

**ABBREVIATIONS**

|         |                             |
|---------|-----------------------------|
| AC      | AIR CONDITIONING UNIT       |
| APPROX. | APPROXIMATE                 |
| ASPH.   | ASPHALT                     |
| BOC     | BITUMINOUS CONCRETE CURBING |
| BIT.    | BITUMINOUS                  |
| BOL     | BOLLARD                     |
| CB      | CATCH BASIN                 |
| CEM     | CEMENT                      |
| CLF     | CHAIN LINK FENCE            |
| CD      | CLEANOUT                    |
| CONC.   | CONCRETE                    |
| CRW     | CONCRETE RETAINING WALL     |
| DUMP    | DUMPSTER                    |
| (E)     | EXISTING ELEVATION          |
| EOP     | EDGE OF PAVEMENT            |
| EPLP    | ENGINEERING PIN/LEAD PLUG   |
| EXIST.  | EXISTING                    |
| F.F.E.  | FIRST FLOOR                 |
| FND     | FOUND                       |
| GM      | GAS METER                   |
| GRAN.   | GRANITE                     |
| GUY     | GUY WIRE                    |
| HH      | HANDHOLE                    |
| HR      | HANDRAIL                    |
| I.G.    | IRON PIPE                   |
| LP      | LIGHT POLE                  |
| MARKED  | MARKED                      |
| (M)     | MASSACHUSETTS HIGHWAY BOUND |
| MMB     | NOW OR FORMERLY             |
| N/F     | NUMBER                      |
| NO.     | NUMBER                      |
| O/H     | OVERHEAD WIRES              |
| OW      | OVERHEAD WIRES              |
| PED     | PEDESTRIAN                  |
| PROP.   | PROPOSED                    |
| R       | REMOVE & RESET              |
| R&R     | REMOVE                      |
| RET.    | RETAIN                      |
| RD      | ROOF DRAIN                  |
| RRT     | RAILROAD TIE                |
| SMH     | SEWER MANHOLE               |
| TSF     | TOP OF FOUNDATION           |
| TOW     | TOP OF WALL                 |
| TYP.    | TYPICAL                     |
| UEM     | UTILITY ELECTRIC METER      |
| VCC     | VERTICAL GRANITE CURB       |
| WP      | WOODEN POST                 |
| WSF     | WOODEN STOCKADE FENCE       |

**LEGEND**

**SURVEY SYMBOLS**

- IRON PIN
- R/C @ REBAR WITH CAP
- CB/DH □ CONCRETE BOUND WITH DRILL HOLE
- SB □ STONE BOUND
- SB/DH □ STONE BOUND

**UTILITY SYMBOLS**

- ⊕ ELECTRIC HAND HOLE
- ⊕ TELE/COMM HAND HOLE
- ⊕ GUY POLE
- GW GUY WIRE
- ⊕ HVAC UNIT
- ⊕ TRANSFORMER
- ⊕ WATER GATE
- ⊕ ELECTRIC MANHOLE
- ⊕ SEWER MANHOLE
- ⊕ DRAIN MANHOLE
- ⊕ TELEPHONE MANHOLE
- ⊕ DRAINAGE CATCH BASIN
- ⊕ HYDRANT
- ⊕ UTILITY POLE
- ⊕ SIGN

**LINE DESIGNATORS**

- G GAS LINE
- FP FIRE PROTECTION WATER SERVICE
- DW DOMESTIC WATER SERVICE
- E UNDERGROUND ELECTRIC
- D STORM DRAIN LINE
- RD ROOF DRAIN
- S SANITARY SEWER LINE
- 100 MAJOR CONTOUR
- 99.55 X SPOT GRADE
- ▲ BUILDING ENTRANCE

| REV | DATE     | DESCRIPTION        | BY  | APP |
|-----|----------|--------------------|-----|-----|
| 1   | 12/01/17 | DRAINAGE REVISIONS | SBS | BCM |

**MCKENZIE ENGINEERING GROUP**  
 Assinippi Office Park  
 150 Longwater Drive, Suite 101  
 Norwell, MA 02061  
 Ph: 781-792-3900  
 Website: www.mckeng.com

**PROPOSED COMPREHENSIVE PERMIT DEVELOPMENT**  
 WELLESLEY SQUARE RESIDENCES  
 (ASSESSOR'S PARCELS 123-9-13)  
 DELANSON CIRCLE  
 WELLESLEY, MASSACHUSETTS

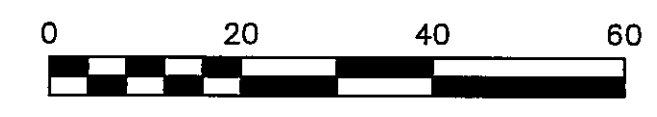
PROFESSIONAL ENGINEER:  
  
 BRADLEY C. MCKENZIE  
 CIVIL ENGINEER  
 No. 35917

OWNER:  
 DELANSON CIRCLE HOLDING, LLC  
 868 WORCESTER STREET  
 WELLESLEY, MASSACHUSETTS 02482  
 DEEDS: BK 27224, PG 65, 66 AND 68  
 BK 29011, PG 473 AND 477

