

Project Name and Address	SINGLETARY ARMS MILLEBURY, MA
Sheet Title	CONSTRUCTION DETAILS



8/22/2020
Date

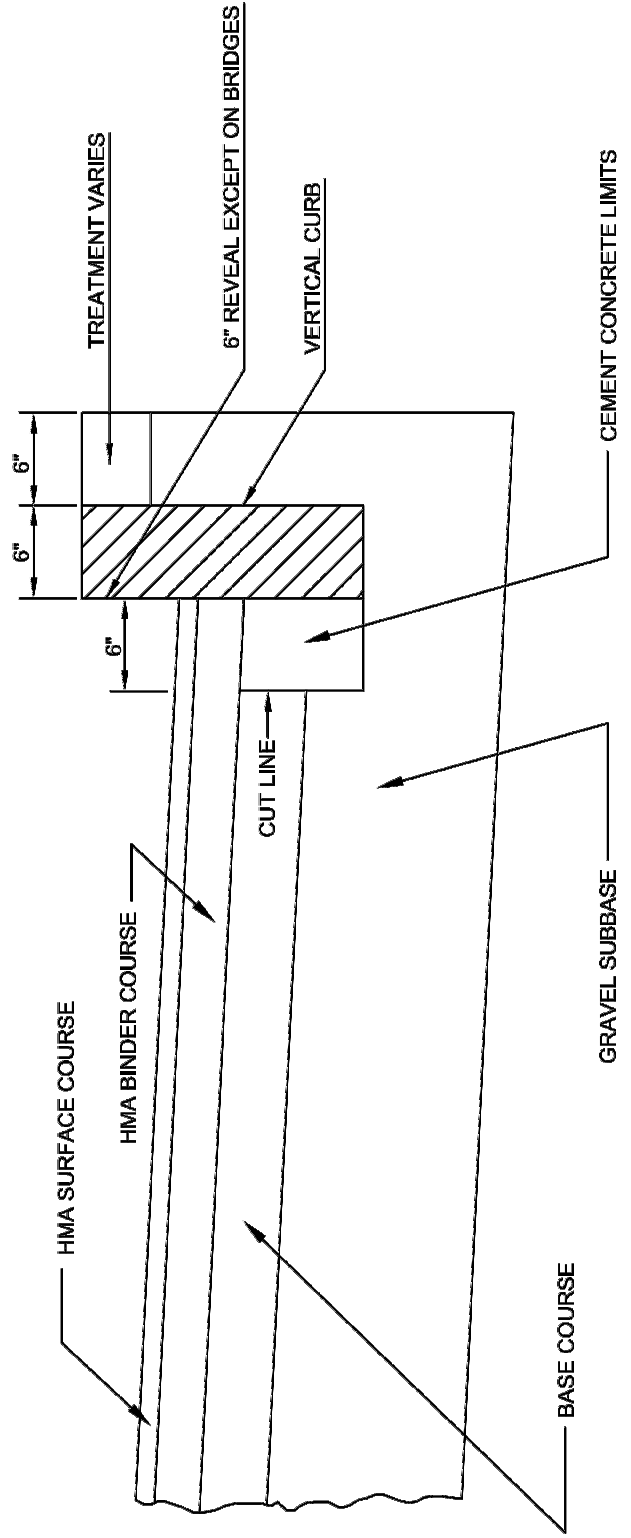
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Project No. ***	Sheet
Date 08/06/2020	C-26
Scale AS NOTED	



METHOD OF SETTING
VERTICAL CURB

DATE OF ISSUE
OCTOBER 2017
DRAWING NUMBER
E 106.3.0

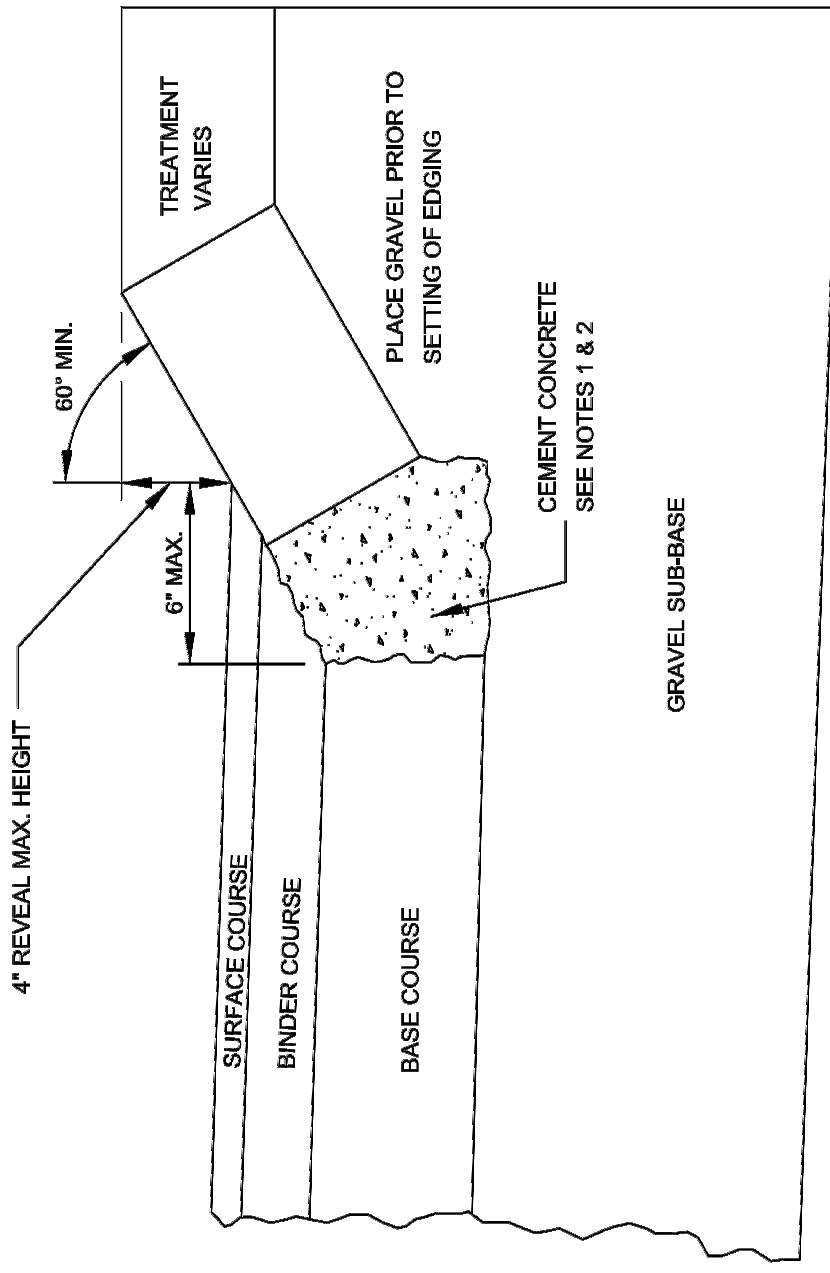


- NOTES:
1. THIS PROCEDURE IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE COURSE IS IN PLACE PRIOR TO BINDER AND TOP PLACEMENT
 2. CUT NEXT LINE 6" FROM CURB LINE AND REMOVE BASE AND GRAVEL. REPLACE WITH CEMENT CONCRETE.
 3. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS SHALL NOT BE USED AS A SUBSTITUTE. IF CEMENT CONCRETE IS NOT AVAILABLE, HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.



METHOD OF SETTING
SLOPED EDGING

DATE OF ISSUE
OCTOBER 2017
DRAWING NUMBER
E 106.5.0

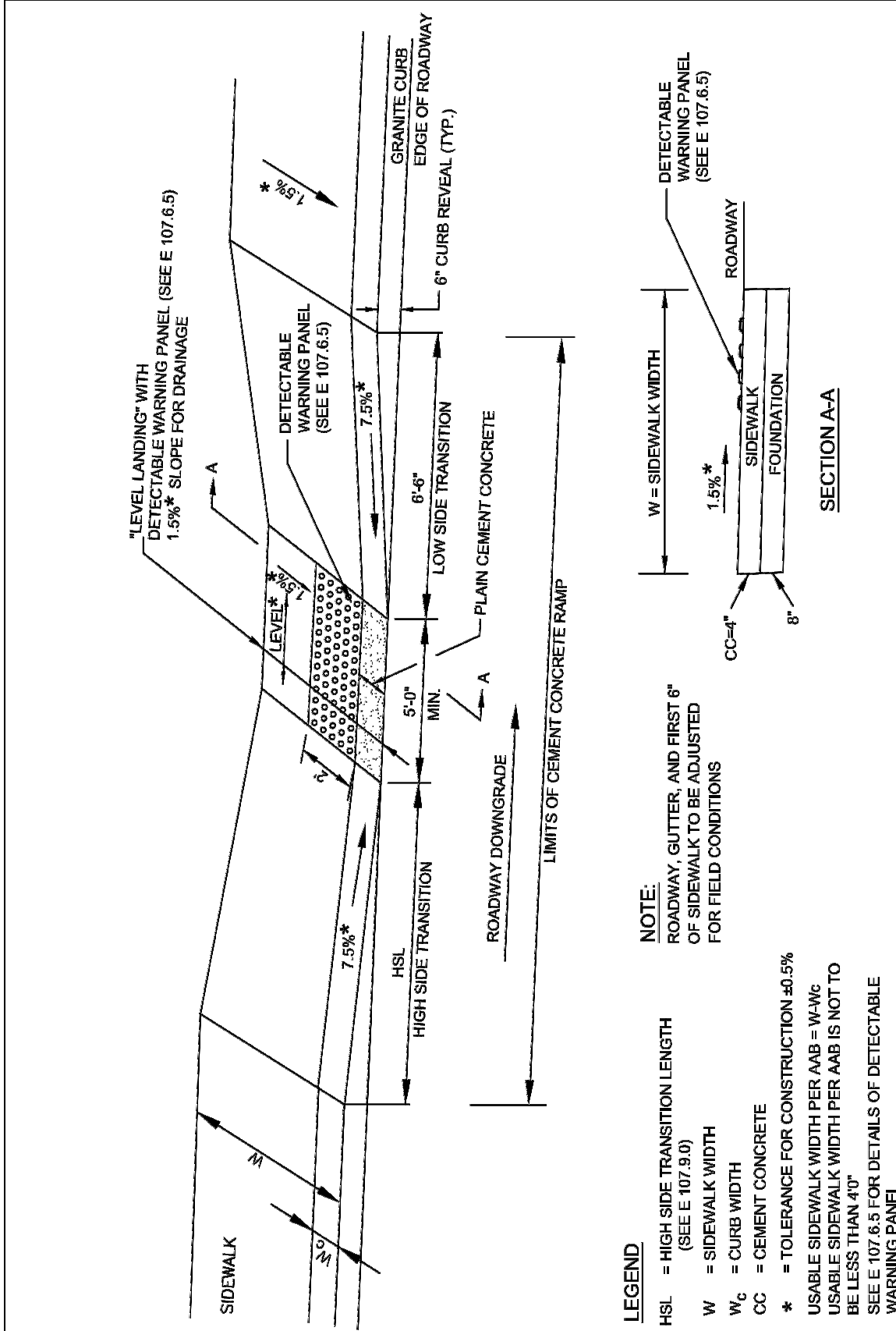


- NOTES:
1. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE TO THE DEPARTMENT UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS, ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.
 2. THE REVEAL IS TO BE A MAXIMUM OF 4" UNDER ALL CONDITIONS. THE ANGLE IS TO BE A MINIMUM OF 60° FROM VERTICAL UNDER ALL CONDITIONS.



WHEELCHAIR RAMP
ON NARROW SIDEWALK
WITH DETECTABLE WARNING PANEL

DATE OF ISSUE
OCTOBER 2017
DRAWING NUMBER
E 107.2.1

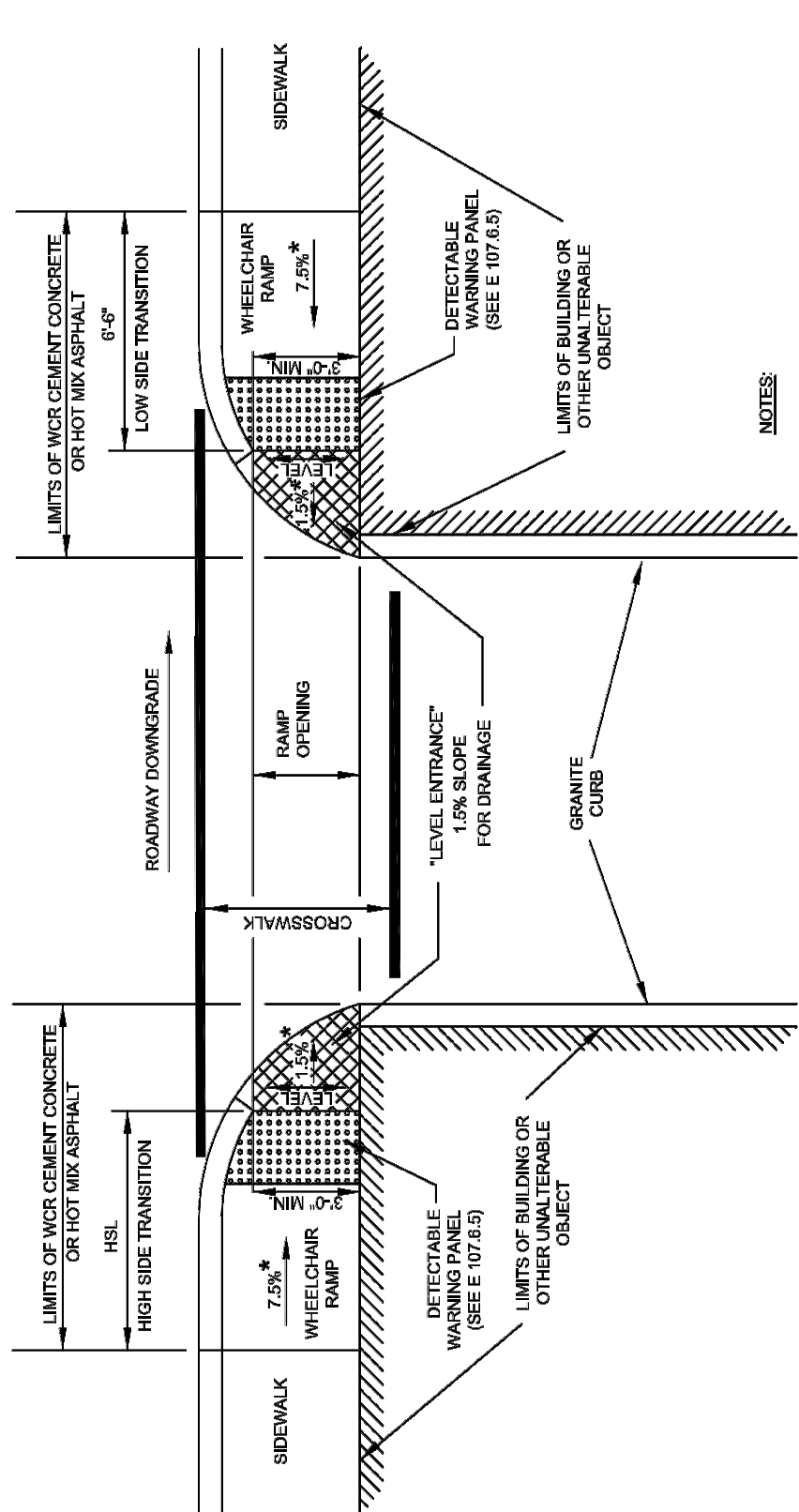


- LEGEND
- HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
 - W = SIDEWALK WIDTH
 - W/C = CEMENT CONCRETE
 - * = TOLERANCE FOR CONSTRUCTION ±0.5%
 - USABLE SIDEWALK WIDTH PER AAS - W-W/C BE LESS THAN 6" FOR DETAILS OF DETECTABLE WARNING PANEL
- NOTE:
- ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS
- SECTION A-A



