

GENERAL NOTES:

- TOPOGRAPHIC DATA, PROPERTY LINE INFORMATION, AND EXISTING SITE FEATURES WERE OBTAINED FROM A PLAN ENTITLED "1299 BEACON STREET, BROOKLINE, MA, EXISTING CONDITIONS PLAN," PREPARED BY RJO'CONNELL AND ASSOCIATES, INC., DATED JUNE 20, 2018.
- FLOODPLAIN INFORMATION WAS OBTAINED FROM THE FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 25021C0053E. THE SITE IS IN ZONE X.
- THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, ALSO REFERRED TO AS JACKIE'S LAW, AS DETAILED IN SECTION 520 CMR 14.00 OF THE CODE OF MASSACHUSETTS REGULATIONS.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, REGULATIONS AND SAFETY CODES IN THE CONSTRUCTION OF ALL IMPROVEMENTS.
- THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, GRADING, SIDEWALKS AND SITE DETAILS OUTSIDE OF THE LIMITS OF REGRADING AND WORK AS SHOWN ON THE DRAWINGS AND SHALL REPAIR AND REPLACE OR OTHERWISE MAKE GOOD AS DIRECTED BY THE ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE ANY SUCH OR OTHER DAMAGE SO CAUSED.
- THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL RUBBISH AND DEBRIS FOUND THEREON. STORAGE OF SUCH MATERIALS ON THE PROJECT SITE WILL NOT BE PERMITTED. THE CONTRACTOR SHALL LEAVE THE SITE IN SAFE, CLEAN, AND LEVEL CONDITION UPON COMPLETION OF THE SITE CLEARANCE WORK.
- THE CONTRACTOR SHALL REMOVE FROM THE AREA OF CONSTRUCTION PAVEMENT, CONCRETE, GRANITE CURBING, CEMENT CURBING, POLES AND FOUNDATIONS, ISLANDS, TREE BERMS AND OTHER FEATURES WITHIN THE LIMITS OF CONSTRUCTION AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION WHETHER SPECIFIED ON THE DRAWINGS OR NOT.
- FOR SITE LAYOUT, GRADING, MATERIALS, PLANTINGS, GROUND COVER, EROSION CONTROL, AND DETAILS SEE LANDSCAPE ARCHITECT'S DRAWINGS.
- FOR STRUCTURAL DETAILS AND INFORMATION SEE STRUCTURAL DRAWINGS.
- FOR SOIL INFORMATION REFER TO GEOTECHNICAL REPORT.
- ALL GRATES IN WALKWAYS SHALL BE ADA COMPLIANT.

UTILITY NOTES:

- THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY UTILITY CONNECTIONS OR CROSSINGS OF PROPOSED UTILITIES AND EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATIONS AND ELEVATIONS OF THEIR LINES. THE CONTRACTOR SHALL KEEP A RECORD OF ANY DISCREPANCIES OR CHANGES IN THE LOCATIONS OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND NITSCH ENGINEERING.
- THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82, SECTION 40, AS AMENDED, WHICH STATES THAT NO ONE MAY EXCAVATE IN THE COMMONWEALTH OF MASSACHUSETTS EXCEPT IN AN EMERGENCY WITHOUT 72 HOURS NOTICE, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, TO NATURAL GAS PIPELINE COMPANIES, AND MUNICIPAL UTILITY DEPARTMENTS THAT SUPPLY GAS, ELECTRICITY, TELEPHONE, OR CABLE TELEVISION SERVICE IN OR TO THE CITY OR TOWN WHERE THE EXCAVATION IS TO BE MADE. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-DIG-SAFE.
- ALL UTILITY CONNECTIONS ARE SUBJECT TO THE APPROVAL OF, AND GRANTING OF PERMITS BY, THE TOWN OF BROOKLINE. IT SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO SEE THAT ALL PERMITS AND APPROVALS ARE OBTAINED BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS FOR AND FOR PERFORMING ANY NECESSARY WORK INVOLVED IN CONNECTION WITH OR THE DISCONTINUANCE OF ANY UTILITIES WITHIN THE JURISDICTION OF ANY UTILITY COMPANIES, SUCH AS ELECTRICITY, TELEPHONE, WATER, GAS, AND ANY SYSTEM OR SYSTEMS WHICH WILL BE AFFECTED BY THE WORK TO BE PERFORMED UNDER THIS CONTRACT. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE AGENCIES, DEPARTMENTS, AND UTILITY COMPANIES, IN WRITING, AT LEAST 48 HOURS AND NOT MORE THAN 30 DAYS PRIOR TO ANY CONSTRUCTION.
- CONSTRUCTION SHALL NOT INTERFERE WITH OR INTERRUPT UTILITIES WHICH ARE TO REMAIN IN OPERATION.
- ALL WATER, SEWER, AND DRAIN WORK SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS AND STANDARD SPECIFICATIONS OF THE TOWN OF BROOKLINE.
- GAS, TELEPHONE AND ELECTRIC SERVICES ARE TO BE DESIGNED BY EACH UTILITY COMPANY IN COORDINATION WITH THE MECHANICAL, ELECTRIC AND PLUMBING CONSULTANTS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES AND DESIGN OF NEW UTILITIES WITH ELECTRIC, CABLE TELEVISION AND TELECOMMUNICATION UTILITIES.
- INSTALL WATER LINES WITH A MINIMUM OF FIVE FEET OF COVER AND A MAXIMUM OF SEVEN FEET COVER FROM THE FINAL DESIGN GRADES.
- MAINTAIN 10 FEET HORIZONTAL SEPARATION AND 18" VERTICAL SEPARATION (WATER OVER SEWER) BETWEEN SEWER AND WATER LINES. WHEREVER THERE IS LESS THAN 10 FEET OF HORIZONTAL SEPARATION AND 18" OF VERTICAL SEPARATION BETWEEN A PROPOSED OR EXISTING SEWER LINE TO REMAIN AND A PROPOSED OR EXISTING WATER LINE TO REMAIN BOTH WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT CEMENT LINED DUCTILE IRON PIPE FOR A DISTANCE OF 10- FEET ON EITHER SIDE OF THE CROSSING. ONE (1) FULL LENGTH OF WATER PIPE SHALL BE CENTERED OVER THE SEWER AT THE CROSSING.
- UTILITY STRUCTURES TO BE ABANDONED SHALL BE REMOVED TO A DEPTH OF NO LESS THAN 3 FEET BELOW FINISHED GRADE, THE BOTTOMS OF THE STRUCTURES SHALL BE BROKEN AND THE STRUCTURES SHALL BE BACKFILLED WITH GRAVEL BORROW AND COMPACTED.
- CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED AND/OR REMOVED & DISPOSED OF.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR TRENCHING, BACKFILLING, AND SURFACE RESTORATION FOR THE GAS LINE INSTALLATION.
- ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
- MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, REGULATIONS AND SAFETY CODES IN THE CONSTRUCTION OF ALL IMPROVEMENTS.

TOWN OF BROOKLINE NOTES:

- WATER MAINS AND APPURTENANCES MUST BE COMPLETELY INSTALLED, FLUSHED, PRESSURE TESTED, DISINFECTED, RE-FLUSHED AND SAMPLED FOR BACTERIA PRIOR TO BEING PLACED INTO SERVICE.
- THE BROOKLINE WATER & SEWER DIVISION SHALL OPERATE ALL VALVES AND HYDRANTS TO PLACE THE MAIN INTO SERVICE. INSTALLATION OF SERVICE TAPS FOR PERMANENT SERVICE CONNECTIONS AND VENTING OUTLETS SHALL BE COMPLETED BY THE WATER & SEWER DIVISION.
- CARE SHALL BE GIVEN TO PROTECT THE EXISTING DISTRIBUTION SYSTEM FROM BACKFLOW CAUSED BY PRESSURE TESTING AND DISINFECTION PROCEDURES
- THE BROOKLINE WATER AND SEWER DIVISION SHALL INSPECT ALL PRESSURE TESTING AND DISINFECTING PROCEDURES. FOR ALL PROCEDURES, APPOINTMENTS FOR INSPECTION MUST BE SCHEDULED (AT LEAST 48 HOURS IN ADVANCE) THROUGH THE BROOKLINE WATER AND SEWER DIVISION (617-730-2170).

DEMOLITION NOTES:

- THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS. THE CONTRACTOR SHALL ALSO PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE ARCHITECT AS REQUIRED.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL WALK THE SITE WITH THE ARCHITECT TO GAIN A THOROUGH UNDERSTANDING OF THE PROJECT, INCLUDING ANY SPECIAL CONDITIONS AND CONSTRAINTS.
- SITE PREPARATION AND DEMOLITION SHALL INCLUDE THOSE AREAS WITHIN THE LIMIT OF WORK LINE AS SHOWN ON THIS CONTRACT.
- THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82, SECTION 40, AS AMENDED, WHICH STATES THAT NO ONE MAY EXCAVATE IN THE COMMONWEALTH OF MASSACHUSETTS EXCEPT IN AN EMERGENCY WITHOUT 72 HOURS NOTICE, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, TO NATURAL GAS PIPELINE COMPANIES, AND MUNICIPAL UTILITY DEPARTMENTS THAT SUPPLY GAS, ELECTRICITY, TELEPHONE, OR CABLE TELEVISION SERVICE IN OR TO THE CITY OR TOWN WHERE THE EXCAVATION IS TO BE MADE. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-DIG-SAFE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL CONDITIONS IN THE FIELD AND REPORT DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE OWNER OR OWNER'S REPRESENTATION IMMEDIATELY.
- THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON PLANS ARE DIAGRAMMATIC ONLY, AND ALL UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR SHALL CONTACT THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANY TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
- CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES.
- EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO OWNER.
- ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- EXISTING SURFACE MATERIALS INCLUDING GRANITE CURB, ASPHALT, CONCRETE, SHRUBS, ETC. SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED.
- CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING DEMOLITION.
- CONTRACTOR SHALL SUPPLY AND MAINTAIN FOR THE DURATION OF DEMOLITION ALL NECESSARY DEVICES FOR EROSION, SEDIMENT AND DUST CONTROL, ETC., INCLUDING THOSE DEVICES NECESSARY FOR STOCKPILES AND PROTECTION OF ADJACENT PUBLIC WAYS, AND SHALL REMOVE THE DEVICES AFTER PROJECT COMPLETION.
- ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC LANDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS EFFORTS OF THE DEMOLITION AND RELATION OF UTILITIES WITH ALL TRADES, IF APPLICABLE.
- ALL EXISTING UTILITIES WITHIN THE PRIVATE PROPERTY SHALL BE REMOVED TO FULL DEPTH TO INCLUDE BASE MATERIAL, PIPING, UTILITY STRUCTURES, AND FOOTINGS OR FOUNDATIONS AS APPLICABLE, AND LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR.
- UTILITY STRUCTURES TO BE ABANDONED SHALL BE REMOVED TO A DEPTH OF NO LESS THAN 3 FEET BELOW FINISHED GRADE, THE BOTTOMS OF THE STRUCTURES SHALL BE BROKEN AND THE STRUCTURES SHALL BE BACKFILLED WITH GRAVEL BORROW AND COMPACTED
- AT ALL LOCATIONS WHERE EXISTING CURBING, CONCRETE PAVEMENT OR BITUMINOUS CONCRETE ROADWAY ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE.

EARTH MOVING AND GRADING NOTES:

- PROVIDE POSITIVE DRAINAGE AWAY FROM FACE OF BUILDING AT ALL LOCATIONS.
- THE GENERAL CONTRACTOR SHALL PROVIDE DUST CONTROL FOR CONSTRUCTION OPERATIONS AS APPROVED BY THE ARCHITECT.
- ALL POINTS OF CONSTRUCTION EGRESS AND/OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS.
- ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE GENERAL CONTRACTOR ON "AS-BUILT" DRAWINGS.
- CONTRACTOR SHALL SURVEY THE EXISTING GRADES AT THE PROPOSED RAMP LOCATION FOR BOTH SIDEWALK AND ROADWAY AND NOTIFY OWNER AND ENGINEER IF EXISTING GRADES VARY SIGNIFICANTLY ENOUGH THAT AN ACCESSIBLE RAMP CANNOT BE CONSTRUCTED AT THE LOCATION AS DESIGNED.
- ALL TOPSOIL ENCOUNTERED WITHIN THE WORK AREA SHALL BE STRIPPED TO ITS FULL DEPTH AND REMOVED FROM THE SITE UNLESS OTHERWISE DIRECTED BY THE OWNER.
- CROSS SLOPES OF ALL PEDESTRIAN WALKS SHALL NOT EXCEED 1.5%.
- RUNNING SLOPE OF ALL PEDESTRIAN WALKS SHALL NOT EXCEED 4.5%, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL EXERCISE CAUTION IN ALL EXCAVATION ACTIVITY DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES.
- ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM OF 1% UNLESS OTHERWISE NOTED.
- PROVIDE POSITIVE DRAINAGE AWAY FROM FACE OF BUILDINGS AT ALL LOCATIONS.
- PITCH EVENLY BETWEEN CONTOUR LINES AND BETWEEN SPOT GRADES. SPOT GRADE ELEVATIONS TAKE PRECEDENCE OVER CONTOUR LINES.
- ALL PROPOSED TOP OF CURB ELEVATIONS ARE SIX INCHES (6") ABOVE BOTTOM OF CURB ELEVATIONS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL BLEND NEW GRADING SMOOTHLY INTO EXISTING GRADING AT LIMITS OF GRADING.
- WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING PAVING WITH SMOOTH TRANSITION BETWEEN EXISTING AND NEW SURFACES.
- THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
- SURPLUS MATERIALS SHALL BE REMOVED FROM THE SITE UNLESS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE. REFER TO EARTHWORK SPECIFICATIONS.
- ANY AREAS OUTSIDE OF THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED BY THE CONTRACTOR TO THE PRE-CONSTRUCTION CONDITION/GRADE AT NO COST TO THE OWNER.
- EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.

