

BOSTON WATER AND SEWER COMMISSION
 LOCATION APPROVED UNDER THE FOLLOWING CONDITIONS

REVIEWED AND APPROVED AS TO PROPOSED CONNECTION(S) TO EXISTING WATER AND SEWER FACILITIES AS SHOWN, FOR ISSUE OF BUILDING PERMIT ONLY. ADDITIONAL PERMITS MUST BE OBTAINED FROM BWSC PRIOR TO CONNECTION TO BWSC FACILITIES. SITE PLANS ARE VALID FOR A PERIOD OF ONE (1) YEAR FROM DATE OF APPROVAL.

JOHN P. SULLIVAN, JR. P.E.
 CHIEF ENGINEER

ALL WATER, SEWER AND DRAIN SERVICE CONNECTIONS TO BOSTON WATER AND SEWER COMMISSION FACILITIES MUST BE PERFORMED BY A BONDED DRAIN LAYER LICENSED BY THE BOSTON WATER AND SEWER COMMISSION.

BOSTON WATER AND SEWER COMMISSION
 CROSS CONNECTION
 APPROVAL: _____ DATE: _____

BOSTON WATER AND SEWER COMMISSION
 DRAIN BACKWATER VALVE INSTALLATION
 APPROVAL: _____ DATE: _____

PROPERTY INFORMATION
 PARCEL ID #: 0502542010
 WARD: 5 PARCEL #: 2542010

LAND-USE CODE
 R-1 - RESIDENTIAL

WATER METER INFORMATION
 EXISTING WATER ACCOUNT NO.: 156037001
 PROPOSED WATER METER SIZE: 5/8-INCH*
 *EXISTING WATER METER BE RETURNED TO BWSC

ESTIMATED SEWAGE FLOW
 RESIDENTIAL
 3 BEDROOMS x 110 GPD/BEDROOM = 330 GPD
 TOTAL = 330 GPD

SERVICE CONNECTION TABLE

ITEM	QTY	BWSC INSPECTOR/DATE
① PROPOSED 2" WATER CONNECTION	(1)	_____
② PROPOSED 4" FIRE CONNECTION	(1)	_____
③ PROPOSED 6" SEWER CONNECTION	(1)	_____
④ PROPOSED INFILTRATION SYSTEM	(1)	_____
⑤ DYE TEST SEWER	(1)	_____
⑥ DOWNSPOUT OVERFLOW	(1)	_____
⑦ AS-BUILT PREPARATION FEE	(1)	_____

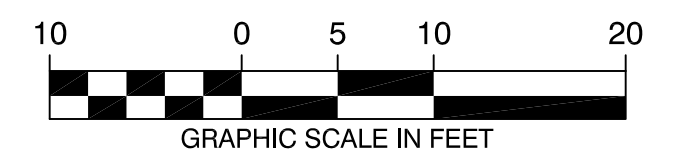
SPECIAL CONDITIONS

ITEM _____ BSWC INSPECTOR/DATE _____

ARTICLE 32 LETTER _____

OWNER/APPLICANT
 DAVID TRUST
 7 BEAVER PLACE
 BOSTON, MA 02108
 PHONE: (617) 262-4354

PROJECT ADDRESS
 7 BEAVER PLACE
 BOSTON, MA 02108-3303



REVISIONS

NO.	DATE	DESCRIPTION
4	1/21/18	PER BSWC COMMENTS
3	12/18/17	MEP COORDINATION
2	7/17/17	LEED STORMWATER COMPLIANCE
1	7/7/17	PER BSWC COMMENTS

DATE: JAN. 7, 2017

SCALE: 1" = 10'

SHEET 1 OF 3

7 BEAVER PLACE
 BOSTON (BEACON HILL), MASSACHUSETTS

C1.1 - UTILITY SITE PLAN
BWSC PLAN #18001

BOSTON COASTAL CONSULTING
 866 East 2nd Street, Unit #2, South Boston, MA 02127
 tel: 857-222-7975

GENERAL NOTES:

- LOCATIONS AND ELEVATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE REFERENCED SURVEY PLAN AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. BOSTON COASTAL CONSULTING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES INACCURATELY SHOWN OR OMITTED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY DEPARTMENT SHALL BE NOTIFIED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHALL BE VERIFIED IN THE FIELD. CALL THE BWSC, (617)869-7000 AND DIG-SAFE CALL CENTER, (888)344-7233, 72 HOURS (3 WORKING DAYS) PRIOR TO EXCAVATION.
- ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO BWSC REQUIREMENTS AND ALL OTHER APPLICABLE MUNICIPAL REGULATIONS.
- ALL DISTURBANCES WITHIN THE PUBLIC WAY SHALL CONFORM TO CITY AND BWSC STANDARDS.
- THIS PLAN HAS BEEN PREPARED FOR APPROVAL OF THE WATER, SEWER AND DRAIN CONNECTIONS TO THE BWSC FACILITIES. IT IS UNDERSTOOD THAT THE RESPONSIBILITY OF OWNERSHIP AND MAINTENANCE OF THE SEWER CONNECTIONS ON PRIVATE PROPERTY AND/OR PRIVATE AND PUBLIC WAYS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR OWNERS. IT IS ALSO UNDERSTOOD THAT THE WATER CONNECTIONS ON PRIVATE PROPERTY INCLUDING PRIVATE WAYS ARE ALSO THE RESPONSIBILITY OF THE DEVELOPER AND/OR OWNERS. IF THE CONNECTIONS CROSS, OR ARE NEAR INDIVIDUAL PROPERTY LINES, PROVISIONS MUST BE MADE TO ALLOW EACH OWNER TO MAINTAIN OR RECONSTRUCT THEIR RESPECTIVE CONNECTIONS. THIS FACT MUST BE INCORPORATED INTO ANY PURCHASE AND SALES AGREEMENT AND DEEDS RELATED TO THE TRANSFER OF OWNERSHIP OF THE PROPERTIES.
- SITE CONTRACTOR TO PROVIDE ALL EXCAVATION, INSTALLATION, BACK FILLING, PAVEMENT PATCHING, ETC. FOR THE INSTALLATION OF UNDERGROUND GAS, ELECTRIC, TELEPHONE, FIRE ALARM, WATER, SEWER, DRAIN AND SIMILAR SERVICES.
- IF EXISTING ABANDONED BWSC SERVICES ARE ENCOUNTERED THEY SHALL BE CUT AND CAPPED AT THE MAIN PER BWSC STANDARDS.

- THE PROPOSED DOMESTIC WATER SERVICE SHALL BE TYPE "K" COPPER TUBING.
- THE PROPOSED FIRE WATER SERVICE SHALL BE CEMENT LINED DUCTILE IRON, ZINC COATED (CLASS 56) PIPING, MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF ANSI/AWWA C151/A21.51 AND SHALL BE CLASS 56 PIPE. ALL JOINTS SHALL HAVE MEGALUG FITTINGS OR APPROVED EQUAL INSTALLED.
- THE GRAVITY DRAIN AND SEWER PIPES SHALL BE POLYVINYL CHLORIDE (PVC) PIPE SDR 35 CONFORMING TO ASTM STANDARD SPECIFICATIONS D3034.
- ALL DRAIN AND SEWER PIPES WITHIN THE BUILDING SHALL BE DESIGNED AND INSTALLED PER MASS PLUMBING CODE WHICH SHALL BE SIGNED OFF BY THE LOCAL PLUMBING INSPECTOR.
- CONTRACTOR IS TO OBTAIN THE ROUGH CONSTRUCTION SIGN OFF DOCUMENT FROM THE CITY OF BOSTON INSPECTIONAL SERVICES DEPARTMENT PRIOR TO FILING A GENERAL SERVICES APPLICATION WITH BWSC.
- CONTRACTOR WILL BE RESPONSIBLE FOR PREPARING AS-BUILT PLANS IN ACCORDANCE WITH BWSC REQUIREMENTS. THIS INFORMATION SHALL BE SUBMITTED TO THE CIVIL ENGINEER FOR THEIR USE.
- CONTRACTOR TO CONFIRM THE LOCATIONS AND INVERTS OF THE EXISTING UTILITIES IN THE STREET PRIOR TO THE INSTALLATION OF NEW SERVICE CONNECTIONS. SERVICES SHALL BE FIELD VERIFIED BEFORE BEGINNING CONSTRUCTION.
- ANY CONSTRUCTION DEWATERING SHALL EMPLOY MEASURES TO FILTER OUT SEDIMENT PRIOR TO ITS DISCHARGE AND SHALL CONFORM WITH BWSC REQUIREMENTS. CONTRACTOR TO SUBMIT A SKETCH OF THESE TO THE ARCHITECT FOR APPROVAL.
- CONTRACTOR TO EMPLOY MEASURES TO CONTROL DUST DURING CONSTRUCTION.
- THE PROPOSED FINISH GRADE ELEVATIONS OF THE UTILITY STRUCTURES ARE APPROXIMATE ONLY. FINAL ELEVATIONS ARE TO BE SET FLUSH. ADJUST ALL OTHER RIM ELEVATIONS OF EXISTING MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISHED GRADE WITHIN LIMITS OF SITE WORK.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM AND OTHER PRIVATE COMPANIES, AS REQUIRED.

- COORDINATE CATV, TELEPHONE AND GAS INSTALLATION WITH THE UTILITY COMPANIES. THE PROPOSED LOCATIONS OF THESE SERVICES ON THESE PLANS ARE FOR PERMITTING PURPOSES ONLY.
- THE EXISTING SEWER, DRAIN AND WATER SERVICES SHOWN ON THESE PLANS ARE SHOWN STRICTLY FOR PERMITTING PURPOSES ONLY. EXACT LOCATIONS AND ELEVATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- COORDINATE EXACT SITE LAYOUT, DRAINAGE GRATE MATERIALS, AND PAVING DESIGN/MATERIALS WITH ARCHITECT PRIOR TO CONSTRUCTION. THESE PLANS ARE FOR THE PROPOSED UTILITY DESIGN TO BE USED FOR BWSC PERMITTING PURPOSES ONLY.
- ALL WORK COMPLETED SHALL BE CONSTRUCTED SO THERE WILL BE NO DISTURBANCE TO ANY EXISTING LAND OR ANY EXISTING STRUCTURES ON THE ADJACENT LOTS.

ARTICLE 32 COMPLIANCE:

THE PROPOSED PROJECT LOCATED AT 7 BEAVER PLACE COMPLIES WITH THE REQUIREMENTS OF ARTICLE 32 OF THE BOSTON ZONING CODE FOR GROUNDWATER STORAGE AND RECHARGE.

REFERENCES:

EXISTING PROPERTY LINE, TOPOGRAPHIC AND UTILITY INFORMATION IS TAKEN FROM A DIGITAL FILE RECEIVED ON JANUARY 4, 2017 AND NAMED '7 Beaver Place Survey_071816V.DWG' OF A TOPOGRAPHIC PLAN OF LAND OF 7 BEAVER PLACE, PREPARED BY NITSCH ENGINEERING OF BOSTON, MA.

LEACHING DRY WELL

PRECAST CONCRETE LEACHING DRY WELLS = OLDCASTLE PRECAST, MODEL NO. DW4-6HD
 4'-0" DIAMETER (6'-0" H) PRECAST CONCRETE DRY WELLS x 2
 1.0 FT. CRUSHED STONE BED / SURROUND WITH 1.0 FT. OF CRUSHED STONE (LIMITS SHOWN ON PLAN)

DESIGN RUNOFF VOLUME

BUILDING ROOF AREA = 819 S.F.
 DESIGN RAINFALL = 3.2 IN.
 RUNOFF VOLUME = 819 S.F. x (3.2"/12") FT. = 218.4 C.F. RUNOFF FROM 1.0 INCH STORM

STORM WATER VOLUME CALCULATIONS

DRY WELL VOLUME
 STORAGE CAPACITY IN DRY WELLS = ((pi x (3.33 FT.) ^ 2)/4) x 5.5 FT. x 2 DRY WELLS = 96 C.F.