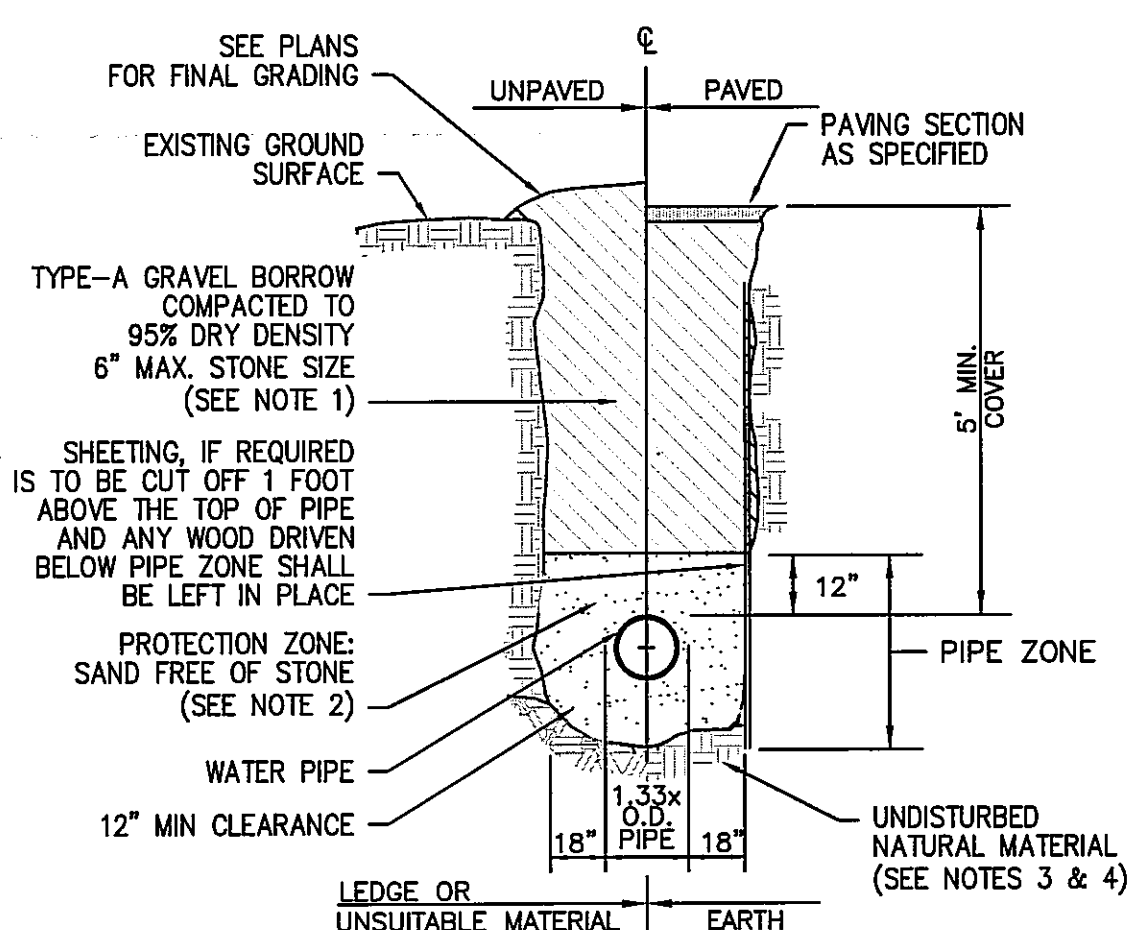
|              |                   |
|--------------|-------------------|
| DRAWN BY:    | SBS               |
| DESIGNED BY: | SBS               |
| CHECKED BY:  | BCM               |
| APPROVED BY: | BCM               |
| DATE:        | NOVEMBER 16, 2017 |
| SCALE:       | 1"=20'            |
| PROJECT NO.: | 216-194           |
| DWG. TITLE:  |                   |