LEGEND

	CATCH BASIN
	DRAIN MANHOLE
	SEWER MANHOLE
	WATER QUALITY INLET
	WATER QUALITY STRUCTURE
	ELECTRIC MANHOLE
	TELEPHONE MANHOLE
	UTILITY POLE
	STREET LIGHT POLE
	ELECTRIC HANDHOLE
	GAS GATE
	WATER VALVE
	ABANDON UTILITY LINE
	CABLE TELEVISION LINE
	DRAIN LINE
	UNDERGROUND ELECTRIC LINE
	GAS LINE
	SEWER LINE
	TELEPHONE/DATA LINE
	WATER LINE
	OVERHEAD WIRES
	TRAFFIC SIGNAL LINE
	CHAIN LINK FENCE
	CUT & CAP UTILITY LINE

ABBREVIATIONS

AD	AREA DRAIN
BC	BOTTOM OF CURB
BLDG.	BUILDING
BW	BOTTOM OF WALL
CATV	CABLE TELEVISION
CB	CATCH BASIN
CI	CAST IRON PIPE
CLDI	CEMENT LINED DUCTILE IRON PIPE
CLF	CHAIN LINK FENCE
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CSMH	COMBINED SEWER MANHOLE
DIP	DUCTILE IRON PIPE
DMH	DRAINAGE MANHOLE
EHH	ELECTRIC HANDHOLE
EMH	ELECTRIC MANHOLE
FS	FIRE SERVICE
GG	GAS GATE
GV	GAS VALVE
HP	HORSEPOWER
HYD	HYDRANT
INV	INVERT ELEVATION
LF	LINEAR FEET
LOC.	LOCATION
LP	STREET LIGHT POLE
OHW	OVERHEAD WIRE
MEP	MECHANICAL, ELECTRICAL, PLUMBING ENGINEER
P&M	PROTECT AND MAINTAIN
PVC	POLYVINYL CHLORIDE PIPE
R	RADIUS
R&D	REMOVE AND DISPOSE OF
ROP	REINFORCED CONCRETE PIPE
REC.	RECORD
SMH	SEWER MANHOLE
TC	TOP OF CURB
TMH	TELEPHONE MANHOLE
TW	TOP OF WALL
TYP.	TYPICAL
UP	UTILITY POLE
VCP	VITRIFIED CLAY PIPE
VGC	VERTICAL GRANITE CURB
WG	WATER GATE
WV	WATER VALVE
W/O	WITH
	WITHOUT

REVISIONS

#	DATE	DESCRIPTION

**1299 BEACON STREET
BROOKLINE, MA 02446**

cbt 617 262 4354 cbtarchitects.com
110 canal street boston, ma 02114

Nitsch Engineering 2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

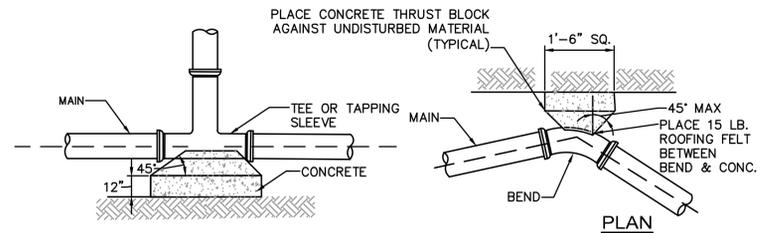


08/16/2019
NOT FOR CONSTRUCTION

CIVIL NOTES, LEGEND, AND ABBREVIATION

SCALE AS NOTED PROJECT # 12693 DATE ISSUED 08.16.2019

C000



PLAN

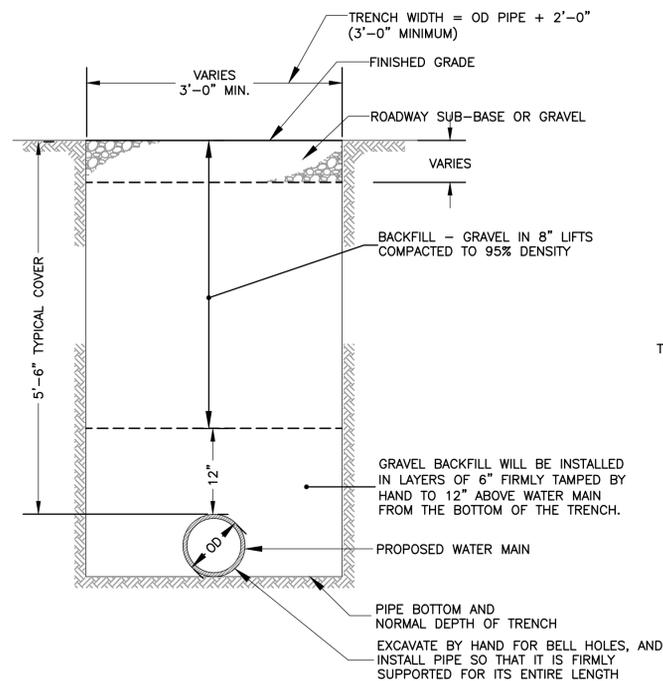
NOTES:

- THRUST BLOCKS TO BE USED ON ALL PRESSURE PIPES AT HORIZONTAL AND VERTICAL BENDS GREATER OR EQUAL TO 45°, TEES AND DEAD ENDS.
- FOR FITTINGS WITH LESS THAN 45° DEFLECTION USE BEARING AREAS FOR 45° BEND.
- BEARING AREAS BASED ON HORIZONTAL PASSIVE SOIL PRESSURE OF 2000 PSF AND A MINIMUM INTERNAL WATER PRESSURE OF 175 PSIG. JOINTS SHALL NOT BE ENCASED IN CONCRETE. BEARING AREAS MAY BE DISREGARDED FOR TRENCHES IN ROCK WHERE THE TOP OF THE ROCK FACE IS AT OR ABOVE THE CROWN OF THE PIPE. HOWEVER, CONCRETE BACKING SHALL BE PLACED BETWEEN THE PIPE AND ROCK FACE.

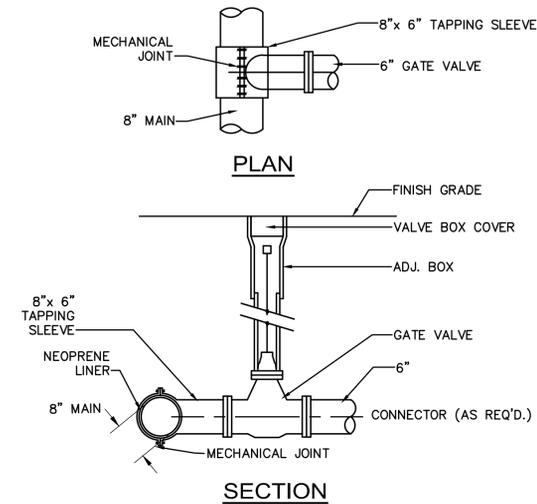
TABLE OF BEARING AREAS IN SQUARE FEET AGAINST UNDISTURBED MATERIAL FOR FITTING. *

SIZE OF MAIN (INCHES)	90° BEND (S.F.)	45° BEND (S.F.)	DEAD END (S.F.)
4	2.3	1.3	1.6
6	4.7	2.5	3.3
8	8.0	4.5	6.0
12	17.0	9.5	12.0