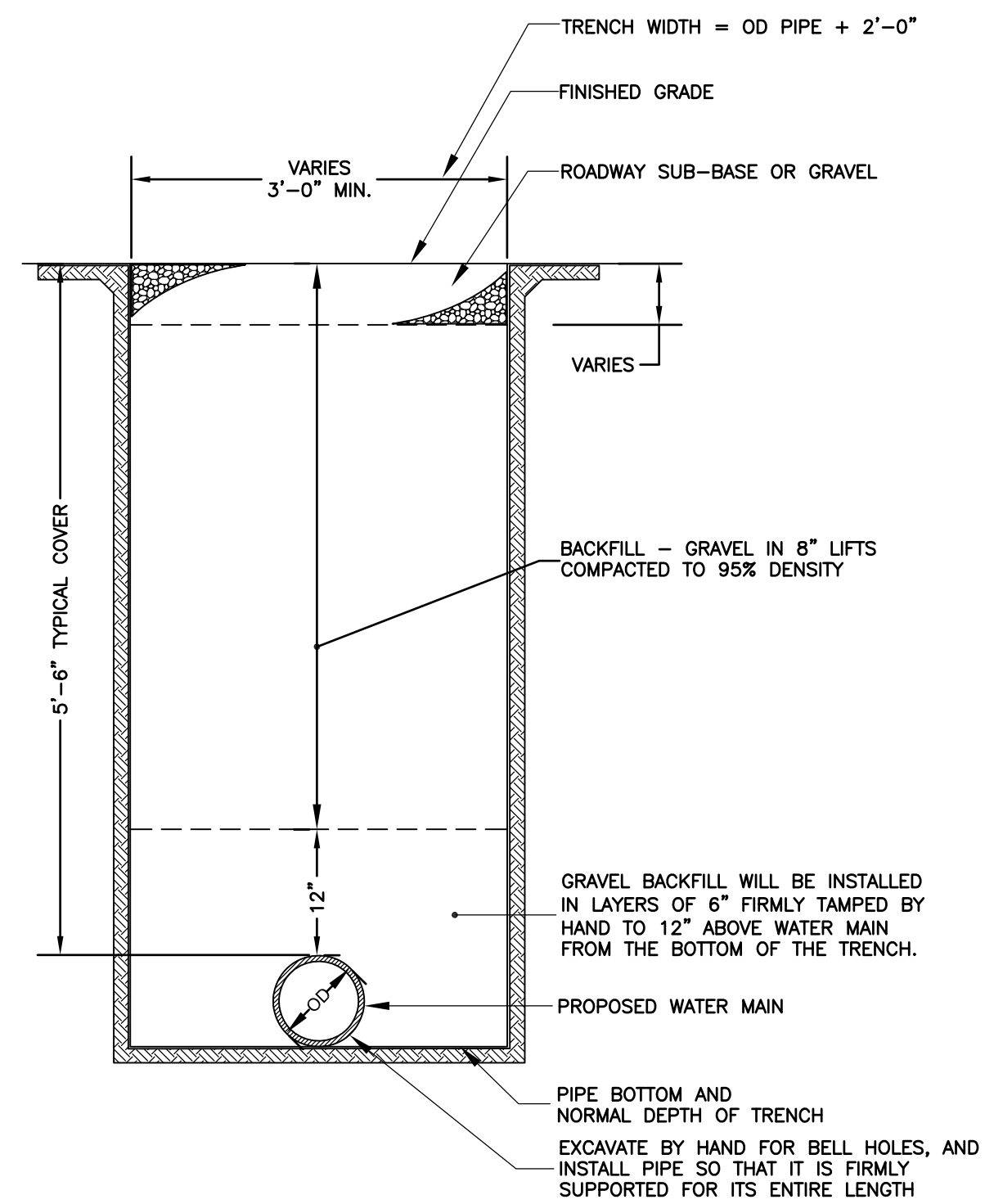
CRUSHED STONE VOLUME
 CRUSHED STONE = L x W x H = 11.5 FT. x 7.5 FT. x 6.5 FT. = 561 C.F.
 (-) DRY WELLS = ((pi x (4.00 FT.) ^ 2)/4) x 5.5 FT. x 2 DRY WELLS = 138 C.F.
 TOTAL STONE = 423 C.F.

STORAGE CAPACITY IN CRUSHED STONE = 423 C.F. x (30% VOIDS) = 127 C.F.

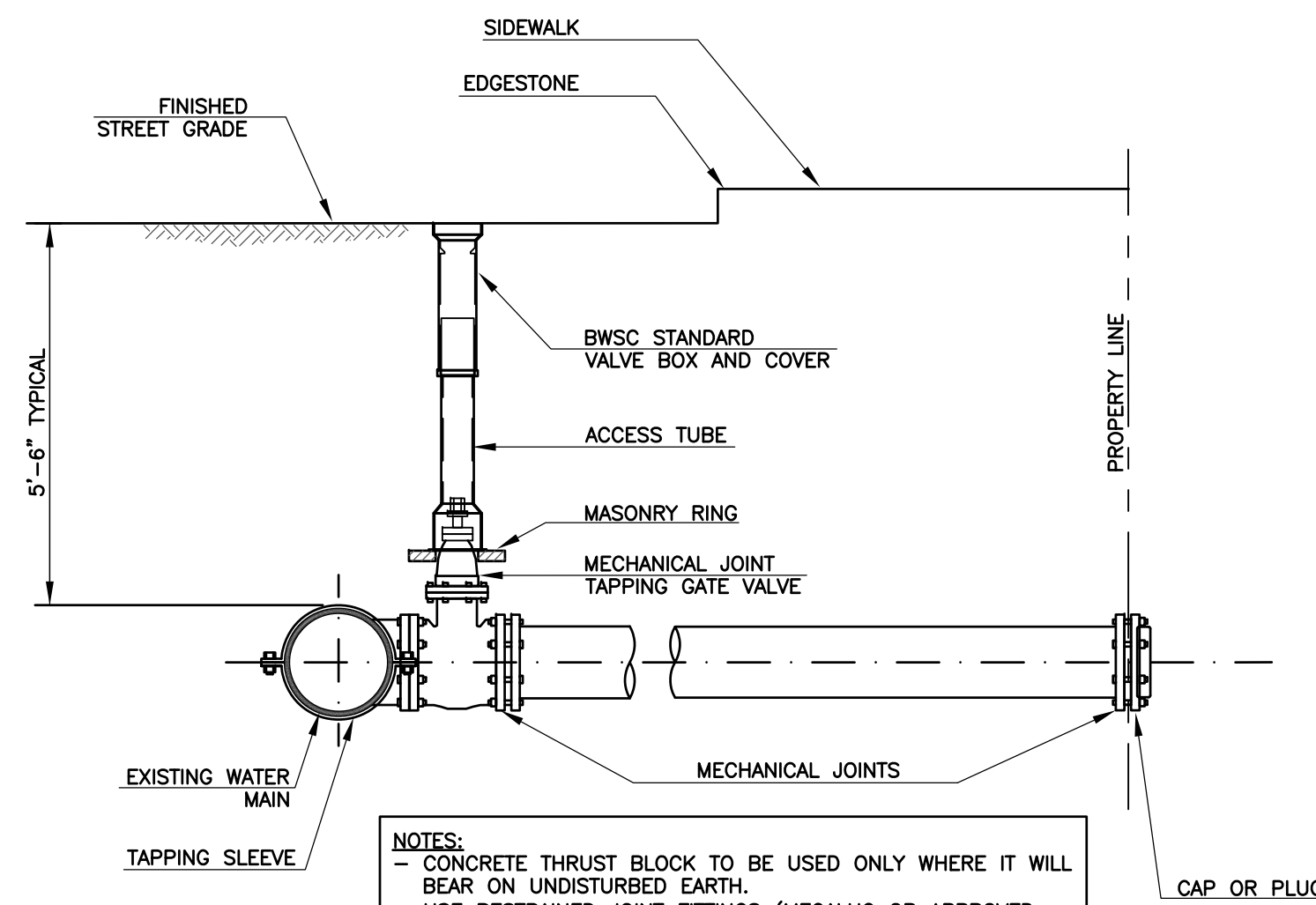
TOTAL STORAGE VOLUME
 TOTAL STORAGE VOLUME = 96 C.F. (DRY WELL) + 127 C.F. (CRUSHED STONE) = 223 C.F.

STORM WATER STORAGE VOLUME = 223 C.F. > 218.4 C.F. RUNOFF FROM 3.2 INCH, 2-YEAR, 24 HOUR STORM EVENT
 THE PROPOSED LEACHING SYSTEM WILL PROVIDE THE REQUIRED STORAGE TO MITIGATE THE RUNOFF VOLUME FROM THE 1.0 INCH STORM EVENT AS REQUIRED BY THE CITY OF BOSTON'S ARTICLE 32 REGULATIONS.

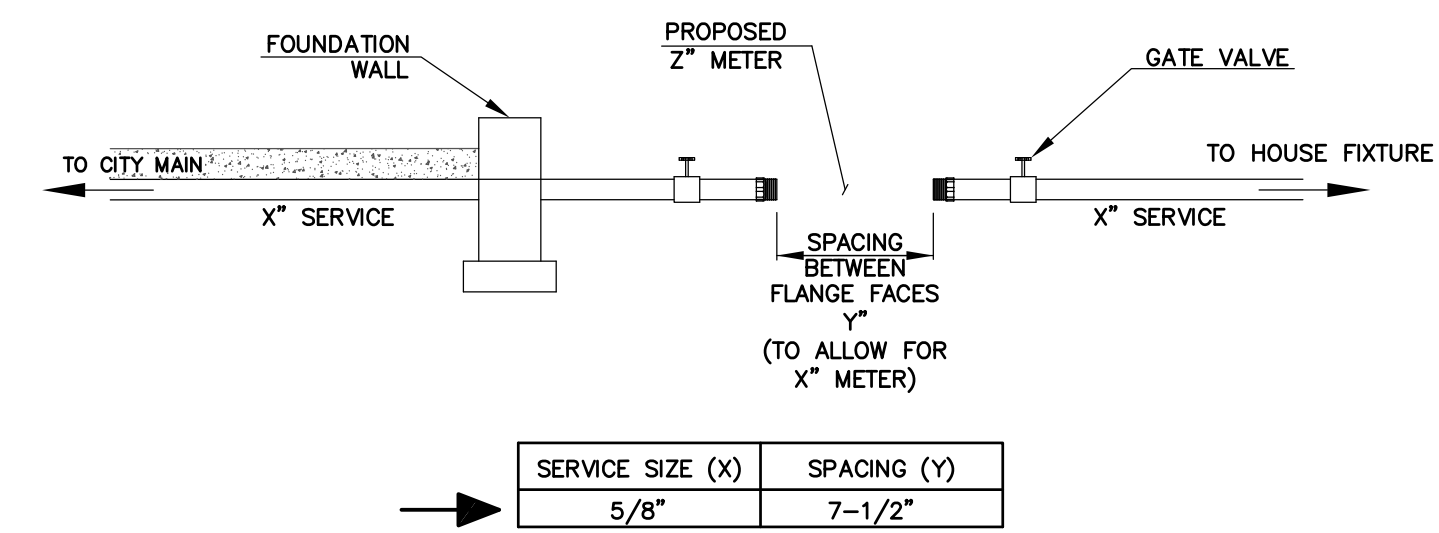
STORMWATER INFILTRATION SYSTEM STORAGE CALCULATIONS



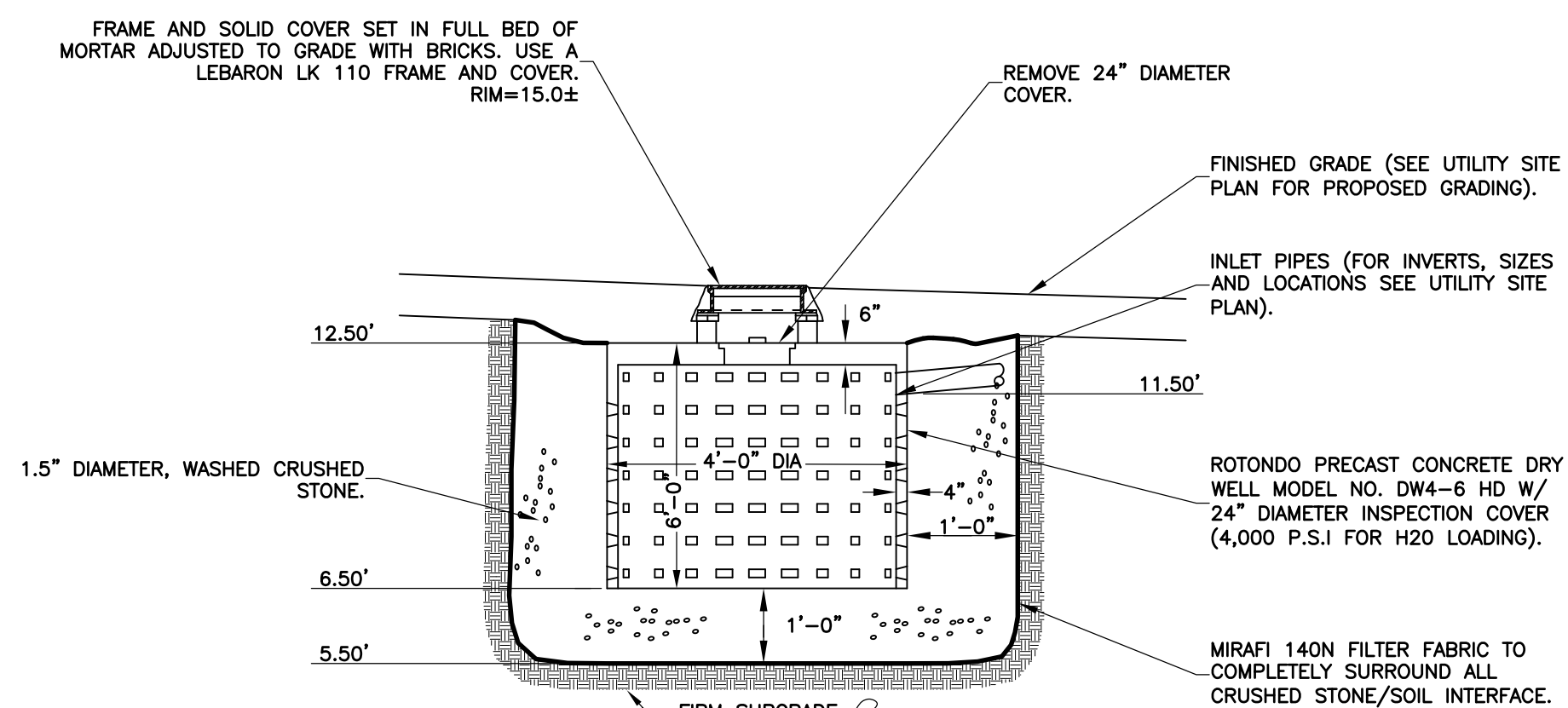
TYPICAL TRENCH DETAIL OF WATER MAIN IN FIRM GROUND
(NOT TO SCALE)



