the current proposed project (12,702 s.f.). This permit application will be filed by our office later in the approval process when the plans are further along.

B. Maps

See Appendix B.

C. Pre-development Site Plan

It is our understanding that abutters have drainage concerns about this project and continued concerns regarding a previous project called Redlon Park. We were able to obtain a digital file of the broader area that included the post-development drainage area for Redlon Park. As shown on the plan, the Redlon Park post-development basin generally passes to the south of the project site.

The project drainage basin consists of 6.10 acres of land that is tributary to an existing catchbasin on Bancroft Street. The project site (1.69 acres) makes up less than 1/3 of the drainage area. The basin is predominantly wooded except for the 5-6 existing homes. Although the site is moderately graded, the site appeared to be rather wet with sluggish drainage. The project will have no impact on the homes and land uphill (to the south).

D. Post-development Site Plan

The post-development plan is shown at a 1"=100 scale to provide an overall view. A second post-development plan is also included to provide a more detailed view. Key features include:

1. Pond 11 (Culvert under Driveway to residence) is an at grade (to avoid the collection of groundwater) culvert directing runoff from the wetlands under the proposed driveway to the downstream wetlands.
2. The driveway and single family house mostly drain back into the site (SA-11 & SA-24).
3. A ditch along the northerly portion of the site should protect the Bancroft Street abutters from significant project site runoff (all runoff directed to wetlands).
4. All runoff eventually is discharged to the municipal combined sewer/drainage line (Reach 8) similar to current pre development conditions
5. Reach 11-Flow remains directed to this wetland to encourage infiltration, thus ultimately reducing the volume of runoff discharged to the combined City sewer/drainage line in Bancroft Street.

E. Runoff Analysis

The runoff from the site was calculated using HydroCAD computer software by Applied Microcomputer System, Chocura, New Hampshire. Both pre-development and post-development calculations are in the same model (see calculations in Appendix C).

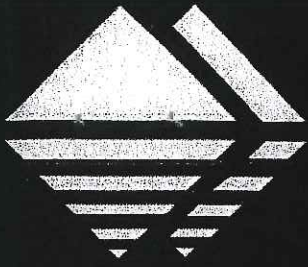
The analysis point is the existing Catch basin in Bancroft Street.

	Pre (SA-1)	Post (Reach 8)
2-Year Storm	3.13 c.f.s.	2.23 c.f.s.
10-Year Storm	7.57 c.f.s.	5.53 c.f.s.
25-Year Storm	9.86 c.f.s.	7.40 c.f.s.

The peak flow rates have been decreased for all storm events for this project. The project will also reduce drainage impacts to surrounding homes as the project is currently designed. No adverse impacts are anticipated to abutting homes or neighboring natural resources as a result of this project. The volume and peak rate of runoff directed to the existing catch basin within Bancroft Street (Analysis Point #1) has been reduced by this design.

APPENDIX A

ANALYST'S QUALIFICATIONS



BH2M

Providing Quality Civil-Site
Engineering & Surveying for
Over 33 Years.

SERVICES:

- Site Development Design
- Subdivision Design
- Stormwater Management
Analysis & Design
- Utility Design
- Roadway Design
- Development Permitting
- Construction
Administration & Oversight
- Full Service
Survey Department

COMPANY OVERVIEW

Berry Huff McDonald Milligan Inc. (BH2M) was founded in 1978 in Gorham, Maine to provide quality civil-site engineering and surveying services. Over the past 33 years BH2M has worked on over 6,000 projects for our diverse client base, which consists of Municipal and Private Sector clients. BH2M has developed a reputation for a strong commitment to excellence in all portions of a project. The staff structure at BH2M is unique in that all the engineers and project managers are partners within the company. This has been a successful formula that has resulted in many long standing relationships with our clients. Each project at BH2M is overseen by a senior principal within the company to assure the highest level of quality of work and performance.

EXPERIENCE

BH2M has provided Quality Civil-Site Engineering and Surveying on many projects within the City of Portland, including:

Office & Commercial Developments

- Oakhurst Dairy
- WB Mason Headquarters
- Unum
- Walgreens - Bayside Area

Hospitals

- Childrens Hospital
- Congress St. Medical Building

Roadway Improvements

- Oak Street

Major Industrial

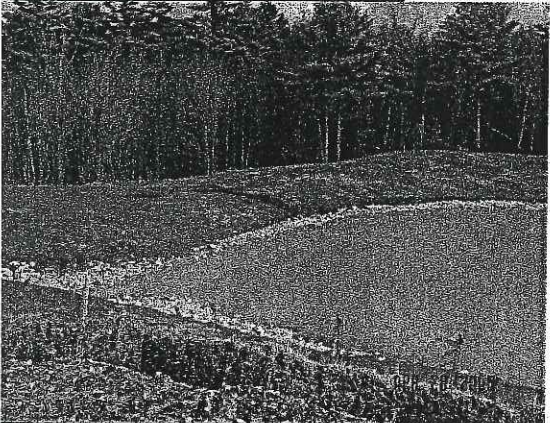
- Brunswick Naval Air Station Hanger Project - Brunswick
- Brunswick Naval Air Station Tower Project - Brunswick
- Savage Intermodel Facility - Auburn
- Pratt-Whitney - North Berwick

CURRENT PROJECTS

- Route 25 & Oak Hill Road Intersection Relocation and Sidewalk Project- Standish
- Summer Winds Condominiums - Old Orchard Beach
- Black Point Park at Scarborough Beach - Scarborough
- Village Square Sidewalk Restoration - Gorham
- Fogg Brook Subdivision - Buxton
- Sawyer Estates Subdivision - Gorham



Selected Stormwater Management Project Experience



- Route 25 & Oak Hill Road Reconstruction & Drainage Improvement, Standish 2012
- Summer Winds Condominium, Old Orchard Beach 2011
- Village Square Sidewalk Reconstruction, Gorham 2011
- Black Point Park at Scarborough Beach, Scarborough 2011
- Fogg Brook Subdivision, Gorham 2011
- Sawyer Estates Subdivision, Gorham 2011
- Golden Ridge Subidvision, Cape Elizabeth 2011
- Juniper Knoll Subdivision, Saco 2010
- Meadowbrook Subdivision, Waterboro 2010
- Bradbury Ridge Subdivision, Hollis 2010
- Lands End Subdivision, Old Orchard Beach 2010
- Limington Salt Shed, Limington 2010
- Peterson Fields Subdivision, 2010
- The Trails Subdivision, Saco 2010
- Mitchell Hill Subdivision, Windham 2010
- Stonehill Subdivision, Biddeford 2010
- Kate's Homemade Butter Plant, Arundel 2010
- Carsons Point Subdivision, Saco 2010
- Pratts Brook Farm Subdivision, Yarmouth 2010
- Highland Glen Subdivision, Yarmouth 2010
- Tucker Road Culvert Improvements, Limington 2010
- Dunegrass Sections B & C, Old Orchard Beach 2010
- Skylark Commons Subdivision, Portland 2009
- Pleasant Ridge Subdivision, Buxton 2009
- Wholesale Distribution and Warehouse Facility, Brockton Ma 2009
- Willowdale Commons Condominium, Old Orchard Beach 2009
- Atlantic Park Condominium, Old Orchard Beach 2009
- Whispering Pines Subdivision, Buxton 2009
- Aceto Construction Facility, Buxton 2009
- D & E Enterprises Facility, Hollis 2009
- K & S Subdivision, Sanford 2009
- Wild Acres Campground Expansion, Old Orchard Beach 2009
- Hardware Store, Biddeford 2009
- Hid n Pines Campground, Old Orchard Beach 2009
- Green Court Acres Subdivision, Waterboro 2009



BH2M

Lester S. Berry, P.E.

EDUCATION:

B.S. Civil Engineering
University of Maine

M.S. Civil Engineering
University of Maine

PROFESSIONAL SOCIETIES:

American Society of Civil Engineers

Maine Association of Planners

Construction Specifications Institute

PROFESSIONAL BACKGROUND:

Vice President BH2M
1978 - Present
Gorham, Maine

Project Engineer
Dale E. Caruthers Company
1975 - 1978
Gorham, Maine

Engineer
State of New Hampshire
1971 - 1972
Concord, New Hampshire

Lester S. Berry, P.E.
Vice President & Senior Engineer

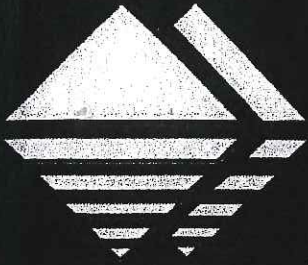
Les co-founded Berry Huff McDonald Milligan Inc. in 1978. He has 40 years of experience in both the public and private sector and has worked on projects in Maine and New Hampshire. His expertise includes a diversified range of all aspects of civil-site engineering, with a focus on site development and the design and implementation of state of the art Stormwater Management Systems.

The following is a list of recent projects worked on by Les:

- Route 25 & Oak Hill Road Intersection Relocation and Sidewalk Project, Standish 2012
- Summer Winds Condominium, Old Orchard Beach 2011
- Village Square Sidewalk Restoration, Gorham 2011
- Black Point Park at Scarborough Beach, Scarborough 2011
- Sawyer Estates Subdivision, Gorham 2011
- Limington Salt Shed, Limington 2011
- Kate's Homemade Butter Plant, Arundel 2011
- Peterson Fields Subdivision, Gorham 2010
- The Trails Subdivision, Gorham 2010
- Savage Intermodal Facility, Auburn 2010
- Childrens Hospital, Portland 2010
- Tucker Road Culvert Improvements, Limington 2010
- Mitchell Hill Subdivision, Windham 2010
- Stonehill Subdivision, Biddeford 2010
- Skylark Commons Subdivision, Portland 2010
- WB Mason Headquarters, Portland 2009
- Walgreens, Portland 2009
- Unum Site Improvements, Portland 2008
- Congress Street Medical Building, Portland 2008



STORMWATER EDUCATION: Hydraulic & related College course Erosion & Sediment Control Stormwater Management Water Conservation Districts, Phosphorus Management, Erosion Control Seminars by Maine DEP, HydroCAD & Advanced HydroCAD, BMP's for Stormwater and Erosion Control.



BH2M

Andrew S. Morrell, E.I.T.

EDUCATION:

B.S. Civil Engineering
State University of New York
Buffalo, NY

PROFESSIONAL BACKGROUND:

Project Engineer
BH2M - Gorham, Me
August 2001 - August 2007
April 2010 - Present

Project Engineer
DeLuca-Hoffman Associates
South Portland, Me
August 2007 - March 2010

Project Engineer
Diversified Civil Engineering
Westford, Ma
May 1999 - August 2001

STORMWATER EDUCATION:

Hydraulics Review Class
for Professional Engineering
License Exam - ASCE 2009

Hydrocad Seminar
Joint Environment Training
Coordinating Committee 2002

STORMWATER EXPERIENCE:

12 years experience
performing stormwater
management design and
calculations.