**GRADING & DRAINAGE PLAN**

DWG. NO.: **C-2**

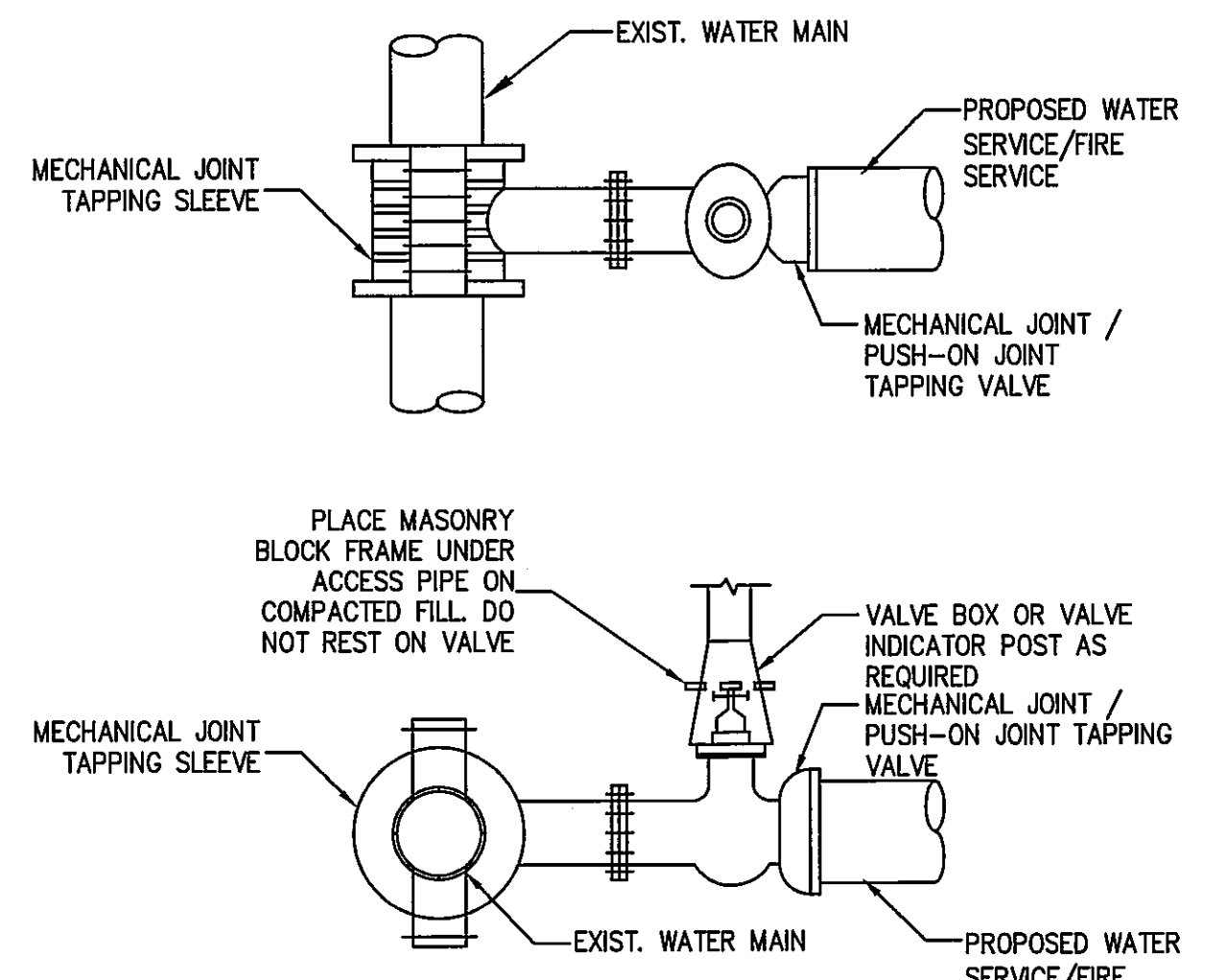






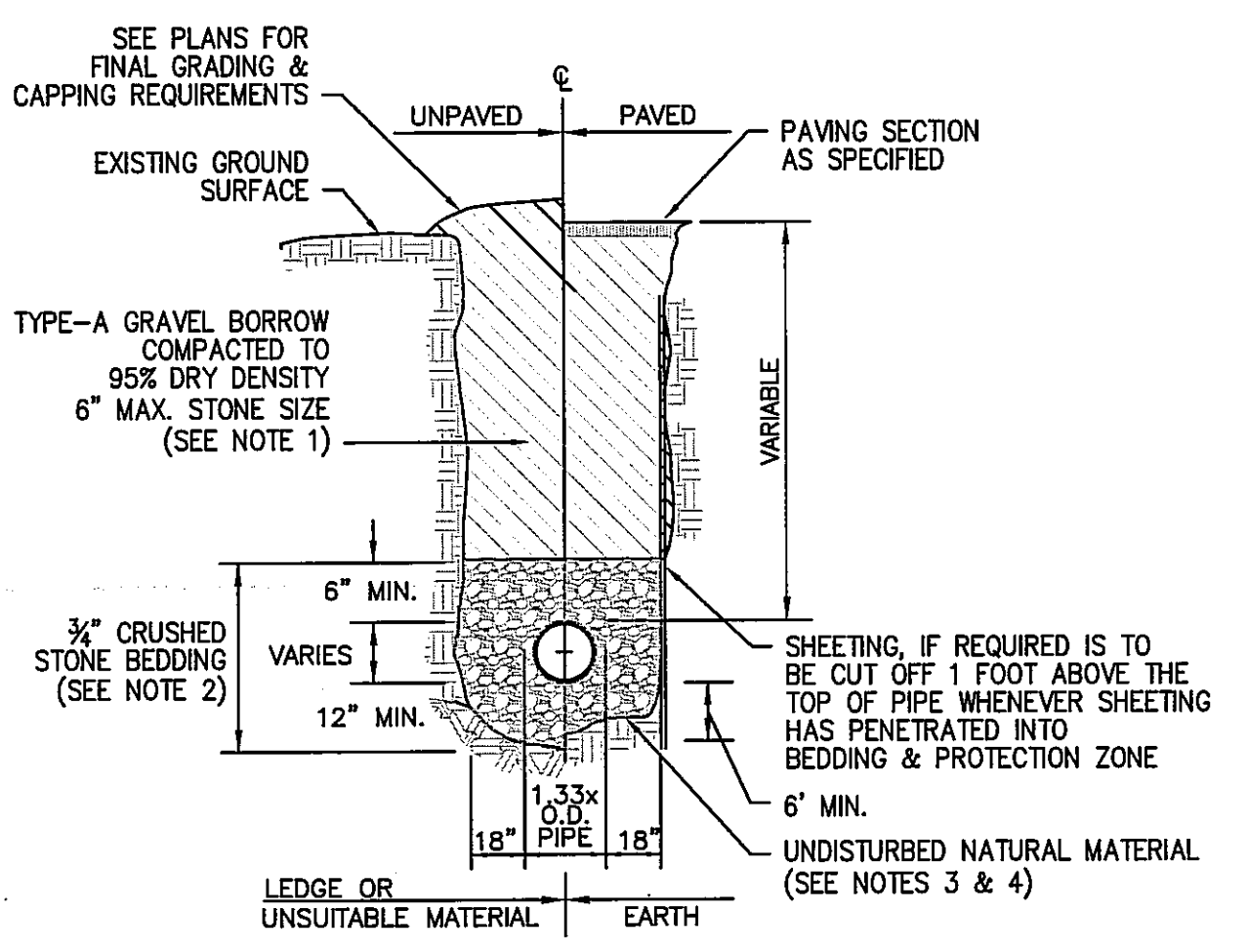
- NOTES:  
1. GRAVEL BORROW SHALL CONFORM TO MASSDOT SPECIFICATION M1.03.0.  
2. SAND BEDDING SHALL CONFORM TO MASSDOT SPECIFICATIONS.  
3. SUBGRADE SHALL CONSIST OF NATIVE SOIL OR IMPORTED SOIL CONFORMING TO THE MASSDOT SPECIFICATION FOR ORDINARY BORROW AND SHALL BE FREE OF ANY UNSUITABLE SOILS OR MATERIAL.  
4. UNSUITABLE SOIL OR MATERIAL SHALL INCLUDE BUT NOT BE LIMITED TO PEAT, MUCK, BROKEN PAVEMENT, STUMPS, LOGS, CONSTRUCTION DEBRIS OR ANY OTHER DELETERIOUS MATERIAL.

TYPICAL WATER TRENCH DETAIL  
N.T.S.