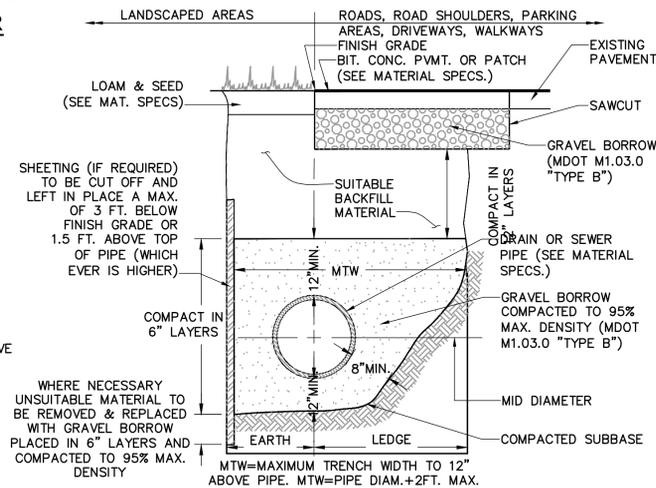
THRUST BLOCK DETAILS NOT TO SCALE



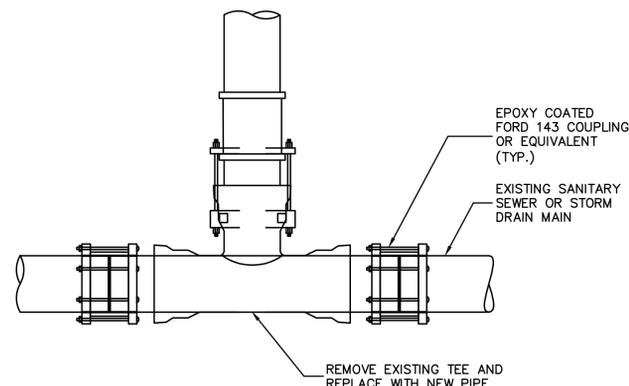
TYPICAL TRENCH DETAIL OF WATER MAIN IN FIRM GROUND NOT TO SCALE



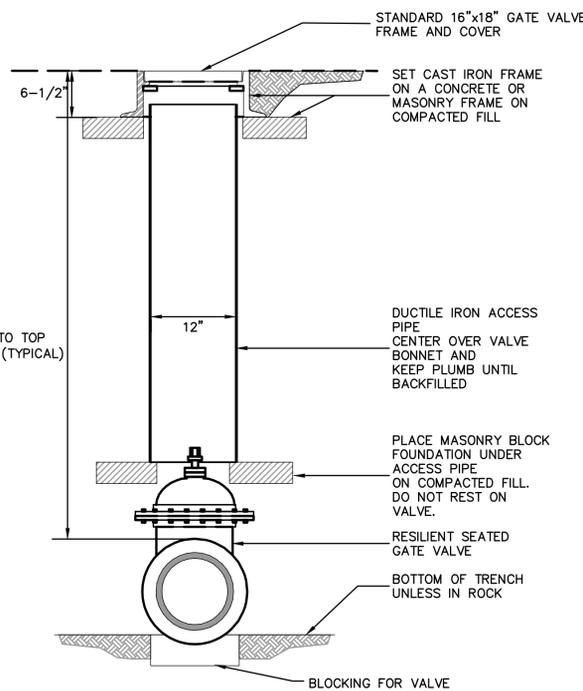
TAPPING SLEEVE, VALVE & BOX DETAIL NOT TO SCALE