Andrew S. Morrell, E.I.T.
Project Engineer

Andy has worked for BH2M for over 9 years and has over 12 years of experience in both the public and private sector and has worked on projects in Maine and Massachusetts. His expertise includes site development, subdivisions and the design of supporting Stormwater Management Systems.

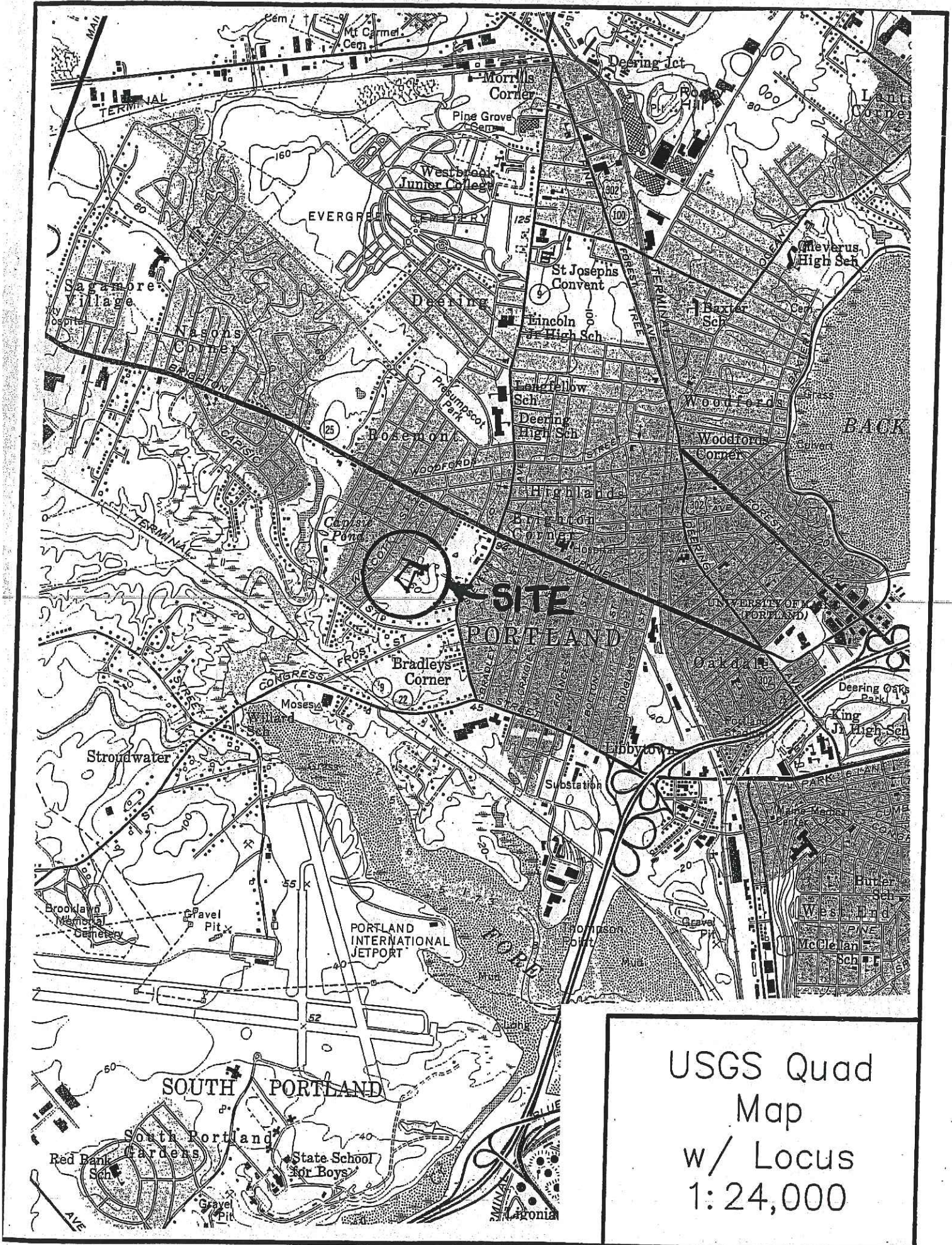
The following is a list of recent projects worked on by Andy:

- Route 25 & Oak Hill Road Intersection Relocation and Sidewalk Project, Standish 2012
- Childrens Hospital, Portland 2011
- Village Square Sidewalk Restoration, Gorham 2011
- Black Point Park at Scarborough Beach, Scarborough 2011
- Sawyer Estates Subdivision, Gorham 2011
- Juniper Knoll Subdivision, Saco 2010
- Limington Salt Shed, Limington 2010
- Kate's Homemade Butter Plant, Arundel 2010
- Tucker Road Culvert Improvements, Limington 2010
- Bradbury Ridge Subdivision, Buxton 2010
- Lands End Subdivision, Old Orchard Beach 2010
- Peterson Fields Subdivision, Gorham 2010
- The Trails Subdivision, Saco 2010
- Mitchell Hill Subdivision, Windham 2010
- Stonehill Subdivision, Biddeford 2010
- Carsons Point Subdivision, Saco 2010
- Pratts Brook Farm Subdivision, Yarmouth 2010
- Highland Glen Subdivision, Yarmouth 2010
- Skylark Commons Subdivision, Portland 2010
- Sunrise Ridge Subdivision, Buxton 2009
- Atlantic Park Condominium, Old Orchard Beach 2009
- Pleasant Ridge Subdivision, Buxton 2009
- Dunegrass Sections B & C, Old Orchard Beach 2009
- Meadowbrook Subdivision, Waterboro 2009
- Aceto Construction Facility, Buxton 2009
- Unum Site Improvements, Portland 2009



APPENDIX B

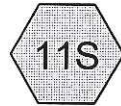
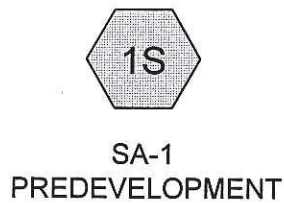
MAPS



USGS Quad
Map
w/ Locus
1:24,000

APPENDIX C

STORMWATER CALCULATIONS



SA11



Driveway Culvert



Wetlands Flow



SA25



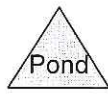
(new Pond)



Summary-Analysis Point
#1



SA24



CHABAD -Revised 11-12-2012

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Printed 11/14/2012

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.720	55	Woods, Good, HSG B (1S, 11S)
1.290	70	Woods, Good, HSG C (1S, 11S, 25S)
0.350	74	>75% Grass cover, Good, HSG C (11S, 24S, 25S)
0.940	75	1/4 acre lots, 38% imp, HSG B (1S, 11S)
1.550	77	Woods, Good, HSG D (1S, 11S, 25S)
0.260	80	>75% Grass cover, Good, HSG D (11S, 24S)
2.120	83	1/4 acre lots, 38% imp, HSG C (1S, 24S)
2.550	87	1/4 acre lots, 38% imp, HSG D (1S, 11S, 24S)
0.040	98	Existing Impervious Area (25S)
0.380	98	Proposed Impervious Area (11S, 24S, 25S)
12.200	75	TOTAL AREA

CHABAD -Revised 11-12-2012

Prepared by Berry Huff McDonald Milligan, Inc.

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Printed 11/14/2012

Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
3.660	HSG B	1S, 11S
3.760	HSG C	1S, 11S, 24S, 25S
4.360	HSG D	1S, 11S, 24S, 25S
0.420	Other	11S, 24S, 25S
12.200		TOTAL AREA

CHABAD -Revised 11-12-2012

Prepared by Berry Huff McDonald Milligan, Inc.

Printed 11/14/2012

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.350	0.260	0.000	0.610	>75% Grass cover, Good	11S, 24S, 25S
0.000	0.940	2.120	2.550	0.000	5.610	1/4 acre lots, 38% imp	1S, 11S, 24S
0.000	0.000	0.000	0.000	0.040	0.040	Existing Impervious Area	25S
0.000	0.000	0.000	0.000	0.380	0.380	Proposed Impervious Area	11S, 24S, 25S
0.000	2.720	1.290	1.550	0.000	5.560	Woods, Good	1S, 11S, 25S
0.000	3.660	3.760	4.360	0.420	12.200	TOTAL AREA	

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S:SA-1 Runoff Area=6.100 ac 20.62% Impervious Runoff Depth>0.86"
Flow Length=1,000' Tc=41.4 min CN=75 Runoff=3.13 cfs 0.438 af

Subcatchment 11S:SA11 Runoff Area=4.220 ac 16.41% Impervious Runoff Depth>0.72"
Flow Length=744' Tc=36.0 min CN=72 Runoff=1.88 cfs 0.253 af

Subcatchment 24S:SA24 Runoff Area=1.240 ac 36.42% Impervious Runoff Depth>1.40"
Flow Length=401' Tc=19.3 min CN=84 Runoff=1.50 cfs 0.145 af

Subcatchment 25S:SA25 Runoff Area=0.640 ac 23.44% Impervious Runoff Depth>1.14"
Flow Length=415' Tc=36.3 min CN=80 Runoff=0.48 cfs 0.061 af

Reach 8R:Summary-AnalysisPoint #1 Inflow=2.23 cfs 0.456 af
Outflow=2.23 cfs 0.456 af

Reach 11R:Wetlands Flow Avg. Flow Depth=0.26' Max Vel=0.59 fps Inflow=1.40 cfs 0.252 af
n=0.150 L=168.0' S=0.0277 '/' Capacity=42.71 cfs Outflow=1.39 cfs 0.250 af

Pond 11P:Driveway Culvert Peak Elev=63.28' Storage=1,423 cf Inflow=1.88 cfs 0.253 af
18.0" Round Culvert n=0.012 L=63.0' S=0.0049 '/' Outflow=1.40 cfs 0.252 af

Pond 25P:(new Pond) Peak Elev=55.17' Inflow=0.48 cfs 0.061 af
15.0" Round Culvert n=0.012 L=42.0' S=0.0050 '/' Outflow=0.48 cfs 0.061 af

Total Runoff Area = 12.200 ac Runoff Volume = 0.897 af Average Runoff Depth = 0.88"
79.08% Pervious = 9.648 ac 20.92% Impervious = 2.552 ac

Summary for Subcatchment 1S: SA-1 PREDEVELOPMENT

Runoff = 3.13 cfs @ 12.62 hrs, Volume= 0.438 af, Depth> 0.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Event Rainfall=3.00"