WHEELCHAIR RAMP FOR ONE
CONTINUOUS DIRECTION OF
PEDESTRIAN TRAVEL

DATE OF ISSUE
OCTOBER 2017
DRAWING NUMBER
E 107.6.0

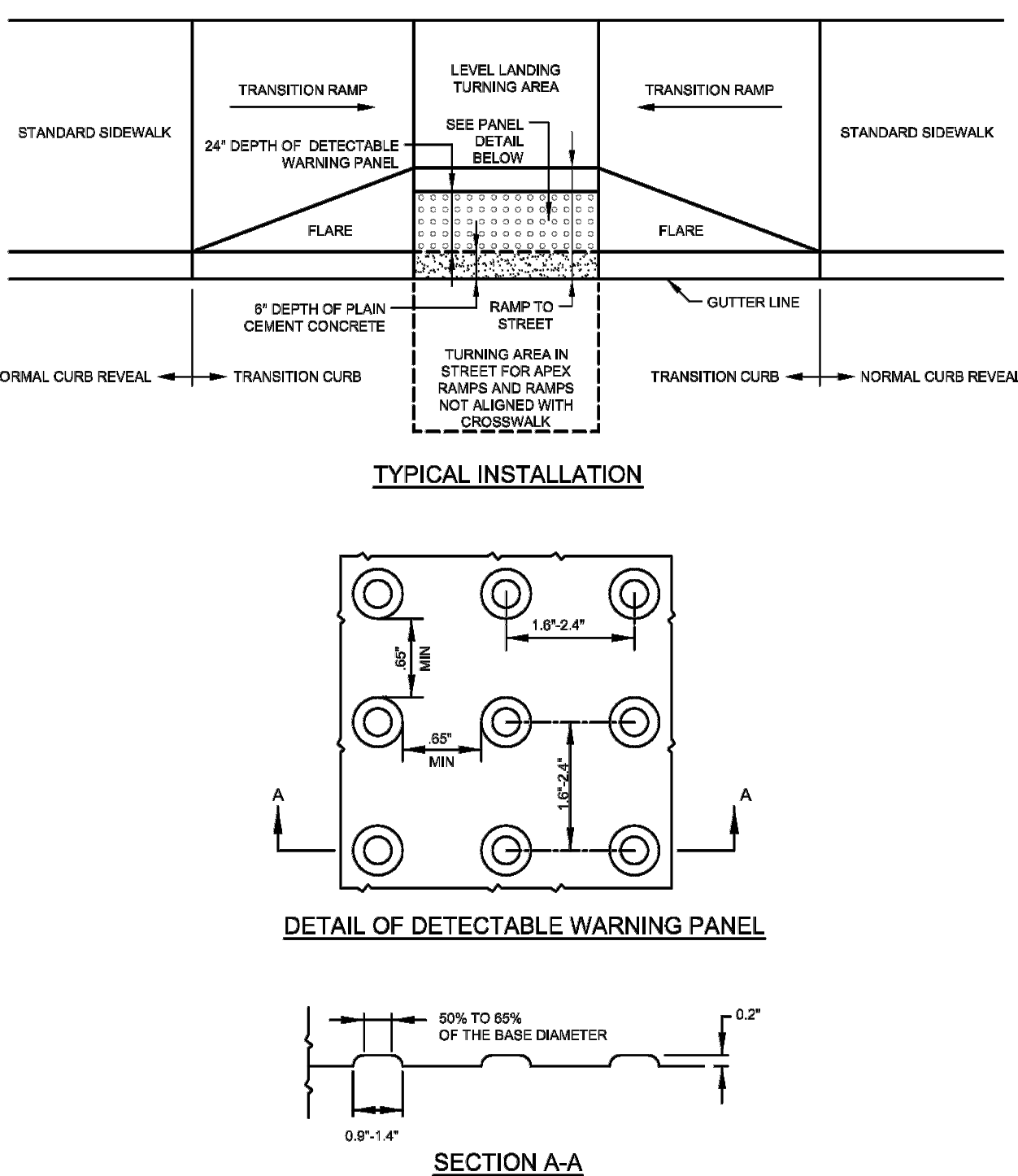


- LEGEND
- HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
 - * = TOLERANCE FOR CONSTRUCTION ±0.5%
- NOTE:
- DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 24" FROM CURB LINE AND NOT MORE THAN 24" FROM CURB LINE. DETECTABLE WARNING PANELS TO BE ADJUSTED WITH DIRECTION OF TRAVEL. FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.
- * = TOLERANCE FOR CONSTRUCTION ±0.5%



DETECTABLE WARNING PANEL
FOR WHEELCHAIR RAMPS AND
STANDARD RAMP TERMINOLOGY

DATE OF ISSUE
OCTOBER 2017
DRAWING NUMBER
E 107.6.5

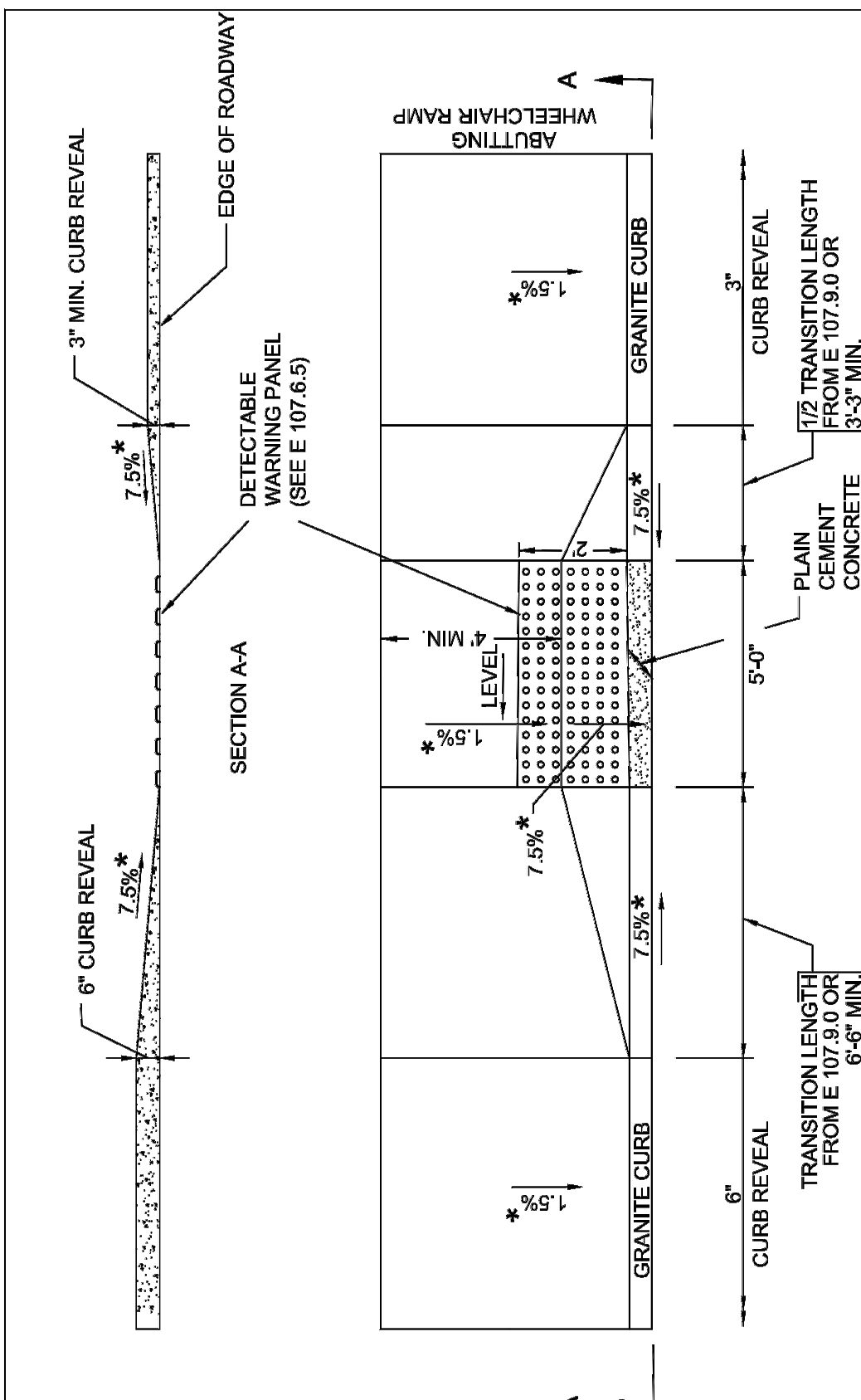


- NOTE:
- PANELS MAY BE CONCRETE, PRECAST OR CAST IN PLACE OR OTHER SUITABLE MATERIAL PERMANENTLY APPLIED TO THE RAMP. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.



WHEELCHAIR RAMP
WITH 3" CURB REVEAL

DATE OF ISSUE
OCTOBER 2017
DRAWING NUMBER
E 107.6.3

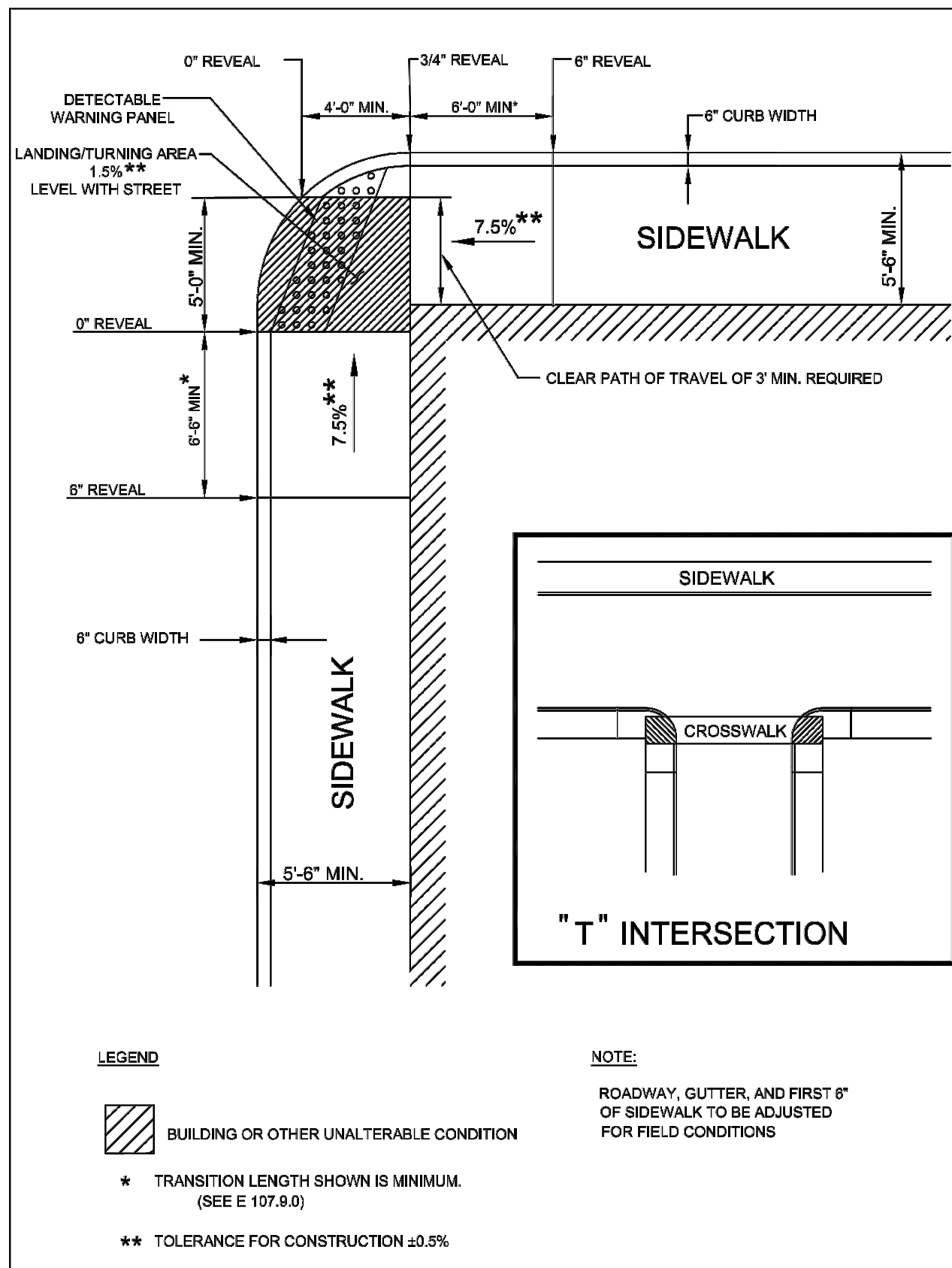


- LEGEND
- HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
 - * = TOLERANCE FOR CONSTRUCTION ±0.5%



"T" INTERSECTION
WHEELCHAIR RAMP

DATE OF ISSUE
OCTOBER 2017
DRAWING NUMBER
E 107.6.4



- LEGEND
- BUILDING OR OTHER UNALTERABLE CONDITION
 - * TRANSITION LENGTH SHOWN IS MINIMUM (SEE E 107.9.0)
 - ** TOLERANCE FOR CONSTRUCTION ±0.5%
- NOTE:
- ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS



CURB TRANSITION LENGTH
FOR WHEELCHAIR RAMPS

DATE OF ISSUE
OCTOBER 2017
DRAWING NUMBER
E 107.9.0

ROADWAY PROFILE GRADE	* HIGH SIDE TRANSITION LENGTH
%	ENGLISH UNITS
=0%	6'-6"
>0% TO 1%	7'-8"
>1% TO 2%	9'-0"
>2% TO 3%	11'-0"
>3% TO 4%	14'-0"
>4% TO 5%	15'-0" Max

- NOTE:
- * BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".