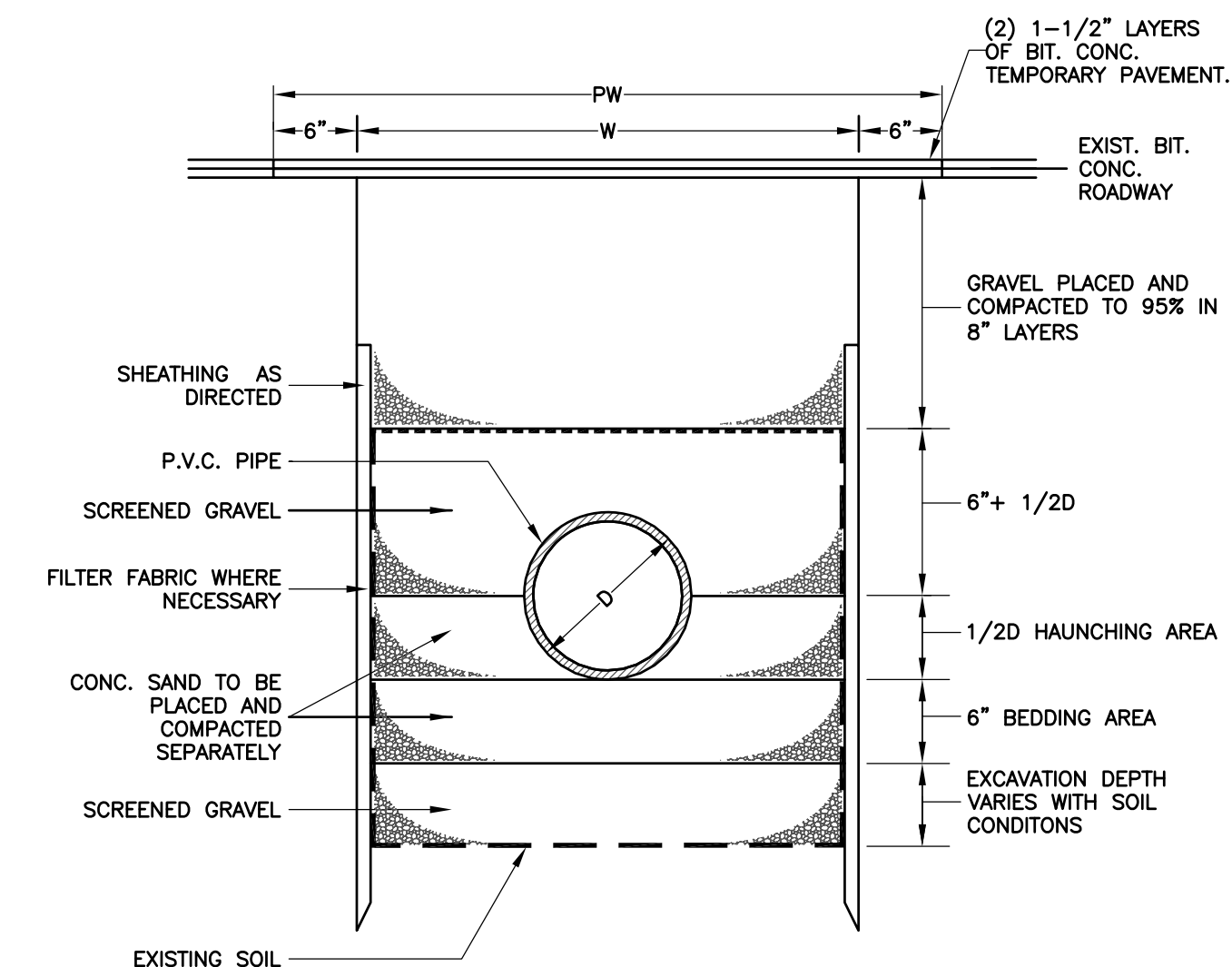
TYPICAL WATER SERVICE CONNECTION WITH TAPPING SLEEVE AND GATE VALVE
(NOT TO SCALE)



WATER METER INSTALLATION DETAIL
(NOT TO SCALE)

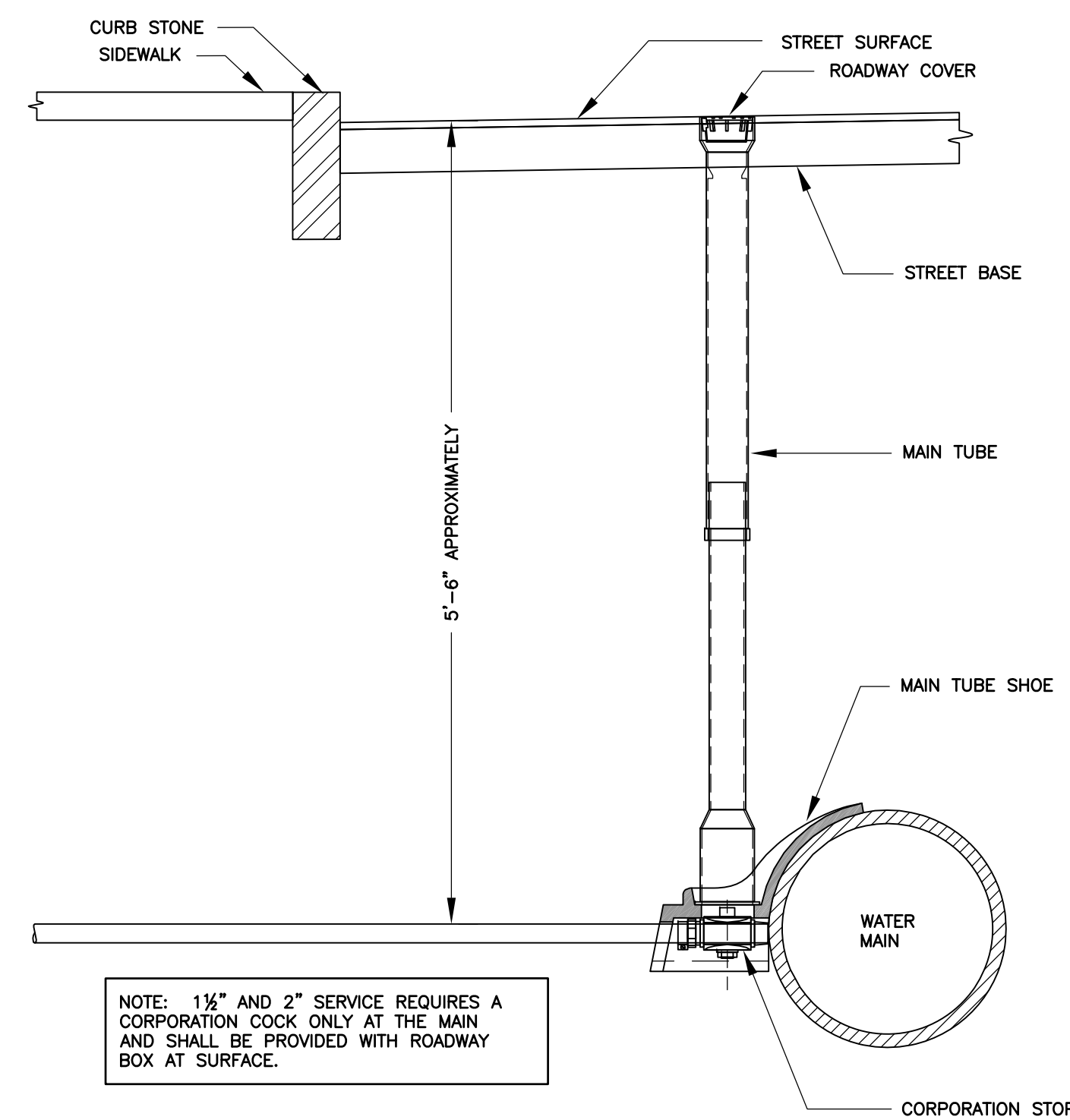


DRY WELL (INFILTRATION SYSTEM) DETAIL
(NOT TO SCALE)

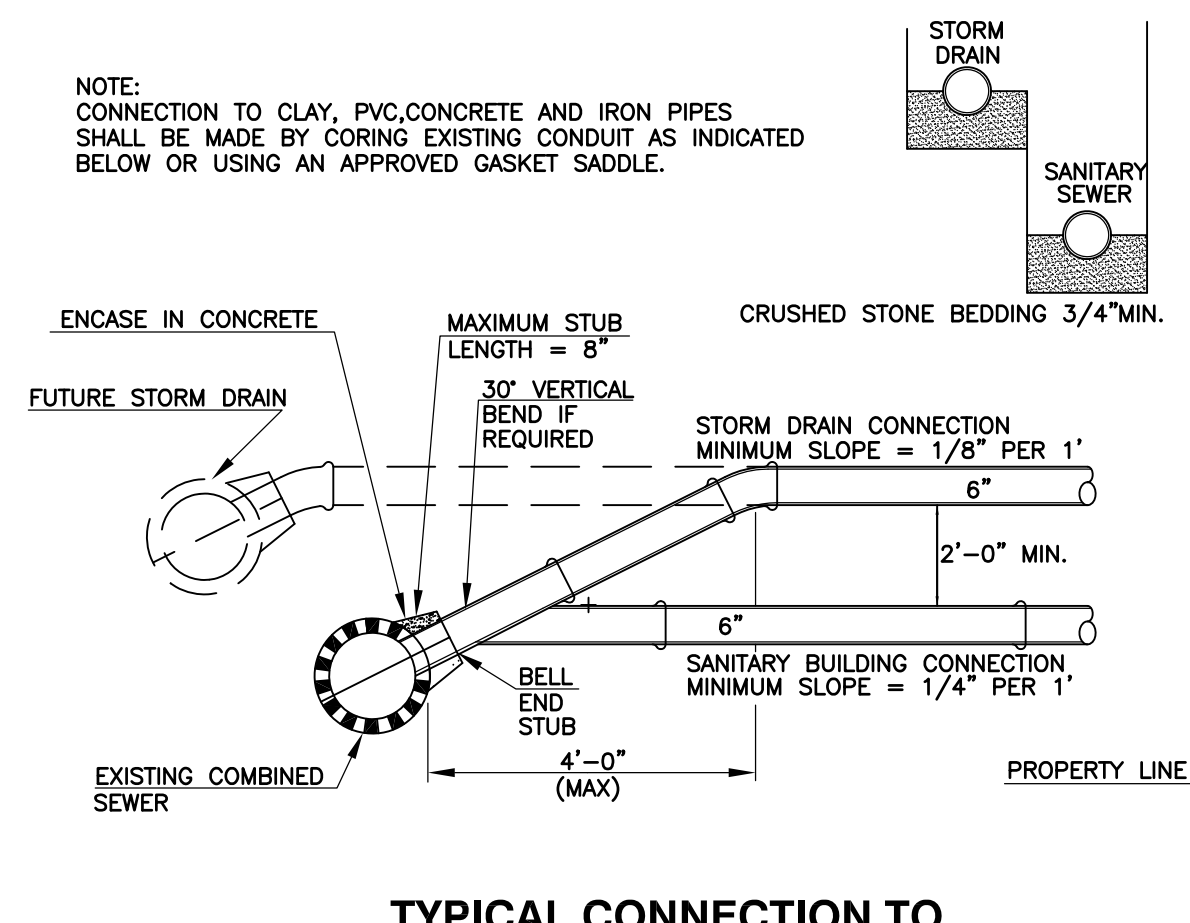


TRENCH DETAIL FOR PVC PIPE
(NOT TO SCALE)

W = MAXIMUM TRENCH WIDTH
PW = MAXIMUM PAVING WIDTH = W+1'-0"
D = OUTSIDE DIAMETER
UNSHATHED TRENCH: W = D+2' (3'-0" MIN.)
SHATHED TRENCH: W = D+2'+ SHEATHING WIDTH:
4'-0" MIN. W/O WALERS
5'-0" MIN. W/WALERS
TRENCH BOX OR HYDRAULIC SHORING:
W = D+2'+ [WALL SHIELD WIDTH ± 8"] + 1' FOR TRENCH BOX

