

THIS PLAN

1. THIS PLAN IS SOLELY FOR THE PERMITTING PURPOSE AND IT DOES NOT CONTAIN THE INFORMATION REQUIRED FOR CONSTRUCTION. DETAILED CONSTRUCTION DRAWINGS ARE REQUIRED UPON THE ISSUANCE OF THE COMPREHENSIVE PERMIT PRIOR TO CONSTRUCTION BIDS AND/OR THE INITIATION OF CONSTRUCTION PRIOR TO THE PREPARATION OF BIDS AND/OR THE INITIATION OF CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN AND CAREFULLY EXAMINE THIS PLAN SET, RELATED CONSTRUCTION PLAN SETS FROM OTHER PROFESSIONAL DISCIPLINES, CONSTRUCTION SPECIFICATIONS, MANUFACTURERS INFORMATION AND ANY APPLICABLE PERMIT REQUIREMENTS/CONDITIONS OF APPROVAL FOR THE PROJECT.
2. THE EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. DIG SAFE AND THE APPROPRIATE UTILITY COMPANIES SHALL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
3. NOT ALL UTILITIES WERE ABLE TO BE LOCATED BY RECORD INFORMATION, SITE SURVEYS OR UTILITY LOCATOR SERVICES. THE DESIGN ENGINEER AND BASE PLAN SURVEYOR DO NOT ACCEPT ANY RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OR SUBSURFACE STRUCTURES WHICH ARE OMITTED OR INACCURATELY SHOWN. PRIOR TO THE INITIATION OF WORK, THE CONTRACTOR SHALL VERIFY THE LOCATION/ELEVATION OF EXISTING UTILITIES SHOWN ON THE PLAN.
4. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY DISCREPANCY BETWEEN THE LOCATION/ELEVATION OF PLANNED EXISTING UTILITIES SHOWN ON THESE PLANS AND THE INFORMATION IN THE FIELD. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN THE FIELD CONDITIONS AND EXISTING TOPOGRAPHY SHOWN ON THIS PLAN SET.
5. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A REGISTERED PROFESSIONAL LAND SURVEYOR TO PROVIDE LAYOUT & CONTROL FOR THE DEVELOPMENT OF THE SITE.
6. ALL CONSTRUCTION UNDER AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE CONSTRUCTED TO WITHSTAND A DIRECT H20 DESIGN LOAD. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL UTILITY/SITE IMPROVEMENT AREAS UNDER LANDSCAPED/NON-TRAFFIC BEARING AREAS FROM TEMPORARY CONSTRUCTION LOADS DURING CONSTRUCTION.
7. THE CONSTRUCTION SHOWN ON THESE PLANS REQUIRES AN ORDER OF CONDITIONS BE ISSUED BY THE LITTLETON CONSERVATION COMMISSION. THE CONTRACTOR SHALL OBTAIN A COPY OF SUCH ORDERS OF CONDITIONS PRIOR TO ANY SITE-RELATED DISTURBANCES AND SHALL COMPLY WITH APPROPRIATE CONDITIONS FOR CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ADJACENT PROPERTY FROM DAMAGE, ALL DAMAGES BY THE CONTRACTOR OR SUBCONTRACTORS SHALL BE REPAIRED AT NO COST TO THE OWNER.
9. THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING SURVEY MONUMENTS (BOUNDARY PINS, PIPES, DRILL HOLES, ETC.) THROUGHOUT ALL PHASES OF CONSTRUCTION. ANY DISTURBED MONUMENTS SHALL BE REPLACED BY A REGISTERED PROFESSIONAL LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
10. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY CONTRADICTION, INCOMPLETE OR MISLEADING INFORMATION SHOWN ON THE PLANS OR PLANS PREPARED BY OTHERS. THE CONTRACTOR SHALL ALLOW FOR ADEQUATE TIME FOR THE ENGINEER TO RESPOND/PROVIDE DIRECTION FOR THE PLAN DISCREPANCY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS OF PRODUCTS/MATERIALS TO THE ENGINEER AND/OR THE LOCAL APPROVING AUTHORITY AS REQUIRED IN THE CONSTRUCTION DOCUMENTS OR IF REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OVER THE PRODUCT. ADEQUATE TIME SHALL BE ALLOWED FOR THE SHOP DRAWINGS TO BE REVIEWED AND RETURNED TO THE CONTRACTOR PRIOR TO ORDERING THE SPECIFIED PRODUCTS/MATERIALS.
12. ALL SUPPLEMENTAL DATA SUBMITTED IN CONJUNCTION WITH THIS COMPREHENSIVE PERMIT AS REQUIRED BY THE LITTLETON ZONING BOARD OF APPEALS REGULATIONS IS HEREBY INCORPORATED AS PART OF THE PLAN SET.
13. ALL PERMANENT BOUNDARY AND SURVEY MONUMENTS SHALL BE INSTALLED AFTER THE COMPLETION OF ALL HEAVY SITE WORK.
14. NO DEBRIS, JUNK, RUBBER OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF ON LANDS OF THE DISTRICT OF COLORADO. ALL DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS.
15. UNLESS OTHERWISE SPECIFIED OR SHOWN, ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE STANDARDS DESCRIBED IN THE TOWN OF LITTLETON'S SUBDIVISION CONTROL REGULATIONS. IF NOT SPECIFIED THEREIN, SUCH CONSTRUCTION SHALL THEN CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MASSDOT), FORMERLY (MASSHIGHWAY) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST VERSION.
16. THE CONTRACTOR SHALL APPLY FOR AND OBTAIN, A PERMIT FROM MASS HIGHWAY TO CONSTRUCT WITHIN A PUBLIC WAY FOR WORK WITHIN GREAT ROAD, STATE ROUTE 2A - 175 CONTROLLED DENSITY FILL SHALL BE USED AS FALCKNEY BAY COURSE WITHIN THE STATE HIGHWAY LAYOUT.
17. WETLANDS Delineation performed by ORION ASSOCIATES, INC. OF ACTON, MA IN APRIL 2011, LOCATIONS OF FLATS WERE FIELD-SURVEY LOCATED BY PLACES ASSOCIATES, INC. THE FINAL WETLANDS LIMITS ARE SUBJECT TO REVIEW AND APPROVAL BY THE LITTLETON CONSERVATION COMMISSION.
18. TOWN LINES DERIVED HEREON ARE DERIVED FROM A FULL DESIGN/CONSTRUCTION AND WILL BE FIELD SURVEY DETERMINED PRIOR TO SUBMITTAL OF A FULL DESIGN/CONSTRUCTION PLANS.