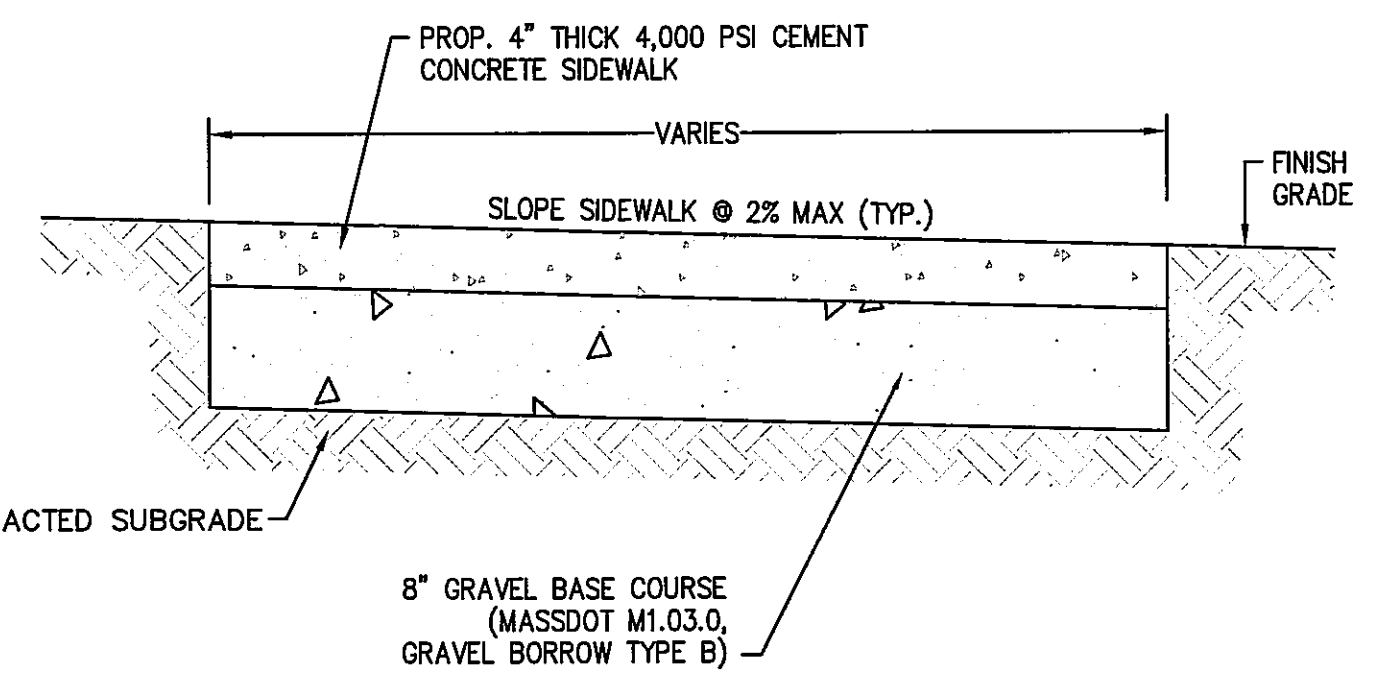
- NOTES:  
1. ALL GATE VALVES SHALL TURN TO THE RIGHT.  
2. ALL GATE VALVES TO BE RESILIENT SEAT, EPOXY COATED.

TYPICAL TAPPING SLEEVE AND VALVE BOX  
SCALE: N.T.S.



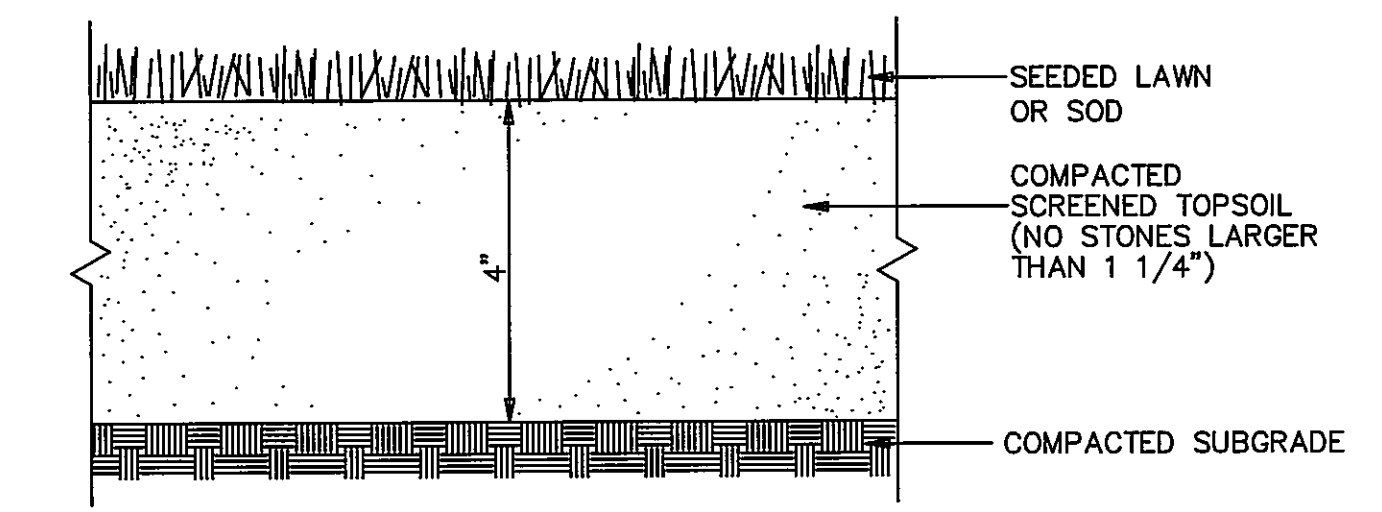
- NOTES:  
1. GRAVEL BORROW SHALL CONFORM TO MASSDOT SPECIFICATION M1.03.0.  
2. CRUSHED STONE BEDDING SHALL CONFORM TO MASSDOT SPECIFICATION M2.01.1.  
3. SUBGRADE SHALL CONSIST OF NATIVE SOIL OR IMPORTED SOIL CONFORMING TO THE MASSDOT SPECIFICATION FOR ORDINARY BORROW AND SHALL BE FREE OF ANY UNSUITABLE SOILS OR MATERIAL.  
4. UNSUITABLE SOIL OR MATERIAL SHALL INCLUDE BUT NOT BE LIMITED TO PEAT, MUCK, BROKEN PAVEMENT, STUMPS, LOGS, CONSTRUCTION DEBRIS OR ANY OTHER DELETERIOUS MATERIAL.

GRAVITY SEWER TRENCH DETAIL  
N.T.S.



