NOTES:

1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'-6" OF COVER IS POSSIBLE ADD 1 INCH OF "BLUE DOW" RIGID INSULATION FOR EVERY 12" LESS COVER.

WATER SERVICE TRENCH SECTION DETAIL

NOT TO SCALE

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE CITY OF PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.
5. CONTRACTOR TO FIELD LOCATE POINT OF CONNECTION TO THE EXISTING SERVICE LINE.

TYPICAL SERVICE CONNECTION

NOT TO SCALE

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST CONFORM TO MONMOUTH WATER ASSOCIATION (M.W.A.) SPECIFICATIONS, SEE SPECIFICATIONS BOOK FOR DETAILS.
2. M.W.A. REQUIRES THE USE OF COPPER FOR THE CUSTOMERS SIDE OF SERVICE.
3. CUSTOMERS PORTION OF SERVICE LINE IS THAT PORTION FROM THE PROPERTY LINE INTO THE BUILDING, IN THIS INSTANCE THE CUSTOMER IS ALSO RESPONSIBLE FOR THE INSTALLATION OF THE CURB STOP BALL VALVE.
4. FOR THE INTERIOR BUILDING PLUMBING REFER TO THE PLUMPING PLAN BY MECHANICAL SYSTEMS ENGINEERS.
5. CONTRACTOR TO FIELD LOCATE POINT OF CONNECTION TO THE EXISTING SERVICE LINE.

SERVICE INSTALLATION DETAIL

NOT TO SCALE

NOTES:

1. IF DEAD END WITH TEE, THRUST BLOCK WOULD BE REQUIRED OR AS DIRECTED BY THE ENGINEER
2. SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

END SECTION

THRUST BLOCKING: REGULAR BEND

NOT TO SCALE

NOTES:

1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II-2.
3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF.SD) SHALL BE ORIENTED UP.
5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND ROW.STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.

TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	5
15	5
18	5
24	6
36	6
48	7

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE

NOTES:

1. DIMENSIONS APPLICABLE FOR 5 ¼" BUFFALO VALVE BOXES
2. BASE SECTION MAY BE USED AS INTERMEDIATE SECTION

VALVE BOX & COVER

NOT TO SCALE

VERTICAL GRANITE CURB CROSS SECTION

NOTES:

1. CURB SHALL BE RESET IN ACCORDANCE WITH MDOT 609.08 WITH THE EXCEPTION OF CURB SPACING TO BE INSTALLED PER DETAIL AND COMPLY WITH THE STANDARDS SET BY THE CITY OF PORTLAND TECHNICAL MANUAL.

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL

NOT TO SCALE

CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2–5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2–4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2–4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2–4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

UTILITY TRENCH: PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

Reviewed for Code Compliance Inspection Division Portland, Maine

ISSUED FOR

Date: 02/28/18

FINAL APPLICATION	WHS	7/15/16
BUILDING PERMIT	WHS	7/25/16
CITY COMMENT	WHS	9/13/16
CONDITIONS OF APPROVAL	WHS	9/12/16

DRAWING NAME: UTILITY DETAILS

PROJECT NAME: THE BLACK BOX AT 93 WASHINGTON

CLIENT: COTTON STREET HOLDINGS, LLC
75 WASHINGTON AVE SUITE 2H PORTLAND, ME 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATION, ALTERATION OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2855

FILE:	1073_CIVIL
JN:	1073
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11416 10-3-16 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-41