Area (ac)	CN	Description
1.050	87	1/4 acre lots, 38% imp, HSG D
1.050	77	Woods, Good, HSG D
1.250	55	Woods, Good, HSG B
0.760	75	1/4 acre lots, 38% imp, HSG B
1.500	83	1/4 acre lots, 38% imp, HSG C
0.490	70	Woods, Good, HSG C
6.100	75	Weighted Average
4.842		79.38% Pervious Area
1.258		20.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	150	0.0100	0.09		Sheet Flow, LAWN Grass: Dense n= 0.240 P2= 3.00"
14.5	850	0.0380	0.97		Shallow Concentrated Flow, LIGHT WOODS Woodland Kv= 5.0 fps
41.4	1,000	Total			

Summary for Subcatchment 11S: SA11

Runoff = 1.88 cfs @ 12.56 hrs, Volume= 0.253 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Event Rainfall=3.00"

Area (ac)	CN	Description
0.670	70	Woods, Good, HSG C
0.150	77	Woods, Good, HSG D
1.300	87	1/4 acre lots, 38% imp, HSG D
* 0.130	98	Proposed Impervious Area
0.130	80	>75% Grass cover, Good, HSG D
0.190	74	>75% Grass cover, Good, HSG C
0.180	75	1/4 acre lots, 38% imp, HSG B
1.470	55	Woods, Good, HSG B
4.220	72	Weighted Average
3.528		83.59% Pervious Area
0.692		16.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	150	0.0100	0.09		Sheet Flow, Grass: Dense n= 0.240 P2= 3.00"
9.1	594	0.0470	1.08		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
36.0	744	Total			

Summary for Subcatchment 24S: SA24

Runoff = 1.50 cfs @ 12.27 hrs, Volume= 0.145 af, Depth> 1.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Event Rainfall=3.00"

Area (ac)	CN	Description
0.200	87	1/4 acre lots, 38% imp, HSG D
0.620	83	1/4 acre lots, 38% imp, HSG C
* 0.140	98	Proposed Impervious Area
0.130	80	>75% Grass cover, Good, HSG D
0.150	74	>75% Grass cover, Good, HSG C
1.240	84	Weighted Average
0.788		63.58% Pervious Area
0.452		36.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7	150	0.0330	0.15		Sheet Flow, Grass: Dense n= 0.240 P2= 3.00"
1.3	94	0.0300	1.21		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.3	157	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
19.3	401	Total			

Summary for Subcatchment 25S: SA25

Runoff = 0.48 cfs @ 12.53 hrs, Volume= 0.061 af, Depth> 1.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Event Rainfall=3.00"

Area (ac)	CN	Description
* 0.110	98	Proposed Impervious Area
0.010	74	>75% Grass cover, Good, HSG C
0.130	70	Woods, Good, HSG C
0.350	77	Woods, Good, HSG D
* 0.040	98	Existing Impervious Area
0.640	80	Weighted Average
0.490		76.56% Pervious Area
0.150		23.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.7	150	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00"
5.6	265	0.0250	0.79		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
36.3	415	Total			

Summary for Reach 8R: Summary-Analysis Point #1

Inflow Area = 6.100 ac, 21.21% Impervious, Inflow Depth > 0.90" for 2-Year Storm Event event
 Inflow = 2.23 cfs @ 12.35 hrs, Volume= 0.456 af
 Outflow = 2.23 cfs @ 12.35 hrs, Volume= 0.456 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

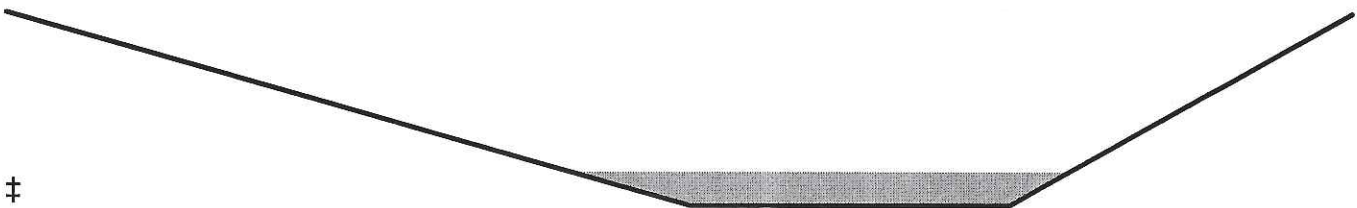
Summary for Reach 11R: Wetlands Flow

Inflow Area = 4.220 ac, 16.41% Impervious, Inflow Depth > 0.72" for 2-Year Storm Event event
 Inflow = 1.40 cfs @ 12.84 hrs, Volume= 0.252 af
 Outflow = 1.39 cfs @ 12.98 hrs, Volume= 0.250 af, Atten= 1%, Lag= 8.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 0.59 fps, Min. Travel Time= 4.7 min
 Avg. Velocity = 0.33 fps, Avg. Travel Time= 8.4 min

Peak Storage= 395 cf @ 12.90 hrs
 Average Depth at Peak Storage= 0.26'
 Bank-Full Depth= 1.50' Flow Area= 27.4 sf, Capacity= 42.71 cfs

7.00' x 1.50' deep channel, n= 0.150
 Side Slope Z-value= 10.0 5.0 ' Top Width= 29.50'
 Length= 168.0' Slope= 0.0277 '
 Inlet Invert= 62.34', Outlet Invert= 57.69'



Summary for Pond 11P: Driveway Culvert

Inflow Area = 4.220 ac, 16.41% Impervious, Inflow Depth > 0.72" for 2-Year Storm Event event
 Inflow = 1.88 cfs @ 12.56 hrs, Volume= 0.253 af
 Outflow = 1.40 cfs @ 12.84 hrs, Volume= 0.252 af, Atten= 25%, Lag= 16.7 min
 Primary = 1.40 cfs @ 12.84 hrs, Volume= 0.252 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 63.28' @ 12.84 hrs Surf.Area= 2,843 sf Storage= 1,423 cf

Plug-Flow detention time= 10.1 min calculated for 0.252 af (99% of inflow)
 Center-of-Mass det. time= 9.0 min (857.9 - 848.9)

Volume	Invert	Avail.Storage	Storage Description
#1	62.65'	19,404 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.65	100	0	0
63.00	335	76	76
64.00	9,380	4,858	4,934
65.00	19,560	14,470	19,404

Device	Routing	Invert	Outlet Devices
#1	Primary	62.65'	18.0" Round Culvert L= 63.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.65' / 62.34' S= 0.0049 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=1.40 cfs @ 12.84 hrs HW=63.28' (Free Discharge)
 ↑1=Culvert (Barrel Controls 1.40 cfs @ 2.95 fps)

Summary for Pond 25P: (new Pond)

Inflow Area = 0.640 ac, 23.44% Impervious, Inflow Depth > 1.14" for 2-Year Storm Event event
 Inflow = 0.48 cfs @ 12.53 hrs, Volume= 0.061 af
 Outflow = 0.48 cfs @ 12.53 hrs, Volume= 0.061 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.48 cfs @ 12.53 hrs, Volume= 0.061 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 55.17' @ 12.53 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	54.79'	15.0" Round Culvert L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.79' / 54.58' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.47 cfs @ 12.53 hrs HW=55.17' (Free Discharge)
 ↑1=Culvert (Barrel Controls 0.47 cfs @ 2.27 fps)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S:SA-1 Runoff Area=6.100 ac 20.62% Impervious Runoff Depth>2.02"
Flow Length=1,000' Tc=41.4 min CN=75 Runoff=7.57 cfs 1.026 af

Subcatchment 11S:SA11 Runoff Area=4.220 ac 16.41% Impervious Runoff Depth>1.79"
Flow Length=744' Tc=36.0 min CN=72 Runoff=4.96 cfs 0.631 af

Subcatchment 24S:SA24 Runoff Area=1.240 ac 36.42% Impervious Runoff Depth>2.80"
Flow Length=401' Tc=19.3 min CN=84 Runoff=2.97 cfs 0.289 af

Subcatchment 25S:SA25 Runoff Area=0.640 ac 23.44% Impervious Runoff Depth>2.43"
Flow Length=415' Tc=36.3 min CN=80 Runoff=1.02 cfs 0.130 af

Reach 8R: Summary-AnalysisPoint #1 Inflow=5.53 cfs 1.045 af
Outflow=5.53 cfs 1.045 af

Reach 11R: Wetlands Flow Avg. Flow Depth=0.46' Max Vel=0.81 fps Inflow=3.96 cfs 0.630 af
n=0.150 L=168.0' S=0.0277 '/' Capacity=42.71 cfs Outflow=3.94 cfs 0.626 af

Pond 11P: Driveway Culvert Peak Elev=63.81' Storage=4,007 cf Inflow=4.96 cfs 0.631 af
18.0" Round Culvert n=0.012 L=63.0' S=0.0049 '/' Outflow=3.96 cfs 0.630 af

Pond 25P: (new Pond) Peak Elev=55.37' Inflow=1.02 cfs 0.130 af
15.0" Round Culvert n=0.012 L=42.0' S=0.0050 '/' Outflow=1.02 cfs 0.130 af

Total Runoff Area = 12.200 ac Runoff Volume = 2.076 af Average Runoff Depth = 2.04"
79.08% Pervious = 9.648 ac 20.92% Impervious = 2.552 ac

Summary for Subcatchment 1S: SA-1 PREDEVELOPMENT

Runoff = 7.57 cfs @ 12.58 hrs, Volume= 1.026 af, Depth> 2.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Event Rainfall=4.70"

Area (ac)	CN	Description
1.050	87	1/4 acre lots, 38% imp, HSG D
1.050	77	Woods, Good, HSG D
1.250	55	Woods, Good, HSG B
0.760	75	1/4 acre lots, 38% imp, HSG B
1.500	83	1/4 acre lots, 38% imp, HSG C
0.490	70	Woods, Good, HSG C
6.100	75	Weighted Average
4.842		79.38% Pervious Area
1.258		20.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	150	0.0100	0.09		Sheet Flow, LAWN Grass: Dense n= 0.240 P2= 3.00"
14.5	850	0.0380	0.97		Shallow Concentrated Flow, LIGHT WOODS Woodland Kv= 5.0 fps
41.4	1,000	Total			

Summary for Subcatchment 11S: SA11

Runoff = 4.96 cfs @ 12.52 hrs, Volume= 0.631 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Storm Event Rainfall=4.70"

Area (ac)	CN	Description
0.670	70	Woods, Good, HSG C
0.150	77	Woods, Good, HSG D
1.300	87	1/4 acre lots, 38% imp, HSG D
* 0.130	98	Proposed Impervious Area
0.130	80	>75% Grass cover, Good, HSG D
0.190	74	>75% Grass cover, Good, HSG C
0.180	75	1/4 acre lots, 38% imp, HSG B
1.470	55	Woods, Good, HSG B
4.220	72	Weighted Average
3.528		83.59% Pervious Area
0.692		16.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	150	0.0100	0.09		Sheet Flow,
					Grass: Dense n= 0.240 P2= 3.00"
9.1	594	0.0470	1.08		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
36.0	744	Total			