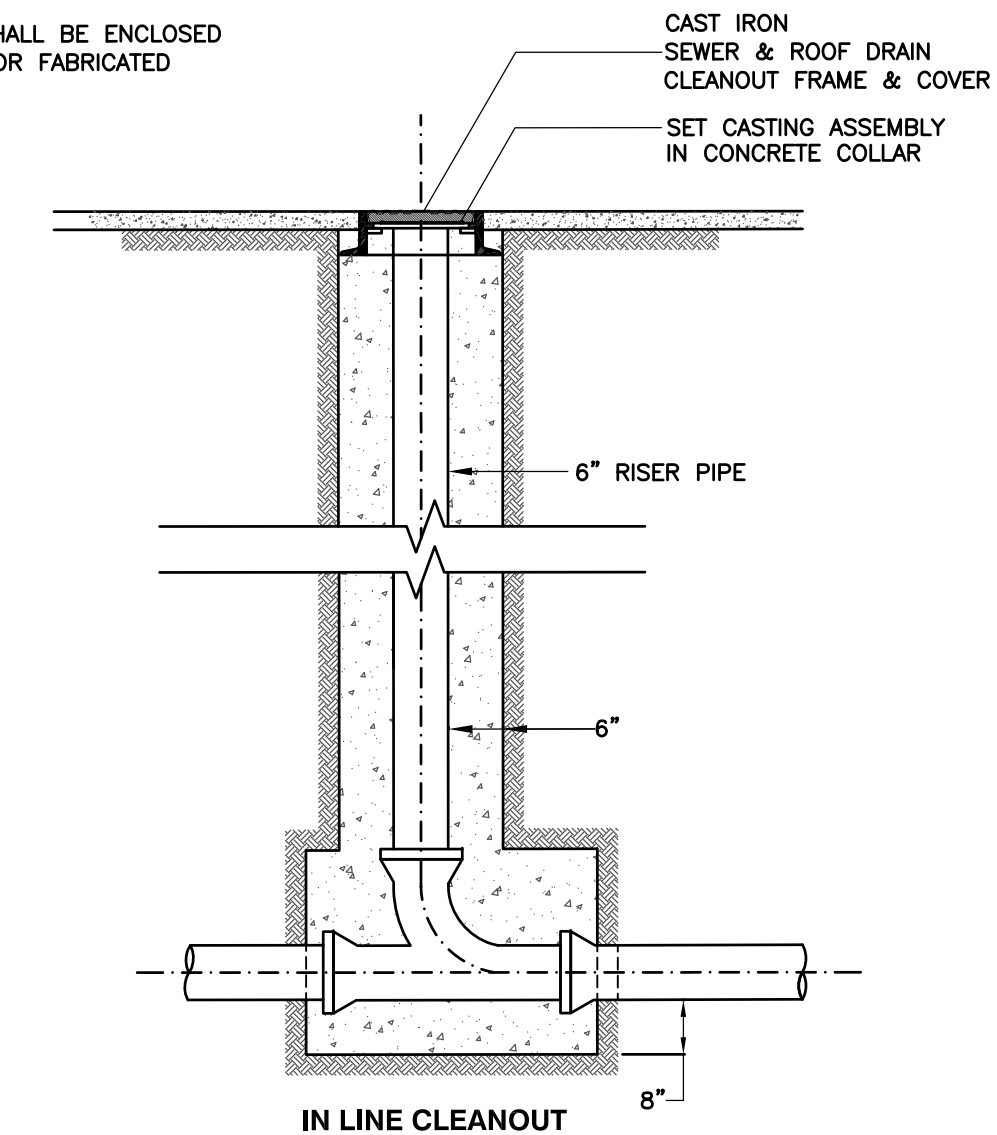


TYPICAL WATER CONNECTION FOR 1-1/2" AND 2" SERVICE PIPES DETAIL
(NOT TO SCALE)



TYPICAL CONNECTION TO COMBINED SEWER DETAIL
(NOT TO SCALE)

NOTE: CLEANOUT TOP SHALL BE ENCLOSED IN CASTING AND/OR FABRICATED COVER ASSEMBLY.



WYE CLEANOUT DETAIL
(NOT TO SCALE)

OWNER/APPLICANT

DAVID TRUST
7 BEAVER PLACE
BOSTON, MA 02108
PHONE: (617) 262-4354

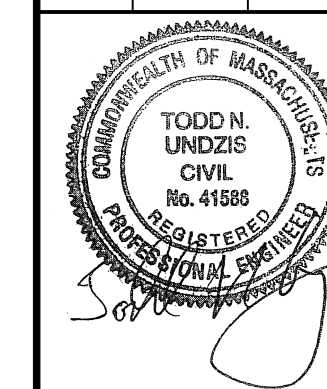
PROJECT ADDRESS

7 BEAVER PLACE
BOSTON, MA 02108-3303

REVISIONS

NO.	DATE	DESCRIPTION
4	1/21/18	PER BWSC COMMENTS
3	12/18/17	MEP COORDINATION
2	7/17/17	LEED STORMWATER COMPLIANCE
1	7/7/17	PER BWSC COMMENTS

ISSUE	DATE	DESCRIPTION
	JAN. 7, 2017	
	SCALE: AS NOTED	
	SHEET 2 OF 3	



7 BEAVER PLACE

BOSTON (BEACON HILL), MASSACHUSETTS

**C1.2 - DETAILS
BWSC PLAN #18001**

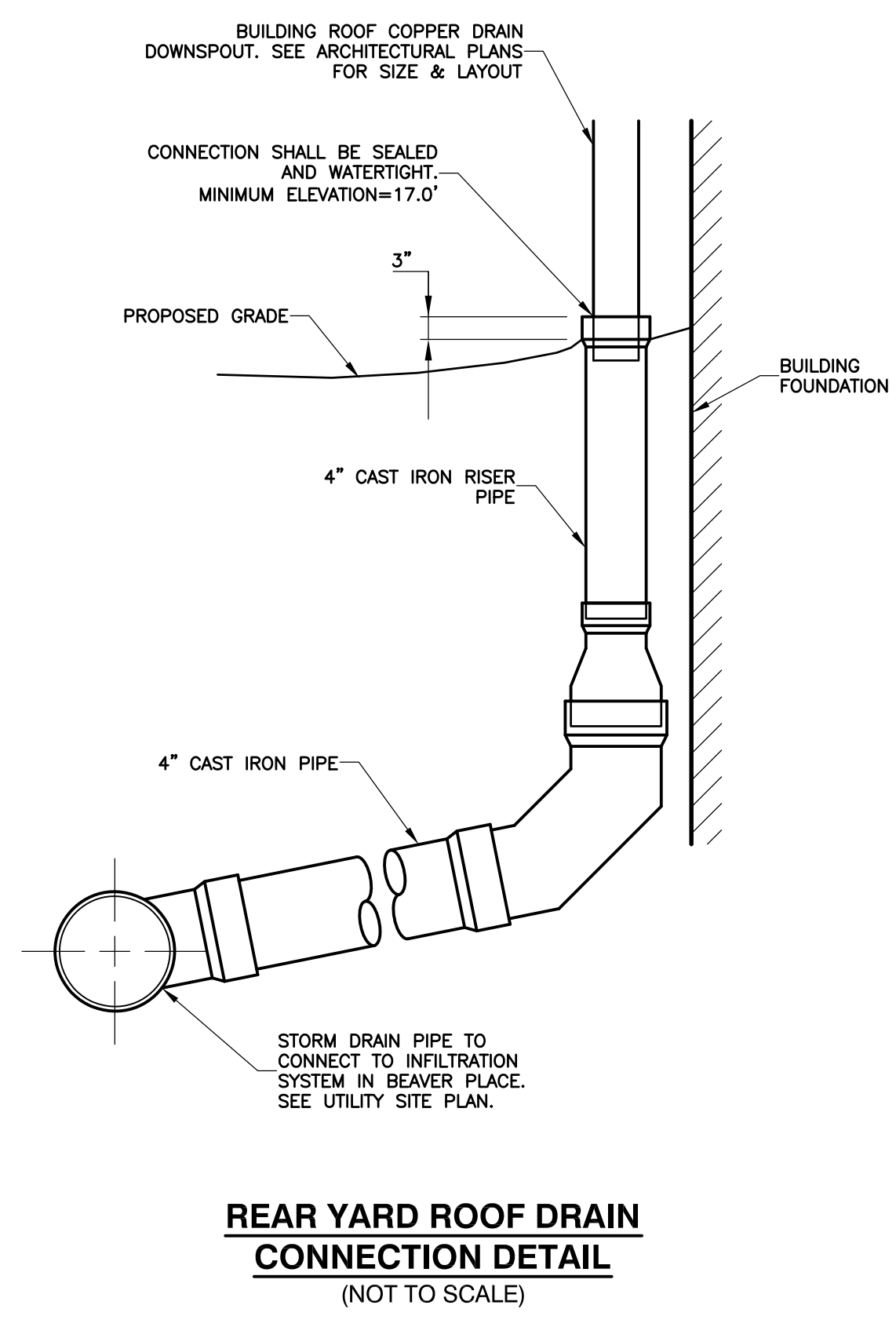
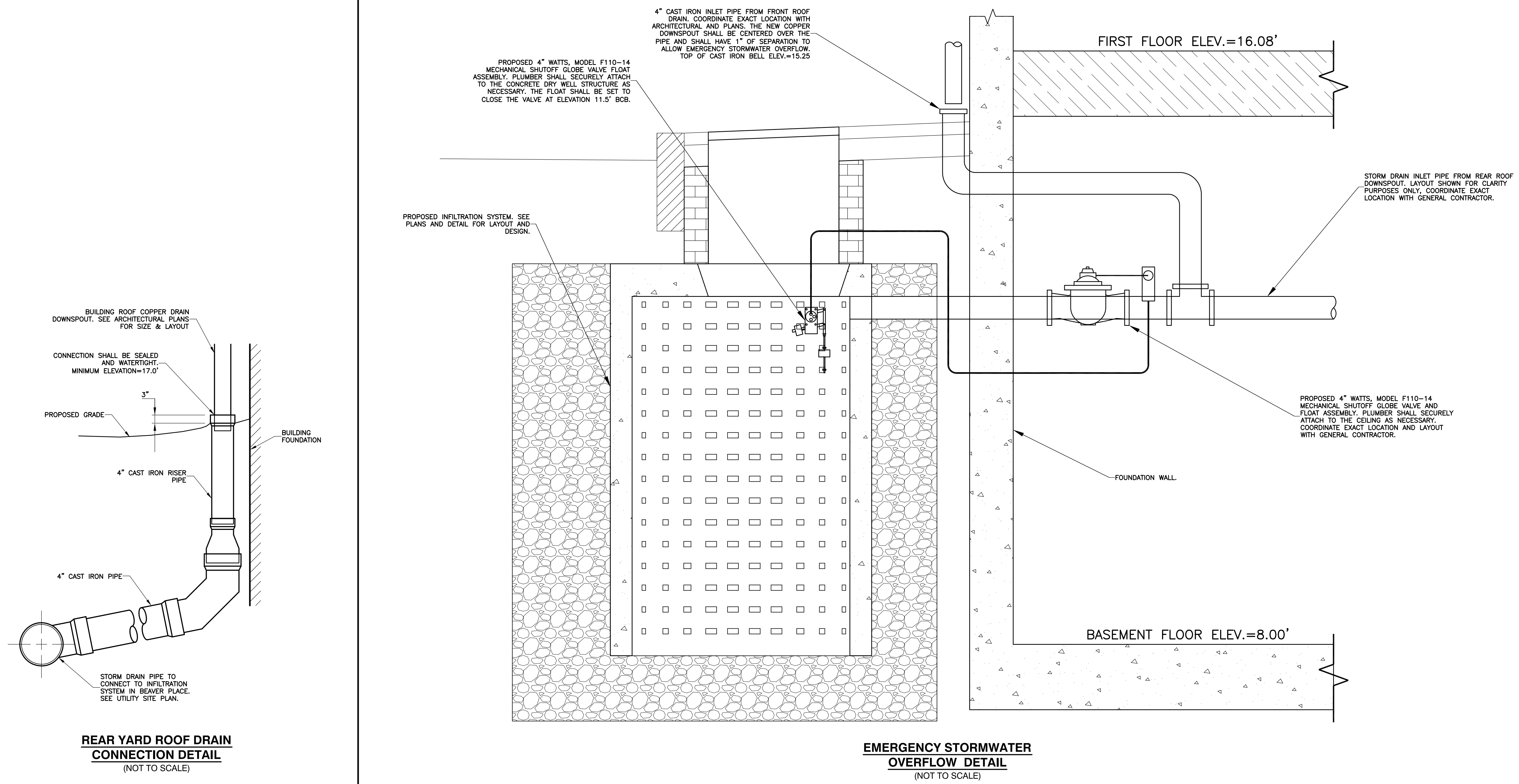
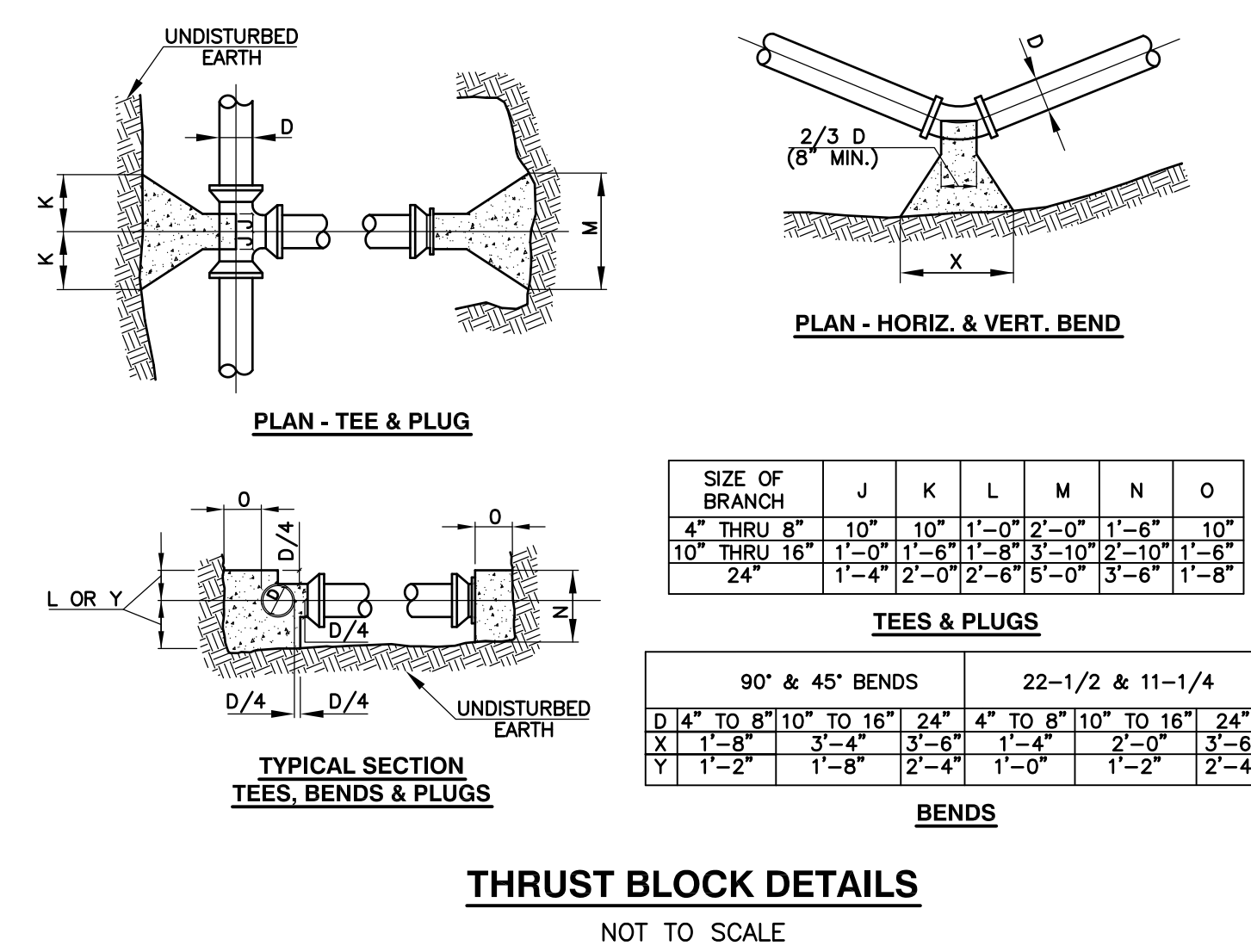
BOSTON COASTAL CONSULTING