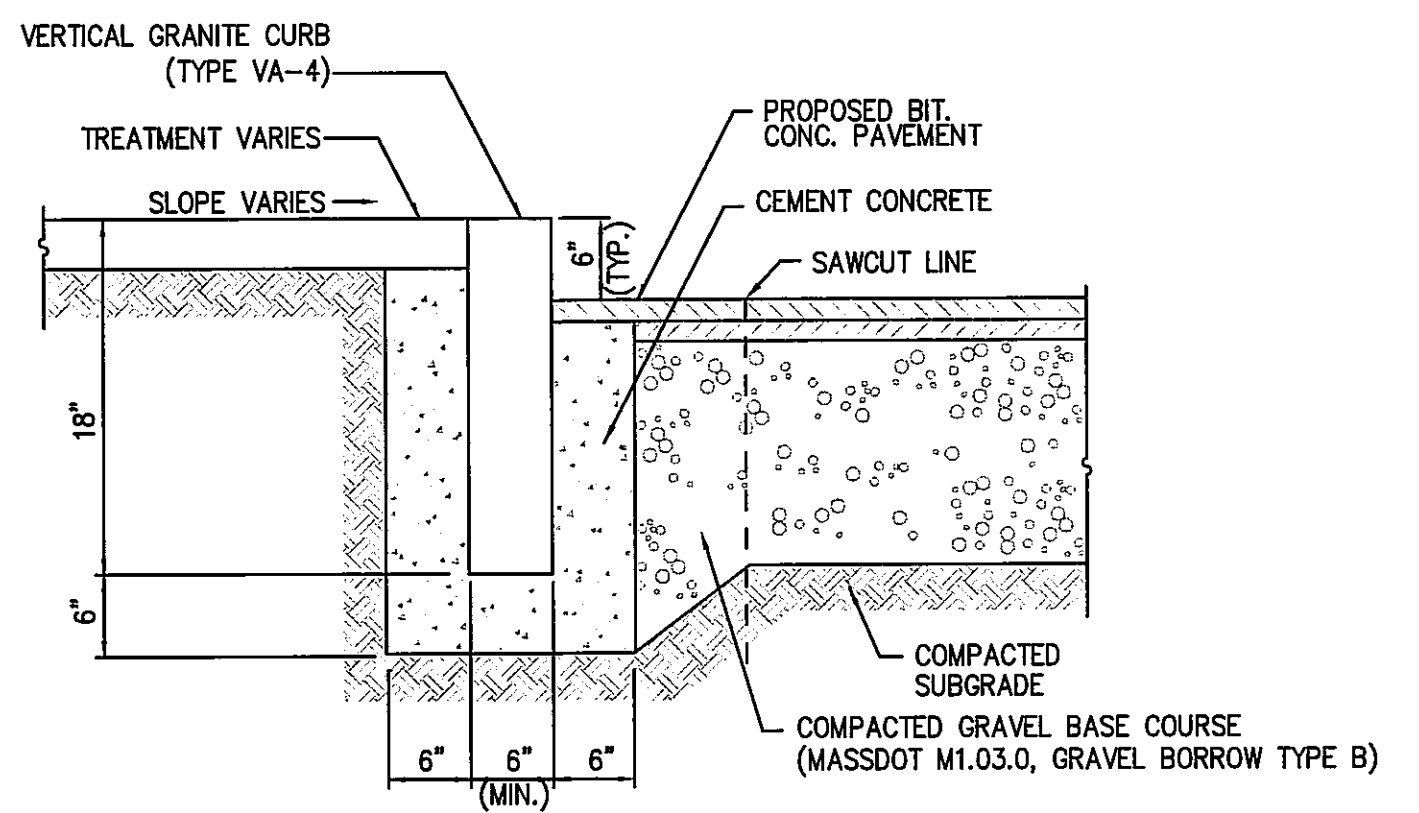
- NOTES:  
1. ALL WORK SHALL COMPLY WITH TOWN OF WELLESLEY SPECIFICATION FOR PORTLAND CEMENT CONCRETE SIDEWALKS. LATEST REVISION.  
2. SUBGRADE SHALL CONSIST OF NATIVE SOIL OR IMPORTED SOIL CONFORMING TO MASSDOT SPECIFICATION FOR ORDINARY BORROW AND SHALL BE FREE OF ANY UNSUITABLE MATERIALS.

CEMENT CONCRETE SIDEWALK DETAIL  
NOT TO SCALE



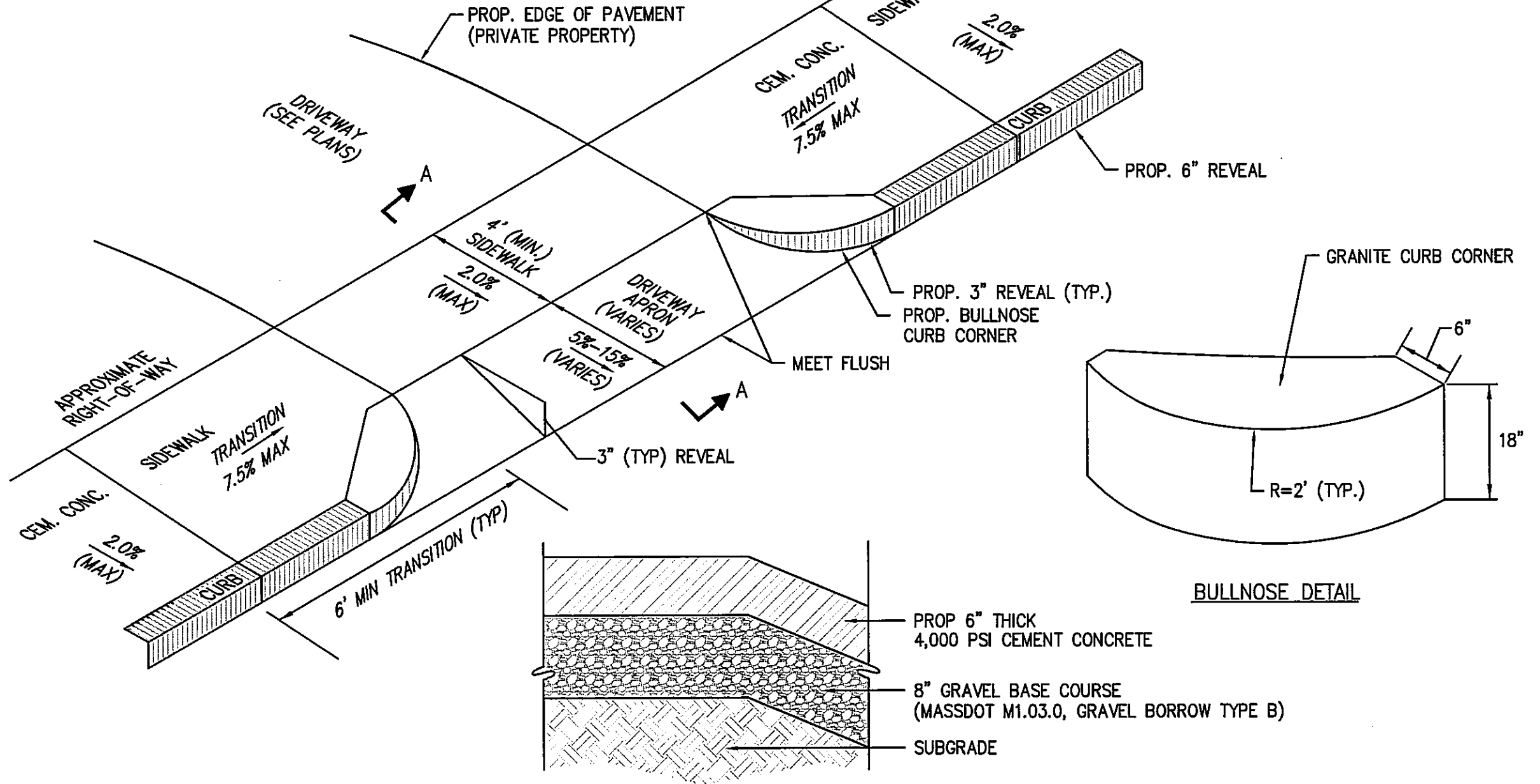
- NOTE:  
LOAM & SEED MATERIAL SHALL CONFORM TO MASSDOT MATERIAL SPECIFICATIONS M1.05.0, M1.07.0, M1.08.1, AND CONSTRUCTION METHODS 751.80 TO 751.83