Project Name and Address

SINGLETARY ARMS

MILBURY, MA

Sheet Title

CONSTRUCTION DETAILS

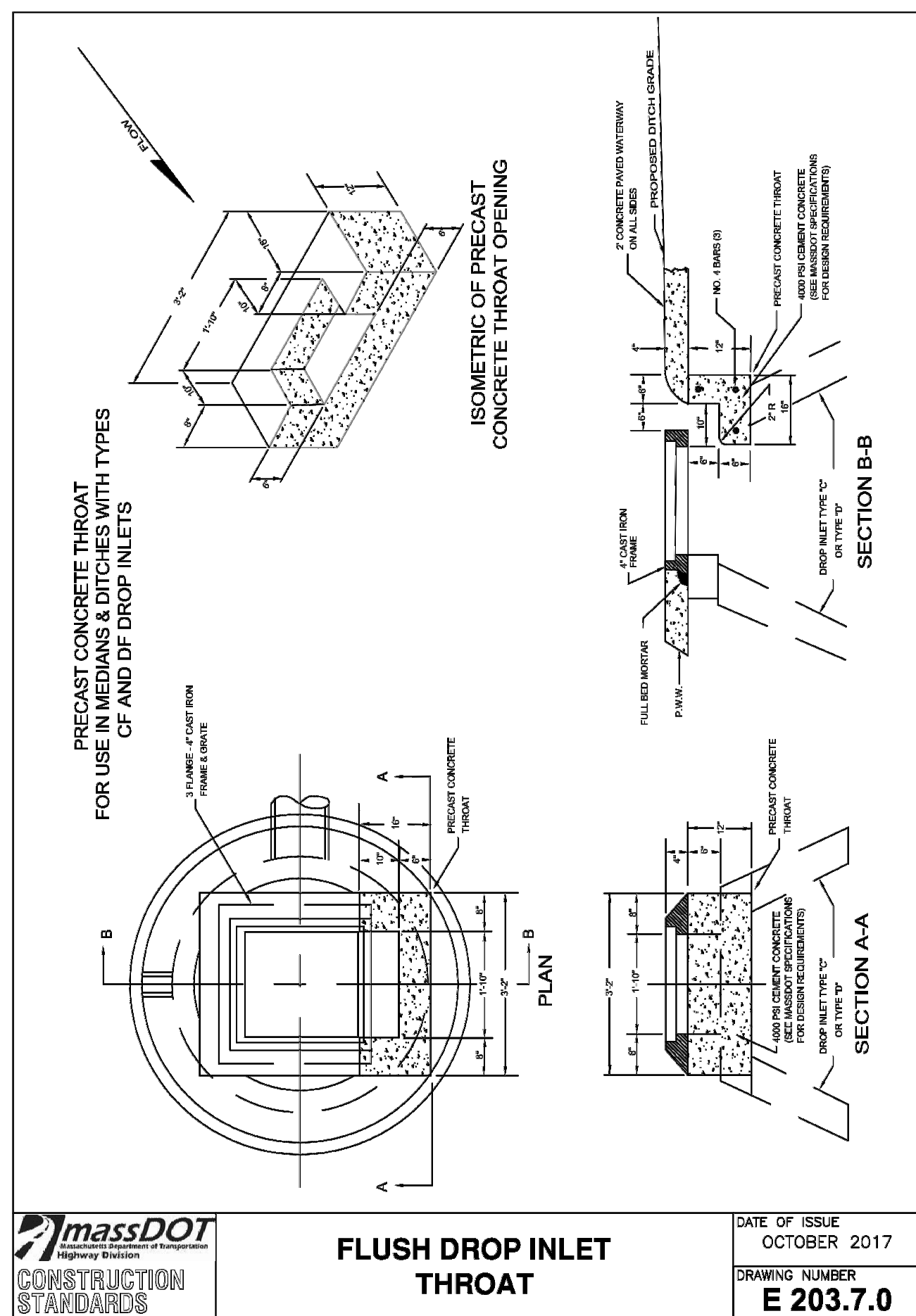
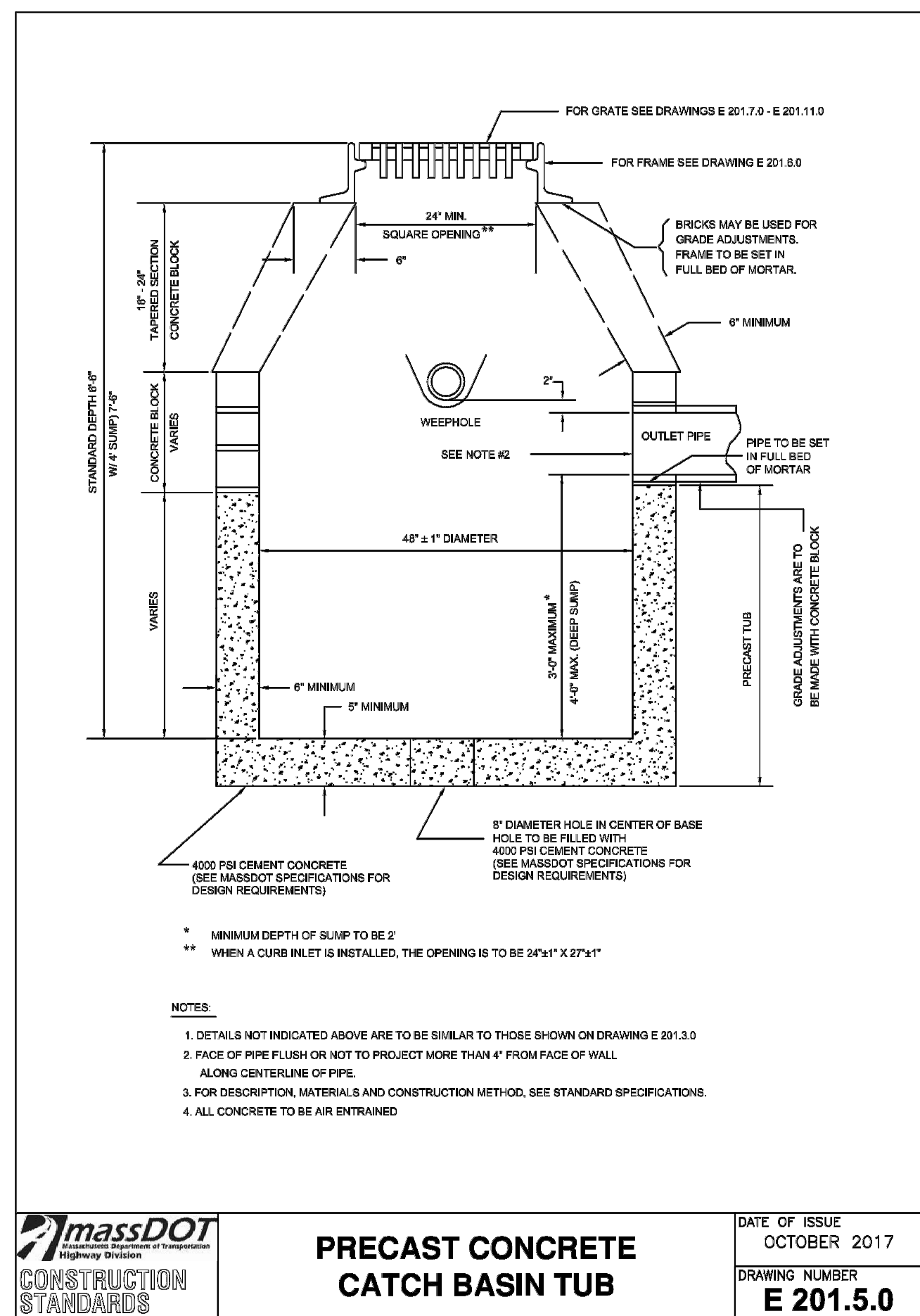