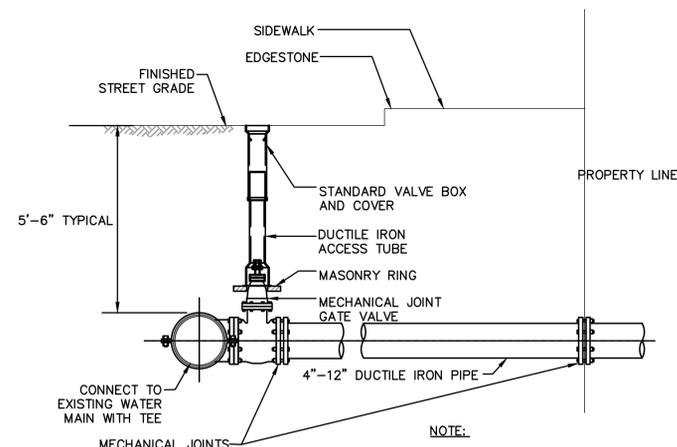
UTILITY TRENCH DETAIL NOT TO SCALE



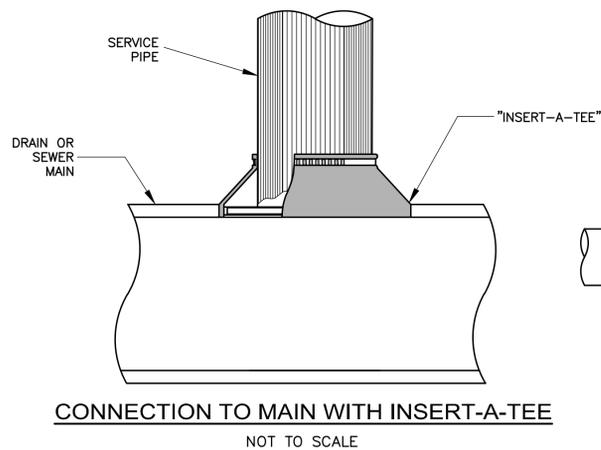
DETAIL OF CUT AND CAP OF SEWER AND DRAIN MAINS SCALE: NOT TO SCALE



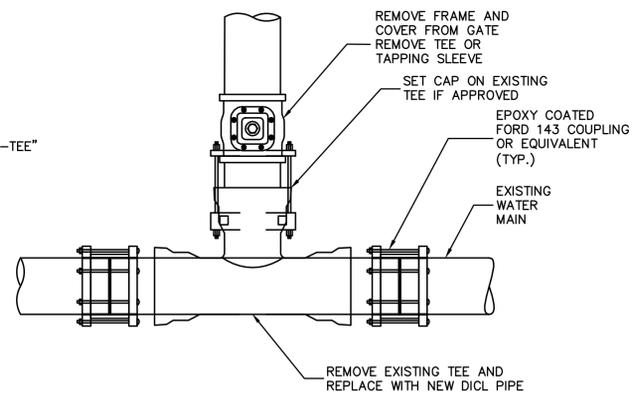
GATE VALVE DETAIL NOT TO SCALE



TYPICAL WATER PIPE CONNECTION NOT TO SCALE



CONNECTION TO MAIN WITH INSERT-A-TEE NOT TO SCALE



DETAIL OF CUT AND CAP OF WATER CONNECTION SCALE: NOT TO SCALE

REVISIONS

#	DATE	DESCRIPTION

1299 BEACON STREET
BROOKLINE, MA 02446

cbt 617 262 4354 cbtarchitects.com
110 canal street boston, ma 02114

Nitsch Engineering
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472



08/16/2019
NOT FOR CONSTRUCTION

SITE UTILITY DETAILS

SCALE AS NOTED PROJECT # 12693 DATE ISSUED 08.16.2019

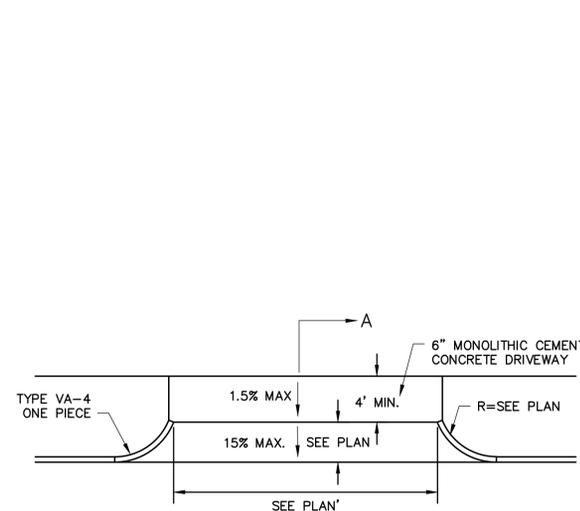
C300

REVISIONS		
#	DATE	DESCRIPTION

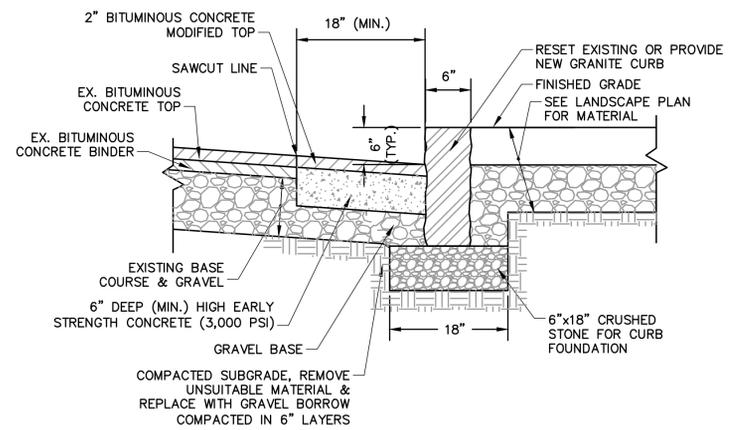
**1299 BEACON STREET
BROOKLINE, MA 02446**

cbt 617 262 4354 cbtarchitects.com
110 canal street boston, ma 02114

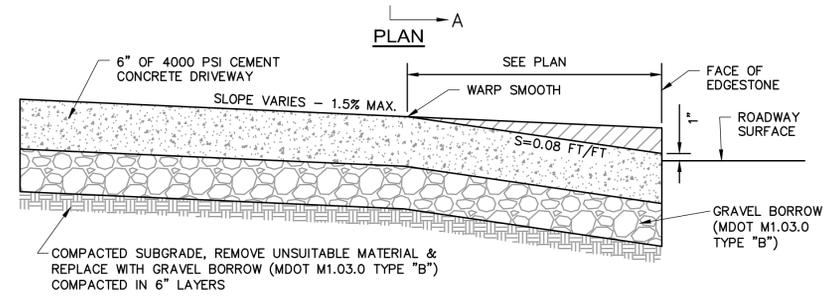
Nitsch Engineering
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472



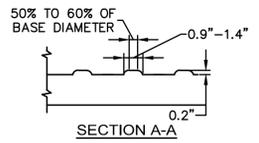
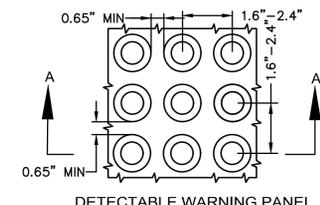
**SECTION A-A CONCRETE DRIVEWAY
TYPICAL DRIVEWAY DETAIL
NOT TO SCALE**