SEEDING OR SODDED LAWN DETAIL  
SCALE: N.T.S.



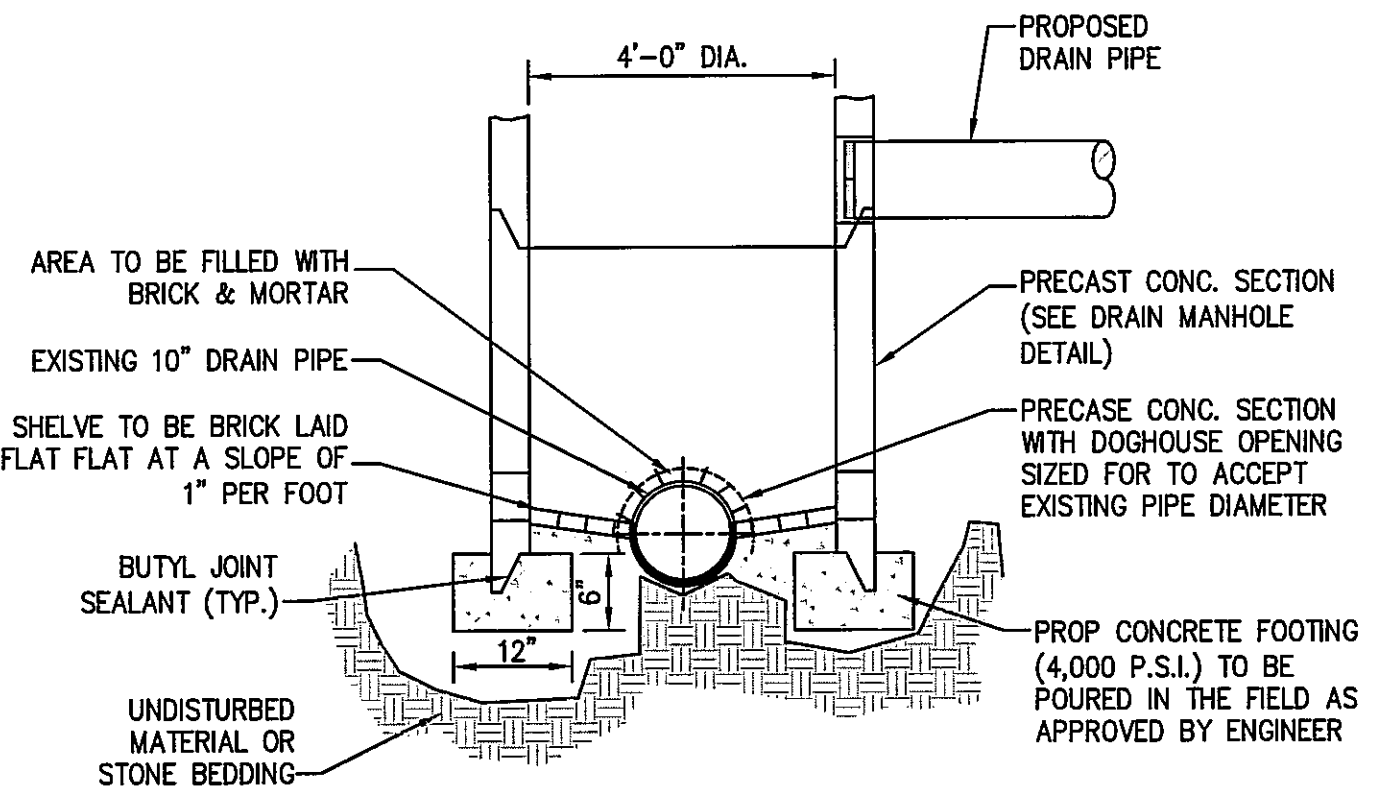
- NOTES:  
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VERTICAL GRANITE CURB (VGC) DETAIL  
SCALE: N.T.S.