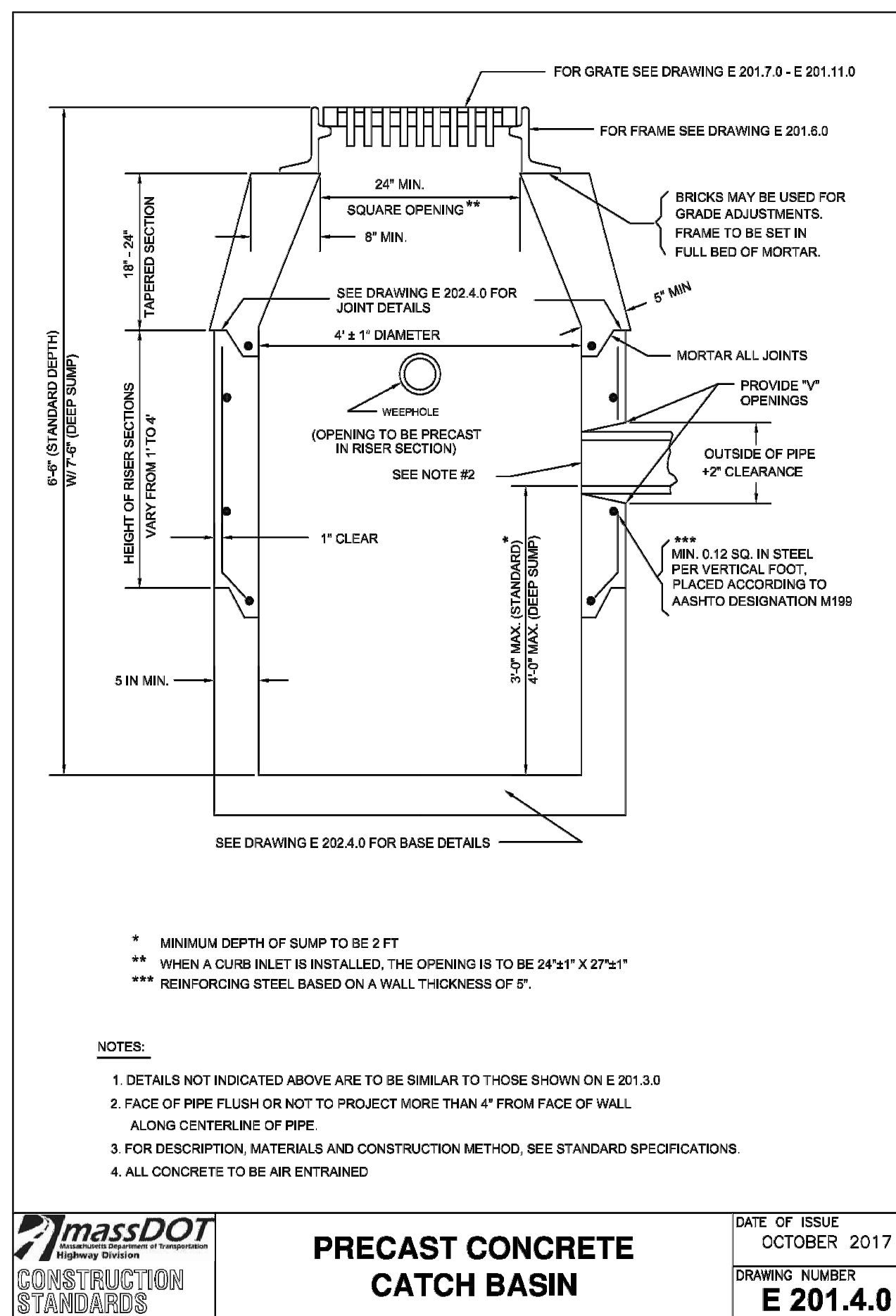
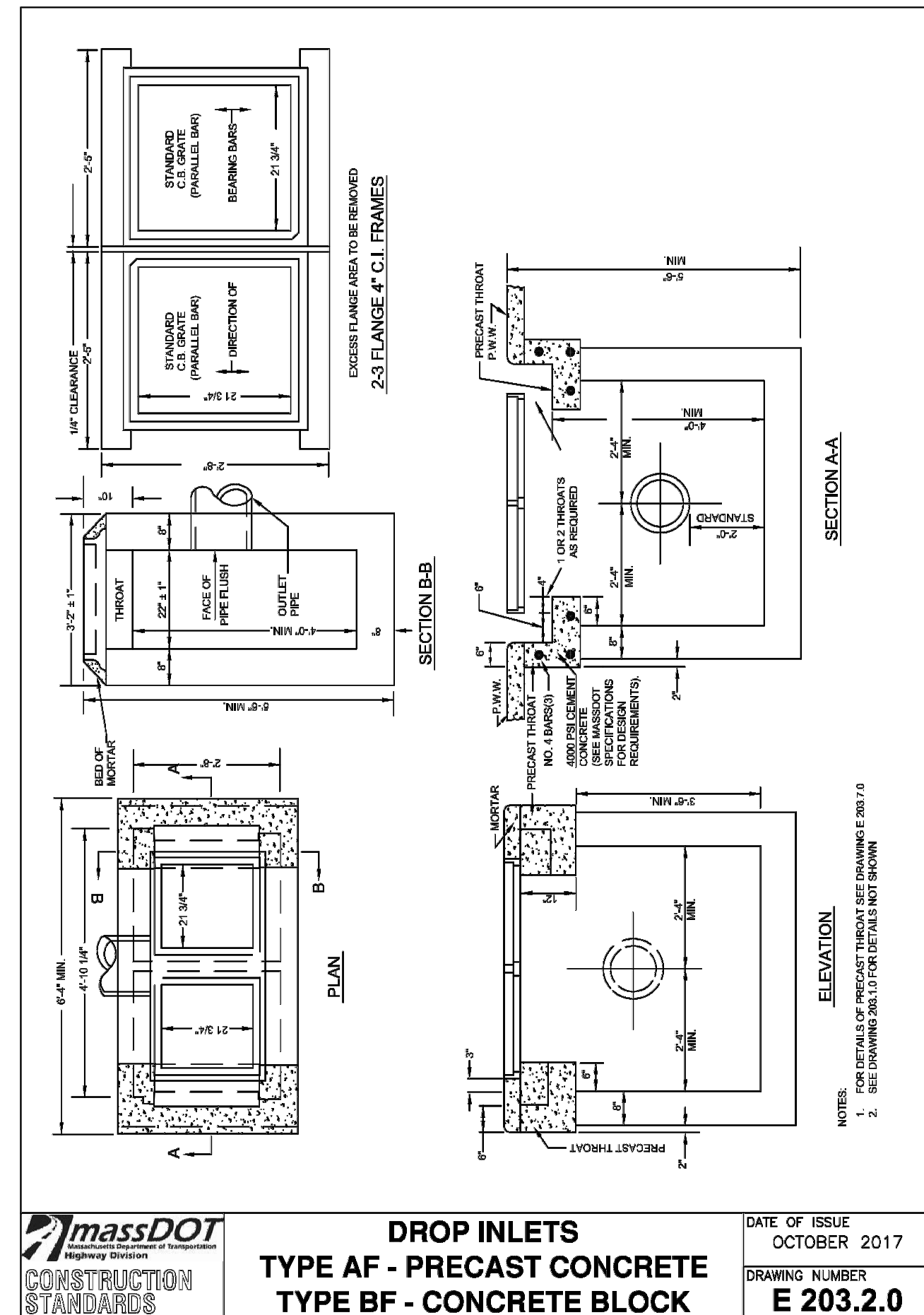
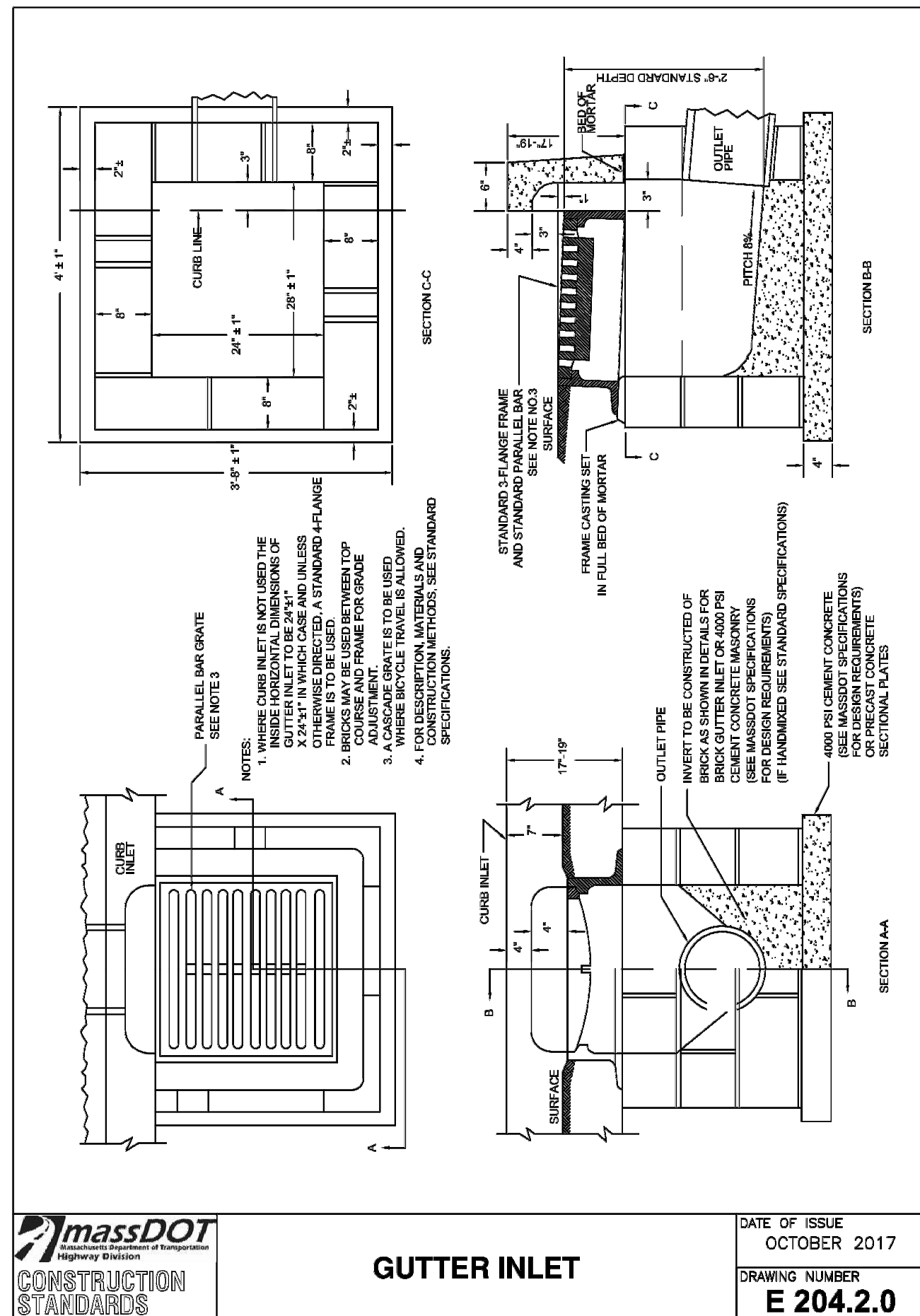
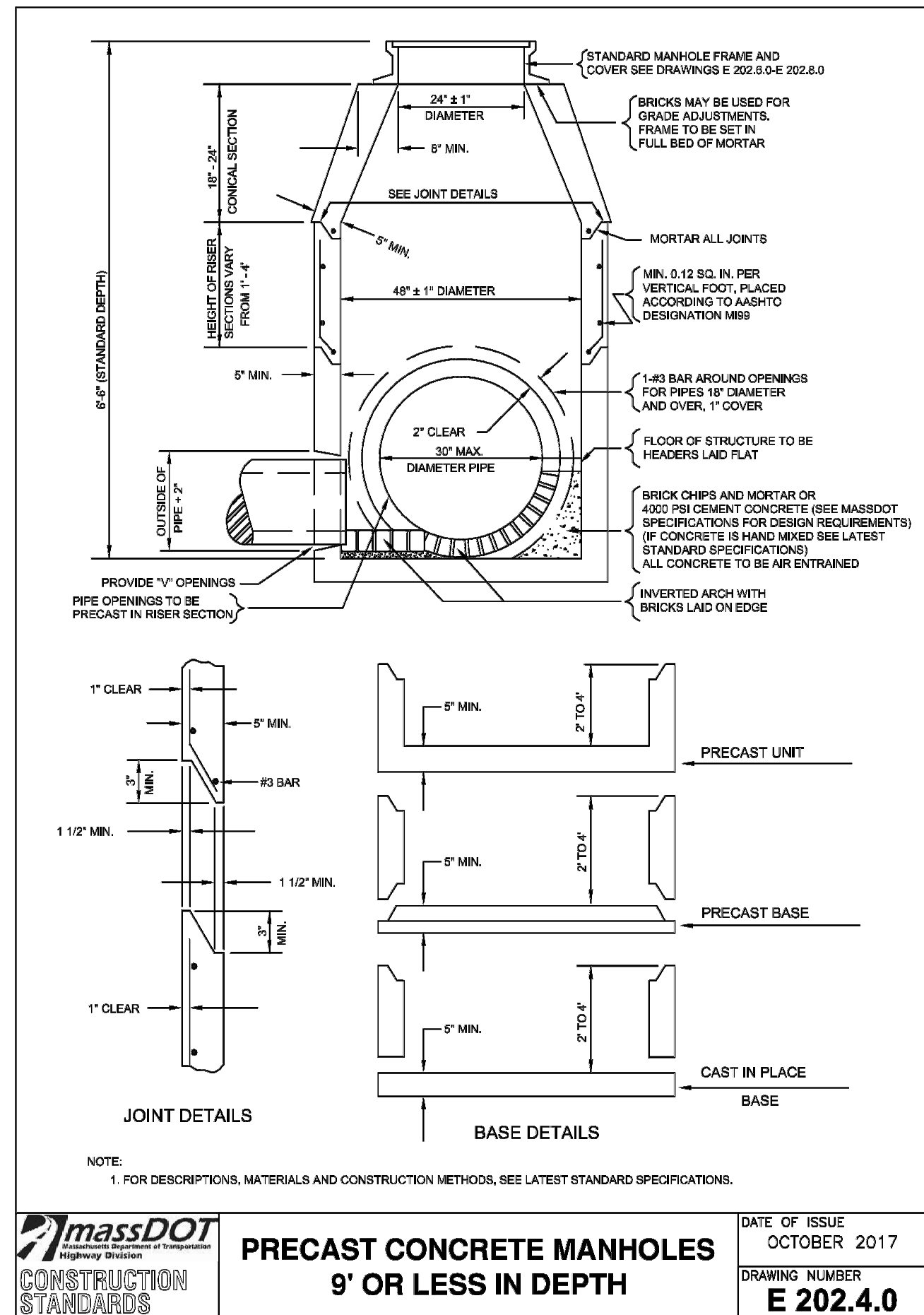
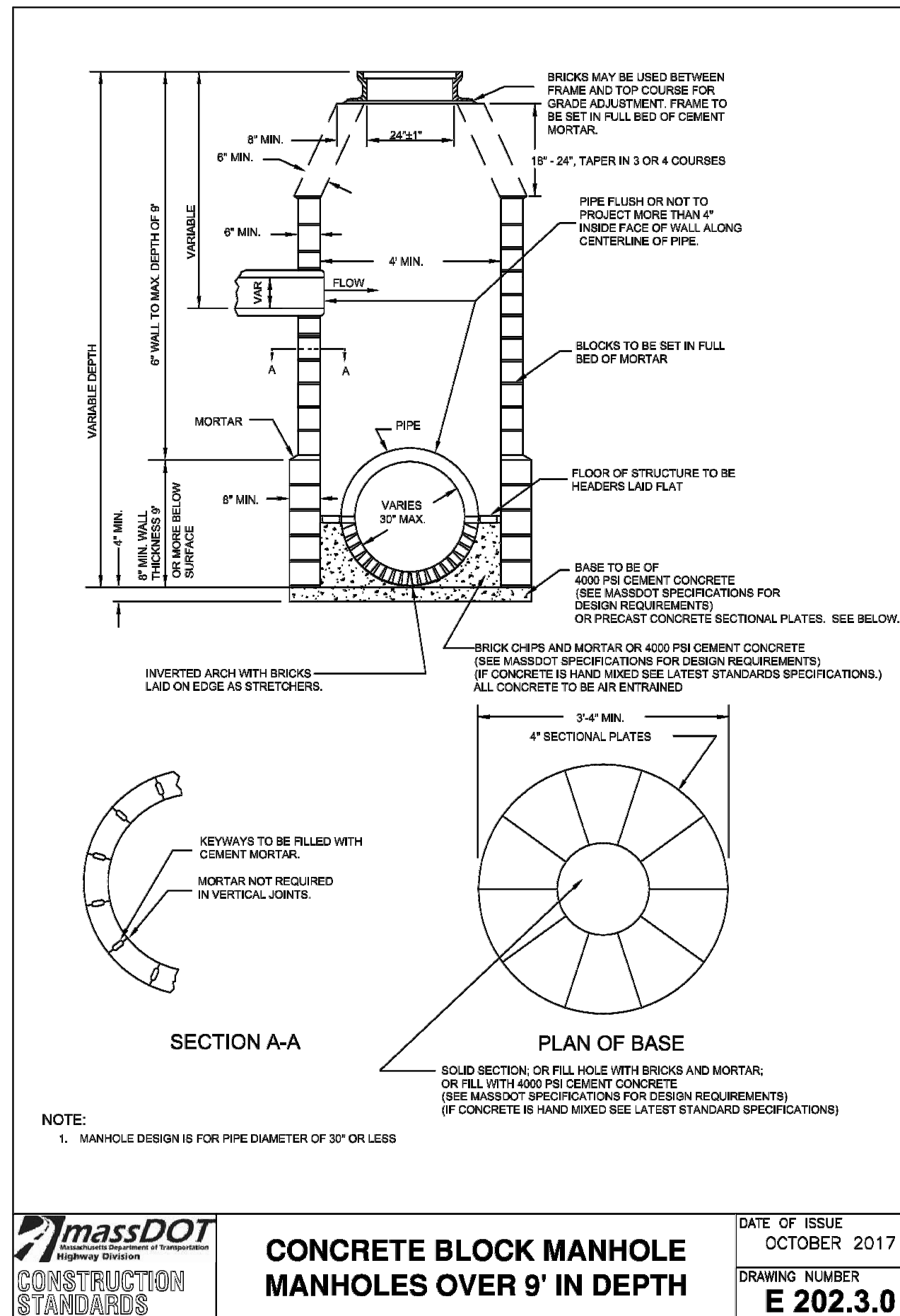