Summary for Subcatchment 24S: SA24

Runoff = 2.97 cfs @ 12.26 hrs, Volume= 0.289 af, Depth> 2.80"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Event Rainfall=4.70"

Area (ac)	CN	Description
0.200	87	1/4 acre lots, 38% imp, HSG D
0.620	83	1/4 acre lots, 38% imp, HSG C
* 0.140	98	Proposed Impervious Area
0.130	80	>75% Grass cover, Good, HSG D
0.150	74	>75% Grass cover, Good, HSG C
1.240	84	Weighted Average
0.788		63.58% Pervious Area
0.452		36.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7	150	0.0330	0.15		Sheet Flow,
					Grass: Dense n= 0.240 P2= 3.00"
1.3	94	0.0300	1.21		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
1.3	157	0.0100	2.03		Shallow Concentrated Flow,
					Paved Kv= 20.3 fps
19.3	401	Total			

Summary for Subcatchment 25S: SA25

Runoff = 1.02 cfs @ 12.51 hrs, Volume= 0.130 af, Depth> 2.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Event Rainfall=4.70"

Area (ac)	CN	Description
* 0.110	98	Proposed Impervious Area
0.010	74	>75% Grass cover, Good, HSG C
0.130	70	Woods, Good, HSG C
0.350	77	Woods, Good, HSG D
* 0.040	98	Existing Impervious Area
0.640	80	Weighted Average
0.490		76.56% Pervious Area
0.150		23.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.7	150	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00"
5.6	265	0.0250	0.79		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
36.3	415	Total			

Summary for Reach 8R: Summary-Analysis Point #1

Inflow Area = 6.100 ac, 21.21% Impervious, Inflow Depth > 2.06" for 10-Year Storm Event event
 Inflow = 5.53 cfs @ 12.70 hrs, Volume= 1.045 af
 Outflow = 5.53 cfs @ 12.70 hrs, Volume= 1.045 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

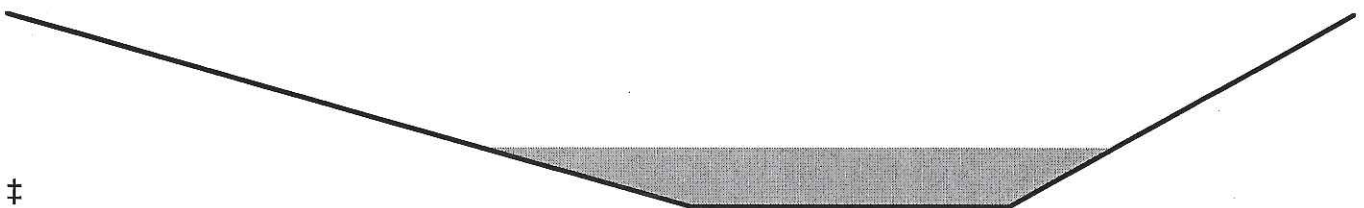
Summary for Reach 11R: Wetlands Flow

Inflow Area = 4.220 ac, 16.41% Impervious, Inflow Depth > 1.79" for 10-Year Storm Event event
 Inflow = 3.96 cfs @ 12.75 hrs, Volume= 0.630 af
 Outflow = 3.94 cfs @ 12.85 hrs, Volume= 0.626 af, Atten= 1%, Lag= 6.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 0.81 fps, Min. Travel Time= 3.4 min
 Avg. Velocity = 0.41 fps, Avg. Travel Time= 6.8 min

Peak Storage= 815 cf @ 12.80 hrs
 Average Depth at Peak Storage= 0.46'
 Bank-Full Depth= 1.50' Flow Area= 27.4 sf, Capacity= 42.71 cfs

7.00' x 1.50' deep channel, n= 0.150
 Side Slope Z-value= 10.0 5.0 ' Top Width= 29.50'
 Length= 168.0' Slope= 0.0277 ' / '
 Inlet Invert= 62.34', Outlet Invert= 57.69'



Summary for Pond 11P: Driveway Culvert

Inflow Area = 4.220 ac, 16.41% Impervious, Inflow Depth > 1.79" for 10-Year Storm Event event
 Inflow = 4.96 cfs @ 12.52 hrs, Volume= 0.631 af
 Outflow = 3.96 cfs @ 12.75 hrs, Volume= 0.630 af, Atten= 20%, Lag= 13.9 min
 Primary = 3.96 cfs @ 12.75 hrs, Volume= 0.630 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 63.81' @ 12.75 hrs Surf.Area= 7,655 sf Storage= 4,007 cf

Plug-Flow detention time= 13.3 min calculated for 0.628 af (99% of inflow)
 Center-of-Mass det. time= 12.6 min (841.8 - 829.1)

Volume	Invert	Avail.Storage	Storage Description
#1	62.65'	19,404 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.65	100	0	0
63.00	335	76	76
64.00	9,380	4,858	4,934
65.00	19,560	14,470	19,404

Device	Routing	Invert	Outlet Devices
#1	Primary	62.65'	18.0" Round Culvert L= 63.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.65' / 62.34' S= 0.0049 ' /' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.96 cfs @ 12.75 hrs HW=63.81' (Free Discharge)
 ↑1=Culvert (Barrel Controls 3.96 cfs @ 3.73 fps)

Summary for Pond 25P: (new Pond)

Inflow Area = 0.640 ac, 23.44% Impervious, Inflow Depth > 2.43" for 10-Year Storm Event event
 Inflow = 1.02 cfs @ 12.51 hrs, Volume= 0.130 af
 Outflow = 1.02 cfs @ 12.51 hrs, Volume= 0.130 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.02 cfs @ 12.51 hrs, Volume= 0.130 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 55.37' @ 12.51 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	54.79'	15.0" Round Culvert L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.79' / 54.58' S= 0.0050 ' /' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.02 cfs @ 12.51 hrs HW=55.36' (Free Discharge)
 ↑1=Culvert (Barrel Controls 1.02 cfs @ 2.71 fps)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S:SA-1 Runoff Area=6.100 ac 20.62% Impervious Runoff Depth>2.63"
Flow Length=1,000' Tc=41.4 min CN=75 Runoff=9.86 cfs 1.335 af

Subcatchment 11S:SA11 Runoff Area=4.220 ac 16.41% Impervious Runoff Depth>2.37"
Flow Length=744' Tc=36.0 min CN=72 Runoff=6.59 cfs 0.834 af

Subcatchment 24S:SA24 Runoff Area=1.240 ac 36.42% Impervious Runoff Depth>3.49"
Flow Length=401' Tc=19.3 min CN=84 Runoff=3.67 cfs 0.361 af

Subcatchment 25S:SA25 Runoff Area=0.640 ac 23.44% Impervious Runoff Depth>3.09"
Flow Length=415' Tc=36.3 min CN=80 Runoff=1.29 cfs 0.165 af

Reach 8R: Summary-AnalysisPoint #1 Inflow=7.40 cfs 1.355 af
Outflow=7.40 cfs 1.355 af

Reach 11R: Wetlands Flow Avg. Flow Depth=0.53' Max Vel=0.88 fps Inflow=5.14 cfs 0.833 af
n=0.150 L=168.0' S=0.0277 '/' Capacity=42.71 cfs Outflow=5.13 cfs 0.829 af

Pond 11P: Driveway Culvert Peak Elev=64.03' Storage=5,341 cf Inflow=6.59 cfs 0.834 af
18.0" Round Culvert n=0.012 L=63.0' S=0.0049 '/' Outflow=5.14 cfs 0.833 af

Pond 25P: (new Pond) Peak Elev=55.45' Inflow=1.29 cfs 0.165 af
15.0" Round Culvert n=0.012 L=42.0' S=0.0050 '/' Outflow=1.29 cfs 0.165 af

Total Runoff Area = 12.200 ac Runoff Volume = 2.695 af Average Runoff Depth = 2.65"
79.08% Pervious = 9.648 ac 20.92% Impervious = 2.552 ac

Summary for Subcatchment 1S: SA-1 PREDEVELOPMENT

Runoff = 9.86 cfs @ 12.58 hrs, Volume= 1.335 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Event Rainfall=5.50"

Area (ac)	CN	Description
1.050	87	1/4 acre lots, 38% imp, HSG D
1.050	77	Woods, Good, HSG D
1.250	55	Woods, Good, HSG B
0.760	75	1/4 acre lots, 38% imp, HSG B
1.500	83	1/4 acre lots, 38% imp, HSG C
0.490	70	Woods, Good, HSG C
6.100	75	Weighted Average
4.842		79.38% Pervious Area
1.258		20.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	150	0.0100	0.09		Sheet Flow, LAWN Grass: Dense n= 0.240 P2= 3.00"
14.5	850	0.0380	0.97		Shallow Concentrated Flow, LIGHT WOODS Woodland Kv= 5.0 fps
41.4	1,000	Total			

Summary for Subcatchment 11S: SA11

Runoff = 6.59 cfs @ 12.51 hrs, Volume= 0.834 af, Depth> 2.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Event Rainfall=5.50"

Area (ac)	CN	Description
0.670	70	Woods, Good, HSG C
0.150	77	Woods, Good, HSG D
1.300	87	1/4 acre lots, 38% imp, HSG D
* 0.130	98	Proposed Impervious Area
0.130	80	>75% Grass cover, Good, HSG D
0.190	74	>75% Grass cover, Good, HSG C
0.180	75	1/4 acre lots, 38% imp, HSG B
1.470	55	Woods, Good, HSG B
4.220	72	Weighted Average
3.528		83.59% Pervious Area
0.692		16.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	150	0.0100	0.09		Sheet Flow, Grass: Dense n= 0.240 P2= 3.00"
9.1	594	0.0470	1.08		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
36.0	744	Total			

Summary for Subcatchment 24S: SA24

Runoff = 3.67 cfs @ 12.26 hrs, Volume= 0.361 af, Depth> 3.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Event Rainfall=5.50"

Area (ac)	CN	Description
0.200	87	1/4 acre lots, 38% imp, HSG D
0.620	83	1/4 acre lots, 38% imp, HSG C
* 0.140	98	Proposed Impervious Area
0.130	80	>75% Grass cover, Good, HSG D
0.150	74	>75% Grass cover, Good, HSG C
1.240	84	Weighted Average
0.788		63.58% Pervious Area
0.452		36.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7	150	0.0330	0.15		Sheet Flow, Grass: Dense n= 0.240 P2= 3.00"
1.3	94	0.0300	1.21		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.3	157	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
19.3	401	Total			