1. THE LIMITS OF

1. EXPLORATIONS OR EARTHEN DISTURBANCE.
2. EROSION CONTROLS SHALL BE IMPLEMENTED PRIOR TO SITE CLEARING OR DISTURBANCE. SEE EROSION AND SEDIMENTATION CONTROL PLAN.
3. EXCEPT FOR THE SETUP FOR ENTRY TO THE SITE, NO CONSTRUCTION OR CONTRACTOR'S VEHICLES SHALL BE PARKED ON GRIST MILL ROAD OR GREAT ROAD, UNLESS COORDINATED WITH ADJACENT PROPERTY OWNERS. ALL CONSTRUCTION STAGING, STOCKPILE AND PARKING AREAS SHALL BE ON-SITE.
4. LOAM SHALL BE STOCKPILED FOR RE-USE ON THE SITE TO THE EXTENT PRACTICAL. SEE EROSION AND SEDIMENTATION CONTROL PLAN.
5. NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS. THE SITE SHALL BE KEPT IN A NEAT AND ORDERLY FASHION.
6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TRENCH OPERATIONS PERMIT PURSUANT TO THE REQUIREMENTS OF THE TOWN OF LITTLETON AND 320 C.M.R. 14.00 (A.A. "JACKIE'S LAW").

ALL STATE
BIRMINGHAM

CONCRETE
PAVEMENT
BE COMPOSED OF MINERAL AGGREGATE, MINERAL FILLER (IF REQUIRED) AND
BITUMINOUS MATERIAL. THE MIXTURE MAY INCLUDE RECLAIMED ASPHALT
PAVEMENT AT THE OPTION OF THE CONTRACTOR.

THE MIXTURE COMPOSITION AND TOLERANCES SHALL MEET THE SPECIFICATIONS FOR BINDER COURSE AND TOP COURSE MIXTURES AS SPECIFIED IN TABLE A OF SSHB M311.03. IF RECLAIMED ASPHALT PAVEMENT (RAP) IS USED IN THE MIXTURE, THE PROPORTION OF RAP TO VIRGIN AGGREGATE SHALL BE LIMITED TO A MAXIMUM OF 40% FOR DRUM MIX PLANTS AND 20% FOR MODIFIED BATCH PLANTS.

ALL SITE CAST IN PLACE CONCRETE AND RELATED REINFORCING SHALL MEET THE REQUIREMENTS OF THE MASSACHUSETTS STATE BUILDING CODE, THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) FOR PRODUCT MATERIALS, FORM WORK, PLACEMENT AND CURING. ALL SITE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI UNLESS OTHERWISE REQUIRED IN THE CONSTRUCTION DOCUMENTS.

CONTROLLED DENSITY FILL (CDF)	CONTROL DENSITY FILL SHALL BE A FLOWABLE, SELF-CONSOLIDATING, RIGID SETTING, LOW DENSITY MATERIAL THAT CAN SUBSTITUTE FOR COMPACTED GRAVELS FOR BACKFILLS, FILLS AND STRUCTURAL FILLS. CDF SHALL BE EXCAVATABLE BY HAND TOOLS AND/OR SHALL EQUIPMENT WHEN PLACED AND CURED. CDF SHALL MEET THE REQUIREMENTS OF SSSH M4.0.8, TYPE 2E, AND SHALL MEET THE FOLLOWING REQUIREMENTS:
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A. CDE IS TO BE BATCHED AT A HEAD MIX PLANT AND IS TO BE USED AT A HIGH OF "VERY HIGH SLUMP FROM 10" TO 12". IT SHALL BE FLOWABLE AND REQUIRE NO VIBRATION AFTER IT HAS BEEN PLACED.

B. CDE SHALL BE A MIXTURE OF PORTLAND CEMENT, FLY ASH, SAND AND WATER DESIGNED TO MEET THE CDP REQUIREMENTS. HIGH AIR ENTRAINMENT MAY BE SUBSTITUTED FOR FLY ASH WITH AN ADJUSTURES (23%) ADJUSTMENT IN SAND CONTENT.

CRUSHED STONE SHALL BE THE SIZE AS INDICATED ON THE PLANS. THE STONE SHALL BE FROM A STONE QUARRY THAT PRODUCES HARD, ANGULAR DURABLE WASHED STONE FREE FROM DEBRIS AND ORGANIC MATERIALS. THE STONE SHALL MEET THE REQUIREMENTS OF SSMB M2.01.0

DENSE, GRADED, CRUSHED STONE SHALL CONSIST OF THE COMBINATION OF DENSE GRADED CRUSHED STONE SHALL CONSIST OF THE COMBINATION OF CRUSHER-OWN COARSE AGGREGATE (MEETING SS# 2.0.1.0) AND FINE AGGREGATES OF NATURAL SAND OR STONE SORTING UNIFORMITY A PREPARED WITH PREDETERMINED QUANTITY OF FINER COARSE AGGREGATE SHALL CONSIST OF CRUSHER-OWN COARSE AGGREGATE (MEETING SS# 2.0.1.0) AND FINE AGGREGATES THAT BREAK UP WHEN ALTERNATELY FROZEN AND THAWED OR WETTED AND DRIED SHALL NOT BE USED. FINE AGGREGATE SHALL CONSIST OF NATURAL OR CRUSHED SAND. THE GRADATION/MATERIAL SHALL COMPLY WITH THE SPECIFICATIONS OF SS# 2.0.1.0

A. GLACIAL TILL: NATURAL, NONORGANIC SOIL APPROVED BY THE ENGINEER AND MEETING THE FOLLOWING REQUIREMENTS:

1. IT SHALL BE FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIALS, FROZEN MATERIALS AND STONES GREATER THAN TWO INCHES IN MAXIMUM DIMENSION.