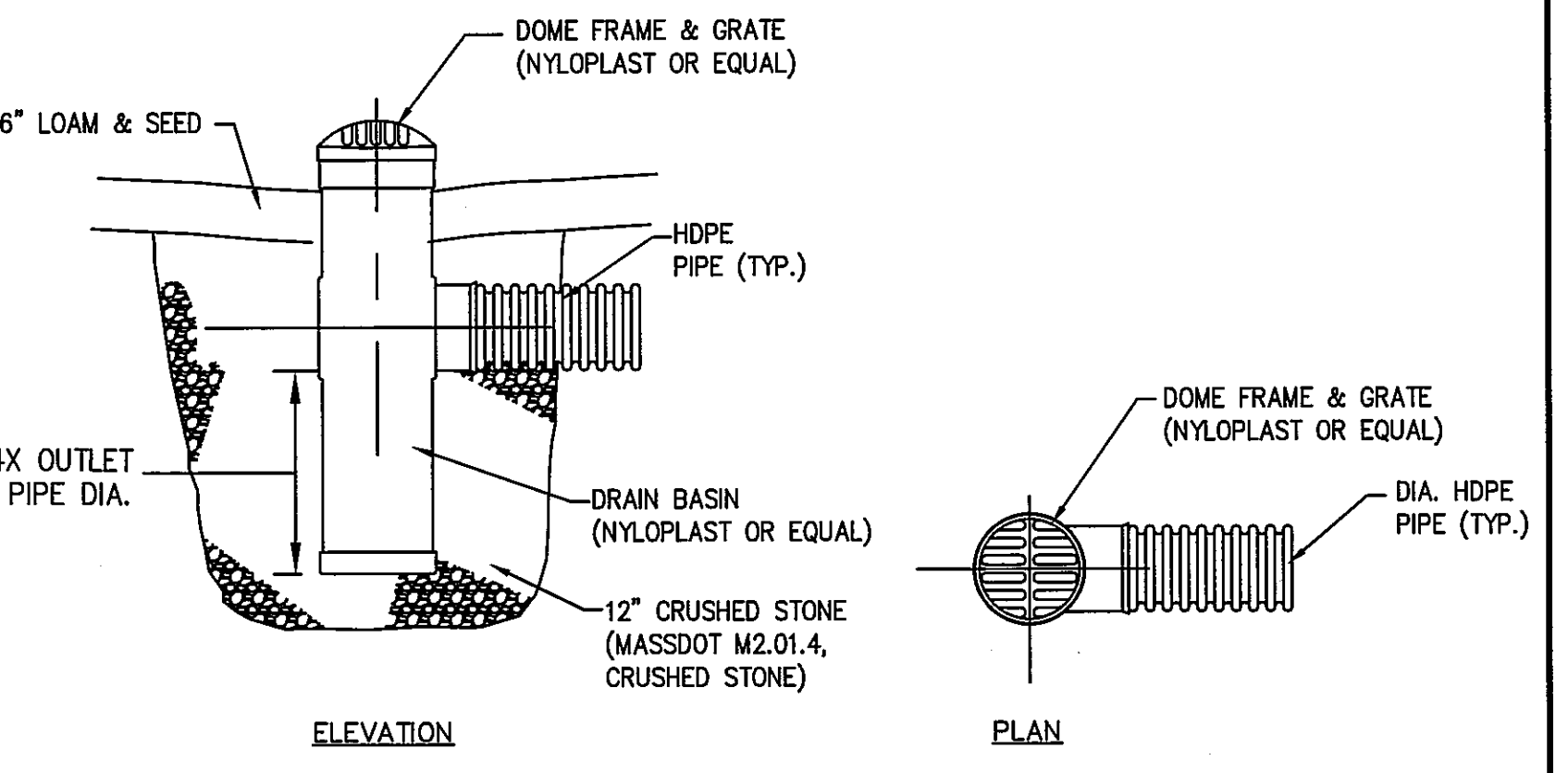
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DRIVEWAY APRON DETAIL  
SCALE: N.T.S.