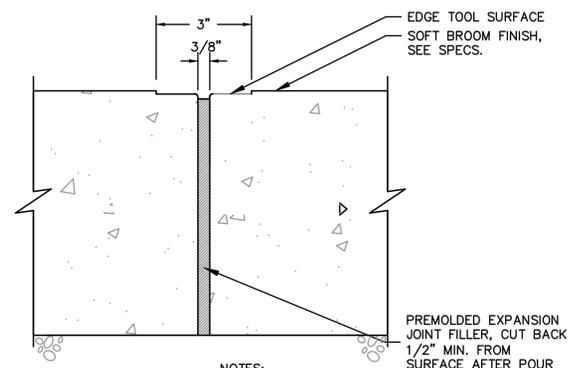
**TYPICAL GRANITE CURB SECTION DETAIL
NOT TO SCALE**



- NOTES:
1. DETECTABLE WARNING PANELS SHALL BE PERMANENTLY APPLIED TO THE RAMP.
 2. DETECTABLE WARNING PANELS SHALL CONTRAST VISUALLY WITH THE ADJACENT WALKWAY SURFACES PER THE FOLLOWING COLOR SCHEDULE:
• PALE YELLOW ON CEMENT
CONCRETE PEDESTRIAN RAMPS
 3. DETECTABLE WARNING PANELS SHALL BE AS MANUFACTURED BY ADA SOLUTIONS, INC. OF NORTH BILLERICA, MA OR AN APPROVED EQUAL.
 4. DETECTABLE WARNING PANELS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

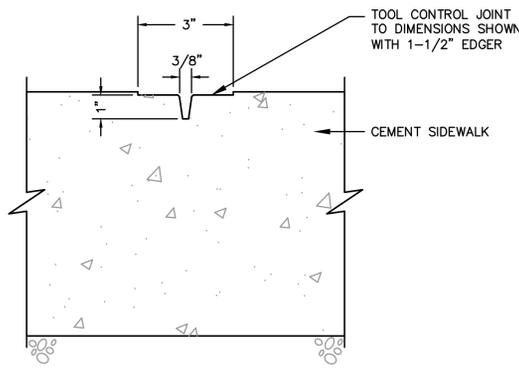


**DETECTABLE WARNING PANEL FOR
PEDESTRIAN RAMPS DETAIL
NOT TO SCALE**



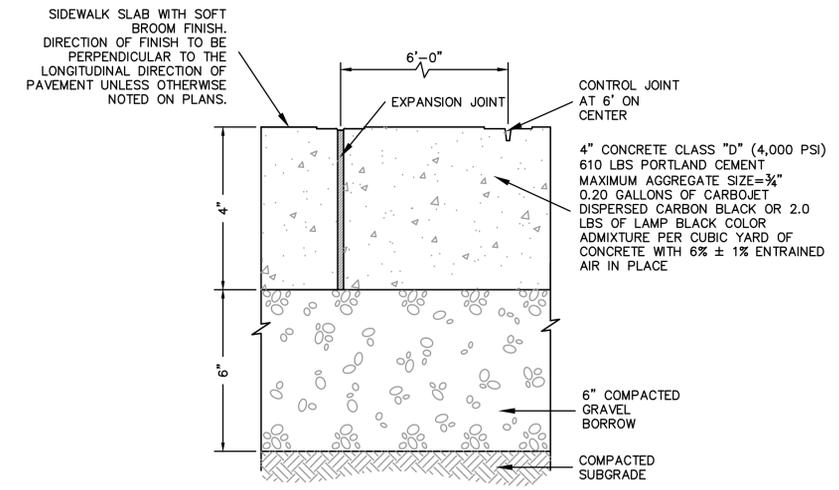
- NOTES:
1. EXPANSION JOINTS 30'-0" O.C. UNLESS OTHERWISE SHOWN
 2. TOOLED EDGES AND JOINTS ALL PANELS.
 3. TO BE PLACED WHERE PAVEMENT THICKNESS CHANGES AND AROUND TREE PITS AND POLES.
 4. INSTALL BOND BREAKING MATERIAL ALONG WALLS.

**EXPANSION JOINT
NOT TO SCALE**



- NOTES:
1. CONTROL JOINTS 6'-0" O.C. UNLESS SHOWN OTHERWISE
 2. TOOLED EDGES AND JOINTS ALL PANELS

**CONTROL JOINT
NOT TO SCALE**



**CEMENT CONCRETE SIDEWALK
NOT TO SCALE**



08/16/2019
NOT FOR CONSTRUCTION

**SITE CONSTRUCTION
DETAILS**

SCALE AS NOTED PROJECT # 12693 DATE ISSUED 08.16.2019

C301