866 East 2nd Street, Unit #2, South Boston, MA 02127
tel: 857-222-7975

Drawing File: 10503-Stg.dwg Tab: C1.2 - DETAILS Plotted on: 1/23/2018 2:27PM Plotted By: Jeffrey Piro-Steve Tello

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

V
U
T
S
R
Q
P
O
N
M
L
K
J
I
H
G
F
E
D
C
B
A



OWNER/APPLICANT
DAVID TRUST
7 BEAVER PLACE
BOSTON, MA 02108
PHONE: (617) 262-4354

PROJECT ADDRESS
7 BEAVER PLACE
BOSTON, MA 02108-3303

REVISIONS

ISSUE	DATE	DESCRIPTION
4	1/21/18	PER BWSC COMMENTS
3	12/18/17	MEP COORDINATION
2	7/17/17	LEED STORMWATER COMPLIANCE
1	7/7/17	PER BWSC COMMENTS

DATE: JAN. 7, 2017

SCALE: AS NOTED

SHEET 3 OF 3

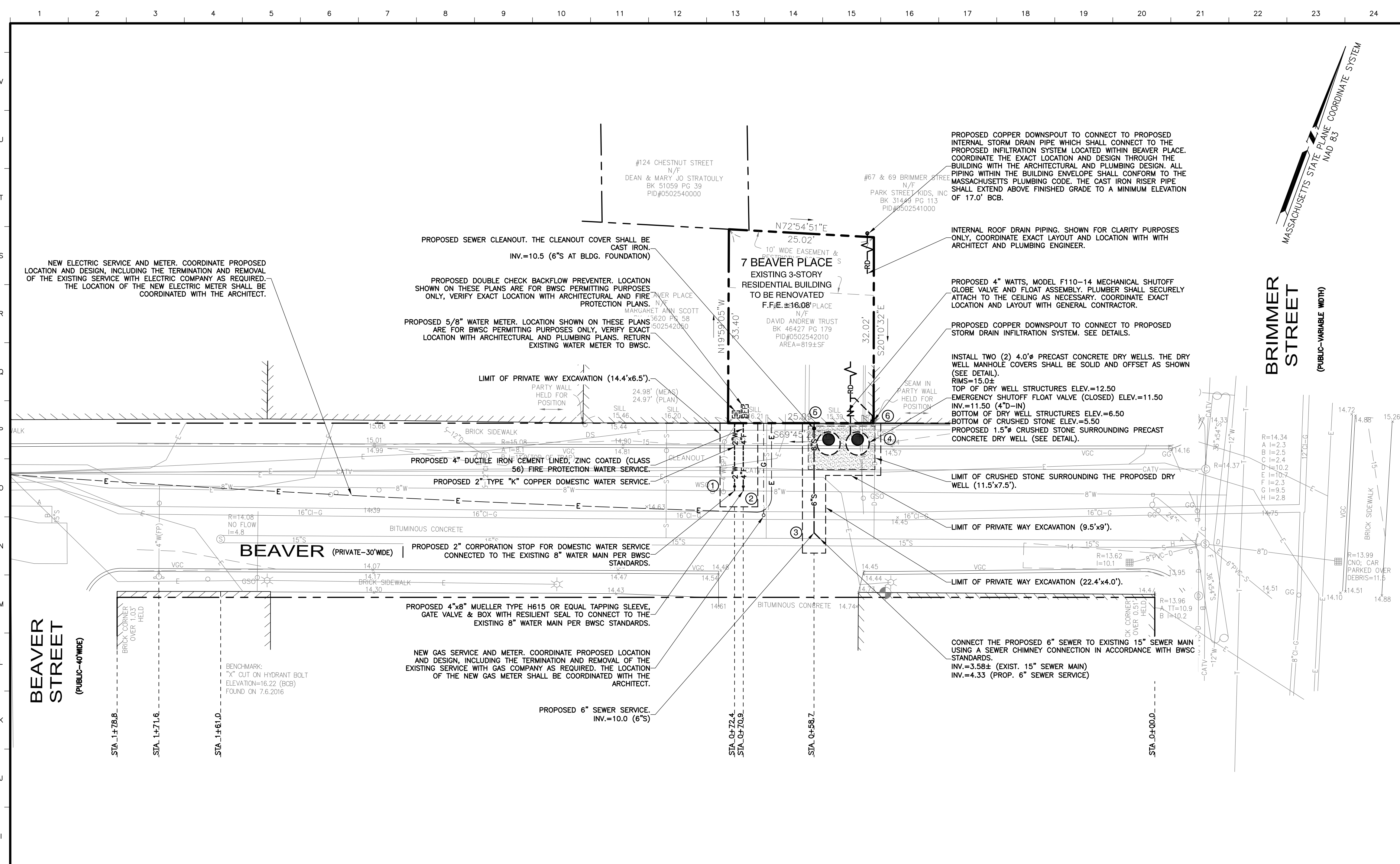
7 BEAVER PLACE
BOSTON (BEACON HILL), MASSACHUSETTS

C1.3 - DETAILS
BWSC PLAN #18001

BOSTON COASTAL CONSULTING
866 East 2nd Street, Unit #2, South Boston, MA 02127
tel: 857-222-7975

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Drawing File: 10503-Stg.dwg
 Plotted on: Jan 23, 2018 - 2:58pm
 Plotted By: Jeffrey Pridmore
 Plot Style Table:



BOSTON WATER AND SEWER COMMISSION
 LOCATION APPROVED UNDER THE FOLLOWING CONDITIONS

REVIEWED AND APPROVED AS TO PROPOSED CONNECTION(S) TO EXISTING WATER AND SEWER FACILITIES AS SHOWN, FOR ISSUE OF BUILDING PERMIT ONLY. ADDITIONAL PERMITS MUST BE OBTAINED FROM BWSC PRIOR TO CONNECTION TO BWSC FACILITIES. SITE PLANS ARE VALID FOR A PERIOD OF ONE (1) YEAR FROM DATE OF APPROVAL.

JOHN P. SULLIVAN, JR. P.E.
 CHIEF ENGINEER

ALL WATER, SEWER AND DRAIN SERVICE CONNECTIONS TO BOSTON WATER AND SEWER COMMISSION FACILITIES MUST BE PERFORMED BY A BONDED DRAIN LAYER LICENSED BY THE BOSTON WATER AND SEWER COMMISSION.

BOSTON WATER AND SEWER COMMISSION
 CROSS CONNECTION
 APPROVAL: _____ DATE: _____

BOSTON WATER AND SEWER COMMISSION
 DRAIN BACKWATER VALVE INSTALLATION
 APPROVAL: _____ DATE: _____

PROPERTY INFORMATION
 PARCEL ID #: 0502542010
 WARD: 5 PARCEL #: 2542010

LAND-USE CODE
 R-1 - RESIDENTIAL

WATER METER INFORMATION
 EXISTING WATER ACCOUNT NO.: 156037001
 PROPOSED WATER METER SIZE: 5/8-INCH*
 *EXISTING WATER METER BE RETURNED TO BWSC

ESTIMATED SEWAGE FLOW
 RESIDENTIAL
 3 BEDROOMS x 110 GPD/BEDROOM = 330 GPD
 TOTAL = 330 GPD

SERVICE CONNECTION TABLE

ITEM	QTY	BWSC INSPECTOR/DATE
① PROPOSED 2" WATER CONNECTION	(1)	_____
② PROPOSED 4" FIRE CONNECTION	(1)	_____
③ PROPOSED 6" SEWER CONNECTION	(1)	_____
④ PROPOSED INFILTRATION SYSTEM	(1)	_____
⑤ DYE TEST SEWER	(1)	_____
⑥ DOWNSPOUT OVERFLOW	(1)	_____
⑦ AS-BUILT PREPARATION FEE	(1)	_____

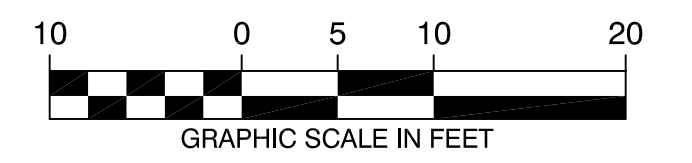
SPECIAL CONDITIONS

ITEM _____ BSWC INSPECTOR/DATE _____

ARTICLE 32 LETTER _____

OWNER/APPLICANT
 DAVID TRUST
 7 BEAVER PLACE
 BOSTON, MA 02108
 PHONE: (617) 262-4354

PROJECT ADDRESS
 7 BEAVER PLACE
 BOSTON, MA 02108-3303



REVISIONS

NO.	DATE	DESCRIPTION
4	1/21/18	PER BSWC COMMENTS
3	12/18/17	MEP COORDINATION
2	7/17/17	LEED STORMWATER COMPLIANCE
1	7/7/17	PER BSWC COMMENTS

DATE: JAN. 7, 2017

SCALE: 1" = 10'

SHEET 1 OF 3

7 BEAVER PLACE
 BOSTON (BEACON HILL), MASSACHUSETTS

C1.1 - UTILITY SITE PLAN
BWSC PLAN #18001

BOSTON COASTAL CONSULTING
 866 East 2nd Street, Unit #2, South Boston, MA 02127
 tel: 857-222-7975

GENERAL NOTES:

- LOCATIONS AND ELEVATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE REFERENCED SURVEY PLAN AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. BOSTON COASTAL CONSULTING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES INACCURATELY SHOWN OR OMITTED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY DEPARTMENT SHALL BE NOTIFIED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHALL BE VERIFIED IN THE FIELD. CALL THE BSWC, (617)869-7000 AND DIG-SAFE CALL CENTER, (888)944-7233, 72 HOURS (3 WORKING DAYS) PRIOR TO EXCAVATION.
- ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO BSWC REQUIREMENTS AND ALL OTHER APPLICABLE MUNICIPAL REGULATIONS.
- ALL DISTURBANCES WITHIN THE PUBLIC WAY SHALL CONFORM TO CITY AND BSWC STANDARDS.
- THIS PLAN HAS BEEN PREPARED FOR APPROVAL OF THE WATER, SEWER AND DRAIN CONNECTIONS TO THE BSWC FACILITIES. IT IS UNDERSTOOD THAT THE RESPONSIBILITY OF OWNERSHIP AND MAINTENANCE OF THE SEWER CONNECTIONS ON PRIVATE PROPERTY AND/OR PRIVATE AND PUBLIC WAYS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR OWNERS. IT IS ALSO UNDERSTOOD THAT THE WATER CONNECTIONS ON PRIVATE PROPERTY INCLUDING PRIVATE WAYS ARE ALSO THE RESPONSIBILITY OF THE DEVELOPER AND/OR OWNERS. IF THE CONNECTIONS CROSS, OR ARE NEAR INDIVIDUAL PROPERTY LINES, PROVISIONS MUST BE MADE TO ALLOW EACH OWNER TO MAINTAIN OR RECONSTRUCT THEIR RESPECTIVE CONNECTIONS. THIS FACT MUST BE INCORPORATED INTO ANY PURCHASE AND SALES AGREEMENT AND DEEDS RELATED TO THE TRANSFER OF OWNERSHIP OF THE PROPERTIES.
- SITE CONTRACTOR TO PROVIDE ALL EXCAVATION, INSTALLATION, BACK FILLING, PAVEMENT PATCHING, ETC. FOR THE INSTALLATION OF UNDERGROUND GAS, ELECTRIC, TELEPHONE, FIRE ALARM, WATER, SEWER, DRAIN AND SIMILAR SERVICES.
- IF EXISTING ABANDONED BSWC SERVICES ARE ENCOUNTERED THEY SHALL BE CUT AND CAPPED AT THE MAIN PER BSWC STANDARDS.