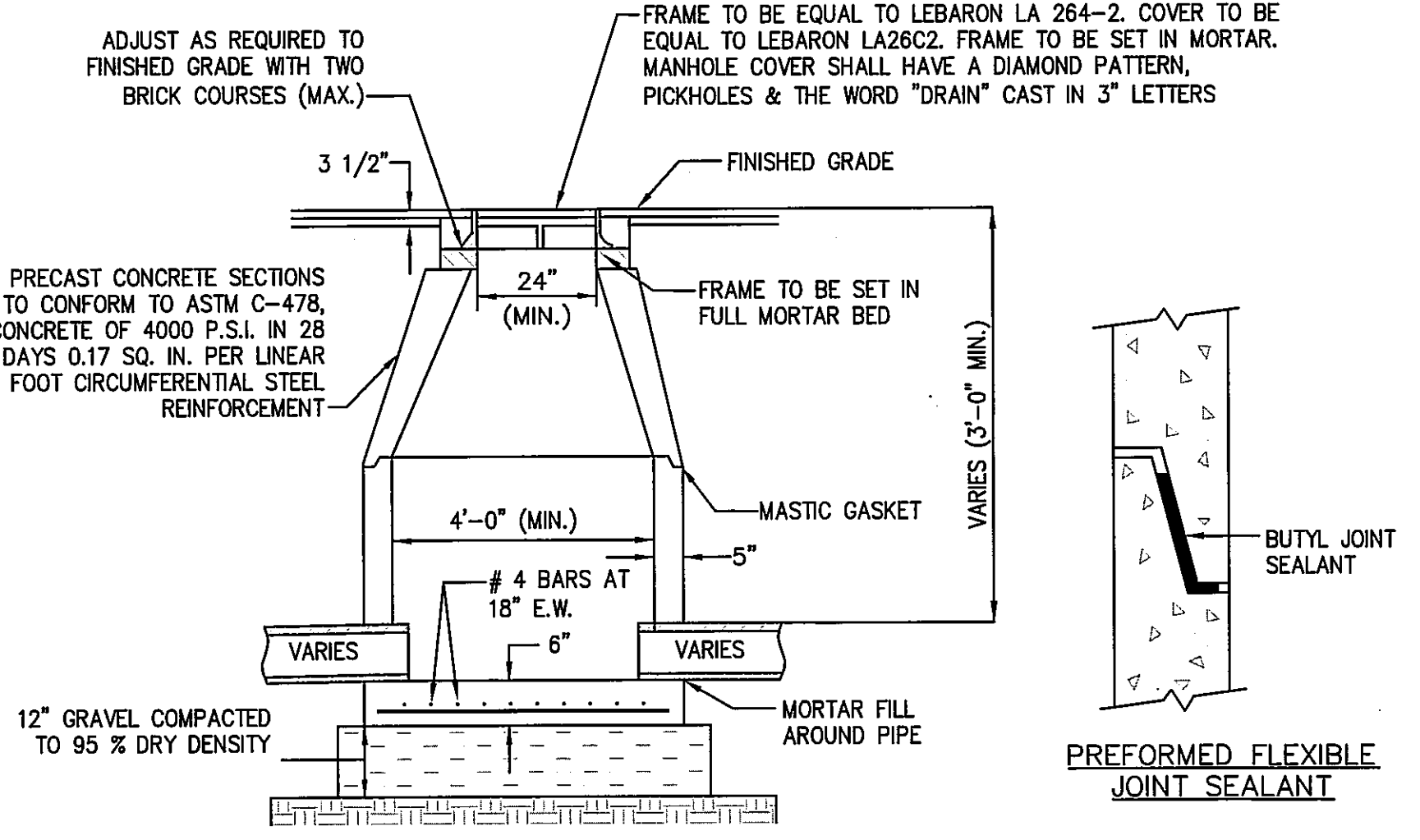


- NOTE:  
EXISTING DRAIN SHALL REMAIN ACTIVE THROUGHOUT CONSTRUCTION

TYPICAL DOGHOUSE DRAIN MANHOLE  
N.T.S.



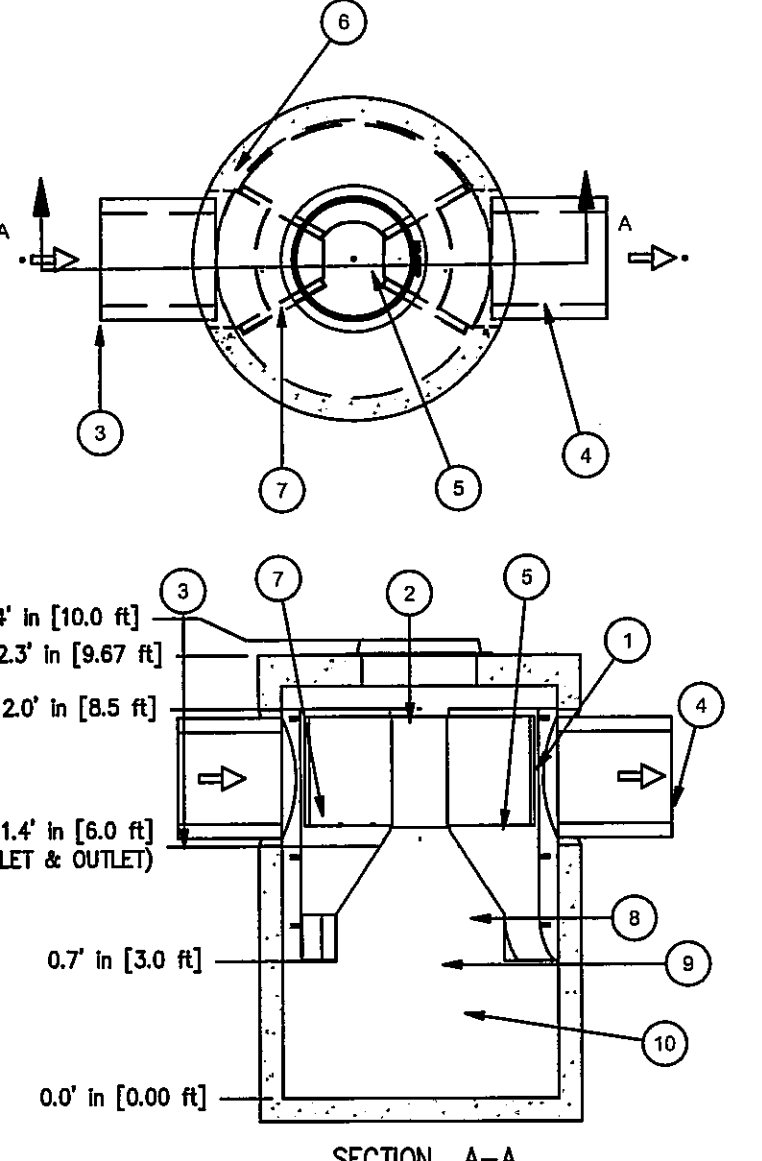
AREAS DRAIN DETAIL  
N.T.S.



TYPICAL PRECAST DRAIN MANHOLE  
N.T.S.

**Hydro**  
International Solutions  
Stormwater Solutions  
94 Hutchins Drive  
Portland, Maine 04102  
Tel: (207) 756-6200  
Fax: (207) 756-6212  
stormwaterinquiry@hydro-int.com

MANHOLE WALL AND SLAB THICKNESS ARE NOT TO SCALE.  
CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.  
CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASING UNIT TO FABRICATION.



| Parts List |      |                                  |           |
|------------|------|----------------------------------|-----------|
| ITEM       | QTY. | DESCRIPTION                      | SIZE (in) |
| 1          | 1    | 1.0. CONCRETE MANHOLE            |           |
| 2          | 1    | INLET CHUTE (W/ FLOATABLES TRAP) |           |
| 3          | 1    | OUTLET CHUTE                     |           |
| 4          | 1    | INLET PIPE (BY OTHERS)           |           |
| 5          | 1    | OUTLET PIPE (BY OTHERS)          |           |
| 6          | 1    | HIGH FLOW BYPASS                 |           |
| 7          | 1    | FRAME AND COVER (OR GRATE)       |           |

FIRST DEFENSE UNIT  
N.T.S.

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| 1   | 12/01/17 | DRAINAGE REVISIONS | SBS | BCM |

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WELLESLEY SQUARE RESIDENCES  
(ASSESSOR'S PARCELS 123-9-13)  
DELANSON CIRCLE  
WELLESLEY, MASSACHUSETTS

PROFESSIONAL ENGINEER:  
  
BRADLEY C. WORSLEY  
CIVIL  
No. 3099  
STATE OF MASSACHUSETTS

OWNER:  
DELANSON CIRCLE HOLDING, LLC  
888 WORCESTER STREET  
WELLESLEY, MASSACHUSETTS 02482  
DEEDS: BK 27224, PG 65, 66 AND 68  
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DESIGNED BY: --  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: NOVEMBER 16, 2017  
SCALE: AS NOTED  
PROJECT NO.: 216-194  
DWG. TITLE: CONSTRUCTION DETAILS

DWG. NO.: C-4