8/22/2020
Date

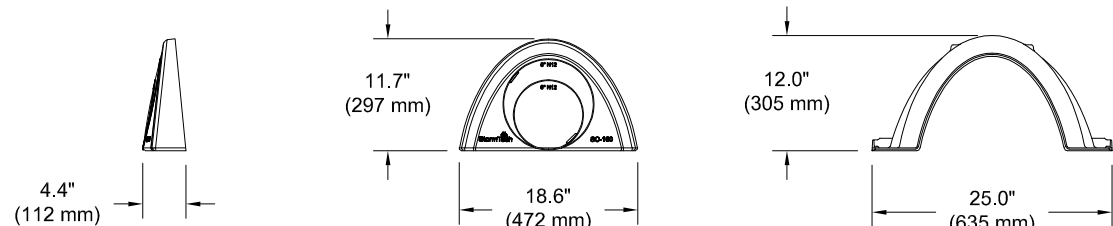
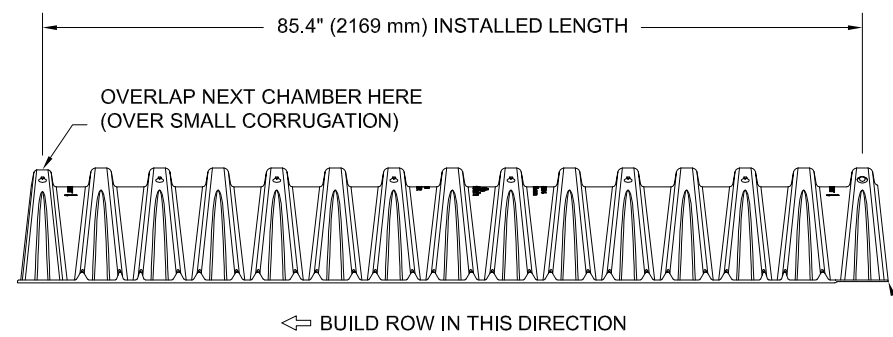
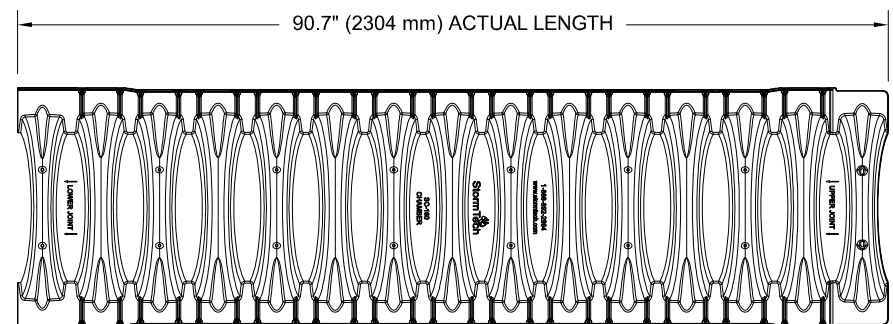
Revision/Issue

Project No.
08/06/2020
Scale
AS NOTED

Sheet
C-27



NTS



NOMINAL CHAMBER SPECIFICATIONS

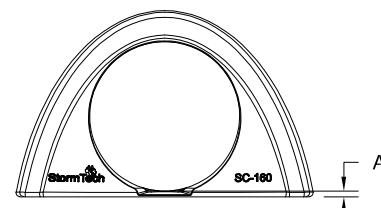
SIZE (W X H X INSTALLED LENGTH)	25.0" X 12.0" X 85.4"	(635 mm X 305 mm X 2169 mm)
CHAMBER STORAGE	6.85 CUBIC FEET	(0.19 m ³)
MINIMUM INSTALLED STORAGE*	16.0 CUBIC FEET	(0.45 m ³)
WEIGHT	24.0 lbs.	(10.9 kg)

*ASSUMES 6" (152 mm) ABOVE, 6" (152 mm) BELOW, AND STONE BETWEEN CHAMBERS WITH 40% STONE POROSITY

PART #	STUB	A
SC160IEPP	6" (150 mm)	0.66" (16 mm)
	8" (200 mm)	0.80" (20 mm)
SC160IEPP08	8" (200 mm)	0.96" (24 mm)

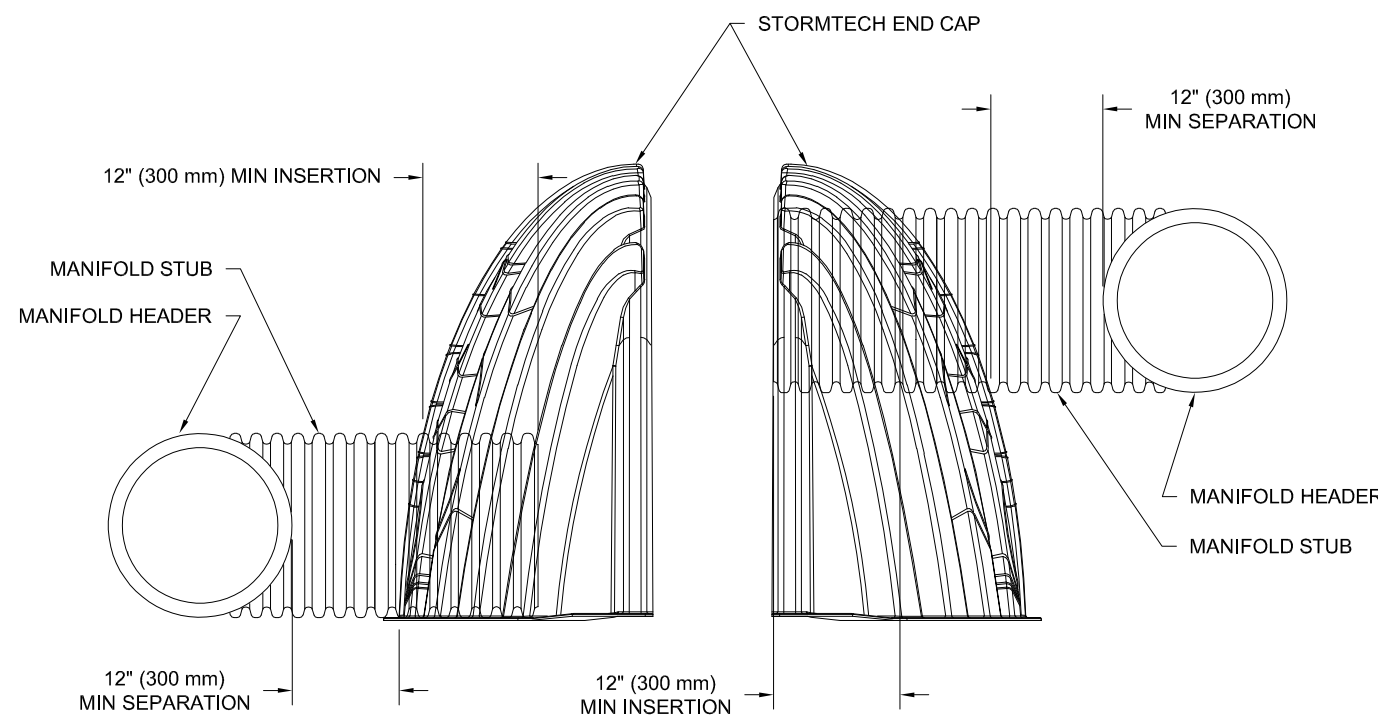
ALL STUBS ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

NOTE: ALL DIMENSIONS ARE NOMINAL



MC-SERIES END CAP INSERTION DETAIL

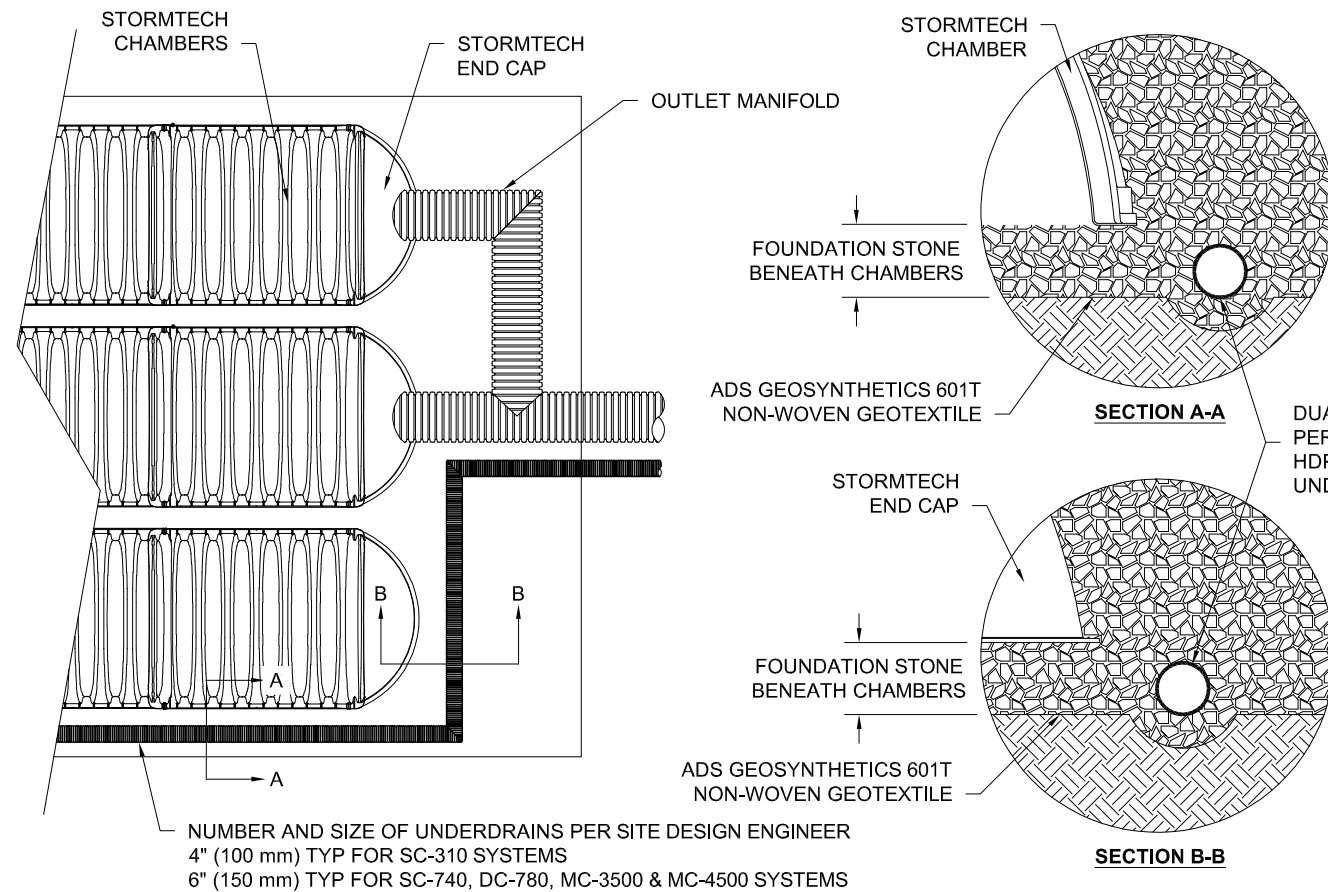
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NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL
FOR A PROPER FIT IN END CAP OPENING.