B. IT SHALL BE A SILL LOAM AS DEFINED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL TEXTURAL CLASSIFICATION.

C. THE SOIL SHALL CONSIST OF GREATER THAN 50% SILT, CLAY, OR 50% TO 80% SILT AND LESS THAN 12% CLAY.

GRAVEL BORROW SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COURSE SAND, FREE FROM CLAY, SURFACE COATINGS, ORGANIC AND DELETERIOUS MATERIAL. ALL GRAVEL BORROW SHALL MEET THE REQUIREMENTS OF SPB M. 03.0. MAXIMUM STONE SIZE SHALL BE AS FOLLOWS:

LOAM (BORROW)
TYPE A: 0' LARGEST DIMENSION
TYPE B: 3' LARGEST DIMENSION
TYPE C: 2' LARGEST DIMENSION
LOAM SHALL CONSIST OF NATURAL TOPSOIL, FREE FROM SUB-SOIL, OBTAINED FROM AREA WHICH HAS NEVER BEEN STRIPPED. LOAM SHALL BE OF

PARTIALLY DISINTEGRATED STONE, LIME, CEMENT, ASHES, SLAG, CONCRETE, TARS, RESIDUE, TARRED PAPER, BOARDS, CHIPS OR ANY OTHER UNDESIRABLE MATERIAL.

LOAM SHALL CONTAIN BEWEEN 5.5 AND 7.5 PERCENT ORGANIC MATTER AS DETERMINED BY LOSS ON IGNITION OF A MOISTURE-FREE SAMPLE DRIED IN ACCORDANCE WITH THE CURRENT METHOD OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS.

THE ACIDITY RANGE OF THE LOAM SHALL BE PH 6.5 TO PH 7.5 INCLUSIVE.

THE MECHANICAL ANALYSIS OF THE SOIL SHALL BE AS FOLLOWS:

U.S. SIEVE SIZE & NUMBER	PERCENT PASSING
	MINIMUM MAXIMUM
1 INCH	100%
¾ INCH	97%
NO. 100 (SAND)	49%
NO. 100 (SILT & CLAY)	40%
	60%

GENERAL FILLING TO THE SPECIFIED SUB-GRADE. THE MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:

A. IT SHALL BE FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIAL, OF FROZEN MATERIALS AND OF STONES LARGER THAN 6 INCHES IN MAXIMUM DIMENSION.

B. IT SHALL BE OF SUCH NATURE & CHARACTER THAT IT CAN BE COMPACTED TO THE SPECIFIED DENSITIES IN A REASONABLE AMOUNT OF TIME.

9. IT SHALL HAVE A MINIMUM ADV. CAPACITY OF NOT LESS THAN 400 SUBJECT TO DECAY, DECOMPOSITION, AND OF CINDERS OR OTHER MATERIALS WHICH WILL CORRODE PIPING OR OTHER BURIED MATERIALS.

E. EXCAVATED ROCK & BOULDERS SMALLER THAN ONE CUBIC YARD IN SIZE MAY BE USED IN FILL AREAS UNDER LAWNS ONLY. PROVIDED THEY ARE A MINIMUM OF 24 INCHES BELOW THE SURGRADE. PLACED AND POUNDS PER CUBIC FOOT AND LESS THAN 40 % OF THE MATERIAL SHALL PASS THE NUMBER 200 SIEVE.

RIP-RAP STONE SHALL BE SOUND, DURABLE ROCK ANGULAR IN SHAPE. RIP

ROUNDED STONES, BOULDERS, SANDSTONE, OR SIMILAR SOFT STONE, OR RELATIVELY THIN SLABS WILL NOT BE PERMITTED UNLESS SPECIFICALLY PERMITTED BY THE DESIGN ENGINEER. ALL RIP RAP MATERIALS SHALL MEET THE REQUIREMENTS OF SPMB M2.02.0.