- THE PROPOSED DOMESTIC WATER SERVICE SHALL BE TYPE "K" COPPER TUBING.
- THE PROPOSED FIRE WATER SERVICE SHALL BE CEMENT LINED DUCTILE IRON, ZINC COATED (CLASS 56) PIPING, MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF ANSI/AWWA C151/A21.51 AND SHALL BE CLASS 56 PIPE. ALL JOINTS SHALL HAVE MEGALUG FITTINGS OR APPROVED EQUAL INSTALLED.
- THE GRAVITY DRAIN AND SEWER PIPES SHALL BE POLYVINYL CHLORIDE (PVC) PIPE SDR 35 CONFORMING TO ASTM STANDARD SPECIFICATIONS D3034.
- ALL DRAIN AND SEWER PIPES WITHIN THE BUILDING SHALL BE DESIGNED AND INSTALLED PER MASS PLUMBING CODE WHICH SHALL BE SIGNED OFF BY THE LOCAL PLUMBING INSPECTOR.
- CONTRACTOR IS TO OBTAIN THE ROUGH CONSTRUCTION SIGN OFF DOCUMENT FROM THE CITY OF BOSTON INSPECTIONAL SERVICES DEPARTMENT PRIOR TO FILING A GENERAL SERVICES APPLICATION WITH BSWC.
- CONTRACTOR WILL BE RESPONSIBLE FOR PREPARING AS-BUILT PLANS IN ACCORDANCE WITH BSWC REQUIREMENTS. THIS INFORMATION SHALL BE SUBMITTED TO THE CIVIL ENGINEER FOR THEIR USE.
- CONTRACTOR TO CONFIRM THE LOCATIONS AND INVERTS OF THE EXISTING UTILITIES IN THE STREET PRIOR TO THE INSTALLATION OF NEW SERVICE CONNECTIONS. SERVICES SHALL BE FIELD VERIFIED BEFORE BEGINNING CONSTRUCTION.
- ANY CONSTRUCTION DEWATERING SHALL EMPLOY MEASURES TO FILTER OUT SEDIMENT PRIOR TO ITS DISCHARGE AND SHALL CONFORM WITH BSWC REQUIREMENTS. CONTRACTOR TO SUBMIT A SKETCH OF THESE TO THE ARCHITECT FOR APPROVAL.
- CONTRACTOR TO EMPLOY MEASURES TO CONTROL DUST DURING CONSTRUCTION.
- THE PROPOSED FINISH GRADE ELEVATIONS OF THE UTILITY STRUCTURES ARE APPROXIMATE ONLY. FINAL ELEVATIONS ARE TO BE SET FLUSH. ADJUST ALL OTHER RIM ELEVATIONS OF EXISTING MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISHED GRADE WITHIN LIMITS OF SITE WORK.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM AND OTHER PRIVATE COMPANIES, AS REQUIRED.

- COORDINATE CATV, TELEPHONE AND GAS INSTALLATION WITH THE UTILITY COMPANIES. THE PROPOSED LOCATIONS OF THESE SERVICES ON THESE PLANS ARE FOR PERMITTING PURPOSES ONLY.
- THE EXISTING SEWER, DRAIN AND WATER SERVICES SHOWN ON THESE PLANS ARE SHOWN STRICTLY FOR PERMITTING PURPOSES ONLY. EXACT LOCATIONS AND ELEVATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- COORDINATE EXACT SITE LAYOUT, DRAINAGE GRATE MATERIALS, AND PAVING DESIGN/MATERIALS WITH ARCHITECT PRIOR TO CONSTRUCTION. THESE PLANS ARE FOR THE PROPOSED UTILITY DESIGN TO BE USED FOR BSWC PERMITTING PURPOSES ONLY.
- ALL WORK COMPLETED SHALL BE CONSTRUCTED SO THERE WILL BE NO DISTURBANCE TO ANY EXISTING LAND OR ANY EXISTING STRUCTURES ON THE ADJACENT LOTS.

ARTICLE 32 COMPLIANCE:

THE PROPOSED PROJECT LOCATED AT 7 BEAVER PLACE COMPLIES WITH THE REQUIREMENTS OF ARTICLE 32 OF THE BOSTON ZONING CODE FOR GROUNDWATER STORAGE AND RECHARGE.

REFERENCES:

EXISTING PROPERTY LINE, TOPOGRAPHIC AND UTILITY INFORMATION IS TAKEN FROM A DIGITAL FILE RECEIVED ON JANUARY 4, 2017 AND NAMED '7 Beaver Place Survey_071816V.DWG' OF A TOPOGRAPHIC PLAN OF LAND OF 7 BEAVER PLACE, PREPARED BY NITSCH ENGINEERING OF BOSTON, MA.

LEACHING DRY WELL

PRECAST CONCRETE LEACHING DRY WELLS = OLDCASTLE PRECAST, MODEL NO. DW4-6HD
 4'-0" DIAMETER (6'-0" H) PRECAST CONCRETE DRY WELLS x 2
 1.0 FT. CRUSHED STONE BED / SURROUND WITH 1.0 FT. OF CRUSHED STONE (LIMITS SHOWN ON PLAN)

DESIGN RUNOFF VOLUME

BUILDING ROOF AREA = 819 S.F.
 DESIGN RAINFALL = 3.2 IN.
 RUNOFF VOLUME = 819 S.F. x (3.2"/12") FT. = 218.4 C.F. RUNOFF FROM 1.0 INCH STORM

STORM WATER VOLUME CALCULATIONS

DRY WELL VOLUME
 STORAGE CAPACITY IN DRY WELLS = ((pi x (3.33 FT.) ^ 2)/4) x 5.5 FT. x 2 DRY WELLS = 96 C.F.

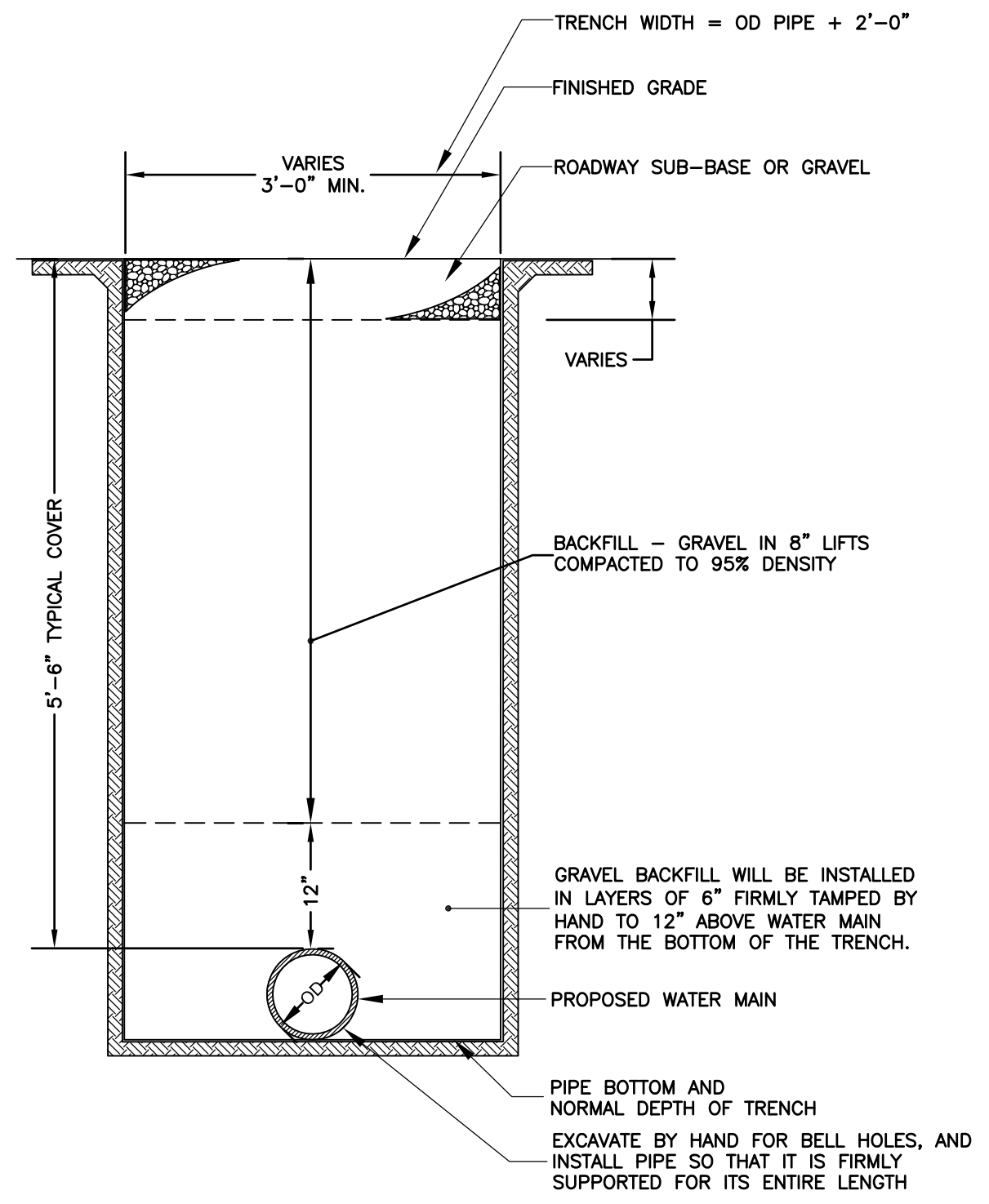
CRUSHED STONE VOLUME
 CRUSHED STONE = L x W x H = 11.5 FT. x 7.5 FT. x 6.5 FT. = 561 C.F.
 (-) DRY WELLS = ((pi x (4.00 FT.) ^ 2)/4) x 5.5 FT. x 2 DRY WELLS = 138 C.F.
 TOTAL STONE = 423 C.F.

STORAGE CAPACITY IN CRUSHED STONE = 423 C.F. x (30% VOIDS) = 127 C.F.

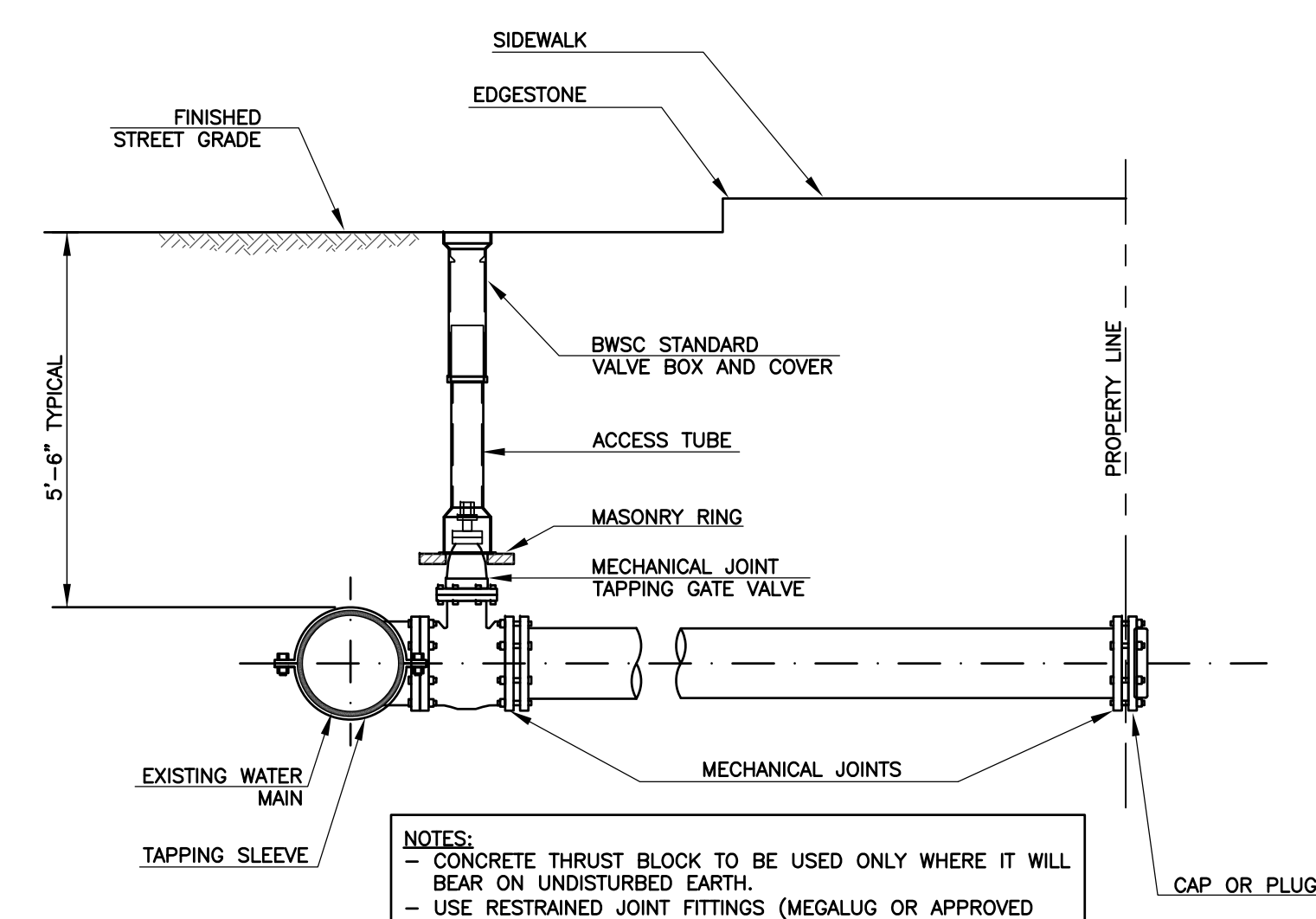
TOTAL STORAGE VOLUME
 TOTAL STORAGE VOLUME = 96 C.F. (DRY WELL) + 127 C.F. (CRUSHED STONE) = 223 C.F.