Summary for Subcatchment 25S: SA25

Runoff = 1.29 cfs @ 12.50 hrs, Volume= 0.165 af, Depth> 3.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Event Rainfall=5.50"

Area (ac)	CN	Description
* 0.110	98	Proposed Impervious Area
0.010	74	>75% Grass cover, Good, HSG C
0.130	70	Woods, Good, HSG C
0.350	77	Woods, Good, HSG D
* 0.040	98	Existing Impervious Area
0.640	80	Weighted Average
0.490		76.56% Pervious Area
0.150		23.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.7	150	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00"
5.6	265	0.0250	0.79		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
36.3	415	Total			

Summary for Reach 8R: Summary-Analysis Point #1

Inflow Area = 6.100 ac, 21.21% Impervious, Inflow Depth > 2.66" for 25-Year Storm Event event
 Inflow = 7.40 cfs @ 12.65 hrs, Volume= 1.355 af
 Outflow = 7.40 cfs @ 12.65 hrs, Volume= 1.355 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

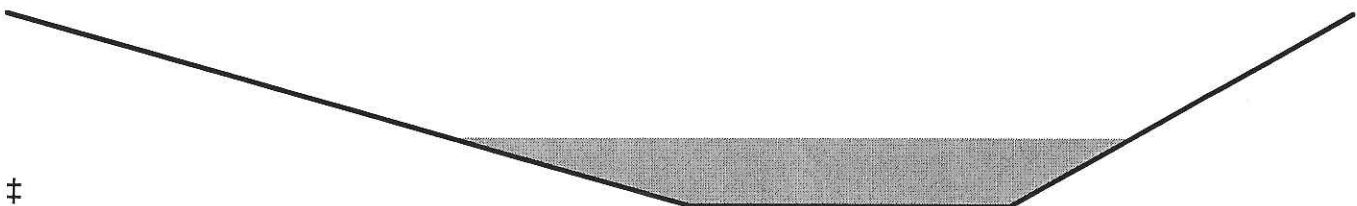
Summary for Reach 11R: Wetlands Flow

Inflow Area = 4.220 ac, 16.41% Impervious, Inflow Depth > 2.37" for 25-Year Storm Event event
 Inflow = 5.14 cfs @ 12.76 hrs, Volume= 0.833 af
 Outflow = 5.13 cfs @ 12.85 hrs, Volume= 0.829 af, Atten= 0%, Lag= 5.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 0.88 fps, Min. Travel Time= 3.2 min
 Avg. Velocity = 0.44 fps, Avg. Travel Time= 6.4 min

Peak Storage= 983 cf @ 12.80 hrs
 Average Depth at Peak Storage= 0.53'
 Bank-Full Depth= 1.50' Flow Area= 27.4 sf, Capacity= 42.71 cfs

7.00' x 1.50' deep channel, n= 0.150
 Side Slope Z-value= 10.0 5.0 ' Top Width= 29.50'
 Length= 168.0' Slope= 0.0277 ' / '
 Inlet Invert= 62.34', Outlet Invert= 57.69'



Summary for Pond 11P: Driveway Culvert

Inflow Area = 4.220 ac, 16.41% Impervious, Inflow Depth > 2.37" for 25-Year Storm Event event
 Inflow = 6.59 cfs @ 12.51 hrs, Volume= 0.834 af
 Outflow = 5.14 cfs @ 12.76 hrs, Volume= 0.833 af, Atten= 22%, Lag= 14.5 min
 Primary = 5.14 cfs @ 12.76 hrs, Volume= 0.833 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 64.03' @ 12.76 hrs Surf.Area= 9,667 sf Storage= 5,341 cf

Plug-Flow detention time= 13.9 min calculated for 0.830 af (100% of inflow)
 Center-of-Mass det. time= 13.4 min (836.5 - 823.1)

Volume	Invert	Avail.Storage	Storage Description
#1	62.65'	19,404 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
62.65	100	0	0
63.00	335	76	76
64.00	9,380	4,858	4,934
65.00	19,560	14,470	19,404

Device	Routing	Invert	Outlet Devices
#1	Primary	62.65'	18.0" Round Culvert L= 63.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 62.65' / 62.34' S= 0.0049 ' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.14 cfs @ 12.76 hrs HW=64.03' (Free Discharge)
 ↑1=Culvert (Barrel Controls 5.14 cfs @ 3.96 fps)

Summary for Pond 25P: (new Pond)

Inflow Area = 0.640 ac, 23.44% Impervious, Inflow Depth > 3.09" for 25-Year Storm Event event
 Inflow = 1.29 cfs @ 12.50 hrs, Volume= 0.165 af
 Outflow = 1.29 cfs @ 12.50 hrs, Volume= 0.165 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.29 cfs @ 12.50 hrs, Volume= 0.165 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 55.45' @ 12.50 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	54.79'	15.0" Round Culvert L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 54.79' / 54.58' S= 0.0050 ' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.29 cfs @ 12.50 hrs HW=55.45' (Free Discharge)
 ↑1=Culvert (Barrel Controls 1.29 cfs @ 2.86 fps)

APPENDIX D

OPERATION & MAINTENANCE PLAN

OPERATIONS & MAINTENANCE PLAN

**For: Chabad Lubavitch
Portland, Me**

The applicant, Chabad Lubavitch of Maine LLC, will be responsible for all required maintenance until the roadway (Pomeroy Street) are offered to the City of Portland for consideration as a public street at which time the City will be responsible for all maintenance within the public Right of Way and Chabad Lubavitch of Maine LLC will remain responsible for the maintenance outside of the Public Right of way. The following is a summary of the required maintenance:

Roadways

1. On-site inspection of the roads on an annual schedule or after a significant period of rainfall.
 - a.) All low spots of pooling water shall be regraded to direct the water off the pavement.
 - b.) Areas of erosions shall be repaired immediately.
 - c.) Sweeping the roadway free of sand after the winter season should be completed annually.

Stormdrain Inlet & Outlet

1. On-site inspection of the rip-rap surrounding the stormdrain inlets and outlets on a monthly schedule or after a significant period of rainfall.
 - a.) Carefully inspect to determine if high flows have caused scour beneath the rip-rap or dislodged any of the stones. If repairs are needed, they should be accomplished immediately.

Vegetated Swale with Check Dams

1. On-site inspection of the vegetated ditches on a monthly schedule or after a significant period of rainfall.
 - a.) Ditches should be inspected to repair erosion problems, remove any accumulated debris and to check the condition and integrity of the check dams.

Storm Drain System Includes Catchbasins

1. Inspect catchbasin inlets, culvert entrances and field inlets on a monthly basis for debris or conditions which could inhibit flow entry. Remove debris.
2. Inspect all catchbasin structures on an annual basis.
 - a.) Check that rim elevations are properly set to optimize flow entry.
 - b.) Measure and record silt accumulation, if any.
3. Check pipelines on an annual basis to determine silt accumulation, if any.

4. Inspect swales, channels, and ditches on a semi-annual basis.
 - a.) Check for debris that may inhibit flow – remove as warranted.
 - b.) Note and remove excessive vegetation – mow monthly.
 - c.) Note any erosion or non-vegetated areas which could lead to erosion.
 - d.)

Housekeeping

1. Use attached “Inspection & Maintenance Log” and keep records in three-ring binder.
 2. See attached Appendix B “Inspection and Maintenance” from MDEP Stormwater Regulations.
 3. See attached “Appendix C” from MDEP Stormwater Regulations for performance standards.
-

**CHABAD LUBAVITCH OF MAINE LLC
STORMWATER MANAGEMENT
INSPECTION & MAINTENANCE LOG**

FACILITY:		YEAR:	
LOCATION:		CONTRACTOR:	
FUNCTION:		DEP PROJ. MANAGER:	
DATE OF INSPECTION:		INSPECTOR:	
ITEM ID	DESCRIPTION OF CONDITIONS	MAINTENANCE ACCOMPLISHED	DATE OF MAINTENANCE
ROADWAYS			
STORMDRAIN INLET & OUTLET			
VEGETATED SWALES			
STORMDRAIN SYSTEM			
CHECK DAMS			
CATCH BASINS & FIELD INLETS			

APPENDIX B. Inspection and maintenance

This appendix applies to all projects. A project that is only required to meet basic standards (stormwater PBR) must meet the standards in Section 1. All other projects must meet standards in Sections 1 through 5.

See Appendix D(5) for additional maintenance requirements related to infiltration of stormwater.

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.

2. Post-construction. The following standards must be met after construction.

- (a) **Plan.** Carry out an approved inspection and maintenance plan that is consistent with the minimum requirements of this section. The plan must address inspection and maintenance of the project's permanent erosion control measures and stormwater management system. This plan may be combined with the plan listed in Section 2(a) of this appendix. See Section 8(C)(2) for submission requirements.
- (b) **Inspection and corrective action.** All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected. Areas, facilities, and measures other than those listed below may also require inspection on a specific site. Inspection

or maintenance tasks other than those discussed below must be included in the maintenance plan developed for a specific site.

NOTE: Expanded and more-detailed descriptions for specific maintenance tasks may be found in the Maine DEP's "Stormwater Management for Maine: Best Management Practices."

- (i) Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. See permanent stabilization standards in Appendix A(5).
 - (ii) Inspect ditches, swales and other open stormwater channels in the spring, in late fall, and after heavy rains to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and to repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or sideslopes.
 - (iii) Inspect culverts in the spring, in late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.
 - (iv) Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring. Clean-out must include the removal and legal disposal of any accumulated sediments and debris at the bottom of the basin, at inlet any grates, at any inflow channels to the basin, and at any pipes between basins. If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).
 - (v) Inspect resource and treatment buffers at least once a year for evidence of erosion, concentrating flow, and encroachment by development. If flows are concentrating within a buffer, site grading, level spreaders, or ditch turn-outs must be used to ensure a more even distribution of flow into a buffer. Check down slope of all spreaders and turn-outs for erosion. If erosion is present, adjust or modify the spreader's or turnout's lip to ensure a better distribution of flow into a buffer. Clean-out any accumulation of sediment within the spreader bays or turn-out pools.
- (c) Regular maintenance
- (i) Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Grading of gravel roads, or grading of the gravel shoulders of gravel or paved roads, must be routinely performed to ensure that stormwater drains immediately off the road surface to adjacent buffer areas or stable ditches, and is not impeded by accumulations of graded material on the

road shoulder or by excavation of false ditches in the shoulder. If water bars or open-top culverts are used to divert runoff from road surfaces, clean-out any sediments within or at the outlet of these structures to restore their function.

- (ii) Manage each buffer's vegetation consistently with the requirements in any deed restrictions for the buffer. Wooded buffers must remain fully wooded and have no disturbance to the duff layer. Vegetation in non-wooded buffers may not be cut more than three times per year, and may not be cut shorter than six inches.