SAND BORROW SHALL CONSIST OF CLEAN WERT, HARD, DURABLE GRAINS OF QUARTZ OR OTHER HARD DURABLE ROCK, FREE FROM LOAM OR CLAY SURFACE COATINGS AND DELETERIOUS MATERIALS. THE ALLOWABLE AMOUNT OF MATERIAL PASSING A #20 SIEVE AS DETERMINED BY ASTM T 11 SHALL NOT EXCEED 10% BY MASS. ALL SAND BORROW SHALL MEET THE REQUIREMENTS OF ASTM M 101.0. MAXIMUM STONE SIZE SHALL BE AS SPECIFIED IN THE PLANS.

ALL EARTHEN MATERIALS SHALL BE COMPACTED TO THE DRY DENSITY INDICATED IN THE CONSTRUCTION DOCUMENTS AND/OR AS IS REQUIRED

SAMPLE OF THE MATERIAL TO BE USED AND TESTED IN ACCORDANCE WITH THE MODIFIED PROCTOR DRY DENSITY TEST AS DEFINED IN ASTM D1557, METHOD C

[illegible]

	INDEX CONTOUR	-100	100	FOOT COUNTS
	INTERMEDIATE CONTOUR	-99	99	
	SPOT GRADE	X 100.52	X 100.52	
	STONE WALL			
	EDGE OF WOODS			
	EDGE OF WATER BODY			
	100 YEAR FLOOD LINE			
	EDGE OF WETLAND			
	25' BUFFER			
	50' BUFFER			
	100' BUFFER			
	WETLAND FLAG			
	RIVERFRONT			
	100' RIVER BUFFER			
	200' RIVER BUFFER			
	SILTATION BARRIER			
	BUILDING SETBACK LINE			
	WELL			
	TREE			
	FLAGPOLE			
	BOUND			
	DRIPL HOLE			
	IRON PIN			
	TERMINAL MARK			
	FENCE TEST			
	TEST PILE			
	SOIL BORING			
	EDGE OF GRAVEL			
	EDGE OF WALK			
	EXPANSION JOINT			
	CONSTRUCTION JOINT			
	EDGE OF PAVEMENT			
	CAPE COD BERM			
	BIT CONC. (TYPE 3)			
	CONCRETE CURB			
	VERT. GRANITE CURB			
	SLOPED GRANITE CURB			
	STOCKADE FENCE			
	CHAIN LINK FENCE			
	FENCE - OTHER			
	FENCE GATE			
	GUARD RAIL			
	WOOD GUIDE RAIL			
	ROOT BARRIER			
	SION POST			
	FOUNDATION DRAIN			
	ROOF DRAIN			
	DRAIN LINE			
	DRAIN MANHOLE			
	CATCHBASIN			
	FLARED END IN/OUT			
	CLEANOUT			
	IRIGATION LINE			
	FIRE PROTECTION LINE			
	WATER LINE			
	WATER VALVE			
	FINE HYDRANT			
	WATER SHUTOFF			
	OVENHEAD WINCS			
	UNDERGROUND WIRES			
	GUY POLE			
	UTILITY POLE			
	GUY ANCHOR			
	UTILITY BOX			
	STREETLIGHT			
	LAMP POST			
	ELECTRIC MANHOLE			
	TELEPHONE MANHOLE			
	SEWER FORCE MAIN			
	LOW PRESSURE SEWER			
	SEWER MANHOLE			
	GAS LINE			
	CAS VALVE			

APARTMENTS

SECTION: 15 GREAT ROAD

LOCATION: 15 GREAT ROAD
TOWN: LITTLETON, MASSACHUSETTS
PREPARED FOR:

PREPARED FOR

ROAD II LLC

NOTED DATE: JUL 11 2011

SCALE: AS NOTED DATE: JULY 2011

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PROJECT No.: 11-6303 PLAN No. PS-2

PERMIT SET
NOT FOR CONSTRUCTION