STORM WATER STORAGE VOLUME = 223 C.F. > 218.4 C.F. RUNOFF FROM 3.2 INCH, 2-YEAR, 24 HOUR STORM EVENT
 THE PROPOSED LEACHING SYSTEM WILL PROVIDE THE REQUIRED STORAGE TO MITIGATE THE RUNOFF VOLUME FROM THE 1.0 INCH STORM EVENT AS REQUIRED BY THE CITY OF BOSTON'S ARTICLE 32 REGULATIONS.

STORMWATER INFILTRATION SYSTEM STORAGE CALCULATIONS

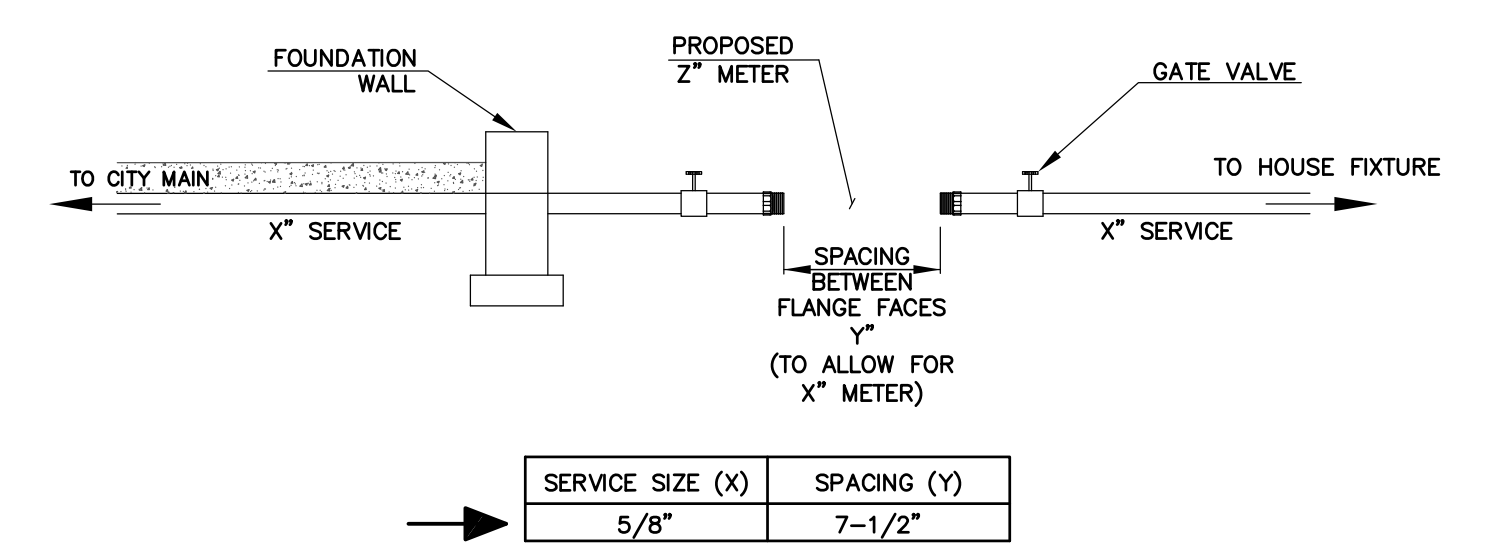


TYPICAL TRENCH DETAIL OF WATER MAIN IN FIRM GROUND
(NOT TO SCALE)



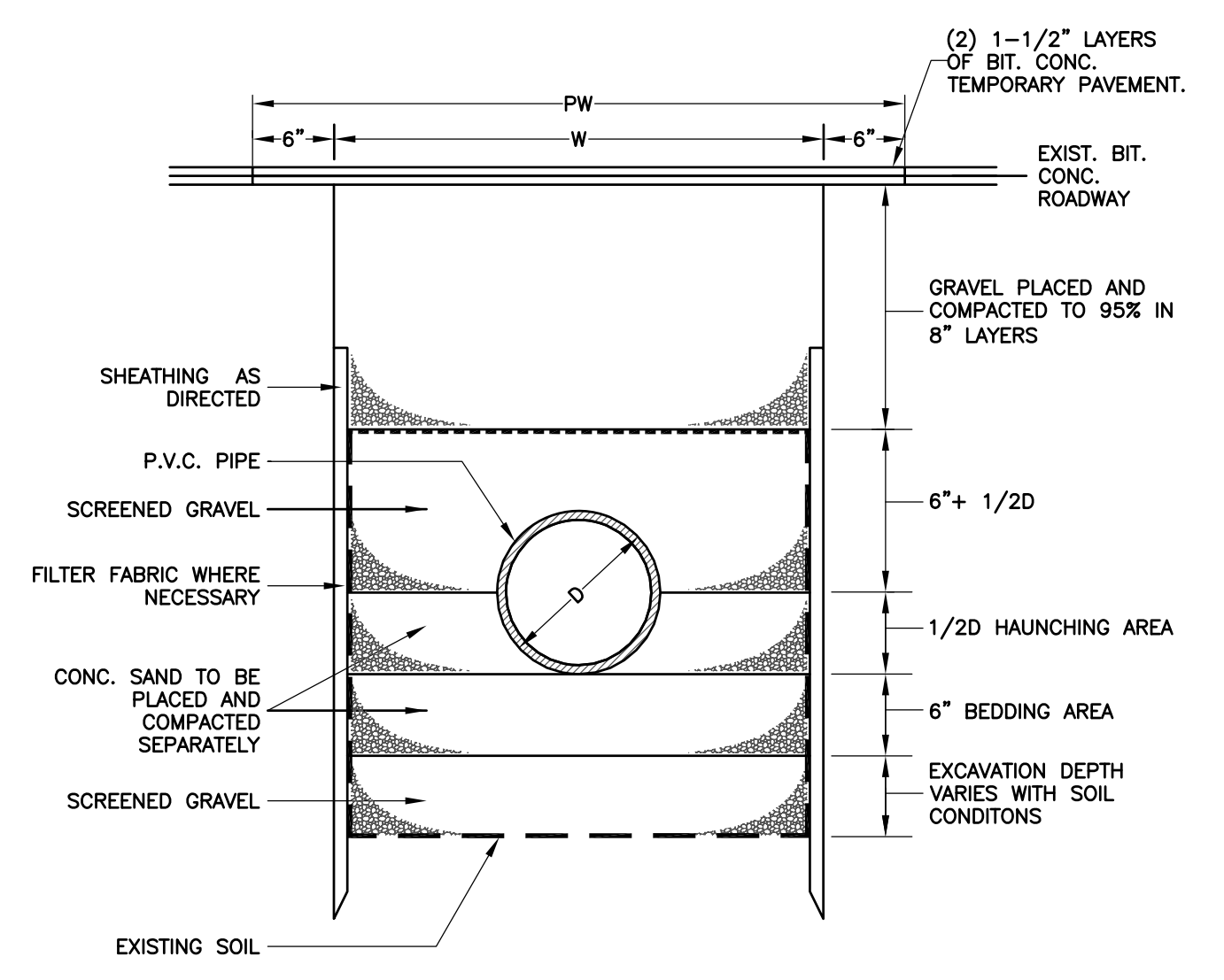
TYPICAL WATER SERVICE CONNECTION WITH TAPPING SLEEVE AND GATE VALVE
(NOT TO SCALE)

NOTES:
 - CONCRETE THRUST BLOCK TO BE USED ONLY WHERE IT WILL BEAR ON UNDISTURBED EARTH.
 - USE RESTRAINED JOINT FITTINGS (MEGALUG OR APPROVED EQUAL) WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.
 - SIZE OF BLOCK OR MEGALUG TO BE DESIGNED FOR SPECIFIC CONDITIONS.



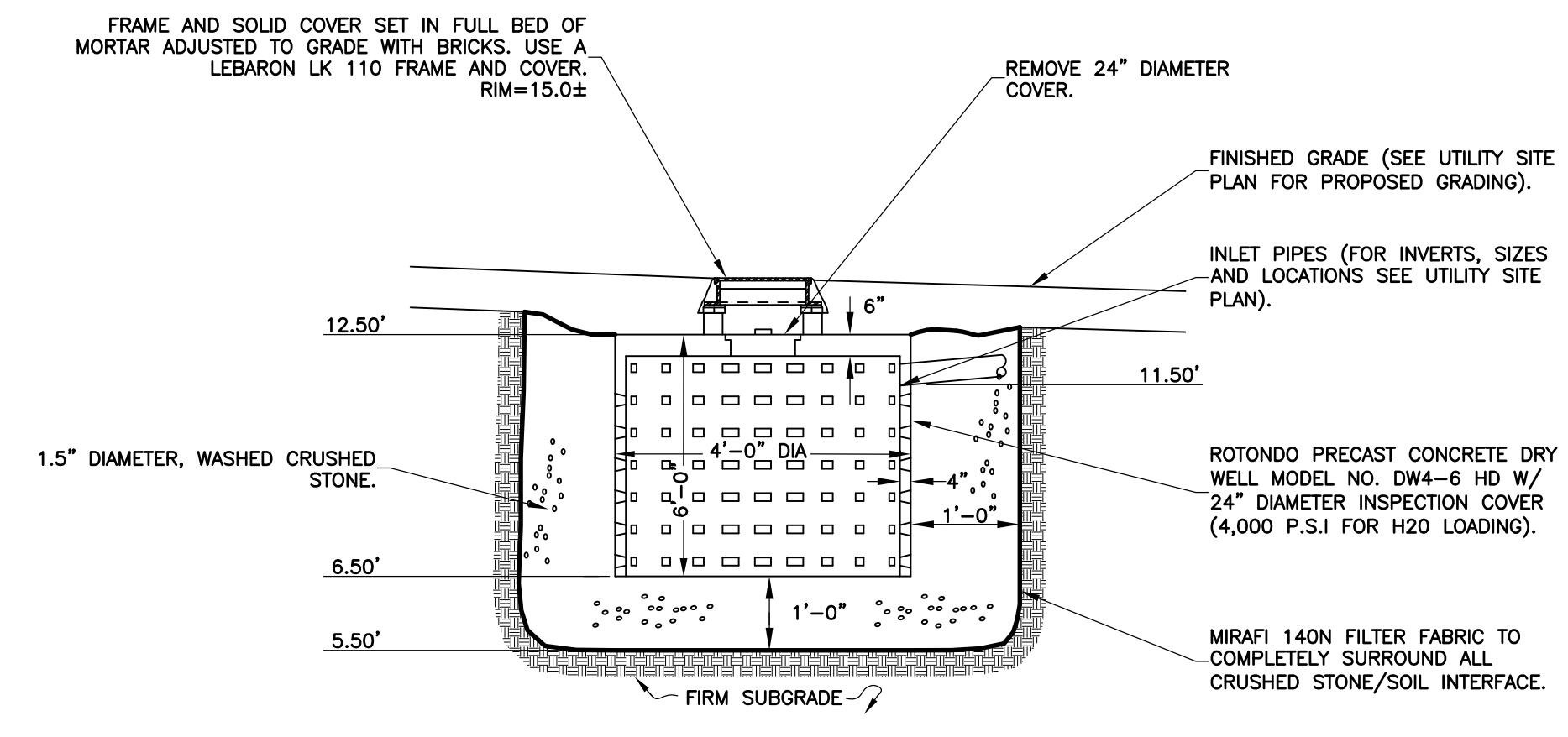
WATER METER INSTALLATION DETAIL
(NOT TO SCALE)

SERVICE SIZE (X)	SPACING (Y)
5/8"	7-1/2"