NOTE: Contact the department's Division of Watershed Management (Maine DEP) for assistance developing inspection and maintenance requirements for other drainage control and runoff treatment measures installed on the site. The maintenance needs for most measures may be found in the Maine DEP's "Stormwater Management for Maine: Best Management Practices."

- (d) Documentation. Keep a log (report) summarizing inspections, maintenance, and any corrective actions taken. The log must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal.

The log must be made accessible to department staff and a copy provided to the department 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.

3. **Maintenance contract.** Contract with a third-party or other qualified professional, as approved by the department, for the removal of accumulated sediments, oils, and debris within any proprietary devices and the replacement of any absorptive filters. The frequency of sediment clean-out and filter replacements must be consistent with the unit's storage capacity and the estimated pollutant load from the contributing drainage area. This clean-out frequency is usually established by the manufacturer of the proprietary system when sizing the device for the project.
4. **Re-certification.** Submit a certification of the following to the department within three months of the expiration of each five-year interval from the date of issuance of the permit.
 - (a) Identification and repair of erosion problems. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
 - (b) Inspection and repair of stormwater control system. All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system.
 - (c) Maintenance. The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.

Municipalities with separate storm sewer systems regulated under the Maine Pollutant Discharge Elimination System (MPDES) Program may report on all regulated systems under their control as part of their required annual reporting in lieu of separate certification of each system. Municipalities not regulated by MPDES, but that are responsible for maintenance of permitted stormwater systems, may report on multiple stormwater systems in one report.

- 5. Duration of maintenance.** Perform maintenance as described and required in the permit unless and until the system is formally accepted by the municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. If a municipality or quasi-municipal district chooses to accept a stormwater management system, or a component of a stormwater system, it must provide a letter to the department stating that it assumes responsibility for the system. The letter must specify the components of the system for which the municipality or district will assume responsibility, and that the municipality or district agrees to maintain those components of the system in compliance with department standards. Upon such assumption of responsibility, and approval by the department, the municipality, quasi-municipal district, or association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.
- 6. Additional requirements.** Additional requirements may be applied on a site-specific basis.

APPENDIX C. Housekeeping

These performance standards apply to all projects.

1. **Spill prevention.** Controls must be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.
2. **Groundwater protection.** During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

See Appendix D for license by rule standards for infiltration.

NOTE: Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1).

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.

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 more frequently as needed.

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, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe

construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the department.

NOTE: For guidance on de-watering controls, consult the Maine Erosion and Sediment Control BMPs", Maine Department of Environmental Protection."

6. **Non-stormwater discharges.** Identify and prevent contamination by non-stormwater discharges.
7. **Additional requirements.** Additional requirements may be applied on a site-specific basis.

CHAPTER 32 STORM WATER

- Art. I. Prohibited Discharges, §§ 32-1--32-15**
Art. II. Prohibited Discharges, §§ 32-16--32-35
Art. III. Post-Construction Stormwater Management, §§32-36--32-40

ARTICLE I. IN GENERAL

Sec. 32-1. Definitions.

For the purposes of this article, the terms listed below are defined as follows:

Applicant. "Applicant" means a person with requisite right, title or interest or an agent for such person who has filed an application for a development project that requires a post-construction stormwater management plan under this article.

Best management practices ("BMP"). "Best management practices" or "BMPs" means schedules or activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clean Water Act. "Clean Water Act" means the federal Water Pollution Control Act (33 U.S.C. § 1251 *et seq.*, also known as the "Clean Water Act"), and any subsequent amendments thereto.

Discharge. "Discharge" means any spilling, leaking, pumping, pouring, emptying, dumping, disposing or other addition of pollutants to "waters of the state." "Direct discharge" or "point source" means any discernable, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

Enforcement authority. "Enforcement authority" means the person(s) or department authorized under section 32-3 of this article to administer and enforce this article.

Exempt person or discharge. "Exempt person or discharge" means any person who is subject to a multi-sector general permit for industrial activities, a general permit for construction activity, a general permit for the discharge of storm water from the Maine department of transportation and the Maine turnpike authority

municipal separate storm sewer systems, or a general permit for the discharge of storm water from state or federally owned authority municipal separate storm sewer system facilities; and any non-storm water discharge permitted under a NPDES permit, waiver, or waste discharge license or order issued to the discharger and administered under the authority of the U.S. environmental protection agency ("EPA") or the Maine department of environmental protection ("DEP"). City of Portland

Municipality. "Municipality" means the city of Portland.

Municipal separate storm sewer system, or MS4. "Municipal separate storm sewer system" or "MS4," means conveyances for storm water, including, but not limited to, roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels or storm drains (other than publicly owned treatment works and combined sewers) owned or operated by any municipality, sewer or sewage district, fire district, state agency or federal agency or other public entity that discharges directly to surface waters of the state.

National pollutant discharge elimination system (NPDES) storm water discharge permit. "National pollutant discharge elimination system (NPDES) storm water discharge permit" means a permit issued by the EPA or by the DEP that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

Non-storm water discharge. "Non-storm water discharge" means any discharge to an MS4 that is not composed entirely of storm water.

Person. "Person" means any individual, firm, corporation, municipality, quasi-municipal corporation, state agency or federal agency or other legal entity which creates, initiates, originates or maintains a discharge of storm water or a non-storm water discharge.

Pollutant. "Pollutant" means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or by-products, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Post-construction stormwater management plan. "Post-construction stormwater management plan" means BMPs employed by a development project to meet the stormwater standards of Section V of the department of planning and urban development's Technical and Design Standards and Guidelines.

Premises. "Premises" means any building, lot, parcel of land, or portion of land, whether improved or unimproved, including adjacent sidewalks and parking strips, located within the municipality from which discharges into the storm drainage system are or may be created, initiated, originated or maintained.

Qualified post-construction stormwater inspector. "Qualified post-construction stormwater inspector" means a person who conducts post-construction stormwater best management practice inspections for compensation and who has received the appropriate training for the same from DEP or otherwise meets DEP requirements to perform said inspections.

Regulated small MS4. "Regulated small MS4" means any small MS4 regulated by the State of Maine "general permit for the discharge of storm water from small municipal separate storm sewer systems" dated July 1, 2008 ("general permit") or the general permits for the discharge of storm water from the Maine department of transportation and Maine turnpike authority small MS4s or state or federally owned or operated small MS4s, including all those located partially or entirely within an urbanized area (UA).

Small municipal separate storm sewer system, or small MS4. "Small municipal separate storm sewer system", or "small MS4," means any MS4 that is not already covered by the phase I MS4 storm water program including municipally owned or operated storm sewer systems, state or federally-owned systems, such as colleges, universities, prisons, Maine department of transportation and Maine turnpike authority road systems and facilities, and military bases and facilities.

Storm drainage system. "Storm drainage system" means the City of Portland's regulated small MS4 and other conveyances for storm water located in areas outside the UA that drain into the regulated small MS4.

Storm water. "Storm water" means any storm water runoff, snowmelt runoff, and surface runoff and drainage; "Stormwater" has the same meaning as "storm water".

Urbanized area ("UA"). "Urbanized area" or "UA" means the areas of the State of Maine so defined by the latest decennial (2000) census by the U.S. Bureau of Census.
(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-2. Reserved.

Sec. 32-3. Reserved.

Sec. 32-4. Reserved.

Sec. 32-5.	Reserved.
Sec. 32-6.	Reserved.
Sec. 32-7.	Reserved.
Sec. 32-8.	Reserved.
Sec. 32-9.	Reserved.
Sec. 32-10.	Reserved.
Sec. 32-11.	Reserved.
Sec. 32-12.	Reserved.
Sec. 32-13.	Reserved.
Sec. 32-14.	Reserved.
Sec. 32-15.	Reserved.

ARTICLE II. PROHIBITED DISCHARGES

Sec. 32-16. Applicability.

This Article shall apply to all persons discharging storm water and/or non-storm water discharges from any premises into the storm drainage system.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-17. Responsibility for administration.

The department of public services is the enforcement authority who shall administer, implement, and enforce the provisions of this article.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10; 8-17-09)

Sec. 32-18. Prohibition of non-storm water discharges.

(a) *General prohibition.* Except as allowed or exempted herein, no person shall create, initiate, originate or maintain a non-storm water discharge to the storm drainage system. Such non-storm water discharges are prohibited notwithstanding the fact that the city may have approved the connections, drains or conveyances by which a person discharges un-allowed non-storm water discharges to the storm drainage system.

(b) *Allowed non-storm water discharges.* The creation, initiation, origination and maintenance of the following non-storm water discharges to the storm drainage system is allowed:

- (1) Landscape irrigation; diverted stream flows; rising ground waters; uncontaminated flows from foundation drains; air conditioning and compressor condensate; irrigation water; flows from uncontaminated springs; uncontaminated water from crawl space pumps; uncontaminated flows from footing drains; lawn watering runoff; flows from riparian habitats and wetlands; residual street wash water (where spills/leaks of toxic or hazardous materials have not

occurred, unless all spilled material has been removed and detergents are not used); hydrant flushing and fire fighting activity runoff; water line flushing and discharges from potable water sources; individual residential car washing; and de-chlorinated swimming pool discharges.

- (2) Discharges specified in writing by the enforcement authority as being necessary to protect public health and safety.
- (3) Dye testing, with verbal notification to the enforcement authority prior to the time of the test.

(c) *Exempt person or discharge.* This article shall not apply to an exempt person or discharge, except that the enforcement authority may request from exempt persons and persons with exempt discharges copies of permits, notices of intent, licenses and orders from the EPA or DEP that authorize the discharge(s).

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-19. Suspension of access to the city's small MS4.

The enforcement authority may, without prior notice, physically suspend discharge access to the storm drainage system to a person when such suspension is necessary to stop an actual or threatened non-storm water discharge to the storm drainage system which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the storm drainage system, or which may cause the city to violate the terms of its environmental permits. Such suspension may include, but is not limited to, blocking pipes, constructing dams or taking other measures, on public ways or public property, to physically block the discharge to prevent or minimize a non-storm water discharge to the storm drainage system. If a person fails to comply with a suspension order issued in an emergency, the enforcement authority may take such steps as deemed necessary to prevent or minimize damage to the storm drainage system, or to minimize danger to persons.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-20. Monitoring of discharges.

In order to determine compliance with this article, the enforcement authority may enter upon and inspect premises subject to this article at reasonable hours to inspect the premises and connections thereon to the storm drainage system; and to conduct monitoring, sampling and testing of the discharge to the storm drainage system.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-21. Enforcement.

It shall be unlawful for any person to violate any provision of or to fail to comply with any of the requirements of this article. Whenever the enforcement authority believes that a person has violated this article, the enforcement authority may enforce this article in accordance with 30-A M.R.S.A. § 4452.