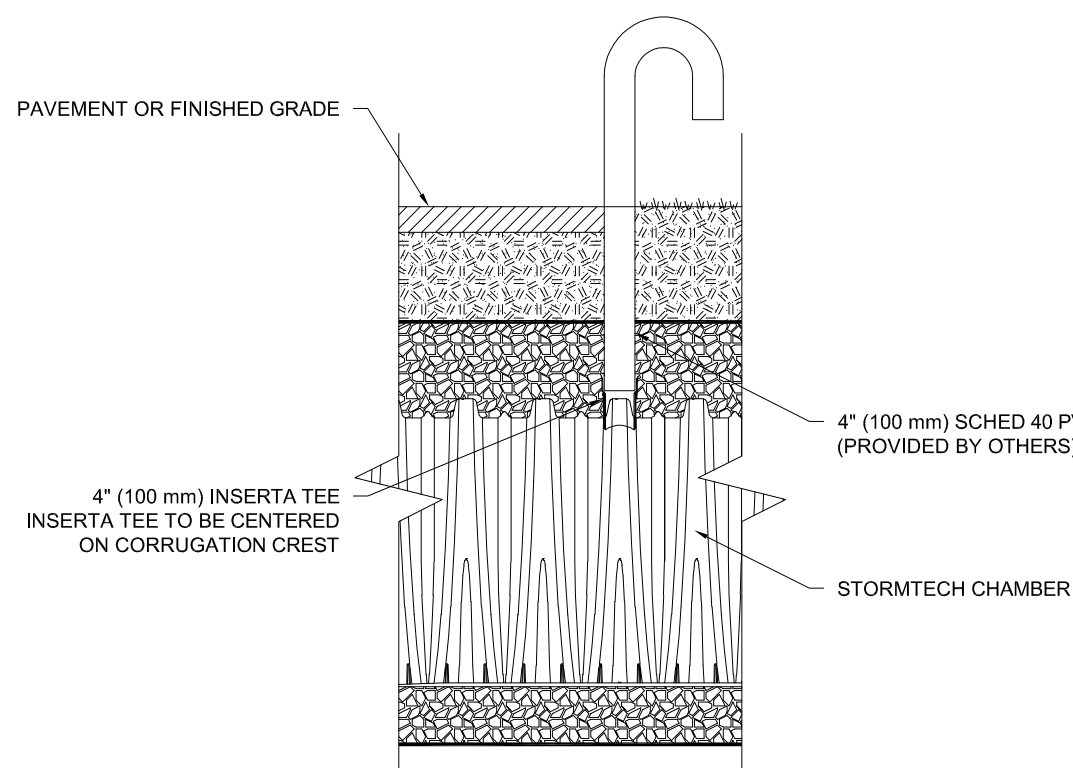
UNDERDRAIN DETAIL

NTS

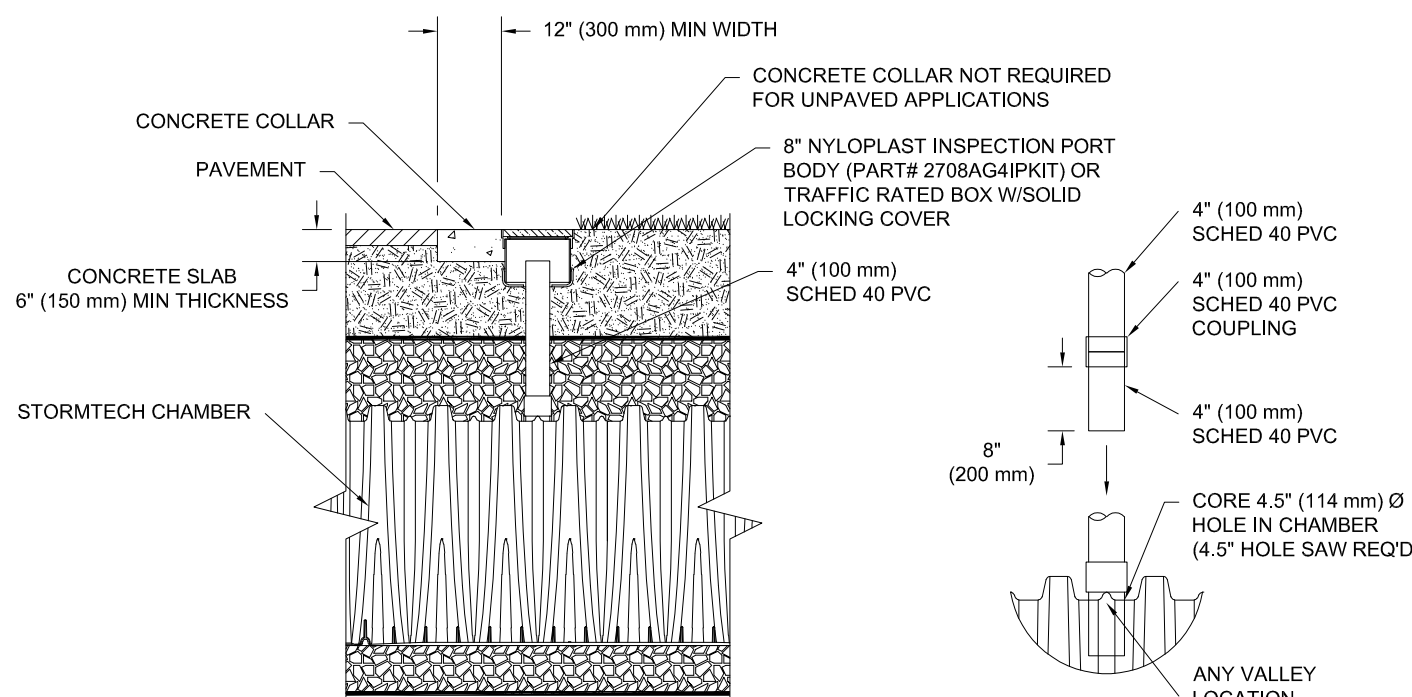


OPTIONAL VENT DETAIL

NT9



- NOTES:
1. VENT MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.
 2. VENT MAY BE ALSO BE CONNECTED THROUGH END CAP OR AS PERFORATED PIPE THROUGH STONE
 3. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.

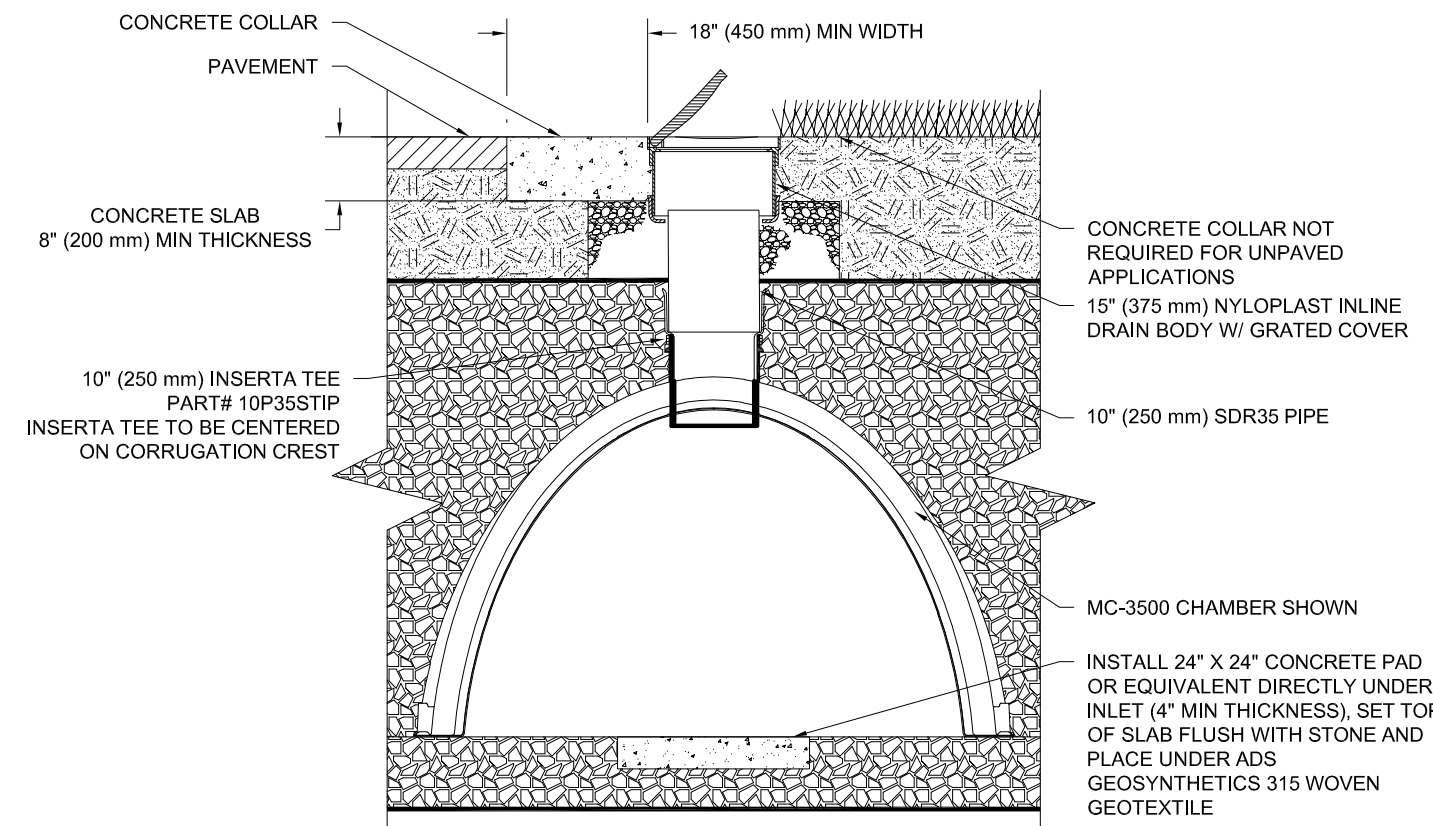


NOTES:

1. INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.
2. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED (4" PVC NOT PROVIDED BY ADS).

4" PVC INSPECTION PORT DETAIL

NT9

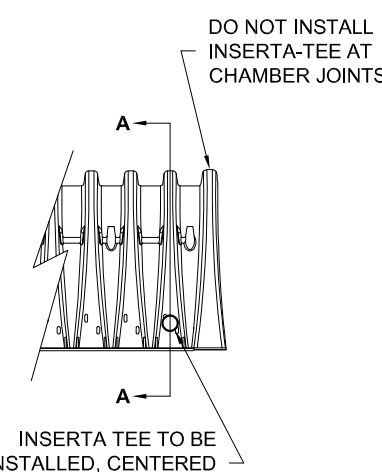
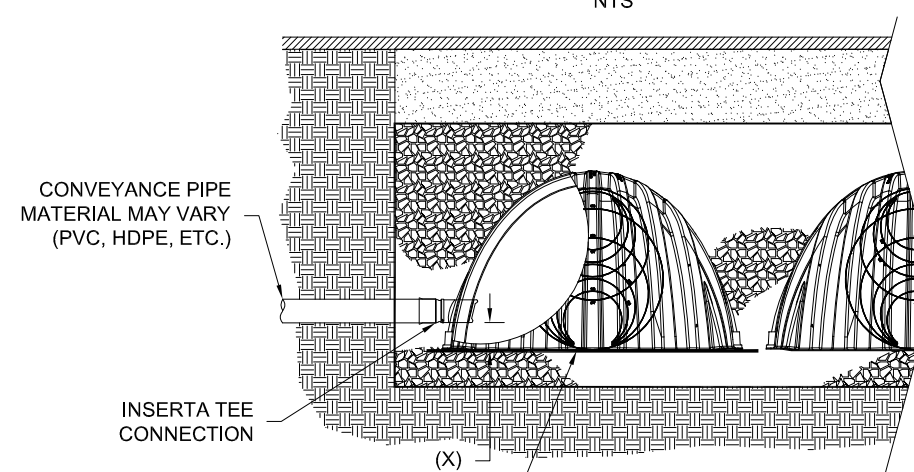


10" (250 mm) INSPECTION PORT INLET DETAIL

NTS

INSERTA TEE DETAIL

NTS



CHAMBER	MAX DIAMETER OF INSERT TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)

INSERT TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

NOTE:
PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS.
CONTACT STORMTECH FOR MORE INFORMATION.

SINGLETARY ARMS

MILLBURY, MA

Sheet Title

DETENTION BASIN DETAILS



8/22/2020

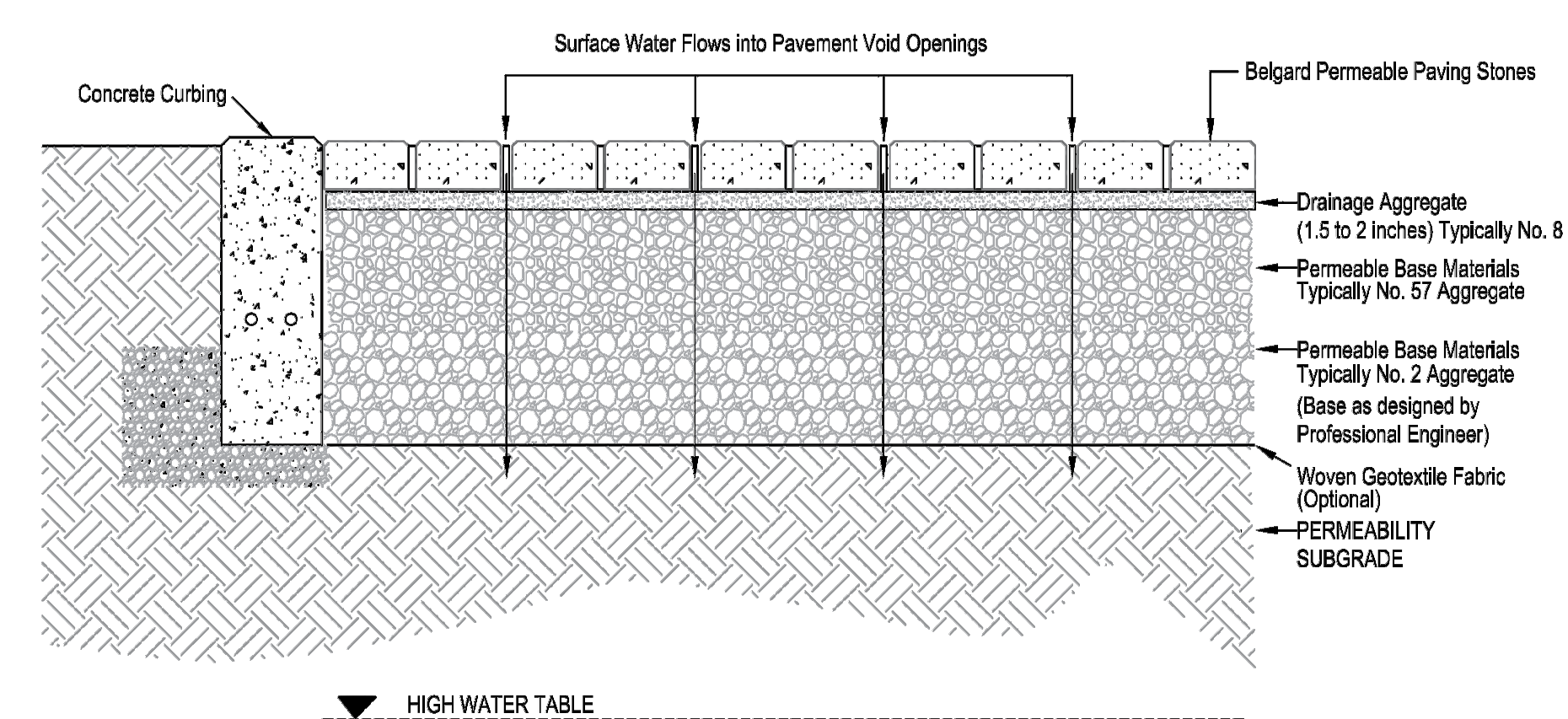
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Project No. ***	Sheet
Date 08/06/2020	C-30
Scale AS NOTED	

PERMEABLE PAVERS

Direct Infiltration Into Permeable Subgrade



This cross section drawing is intended for preliminary design purposes only. The actual structural design and site evaluation should be performed by a qualified Professional Engineer.



PERM01-A

PERMEABLE PAVERS

SINGLETARY ARMS

MILLBURY, MA

PERVIOUS PAVER DETAILS



Date _____

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Sheet
C-31

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT, ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
2. EROSION CONTROL IS THE CONTRACTOR'S RESPONSIBILITY. THIS PLAN SHOULD BE USED AS A GUIDE AND REPRESENTS THE MINIMUM EROSION CONTROL DEVICES REQUIRED.
3. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION & SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
4. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL EROSION & SEDIMENT CONTROL DEVICES AFTER EACH RAINFALL EVENT.
5. THE CONTRACTOR SHALL PROVIDE ANY FURTHER EROSION CONTROL MEASURES IN ADDITION TO THOSE LISTED TO ENSURE THAT SILT WILL NOT LEAVE THE PROJECT CONFINES.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION & SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED WITH A HEALTHY STAND OF PERMANENT VEGETATION.
7. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AT COMPLETION OF CONSTRUCTION.
8. THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, FLUMES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
9. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY STABILIZATION AS REQUIRED.
10. THE CONTRACTOR SHALL PROVIDE A TEMPORARY CONSTRUCTION ENTRANCE FOR VEHICULAR TRAFFIC AT LOCATION SHOWN.
11. ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS AND DESIGN CRITERIA OF THE DEPARTMENT OF PUBLIC WORKS, CITY OF BRANSON WEST, MISSOURI.
12. THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE STREETS OF DEPOSITED MUD AS FREQUENTLY AS NEEDED AS DETERMINED BY THE ENGINEER IN ORDER TO KEEP THEM USABLE AND TO CONTROL DUST.
13. SEE TEMPORARY VEGETATION REQUIREMENT NOTES ON THIS SHEET FOR EXPOSED SOIL WHERE NO ACTIVITY WILL OCCUR FOR MORE THAN 14 DAYS.
14. CONTRACTOR IS RESPONSIBLE FOR PHASED INSTALLATION OF EROSION CONTROL BMP'S IN ORDER TO PREVENT SEDIMENT FROM BREACHING THE LIMITS OF DISTURBANCE.