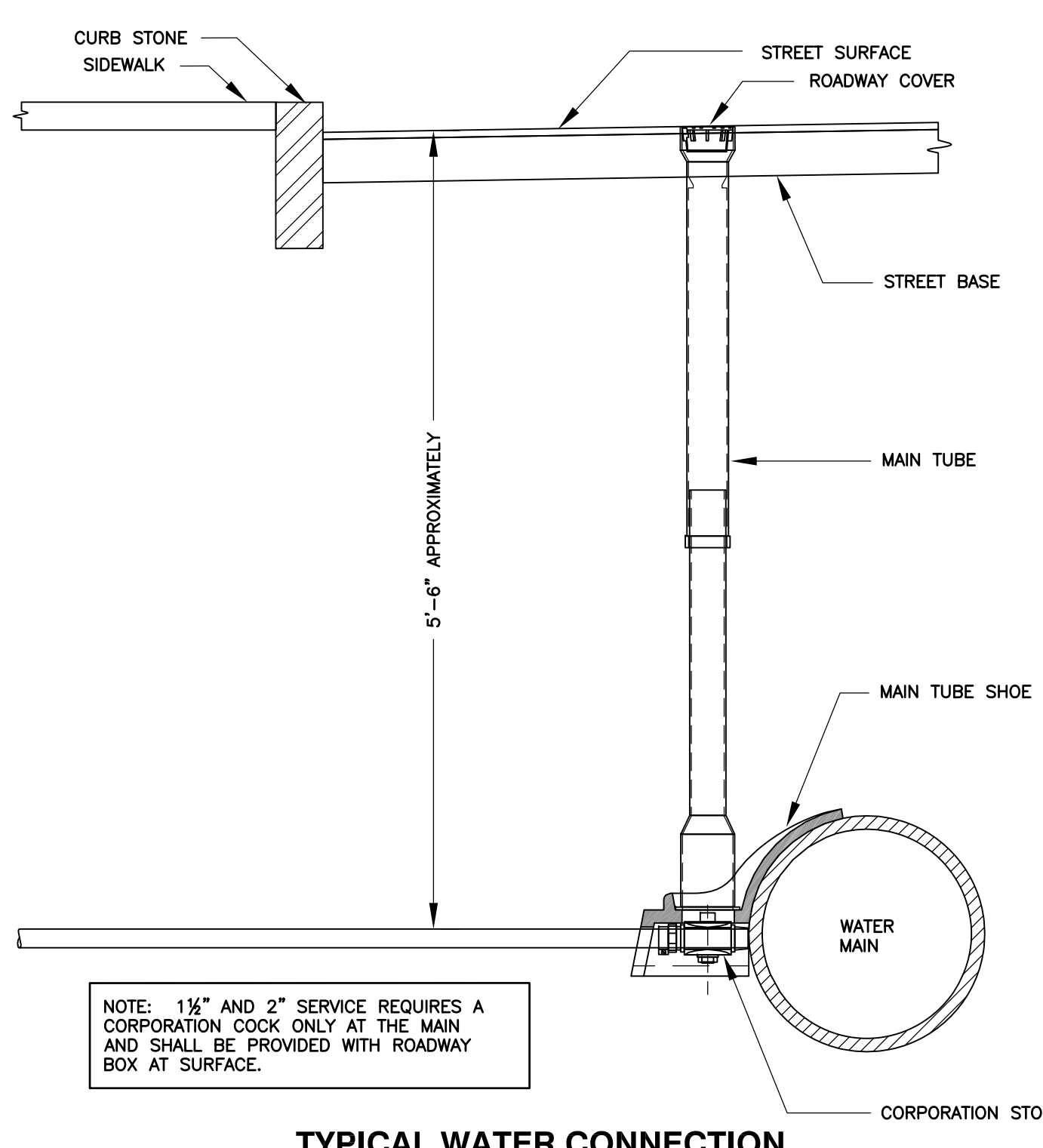


TRENCH DETAIL FOR PVC PIPE
(NOT TO SCALE)

W = MAXIMUM TRENCH WIDTH
 PW = MAXIMUM PAVING WIDTH = W+1'-0"
 D = OUTSIDE DIAMETER
 UNSHEATHED TRENCH: W = D+2' (3'-0" MIN.)
 SHEATHED TRENCH: W = D+2'+ SHEATHING WIDTH:
 4'-0" MIN. W/O WALERS
 5'-0" MIN. W/WALERS
 TRENCH BOX OR HYDRAULIC SHORING:
 W = D+2'+ [WALL SHIELD WIDTH ± 8"] + 1' FOR TRENCH BOX

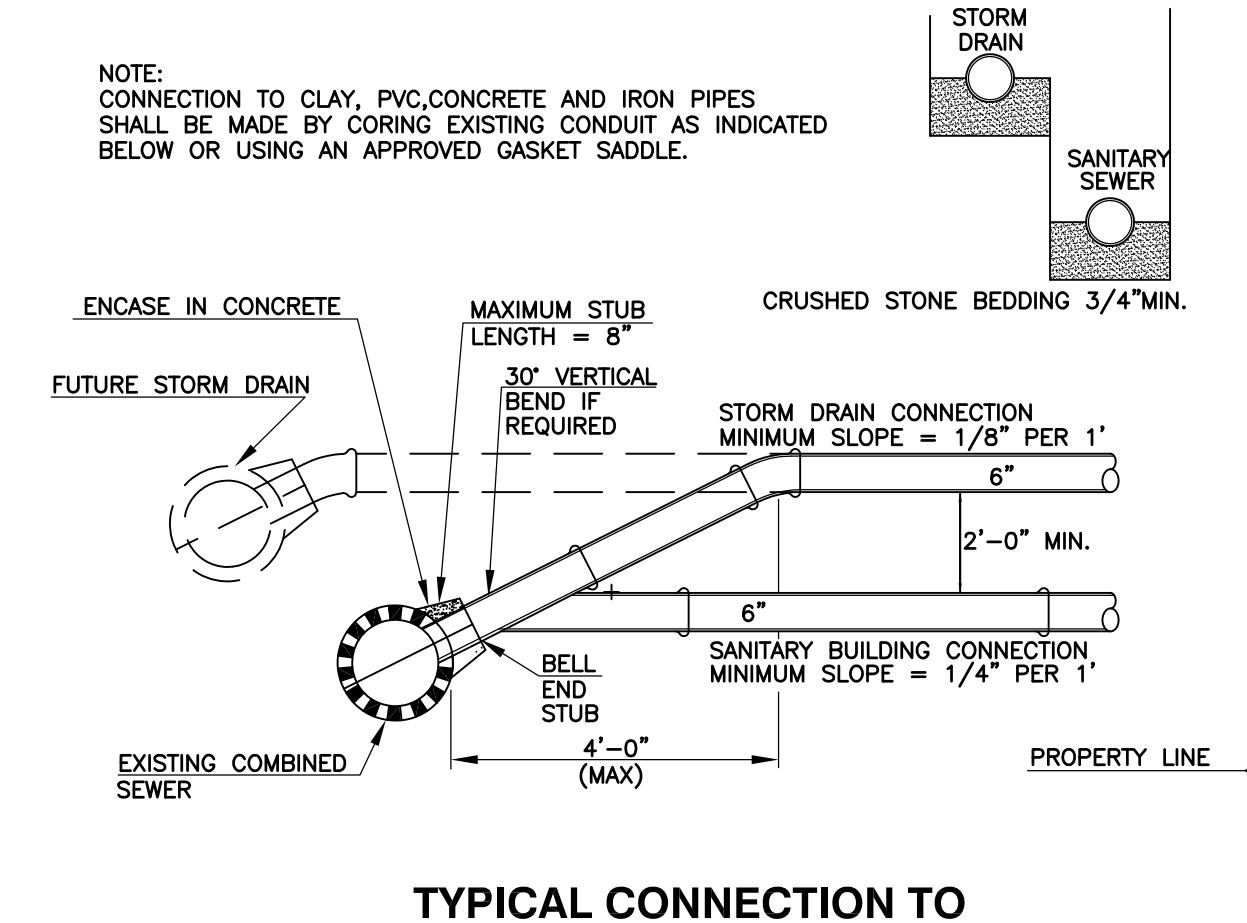


DRY WELL (INFILTRATION SYSTEM) DETAIL
(NOT TO SCALE)

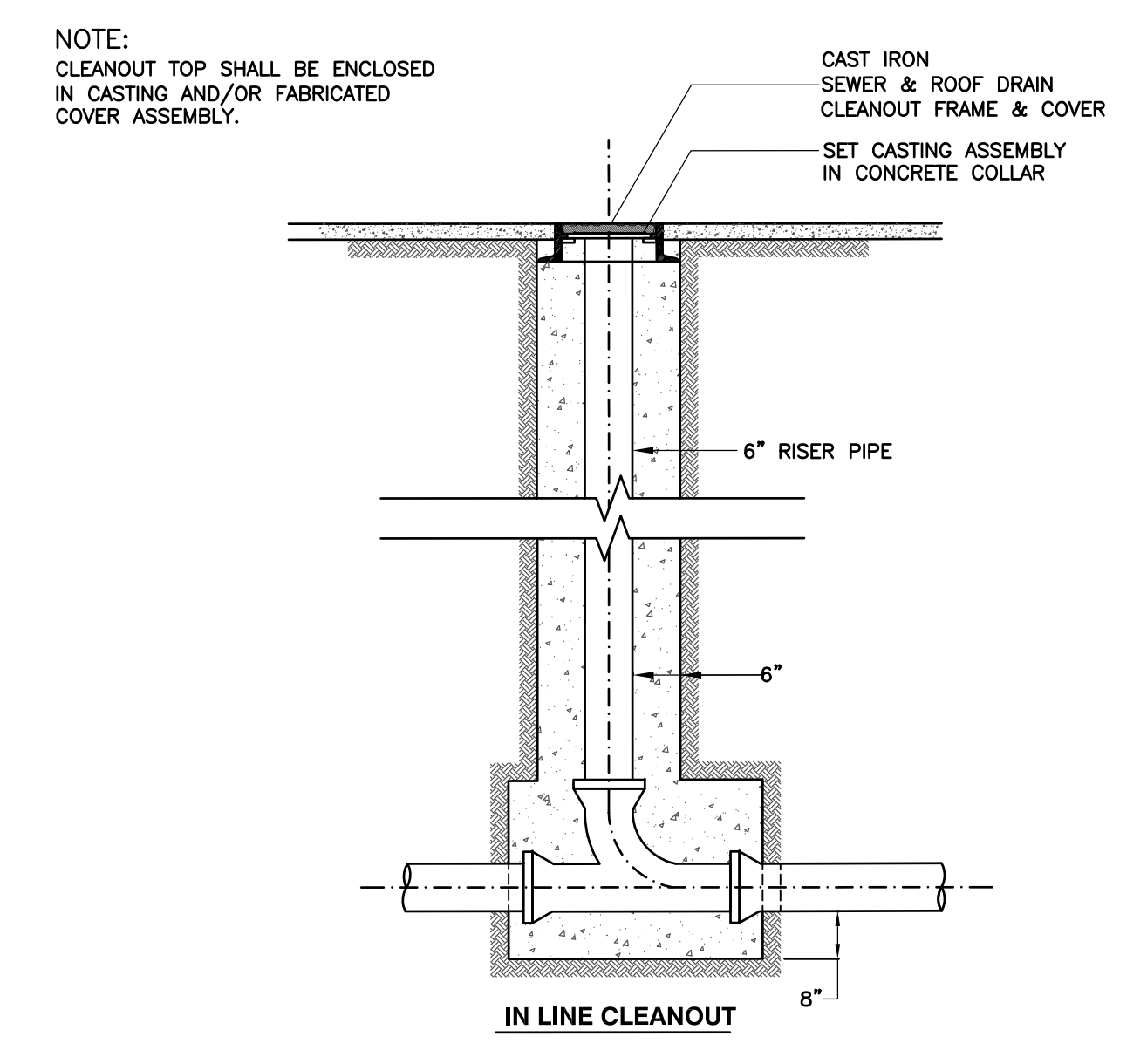


TYPICAL WATER CONNECTION FOR 1-1/2" AND 2" SERVICE PIPES DETAIL
(NOT TO SCALE)

NOTE: 1 1/2" AND 2" SERVICE REQUIRES A CORPORATION COCK ONLY AT THE MAIN AND SHALL BE PROVIDED WITH ROADWAY BOX AT SURFACE.



TYPICAL CONNECTION TO COMBINED SEWER DETAIL
(NOT TO SCALE)



WYE CLEANOUT DETAIL
(NOT TO SCALE)

OWNER/APPLICANT
 DAVID TRUST
 7 BEAVER PLACE
 BOSTON, MA 02108
 PHONE: (617) 262-4354

PROJECT ADDRESS
 7 BEAVER PLACE
 BOSTON, MA 02108-3303

REVISIONS		
NO.	DATE	DESCRIPTION
4	1/21/18	PER BWS COMMENTS
3	12/18/17	MEP COORDINATION
2	7/17/17	LEED STORMWATER COMPLIANCE
1	7/7/17	PER BWS COMMENTS

ISSUE	DATE	DESCRIPTION
	JAN. 7, 2017	
	AS NOTED	
	SHEET 2 OF 3	

7 BEAVER PLACE
 BOSTON (BEACON HILL), MASSACHUSETTS

C1.2 - DETAILS
BWSC PLAN #18001

BOSTON COASTAL CONSULTING
 866 East 2nd Street, Unit #2, South Boston, MA 02127
 tel: 857-222-7975

Drawing File: 10503-Stg.dwg
 Plotted on: 1/23/2018 2:27PM
 Plotted By: Jeffrey Poir-Shye
 Plot Style Table: