### **GENERAL NOTES**

- THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF ALL REGULATIONS ADMINISTERED BY THE LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXITS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS.
- ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (1-888-DIGSAFE). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT NO EXTRA EXPENSE TO THE OWNER.
- MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL THE OWNER OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.
- 6. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON UTILITY NOTES HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO PROJECT CONTRACT SPECIFICATIONS, AND THE CITY OF PORTLAND TECHNICAL STANDARDS, WHICHEVER
- 8. TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION WAS PROVIDED BY NORTHEAST CIVIL SOLUTIONS OCTOBER 2014.
- 9. FEMA MAP COMMUNITY PANEL NUMBER 2300510013B. THE SITE IS LOCATED IN A C ZONE.
- 10. THE PROPERTY SHOWN ON THIS PLAN MAY BE DEVELOPED AND USED ONLY AS DEPICTED IN THIS APPROVED PLAN. ALL ELEMENTS AND FEATURES OF THE PLAN AND ALL THE PROPERTY WHICH APPEARS IN THE RECORD OF THE PLANNING BOARD PROCEEDINGS ARE CONDITIONS OF THE APPROVAL. NO CHANGE FROM THE CONDITIONS OF APPROVALS IS PERMITTED UNLESS AN AMENDED PLAN IS FIRST SUBMITTED TO AND APPROVED BY THE PLANNING AUTHORITY.
- 11. ALL SIGNAGE SHALL CONFORM TO THE STANDARDS FOR SIZE, HEIGHT, LOCATION AND REFLECTIVITY SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 12. ALL CURB SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AS NOTED ON THE PLANS: GRANITE SLIPFORM CONCRETE AND BITUMINOUS CONCRETE CURB SHALL MEET THE REQUIREMENTS OF MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS 609.03 AND 609.04 AND CITY OF PORTLAND TECHNICAL STANDARDS.
- 13. ALL DIMENSIONING UNLESS OTHERWISE NOTED IS TO THE FACE OF CURB OR FACE OF BUILDING.
- 14. THE FACILITY WILL BE SERVICED BY PUBLIC WATER, SEWER, NATURAL GAS AND UNDERGROUND POWER.
- 15. THE CONTRACTOR IS REQUIRED TO NOTIFY THE CITY OF PORTLAND PUBLIC WORKS INSPECTION SERVICES DIVISION (874-8300 EXT. 8838), CODE ENFORCEMENT OFFICE AND DEVELOPMENT REVIEW COORDINATOR IN WRITING THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. A PRECONSTRUCTION MEETING MAY BE REQUIRED TO INCLUDE THE PUBLIC WORKS AUTHORITY OR DEVELOPMENT REVIEW COORDINATOR.
- 16. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
- 17. WARNING SIGNS, MARKERS, BARRICADES OR FLAGMEN MUST BE EMPLOYED ON ADJACENT STREETS AS NECESSARY.
- 18. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED AND DISPOSED OF IN ACCORDANCE WITH THE CITY OF PORTLAND'S SOLID WASTE ORDINANCE CHAPTER 12. ALL DEMOLITION MATERIAL FROM THE PROJECT SITES SHALL BE TAKEN TO THE RIVERSIDE RECYCLING FACILITY OR AS OTHERWISE DIRECTED PENDING THE RESULTS OF A HAZARDOUS BUILDING MATERIALS SURVEY AS AUTHORIZED AND COORDINATED BY THE OWNER. ALL SALVAGED MATERIAL WITHIN THE PUBLIC R.O.W.(SIDEWALKS, BRICKS, GRANITE CURB) NOT REUSED SHALL BE DISPOSED OF AS DIRECTED BY THE PORTLAND PUBLIC SERVICES DEPARTMENT AT NO EXTRA COST TO THE OWNER.
- 19. ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
- 20. PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED AT ALL TIMES DURING CONSTRUCTION TO INSURE INTEGRITY. IF DISTURBED THEY SHALL BE REPLACED BY A SURVEYOR REGISTERED IN THE STATE OF MAINE AT THE CONTRACTOR'S EXPENSE.
- 21. THE OWNER SHALL BE RESPONSIBLE TO COORDINATE THE PERFORMANCE OF A HAZARDOUS MATERIALS INSPECTION OF THE EXISTING PROPERTY.
- 22. A STREET OPENING PERMIT MUST BE OBTAINED FROM THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT PRIOR TO BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE COMPLETED IN CONFORMANCE TO THE CITY'S RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN PUBLIC RIGHT
- 23. CONTRACTOR MUST MAINTAIN THROUGH TRAFFIC ON ADJACENT STREETS AT ALL TIMES.
- 24. ALL METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS IDENTIFIED HEREIN SHALL CONFORM TO THE CITY OF PORTLAND CONSTRUCTION AND TECHNICAL STANDARDS AND SPECIFICATIONS AND/OR CURRENT MDOT STANDARDS AND SPECIFICATIONS. WHICHEVER IS MORE STRINGENT.

25. SITE WORK FOR BUILDING SHALL INCLUDE GRADING THE AREA OF THE BUILDING ADDITION(DEFINED AS THE BUILDING FOOTPRINT PLUS 5'-0" BEYOND THE EXTERIOR WALL) TO

- A GRADE 18" BELOW THE GROUND FLOOR FINISH ELEVATION. ALL WORK SHALL INCLUDE EXCAVATION (INCLUDING ROCK REMOVAL AND EXISTING FOUNDATION DEMOLITION) AND BACKFILL OF ALL FOOTINGS AND FOUNDATIONS, INSTALLATION OF PERIMETER FOUNDATION DRAINS, EXCAVATION AND BACKFILL OF ALL UNDERSLAB UTILITIES AND PLACEMENT OF ALL AGGREGATES BELOW THE FLOOR SLAB AND ADJACENT THE FOUNDATION WALLS IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS.
- 26. RECORD DRAWINGS REQUIRE ALL BURIED UTILITIES INCLUDING, BUT NOT LIMITED TO, BENDS, APPURTENANCES, AND OTHER FEATURES TO BE LOCATED BY COORDINATE INFORMATION TO BE RECORDED BY THE CONTRACTOR AND SUPPLIED TO THE OWNER AT THE END OF THE PROJECT.

### **EROSION CONTROL NOTES**

- 1. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE SITE.
- PRIOR TO BEGINNING ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES AND THE STABILIZED CONSTRUCTION
- 3. SILT BARRIERS SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES SHOWN ON THE EROSION CONTROL DETAIL SHEET.
- THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCES AS THEY BECOME SATURATED WITH MUD TO ENSURE THAT THEY WORK AS PLANNED DURING CONSTRUCTION AND SHALL KEEP ADJACENT STREETS CLEAR OF DIRT AND MUD.
- SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO IT FOR LATER USE IN LANDSCAPING
- CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITIES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST THREE (3) BUT NOT MORE THAN (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF
- IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AS SPECIFIED ON
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 1991 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
- CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL REQUIREMENTS, INSPECTION AND MAINTENANCE REQUIREMENTS AND GOOD HOUSEKEEPING PRACTICES IN ACCORDANCE WITH APPENDIX A, B& C OF MAINE DEP CHAPTER 500.

## **GRADING AND DRAINAGE NOTES**

- ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF n = 0.013 OR LESS. UNLESS A SPECIFIC PIPE MATERIAL IS CALLED FOR ON THE CONTRACT DRAWINGS. PVC PIPING SHALL NOT BE USED IN AREAS OF EXPOSED SUNLIGHT. SLOPE PROTECTION IS TO BE PROVIDED PER THE DESIGN PLANS AND MAY INCLUDE EROSION CONTROL BLANKET, SOD OR MULCH.
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EARTHWORK OPERATIONS TO INSURE THAT DISTURBANCE TO ANY STEEP SLOPE AREAS ARE MINIMIZED TO THE EXTENT PRACTICABLE.
- THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY OTHERS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.

- 5. ALL PAVING WITHIN THE PUBLIC R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF PORTLAND RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN THE
- 6. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
- 7. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
- 8. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES AND PHYSICAL FEATURES THAT ARE OUTSIDE THE SCOPE OF WORK. THE CONTRACTOR SHALL MAINTAIN SITE STABILITY DURING CONSTRUCTION TO AVOID EROSION AND SEDIMENT TRANSPORT. CONTRACTOR SHALL RESTORE ALL AREAS TO A FINAL STABILIZED CONDITION AS DIRECTED BY DESIGN DRAWINGS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
- 10. EXTERIOR GRADES AROUND PROPOSED STRUCTURE SHALL BE COORDINATED WITH FINAL BUILDING PLANS AND PROVIDE FOR ALL ACCESS OPENINGS.
- 11. SUBGRADE FILL PLACED BENEATH ALL PERMANENT PAVEMENT, SIDEWALK OR CONCRETE SURFACES EXCLUDING ANY BUILDING AREAS, SHALL BE GRANULAR BORROW. SUBGRADE FILL PLACED BENEATH ALL LANDSCAPE AREAS EXCEPT THOSE ADJACENT THE FOUNDATION SYSTEMS MAY BE A COMMON BORROW MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL, PERISHABLE RUBBLE, PEAT, ORGANICS, ROCKS LARGER THAN 12" IN DIAMETER, VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUBGRADE CONSTRUCTION. EXCAVATED ON-SITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. EXCAVATED ONSITE MATERIALS MAY NOT BE USED AS COMPACTED STRUCTURAL FILL BENEATH THE BUILDING AREAS OR AS FOUNDATION BACKFILL. GRANULAR BORROW AND COMMON BORROW SHALL COMPLY WITH THE MDOT SPECIFICATIONS.
- EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF 12. ALL FILLS SHALL BE PLACED IN LAYERS NOT MORE THAN 12" LOOSE DEPTH AND COMPACTED BY HEAVY COMPACTION EQUIPMENT. MINIMUM COMPACTION SHALL BE 95% OF MAXIMUM DENSITY ASTM 1557, MODIFIED AND FIELD DENSITY ASTM D2922 (NUCLEAR METHODS).

- 1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED BETWEEN THE SITE WORK CONTRACTOR AND DIVISION 22/26 CONTRACTOR(S). THE SITE WORK CONTRACTOR SHALL BE RESPONSIBLE TO EXTEND ALL PROPOSED UTILITIES TO WITHIN FIVE (5) FEET OF THE BUILDING TO A LOCATION COORDINATED WITH THE MECHANICAL AND ELECTRICAL SUBCONTRACTORS. THE BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES WITHIN FIVE (5) FEET AND INSIDE THE BUILDING OR UNDER SLAB.
- 2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF AND/OR RELOCATION OF OVERHEAD AND UNDERGROUND TELEPHONE WITH FAIRPOINT COMMUNICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUITS, PULL WIRES, TRENCHING AND BACKFILLING NECESSARY TO COMPLETE THE WORK.
- 3. THE CONTRACTOR SHALL COORDINATE THE DEMOLITION / INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER: THE GAS SERVICE WITH UNITIL: THE TELECOMMUNICATIONS SERVICE WITH FAIRPOINT COMMUNICATIONS AND CABLE SERVICE WITH TIME WARNER CABLE. ALL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS OR UTILITY COMPANY STANDARDS, WHICHEVER IS MORE STRINGENT.
- 4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 5. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
- 6. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.
- 7. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL, AT NO EXTRA EXPENSE TO THE OWNER.
- 8. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.
- 9. THE CONTRACTOR SHALL PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOBSITE. TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER AND AFFECTED BUSINESSES.
- 10. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL SERVICES IN CONDUIT TO SITE LIGHTING, COMPLYING WITH APPLICABLE CODES. COORDINATE WITH
- OWNER, SITE ELECTRICAL, ARCHITECTURAL AND CMP PLANS.
- 11. ALL SANITARY SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT. ALL SANITARY SERVICES AND APPURTENANCES TO BE ABANDONED SHALL BE PROPERLY RECORDED WITH PORTLAND PUBLIC WORKS ENGINEERING DEPARTMENT. A DIGITAL VIDEOTAPE SHALL BE MADE OF SANITARY SEWER SYSTEMS TO BE UTILIZED PRIOR TO CONSTRUCTION; UPSTREAM PIPES INTENDED FOR ABANDONMENT SHALL BE INSPECTED TO VERIFY THAT THEY NO LONGER SERVE OTHER FACILITIES.
- 12. AN EXISTING 2" DOMESTIC SERVICE AND 6" FIRE SERVICE ARE TO BE RETIRED PER PORTLAND WATER DISTRICT STANDARDS. THIS WILL INCLUDE SHUTTING THE CORPORATION VALVE AND CUTTING THE PIPE FROM THE WATER MAIN AND REMOVING THE BOX AND ROD.

### **GEOTECHNICAL RECOMMENDATIONS**

WITH PROPER SITE PREPARATION, RELATIVELY LIGHT COLUMN LOADS, AND CORRESPONDING BEARING PRESSURE THE BUILDING CAN BE SUPPORTED USING CONVENTIONAL SPREAD FOOTINGS. THE FOLLOWING ARE GEOTECHNICAL RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION OF THE BUILDING FOUNDATIONS:

- THE COLUMN LOADS FOR NEW FOUNDATIONS ARE LIMITED TO 110 KIPS OR LESS. THE COLUMN FOOTINGS ARE SPACED MINIMUM 3 FEET BETWEEN EDGE OF NEW AND ANY EXISTING
- FOUNDATION FOOTINGS ARE CONSTRUCTED ON MINIMUM 12" CRUSHED STONE
- SUBGRADED BENEATH FOOTINGS ARE INSPECTED BY GEOTECHNICAL ENGINEER DURING CONSTRUCTION

### FOUNDATION BEARING PRESSURE

WE RECOMMEND THE FOUNDATION ELEMENTS BE PROPORTIONED USING AN ALLOWABLE NET BEARING PRESSURE OF 2,000 PSI

EXTERIOR FOOTINGS SHOULD BE CONSTRUCTED AT A MINIMUM DEPTH OF 4 FEET BELOW FINISHED GRADE FOR FROST PROTECTION BASED ON A DESIGN AIR-FREEZING INDEX OF 1.250 F-DEGREE DAYS FOR THE PORTLAND AREA. WE RECOMMEND EXTERIOR AND INTERIOR PORTIONS OF THE FOUNDATION WALLS AND FOOTINGS ARE BACKFILLED WITH FOUNDATION BACKFILL. THE FOUNDATION BACKFILL SHOULD BE COMPACTED TO 95 PERCENT OF ITS MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557. THE MAXIMUM PARTICLE SIZE SHOULD BE LIMITED TO 6INCHES AND THE PORTION PASSING A 3-INCH SIEVE SHOULD MEET THE FOLLOWING GRADATION:

FOUNDATION BACKFILL	
SEIVE SIZE	PERCENT FINER
3 INCH	100
½ INCH	25 TO 100
NO. 40	0 TO 50
NO.20	0 TO 7
REFERENCE: MDOT SPECIFICATION 703.06, TYPE E (2014)	

WE RECOMMEND THE BUILDING SLABS BE CONSTRUCTED ON A MINIMUM 12-INCH THICK LAYER OF CRUSHED STONE AS PART OF SUB SLAB VAPOR MITIGATION SYSTEM AS OUTLINED UNDER OUR LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT(SGS #16218). CRUSHED STONE SHOULD BE PLACED OVERLYING GEOTEXTILE (MIRAFI 500X OR SIMILAR), BE TAMPED TO LOCK THE STONE STRUCTURE TOGETHER, AND MEET THE FOLLOWING GRADATION SPECIFICATION:

CRUSHED STONE 3/4 INCH	
SEIVE SIZE	PERCENT FINER
1 INCH	100
<sup>3</sup> / <sub>4</sub> INCH	90 TO 100
½ INCH	20 TO 55
₹ INCH	0 TO 15
NO.4	0 TO 5
REFERENCE: MDOT SPECIFICATION 703.13, CRUSHED STONE $\frac{3}{4}$ INCH (2014)	

DUE TO THE POTENTIAL FOR CAPILLARY RISE FROM GROUNDWATER WE RECOMMEND A VAPOR BARRIER BE USED BENEATH THE BUILDING SLAB. THE VAPOR BARRIER SHOULD BE INSTALLED IN ACCORDANCE WIT THE LATEST ACI SPECIFICATIONS (ACI 302.1R-96).