3. NO WASTE MATERIALS SHALL BE BURIED ON-SITE.
4. MIXING, PUMPING, TRANSFERRING OR OTHERWISE HANDLING CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.
5. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED ONLY IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS.
6. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW DIRECTLY TO STORM SEWERS, STREAMS, DITCHES, LAKES, ETC WITHOUT BEING TREATED. A CONCRETE WASHOUT AREA SHALL BE PROVIDED. SEE DETAIL ON THIS SHEET.
7. ALL PAINT, SOLVENTS, PETROLEUM PRODUCTS AND PETROLEUM WASTE PRODUCTS, AND STORAGE CONTAINERS (SUCH AS DRUMS, CANS, OR CARTONS) SHALL BE STORED ACCORDING TO BMPS. THE MATERIALS EXPOSED TO PRECIPITATION SHALL BE STORED IN WATERTIGHT, STRUCTURALLY SOUND CLOSED CONTAINERS. ALL CONTAINERS SHALL BE INSPECTED FOR LEAKS OR SPILLAGE DURING THE ONCE PER WEEK INSPECTION OF BMPS. IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO SOIL, THE SOIL SHALL BE DUG UP AND PROPERLY DISPOSED OF. SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST, KITTY LITTER OR PRODUCT DESIGNED FOR THAT PURPOSED AND DISPOSED OF AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. THESE MATERIALS WILL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH MoDNR REQUIREMENTS.
8. STATE LAW REQUIRES THE PARTY RESPONSIBLE FOR A PETROLEUM PRODUCT SPILL IN EXCESS OF 50 GALLONS TO REPORT THE SPILL TO MASDEQ AS SOON AS PRACTICAL AFTER DISCOVERY. FEDERAL LAW REQUIRES THE RESPONSIBLE PARTY TO REPORT ANY RELEASE OF OIL IF IT REACHES OR THREATENS A SEWER, LAKE, CREEK, STREAM, RIVER, GROUNDWATER, WETLAND, OR AREA, LIKE A ROAD DITCH, THAT DRAINS INTO ONE OF THE ABOVE.
9. SUFFICIENT TEMPORARY TOILET FACILITIES TO SERVE THE NUMBER OF WORKERS ON THE SITE SHALL BE PROVIDED. THE FACILITIES SHALL BE SERVICED FREQUENTLY TO MAINTAIN A SANITARY CONDITIONS.

PERMANENT SEEDING - MARCH 1 TO JUNE 1 AND AUGUST 15 TO NOVEMBER 1
TEMPORARY SEEDING - CAN OCCUR DURING ANY SEASON, HOWEVER WINTER IS THE LEAST TOLERANT.
DORMANT SEASON SEEDING - DECEMBER 15 TO FEBRUARY 29

Project Name and Address

SINGLETARY ARMS

MILLBURY, MA

Sheet Title

SEDIMENT CONTROL DETAILS

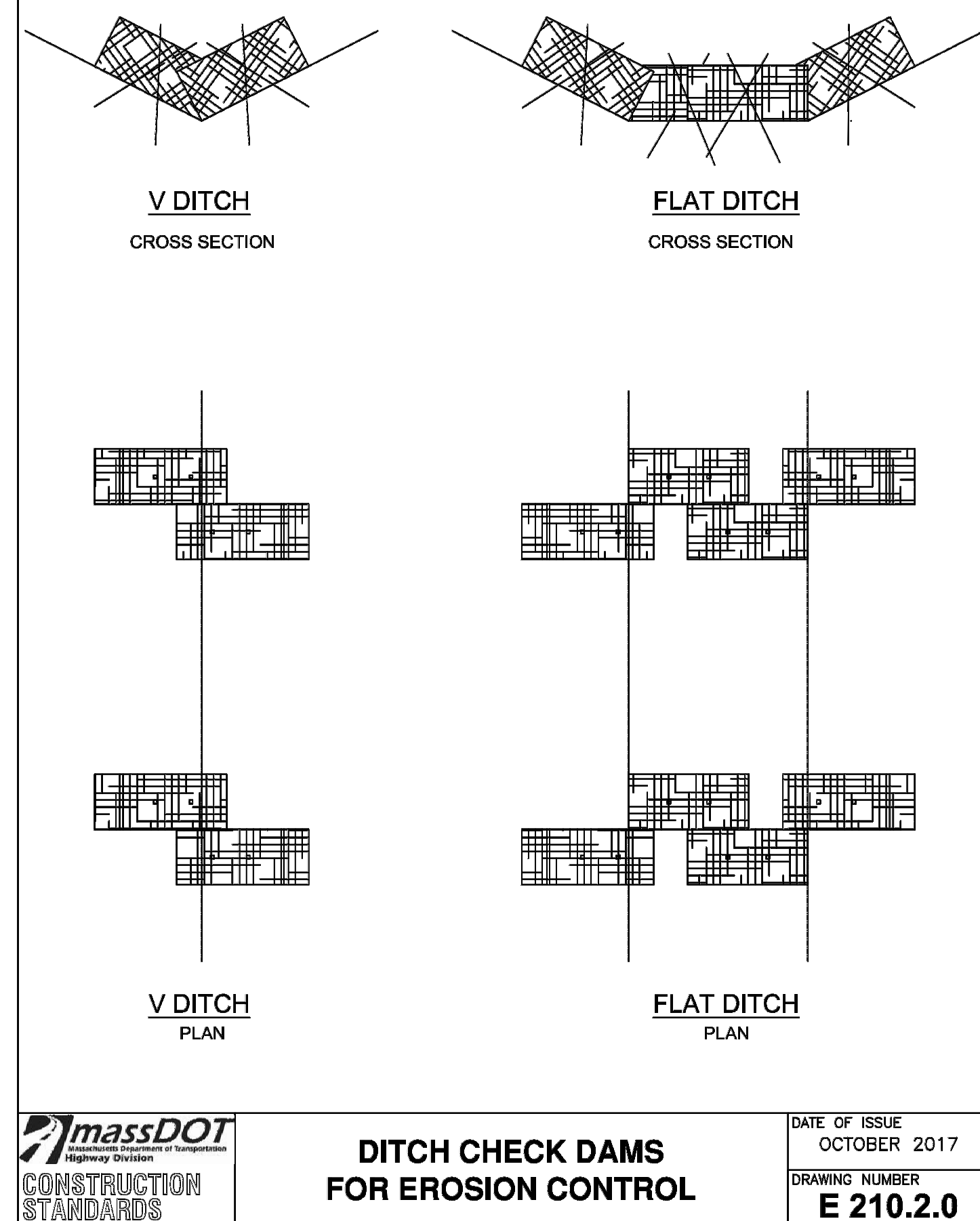


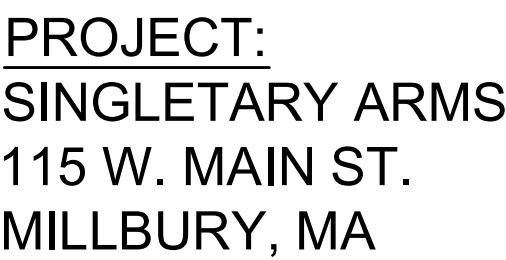
8/22/2020

Date _____

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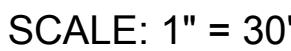
Project No. ***	Sheet
Date 08/06/2020	C-32
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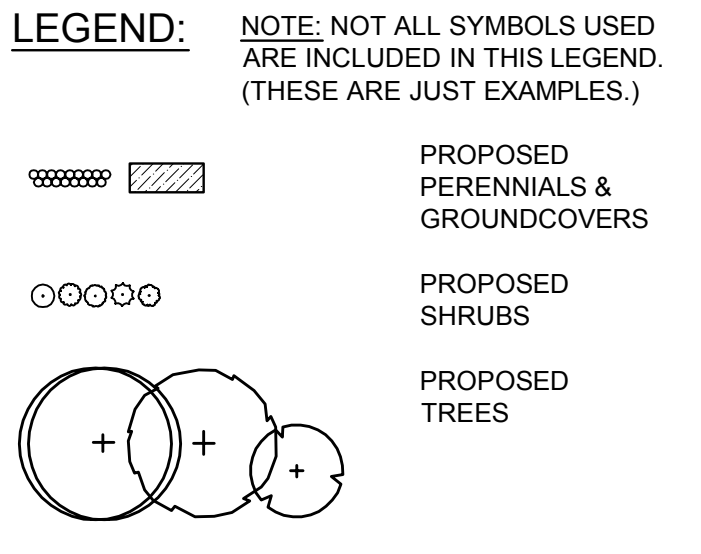


DATE: 7-15-2020

REVISIONS:		
NO.	DATE	DESCRIPTION



SHEET L-1

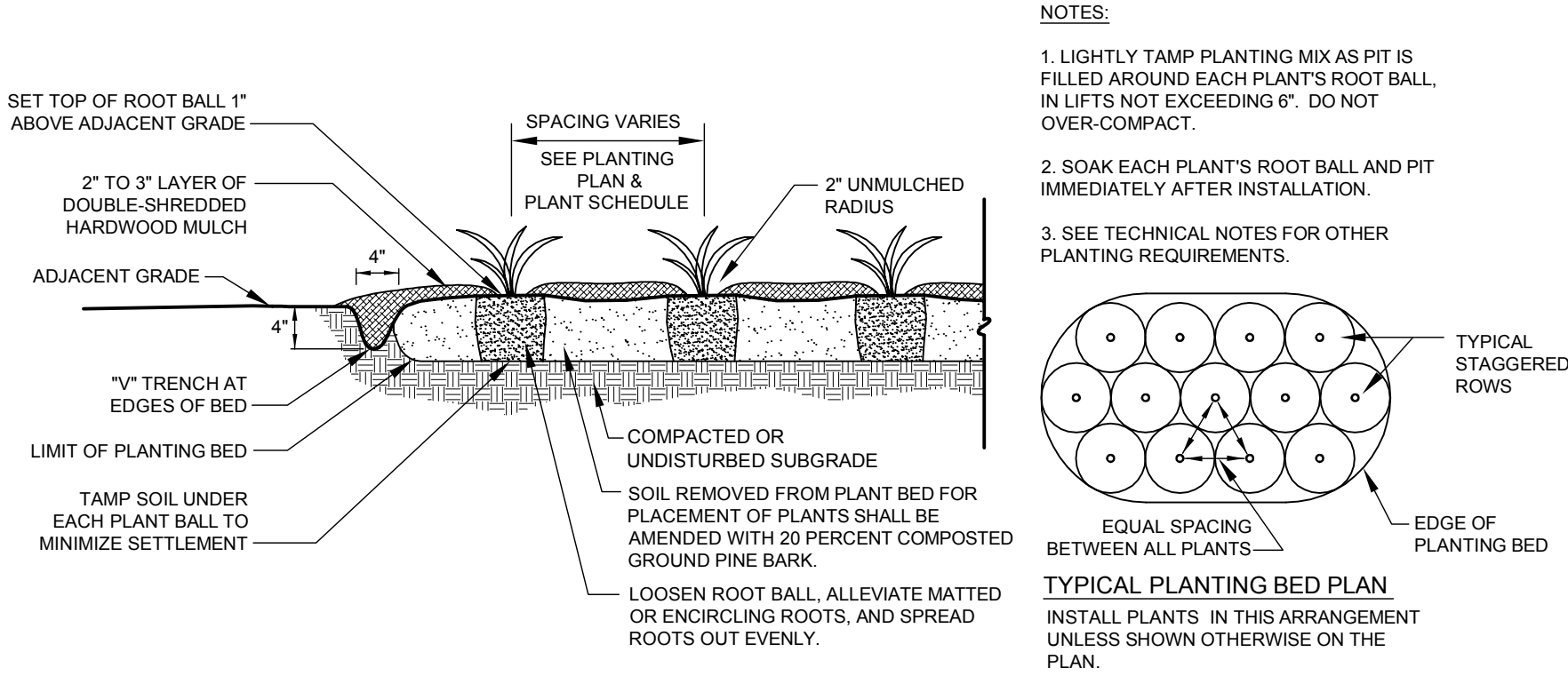


NOTES:

- 1) PLANT SPECIES, CULTIVARS, AND LOCATIONS SHALL NOT BE CHANGED EXCEPT BY PERMISSION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL CHECK PLANT MATERIAL FROM NURSERIES BEFORE ACCEPTING PLANTS, TO MAKE SURE THERE ARE NO UNAUTHORIZED SUBSTITUTIONS. ALTERNATE CULTIVARS OF THE SAME SPECIES SHALL NOT BE SUBSTITUTED WITHOUT LANDSCAPE ARCHITECT'S APPROVAL.
- 2) SEE SHEET L-2 FOR PLANT SCHEDULE AND DETAILS.
- 3) SEE SHEET L-3 FOR TECHNICAL NOTES.
- 4) ALL AREAS TO RECEIVE SEED AND PLANTINGS SHALL FIRST RECEIVE 6" OF LOAM AS SPECIFIED ON SHEET L-3.
- 5) ALL NON-PAVED AREAS SHALL BE SEEDDED WITH LAWN SEED, EXCEPT PLANT BED AREAS.
- 6) SEE SHEET L-4 FOR PAVEMENT DETAILS.