- (a) *Notice of violation.* Whenever the enforcement authority believes that a person has violated this article, the enforcement authority may order compliance with this article by written notice of violation to that person indicating the nature of the violation and ordering the action necessary to correct it, including, without limitation:
- (1) The elimination of non-storm water discharges to the storm drainage system, including, but not limited to, disconnection of the premises from the MS4.
 - (2) The cessation of discharges, practices, or operations in violation of this article.
 - (3) At the Person's expense, the abatement or remediation (in accordance with best management practices in DEP rules and regulations) of non-storm water discharges to the storm drainage system and the restoration of any affected property; and/or
 - (4) The payment of fines, of the city's remediation costs and of the city's reasonable administrative costs and attorneys' fees and costs. If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such abatement or restoration must be completed.
- (b) *Penalties/fines/injunctive relief.* In addition to the imposition of any other costs or penalties provided for herein, any person who violates this section shall be subject to fines, penalties and orders for injunctive relief and shall be responsible for the city's attorney's fees and costs, all in accordance with 30-A M.R.S.A. § 4452. Each day such violation continues shall constitute a separate violation. Moreover, any person who violates this section also shall be responsible for any and all fines, penalties, damages and costs, including, but not limited to attorneys' fees and costs, incurred by the city for violation of federal and State environmental laws and

regulations caused by or related to that person's violation of this article; this responsibility shall be in addition to any penalties, fines or injunctive relief imposed under this section.

- (c) *Consent agreement.* The enforcement authority may, with the approval of the city manager, enter into a written consent agreement with the violator to address timely abatement of the violation(s) of this article for the purposes of eliminating violations of this article and of recovering fines, costs and fees without court action.
- (d) *Appeal of notice of violation.* Any person receiving a notice of violation or suspension notice may appeal the determination of the enforcement authority to the city manager or his or her designee. The notice of appeal must be received within 30 days from the date of receipt of the notice of violation. The city manager shall hold a hearing on the appeal within 30 days from the date of receipt of the notice of appeal, except that such hearing may be delayed by agreement of the city manager and the appellant. The city manager may affirm, reverse or modify the decision of the enforcement authority. A suspension under Section 32-5 of this article remains in place unless or until lifted by the city manager or by a reviewing court. A party aggrieved by the decision of the city manager may appeal that decision to the Maine superior court within 45 days of the date of the city manager's decision pursuant to Rule 80B of the Maine Rules of Civil Procedure.
- (e) *Enforcement measures.* If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, or, in the event of an appeal to the city manager, within 45 days of a decision of the city manager affirming the enforcement authority's decision, then the enforcement authority may recommend that the corporation counsel's office file an enforcement action in a Maine court of competent jurisdiction under Rule 80K of the Maine Rules of Civil Procedure.
- (f) *Ultimate responsibility of discharger.* The standards set forth herein are minimum standards; therefore this article does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants into waters of the U.S. caused by said person. This article shall not create liability on the part of the city, or any officer agent or employee thereof for any damages that

result from any person's reliance on this article or any administrative decision lawfully made hereunder.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-22. Severability.

The provisions of this article are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this article or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions, clauses, sentences, or paragraphs or application of this article.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

- Sec. 32-23. Reserved.
- Sec. 32-24. Reserved.
- Sec. 32-25. Reserved.
- Sec. 32-26. Reserved.
- Sec. 32-27. Reserved.
- Sec. 32-28. Reserved.
- Sec. 32-29. Reserved.
- Sec. 32-30. Reserved.
- Sec. 32-31. Reserved.
- Sec. 32-32. Reserved.
- Sec. 32-33. Reserved.
- Sec. 32-34. Reserved.
- Sec. 32-35. Reserved.

ARTICLE III. POST-CONSTRUCTION STORMWATER MANAGEMENT.

Sec. 32-36. Applicability.

This article applies to all development projects that require a stormwater management plan pursuant to section V of the department of planning and urban development's Technical and Design Standards and Guidelines.

(Ord. No. 35-09/10, 8-17-09)

Sec. 32-37. Post-construction stormwater management plan approval.

Notwithstanding any ordinance provision to the contrary, no applicant for a development project to which this article is applicable shall receive approval for that development project unless the applicant also receives approval for its post-construction stormwater management plan and for the best management practices ("BMPs") for that development project.

(Ord. No. 35-09/10, 9-17-09)

Sec. 32-38. Post-construction stormwater management plan compliance.

Any person owning, operating, or otherwise having control over a BMP required by a post construction stormwater management plan shall maintain the BMPs in accordance with the approved plan and shall demonstrate compliance with that plan as follows:

- (a) *Inspections.* The owner or operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
- (b) *Maintenance and repair.* If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action(s) to the department of public services ("DPS") in the annual report.
- (c) *Annual report.* The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification to DPS in a form provided by DPS, certifying that the person has inspected the BMP(s) and that the same are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action(s) taken.
- (d) *Filing fee.* Any persons required to file an annual certification under this section shall include with the annual certification a filing fee established by DPS to pay the administrative and technical costs of review of the annual certification.
- (e) *Right of entry.* In order to determine compliance with this article and with the post-construction stormwater management plan, DPS may enter upon property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMPs.

Sec. 32-39. Enforcement.

It shall be unlawful for any person to violate any provision of or to fail to comply with any of the requirements of this article or of the post-construction stormwater management plan. Whenever the enforcement authority believes that a person has violated this article, DPS may enforce this article in accordance with 30-A M.R.S.A. § 4452. Each day on which a violation exists shall constitute a separate violation for purposes of this section.

- (a) *Notice of violation.* Whenever DPS believes that a person has violated this article or the post-construction stormwater management plan, DPS may order compliance by written notice of violation to that person indicating the nature of the violation and ordering the action necessary to correct it, including, without limitation:
- (1) The abatement of violations, and the cessation of practices or operations in violation of this article or of the post-construction stormwater management plan;
 - (2) At the person's expense, compliance with BMPs required as a condition of approval of the development project, the repair of BMPs and/or the restoration of any affected property; and/or
 - (3) The payment of fines, of the City's remediation costs and of the City's reasonable administrative costs and attorneys' fees and costs.
 - (4) If abatement of a violation, compliance with BMPs, repair of BMPs and/or restoration of affected property is required, the notice shall set forth a deadline within which such abatement, compliance, repair and/or restoration must be completed.
- (b) *Penalties/fines/injunctive relief.* In addition to the imposition of any other costs or penalties provided for herein, any person who violates this section shall be subject to fines, penalties and orders for injunctive relief and shall be responsible for the city's attorney's fees and costs, all in accordance with 30-A M.R.S.A. § 4452. Each day such violation continues shall constitute a separate violation. Moreover, any person who violates this section also shall be responsible for any and all fines, penalties, damages and costs, including, but not limited to

attorneys' fees and costs, incurred by the city for violation of federal and state environmental laws and regulations caused by or related to that person's violation of this article; this responsibility shall be in addition to any penalties, fines or injunctive relief imposed under this section.

- (c) *Consent agreement.* The enforcement authority may, without approval of the city manager, enter into a written consent agreement with the violator to address timely abatement of the violation(s) of this article for the purposes of eliminating violations of this article and of recovering fines, costs and fees without court action.
- (d) *Appeal of notice of violation.* Any person receiving a notice of violation or suspension notice may appeal the determination of the enforcement authority to the city manager or his or her designee. The notice of appeal must be received within 30 days from the date of receipt of the notice of violation. The city manager shall hold a hearing on the appeal within 30 days from the date of receipt of the notice of appeal, except that such hearing may be delayed by agreement of the city manager and the appellant. The city manager may affirm, reverse or modify the decision of the DPS. A party aggrieved by the decision of the city manager may appeal that decision to the Maine superior court within forty-five (45) days of the date of the city manager's decision pursuant to Rule 80B of the Maine Rules of Civil Procedure.
- (e) *Enforcement measures.* If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, or, in the event of an appeal to the city manager, within forty-five (45) days of a decision of the city manager affirming the enforcement authority's decision, then the enforcement authority may recommend that the corporation counsel's office file an enforcement action in a Maine court of competent jurisdiction under Rule 80K of the Maine Rules of Civil Procedure.

(Ord. No. 35-09/10, 8-17-09)

Sec. 32-40. Severability.

The provisions of this article are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this article or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions, clauses, sentences, or paragraphs or application of this article.

(Ord. No. 35-09/10, 8-17-09)



Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

LESTER S. BERRY
WILLIAM A. THOMPSON
ROBERT C. LIBBY, Jr.
WALTER E. PELKEY
ANDREW S. MORRELL

August 29, 2012

City of Portland
Inspection Office & Planning Division
389 Congress Street
Portland, ME 04103

RE: Level I-Minor Residential Development Review Site Plan Revisions
Level II-Preliminary & Final Site Plan Development Revisions
Chabad Lubavitch of Maine LLC.
Pomeroy Street

Dear Nell Donaldson:

On behalf of the applicant, Chabad Lubavitch of Maine Inc., our office is submitting revisions for the above referenced project for both the Level I Site Plan application with the Inspection Division and the Level II Site Plan application with the Planning Division for the above referenced project. These revisions come in response to comments from the City. Please find attached five copies (4 copies for Level I application and 1 copy for Level II application) of the following information in support of this submission as well as digital copies of this information on cd. Our responses to the comments received from the City have been sorted by the source of the comment and we are utilizing the same numbering system for clarity:

- Suggested Deed Description-Outsale Lot
- Revised Site Plans
- All Submissions in electronic format (cd)

Comments from Nell Donaldson, City Planner, dated July 11, 2012 regarding the Level I-Minor Residential Site Plan:

Environmental

1. We understand that wetlands and storm water are the major items involved in the design of this parcel. These items were discussed in detail during our first design back in 2005, which was ultimately accepted by the City of Portland. Please note that both the scope of wetland impacts and the

amount of runoff directed to the City's storm drain system has been reduced as part of this current design.

The storm water design for the collection of runoff remains mostly unchanged from the approved design which was accepted by the City of Portland back in 2005. The amount of impervious area proposed onsite has been reduced as part of the new design. As summarized in the Stormwater Management Report the runoff directed to the City's Stormwater system within Bancroft Street (Analysis Point #1-Reach 8) has the following results:

<u>Storm Event</u>	<u>Original 2005 Design</u>	<u>Current Design</u>	<u>% Reduction</u>
2-Year Storm	4.16 cfs	2.29 cfs	55%
10-Year Storm	8.65 cfs	5.31 cfs	61%
25-Year Storm	11.50 cfs	6.91 cfs	60%

The wetland impacts have similarly been reduced as part of this project. The original approval resulted in a wetland fill of 13,028 s.f.. This project received a permit from the Maine DEP and ACOE for this wetland fill. The current design results in a proposed wetland fill of 10,462 s.f.. The wetland fills associated with this project have been reduced by approximately 20%.