WE RECOMMEND GRANULAR SUBGRADE BE PROOF-ROLLED PRIOR TO PLACEMENT OF CRUSHED STONE. PROOF ROLLING SHOULD CONSIST OF A MINIMUM OF FIVE PASSES IN A NORTH-SOUTH DIRECTION AND THEN FIVE PASSES IN AN EAST-WEST DIRECTION USING A VIBRATORY ROLLER OR PLATE COMPACTOR, WHERE ACCESS IS PERMITTED. PROOF ROLLING OF SILT-CLAY SUBGRADE IS NOT RECOMMENDED DUE TO ITS SENSITIVITY AND RESULTING SUSCEPTIBILITY TO SOFTENING.

GROUNDWATER WAS ENCOUNTERED AT A DEPTH RANGE OF 6.2 TO 7.1 FEET (ELEVATIONS 5 TO 4 FEET). AT MINIMUM, WE RECOMMEND EXTERIOR GRADES SLOPE AWAY FROM THE BUILDING FOORPRINT TO REDUCE RUNOFF WATER FROM INFILTRATING THE FOUNDATION BACKFILL SOILS. PERIMETER UNDERDRAINS SHOULD CONSIST OF 4" RIGID PERFORATED PVC PLACED ADJACENT TO THE EXTERIOR FOOTINGS AND SURROUNDED BY A MINIMUM OF 6 INCHES OF CRUSHED STONE. CRUSHED STONE SHOULD BE WRAPPED IN FILTER FABRIC (MIRAFI140N OR SIMILAR) TO PREVENT CLOGGING FROM THE MIGRATION OF THE FINE SOIL PARTICLES IN THE BACKFILL SOILS.

### LEGEND

# **EXISTING** IRON PIPE OR ROD FOUND GAS VALVE WATER VALVE HYDRANT UTILITY POLE $\mathbb{S}\mathbb{D}$ MANHOLE - SANITARY OR DRAIN CATCH BASIN GAS OR ELECTRIC METER **DECIDUOUS TREE** CONIFEROUS TREE $\times$ $\times$ $\times$ CURB (SEE SITE PLAN FOR TYPE) OVERHEAD WIRES WATER LINE GAS LINE STORM DRAIN PROPERTY BOUNDARY EASEMENT BOUNDARY **EXISTING BUILDING** CONCRETE SURFACE **PROPOSED** PARKING STRIPING BARRIER FREE SYMBOL TRAFFIC ARROW EDGE OF PAVEMENT SLIPFORM CONCRETE CURB VERTICAL GRANITE CURB WATER LINE STORM OR ROOF DRAIN LINE SANITARY SEWER LINE UNDERGROUND ELECTRIC TELEPHONE CABLE

### PHASE II ESA RECOMMENDATIONS

CONTOUR LINE

ADA ACCESSIBLE RAMP

- SHOULD UTILITY TRENCHING BE REQUIRED IN THE AREA OF THE FORMER USTS AN ENVIRONMENTAL PROFESSIONAL SHOULD BE AVAILABLE ONSITE TO SCREEN SOILS FOR THE PRESENCE OF PETROLEUM CONTAMINATION. SHOULD THE SOIL CONTAIN CONTAMINATION AT LEVELS GREATER THAN THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION NOTIFICATION LEVEL, THE DEPARTMENT SHOULD BE CONTACTED AND A SOIL HANDLING PROTOCOL SHOULD BE DEVELOPED.
- DUE TO THE HISTORICAL USE OF THE SITE AND LAND BENEATH THE SITE, THE PROPOSED BUILDING DESIGN SHOULD INCORPORATE THE INSTALLATION OF A SUB SLAB VAPOR MITIGATION SYSTEM.
- WHEN REMOVING THE FLOOR DRAINS FROM THE EXISTING FOUNDATION, AN ASSESSMENT SHOULD BE MADE CONCERNING THE PRESENCE OF HISTORICAL CONTAMINATION ASSOCIATED WITH THE FLOOR DRAIN SYSTEM.

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PORTLAND, MAINE

GENERAL NOTES AND LEGEND

Scale Project No. 195350354 Sheet