The management of stormwater and the impacts to the wetlands are all issues that we have discussed in detail during our last approval for this project. The current reduction in scope of the project provides less of an impact to both the City's drainage system and the abutting wetlands.

It is our understanding that the City Engineer is required to grant a waiver for this condition. Based on the above information as well as those supporting documents previously submitted we request a waiver for this condition from the City.

2. Note #23 has been added to the Site Plan (Sheet 1).
3. As discussed above some of the existing trees will be preserved, however, there have also been 4 street trees proposed along Pomeroy Street as part of these improvements as well (see Plans for more information). As part of these revisions some additional site landscaping has been proposed (see sheet 1 for additional information).

Zoning

1. Please find attached a suggested deed description for the outsale lot.
2. The Plans have been revised to reflect the current proposed building footprint. Specifically, to include the proposed porches as requested.

Additional Submittals Required

1. The plans have been revised as requested and summarized below:
 - a. Distance from proposed buildings to property lines has been added to the Site Plan (Sheet 1).
 - b. Note #24 has been added to the Site Plan to summarize the area of disturbance. A limit of disturbance line has also been added to the plans for clarity.
 - c. A foundation drain has been added to the Site Plan. A detail has also been added to sheet 4 of the plans.
 - d. Note #25 has been added to the Site Plan regarding the preservation of existing trees.
 - e. See Comment 3 from Environmental section above.
 - f. See Comment 2 from Zoning section above.
2. This information will be submitted to the City once it has been received by our office.
3. The easement around the existing trees abutting land of Kriston Briggs & Jean Gilpatrick is a proposed easement not an existing easement. More details have been added to the Site Plan for this easement.
4. See Comment 8 from David-Margolis-Pineo review comments below.
5. The Level II Site Plan application has been submitted. Included herein this submission are revisions that also address this application.
6. If additional information is requested please let us know.

Comments from David Margolis-Pineo, Dept. of Public Services, dated May 31, 2012 regarding the Level I-Minor Residential Site Plan:

1. See Comment 1 From Environmental Section of Nell Donaldson's Review Comments above.
2. A detail was added to sheet 4 of the plans.
3. Note #26 has been added to the Site Plan (Sheet 1) regarding the construction of Pomeroy Street.
4. The turnaround has been defined with the appropriate easements as requested (see sheet 1 of the plans).
5. The detail on sheet 4 has been revised accordingly.
6. The details on sheet 4 have been revised accordingly.
7. A detail of the truncated dome proposed as part of this project has been added to Sheet 1 for review by the City and Mr. Hyman.
8. We look forward to hearing from the City on this item.
9. Note #28 has been added to the Site Plan regarding the street status.
10. The plans have been revised to be on the Maine State Coordinate System as requested. Coordinate References have been added to the Site Plan.
11. The project Benchmark has been revised as requested (see Sheet 1).
12. Our office has not heard from counsel on this item to date.
13. The portion of Pomeroy Street to be accepted as part of this project has been revised to include all appropriate information as requested (see Sheet 1).

Comments from David Senus of Woodard & Curran, dated May 30, 2012 regarding the Level I & II Site Plans:

1. Note #27 has been added to the Site Plan (Sheet 1).
2. This information will be forwarded to the City once received by our office.
3. See Comment 1 from Environmental Section of Review Comments by Nell Donaldson above.

4. To comply with City standards the following changes have been made to the plans:
 - a. The Roadway Section Detail on Sheet 3 of the plans has been revised accordingly.
 - b. The Vertical Granite Curbing Detail has also been revised.
5. To comply with City standards the following changes have been made to the plans:
 - a. See Comment 1 from Environmental Section of Review Comments by Nell Donaldson above.
 - b. The Details on sheet 4 have been revised accordingly.
 - c. The Detail on sheet 4 has been revised accordingly.
 - d. The Details on sheet 4 has been revised accordingly.
6. The applicant requests to pay the Urban Impaired Stream Compensation Fees as part of this project.
7. A review of the Drainage Plans (Sheets 6 through 8) will show that Subcatchment 1 within the Pre Development condition shall in fact differ in both ground cover and time of concentration route from Subcatchment 11 within the Post Development condition since this is where the Single Family residential home, driveway and other site improvements have been proposed as part of this project.
8. Chapter 32 of the City of Portland Ordinance regarding Stormwater will be added to Appendix D of the Stormwater Management Report for this project. Appendix D of the Stormwater Management Report includes and Operation and Maintenance Plan for this project and the Stormwater infrastructure.

Comments from Nell Donaldson, City Planner, dated June 13, 2012 regarding the Level II-Preliminary and Final Site Plan:

Most of these comments have already been addressed in the above described sections. I will only address new comments from this letter, hence the numbering system does not coordinate with the written comments as the other sections do:

1. A waiver for the elimination of sidewalk along one side of Pomeroy Street was provided in our original submission dated March 16, 2012.

2. Our office has not heard from the Planning Division on weather drainage easements are in fact required for the current design.
3. The applicant appreciates the input provided from the public and will certainly consider these comments as the process moves forward.
4. The total Right of Way widths have been added to the Site Plan as requested (Sheet 1).
5. The applicant provided financial Capacity information as part of our original submission to the City.
6. The building plans for the proposed residence have subsequently been submitted as part of the Level I Site Plan application.

We look forward to working with City Staff on this project. Please contact our office if you have any questions or if you need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew S. Morrell". The signature is written in a cursive, somewhat stylized font with some overlapping strokes.

Andrew S. Morrell, E.I.

Level I&II Revisions-8-29-2012

**SUGGESTED DEED DESCRIPTION
PROPOSED OUTSALE LOT TO
SQUARE ONE CONSTRUCTION, INC.
POMEROY STREET
PORTLAND, MAINE**

January 17, 2012

A certain lot or parcel of land located on the southwesterly sideline of Pomeroy Street, so-called, and on the northerly sideline of Motley Street, so-called, in the City of Portland, County of Cumberland and State of Maine and shown on the plan titled "Amended Site Plan, Land of Chabad Lubavitch of Maine Inc., Pomeroy Street, Portland, Maine" dated January 2012, by Berry Huff McDonald Milligan, Inc. to be recorded; said parcel being more particularly described as follows:

Beginning at a capped iron rod to be set (PLS #2190) on the southwesterly sideline of said Pomeroy Street and the northeasterly corner of remaining land of Chabad Lubavitch of Maine Inc. as shown on aforesaid plan;

thence S 46°-11'-30" E along the southwesterly sideline of said Pomeroy Street a distance of 205.27 feet to a capped iron rod found (PLS #1278) and the northerly sideline of said Motley Street;

thence S 71°-08'-30" W along the northerly sideline of said Motley Street a distance of 58.71 feet to a capped iron rod to be set (PLS #2190);

thence in a general southwesterly direction along the northerly sideline of said Motley Street and along a circular curve to the left, circumscribed by a radius of 218.81 feet, an arc length of 44.46 feet to a capped iron rod found (PLS #1278) and land now or formerly of Joshua James and Tamara Rainsford Krieger; said capped iron rod found being S 65°-19'-13" W a tie distance of 44.39 feet from said previous capped iron rod to be set;

thence N 34°-26'-02" W along the land of said James and Krieger and along the remaining land of Chabad Lubavitch of Maine Inc. a distance of 160.00 feet to a capped iron rod to be set (PLS #2190);

thence N 38°-44'-24" E along the remaining land of Chabad Lubavitch of Maine Inc. a distance of 61.09 feet to the point of beginning.

The above described parcel contains 14,103 s.f.. All bearings refer to magnetic north as observed in 1986.



BH2M

Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

LESTER S. BERRY
WILLIAM A. THOMPSON
ROBERT C. LIBBY, Jr.
WALTER E. PELKEY
ANDREW S. MORRELL

April 15, 2013

Nell Donaldson
City of Portland
Inspection Office & Planning Division
389 Congress Street
Portland, ME 04103

RE: Level I-Minor Residential Development Review Site Plan Revisions
Level II-Preliminary & Final Site Plan Development Revisions
Chabad Lubavitch of Maine LLC
Pomeroy Street

Dear Nell Donaldson:

On behalf of the applicant, Chabad Lubavitch of Maine Inc., our office is submitting revisions for the above referenced project for both the Level I Site Plan application with the Inspection Division and the Level II Site Plan application with the Planning Division for the above referenced project. These revisions come in response to comments from the City. Please find attached electronic copies of the following revised information in support of this submission:

- Revised Plans
- Revised Storm Water Management Report

As you know our office had a meeting with the City of Portland regarding this project back on December 6, 2012. The purpose of this meeting was to go over the project and the remaining issues that were outstanding for the project. This meeting was quite productive. The City provided the applicant with specific direction on what kind of storm water design changes they would like to see implemented. After this meeting the project was put on hold for several months by the applicant until recently.

3. The proposed Roadway has been shifted within the Right of way to the East by approximately 6-feet as requested by the City. This offset in the right of way allows for a reduction of impacts to the wetlands and improves the overall drainage for the project.
4. A 5-foot wide strip of land has been kept on the Eastern side of Pomeroy Street as requested by the City for snow storage during the winter seasons.
5. The proposed roadway has been super elevated, meaning there is no crown in the roadway. The entire roadway slopes down (at a 2% cross slope) to the Eastern side of the roadway. This was requested by the City to alleviate concerns of the abutters on drainage issues. The overall design has been completed to try to reduce the impacts to the abutting wetlands and the abutting home now or formerly owned by Kriston Briggs. The existing grades along this property have been maintained for the most part (see profile of proposed Pomeroy Street on sheet 3 of the plans).
6. All of the curbing along Pomeroy Street has been eliminated as requested by the City.
7. A curtain drain has been proposed along the Eastern side of Pomeroy Street to collect runoff from the roadway and to discharge this flow into the ground through infiltration. During periods of significant runoff an outlet pipe has been proposed that connects to the existing catch basin in Bancroft Street. This design was requested by the City to adequately handle the runoff to be generated by Pomeroy Street. The attached revised stormwater management report has been updated accordingly. The applicant considered the use of a filterra filtration system for this design but ultimately decided that a curtain drain would be more appropriate for this application.
8. A swale has been designed along the Western side of Pomeroy Street to direct runoff within the wetlands to the existing catch basin along Bancroft Street (see sheet 1 of plans).
9. The location of the proposed driveway and turnaround along Pomeroy Street has been have been switched as requested by the City (see sheet 1 of plans). As mentioned above the turnaround has been redesigned to meet the City Technical Manual.
10. The applicant also requested that the proposed house location be shifted closer to the proposed Pomeroy Street (see sheet 1 of plans).