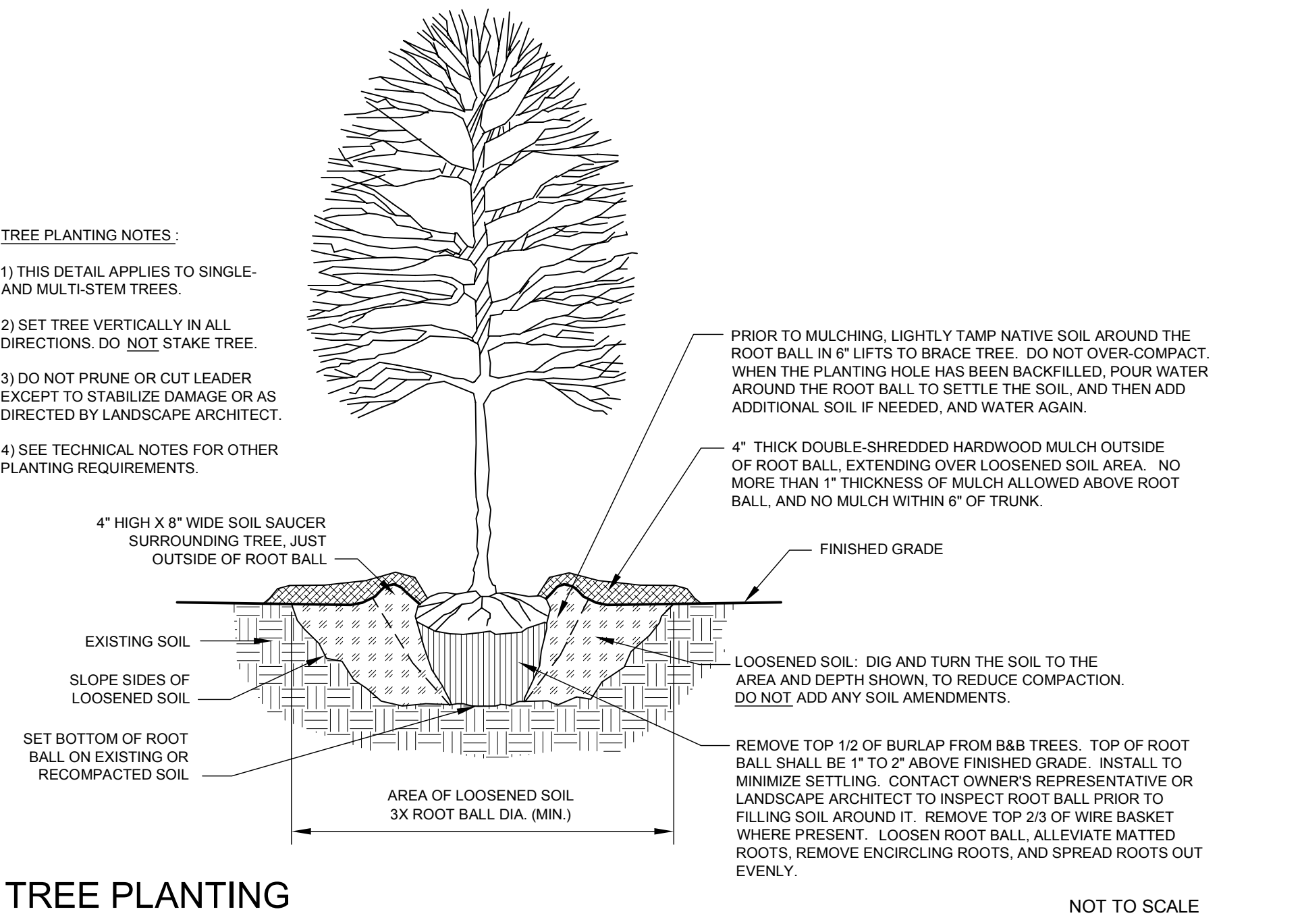
PLANT SCHEDULE					
SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE AT PLANTING	PLANT SPACING & NOTES
SHADE TREES:					
GTS		8 GLEDITZIA TRIACANTHOS VAR. INERMIS 'SKYLINE'	SKYLINE HONEYSUCKLE	2.5" CALIPER	B&B, PLANT 25' ON CENTER
LSH		2 LIQUIDAMBAR STYRACIFLUA 'HAPPIDAZE'	HAPPIDAZE SWEETGUM	2.5" CALIPER	B&B, PLANT 25' ON CENTER
LTE		4 LIRIODENDRON TULIPIFERA 'EMERALD CITY'	EMERALD CITY TULIP POPLAR	2.5" CALIPER	B&B, PLANT 25' ON CENTER
QRU		10 QUERCUS RUBRA	RED OAK	2.5" CALIPER	B&B, PLANT 25' ON CENTER
SRI		7 SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE LILAC	2.5" CALIPER	B&B, PLANT 20' ON CENTER
ZSG		9 ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	2.5" CALIPER	B&B, PLANT 25' ON CENTER
ORNAMENTAL AND EVERGREEN TREES:					
AGA		6 AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	8' HEIGHT	B&B, MULTI-STEM, PLANT 12' ON CENTER
APD		8 AMELANCHIER X GRANDIFLORA 'PRINCESS DIANA'	PRINCESS DIANA SERVICEBERRY	8' HEIGHT	B&B, MULTI-STEM, PLANT 15' ON CENTER
MST		3 MAGNOLIA STELLATA	STAR MAGNOLIA	8' HEIGHT	B&B, PLANT 15' ON CENTER
PGL		7 PICEA GLAUCA	WHITE SPRUCE	8' HEIGHT	B&B, PLANT 15' ON CENTER
PSA		3 PRUNUS SARGENTII 'COLUMNARIS'	COLUMNAR SARGENT CHERRY	8' HEIGHT	B&B, PLANT 15' ON CENTER
SHRUBS:					
AAB		19 ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	BRILLIANT ARONIA	# 3 POT	PLANT 4' ON CENTER
ALS		12 ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND ARONIA	# 3 POT	PLANT 3' ON CENTER
AME		22 ARONIA MELANOCARPA (STRAIGHT SPECIES)	BLACK ARONIA	# 3 POT	PLANT 5' ON CENTER
CAM		11 CEANOTHUS AMERICANUS	NEW JERSEY TEA	# 3 POT	PLANT 3' ON CENTER
CLH		16 CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	# 3 POT	PLANT 4' ON CENTER
CNF		10 CLETHRA ALNIFOLIA (STRAIGHT SPECIES)	SUMMERSWEET	# 3 POT	PLANT 5' ON CENTER
CPR		33 COMPTONIA PEREGRINA	SWEETFERN	# 3 POT	PLANT 3' ON CENTER
DKO		9 DIERVILLA X 'KODIAK ORANGE'	KODIAK ORANGE BUSH HONEYSUCKLE	# 3 POT	PLANT 4' ON CENTER
FGA		11 FOTHERGILLA GARDENII	DWARF FOTHERGILLA	# 3 POT	PLANT 3' ON CENTER
HFS		37 HYPERICUM FRONDOSUM 'SUNBURST'	SUNBURST ST. JOHN'S WORT	# 3 POT	PLANT 3' ON CENTER
IGB		79 ILEX GLABRA 'GEM BOX'	GEM BOX INKBERRY	# 3 POT	PLANT 3' ON CENTER. DO NOT SUBSTITUTE LARGER CULTIVAR FOR THIS PLANT.
ILG		20 ILEX GLABRA (STRAIGHT SPECIES)	INKBERRY	# 3 POT	PLANT 5' ON CENTER
ISH		64 ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	# 3 POT	PLANT 4' ON CENTER
ITO		8 ILEX CRENATA 'SOFT TOUCH'	SOFT TOUCH HOLLY	# 3 POT	PLANT 3' ON CENTER. DO NOT SUBSTITUTE LARGER CULTIVAR FOR THIS PLANT.
JCO		25 JUNIPERUS CHINENSIS 'OLD GOLD'	OLD GOLD JUNIPER	# 3 POT	PLANT 4' ON CENTER
JVI		24 JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	8' HEIGHT	PLANT 8' ON CENTER
MPE		20 MYRICA PENSYLVANICA	NORTHERN BAYBERRY	# 3 POT	PLANT 5' ON CENTER
PDI		12 PHYSOCARPUS OPULIFOLIUS 'DIABOLO'	DIABOLO NINEBARK	5' HEIGHT	PLANT 8' ON CENTER
PSU		20 PHYSOCARPUS OPULIFOLIUS 'SUMMER WINE'	SUMMER WINE NINEBARK	# 3 POT	PLANT 5' ON CENTER
PTW		8 PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK	# 3 POT	PLANT 3.5' ON CENTER. DO NOT SUBSTITUTE LARGER CULTIVAR FOR THIS PLANT.
RVG		27 ROSA VIRGINIANA	VIRGINIA ROSE	# 3 POT	PLANT 4' ON CENTER
THM		7 THUJA OCCIDENTALIS 'HETZ MIDGET'	HETZ MIDGET ARBORVITAE	# 3 POT	PLANT 4' ON CENTER. DO NOT SUBSTITUTE LARGER CULTIVAR FOR THIS PLANT.
TON		22 THUJA OCCIDENTALIS 'NIGRA'	DARK AMERICAN ARBOVITAE	8' HEIGHT	PLANT 8' ON CENTER
GROUNDCOVERS & PERENNIALS					
AGH		196 ARONIA MELANOCARPA 'GROUNDHOG'	GROUNDHOG ARONIA	# 2 POT	PLANT 30" ON CENTER
ATU		86 ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	# 1 POT	PLANT 12" ON CENTER
CKF		158 CALAMAGROSTIS X ACUTIFOLIA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	# 2 POT	PLANT 2' ON CENTER
HHR		95 HEMEROCALLIS X 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	# 1 POT	PLANT 18" ON CENTER
JHW		323 JUNIPERUS HORIZONTALIS 'WILTONI'	BLUE RUG JUNIPER	# 2 POT	PLANT 2' ON CENTER
JPC		85 JUNIPERUS HORIZONTALIS 'PLUMOSA COMPACTA'	COMPACT ANDORRA JUNIPER	# 3 POT	PLANT 3' ON CENTER
LSK		68 LIATRIS SPICATA 'KOBOLD'	KOBOLD BLAZINGSTAR	# 1 POT	PLANT 15" ON CENTER
PVH		44 PANICUM VIRGATUM 'HEAVY METAL'	HEAVY METAL SWITCHGRASS	# 2 POT	PLANT 3' ON CENTER
RAG		422 RHUS AROMATICA 'GRO-LOW'	GRO-LOW SUMAC	# 2 POT	PLANT 2' ON CENTER
RFU		66 RUDBECKIA FULGIDA 'GOLDSTURM'	GOLDSTURM BLACK-EYED SUSAN	# 1 POT	PLANT 18" ON CENTER
WFR		54 WALDSTEINIA FRAGARIOIDES	BARREN STRAWBERRY	# 1 POT	PLANT 18" ON CENTER

NOTE: PLANT SPECIES, CULTIVARS, SIZES, AND LOCATIONS SHALL NOT BE CHANGED EXCEPT BY PERMISSION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL CHECK PLANT MATERIAL FROM NURSERIES BEFORE ACCEPTING PLANTS, TO MAKE SURE THERE ARE NO UNAUTHORIZED SUBSTITUTIONS. ALTERNATE CULTIVARS OF THE SAME SPECIES SHALL NOT BE SUBSTITUTED WITHOUT LANDSCAPE ARCHITECT'S APPROVAL.



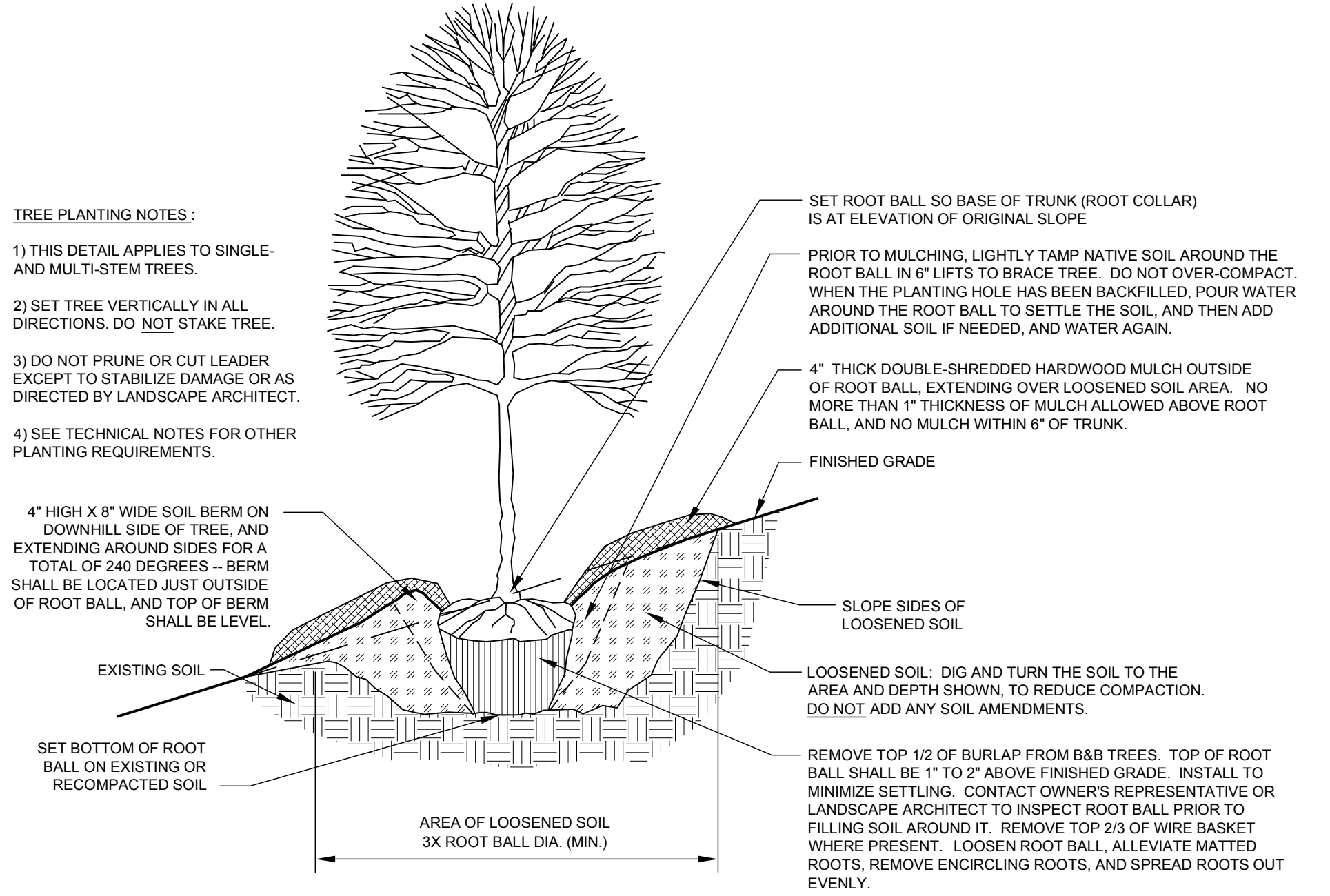
GROUNDCOVER & PERENNIAL PLANTING

NOT TO SCALE



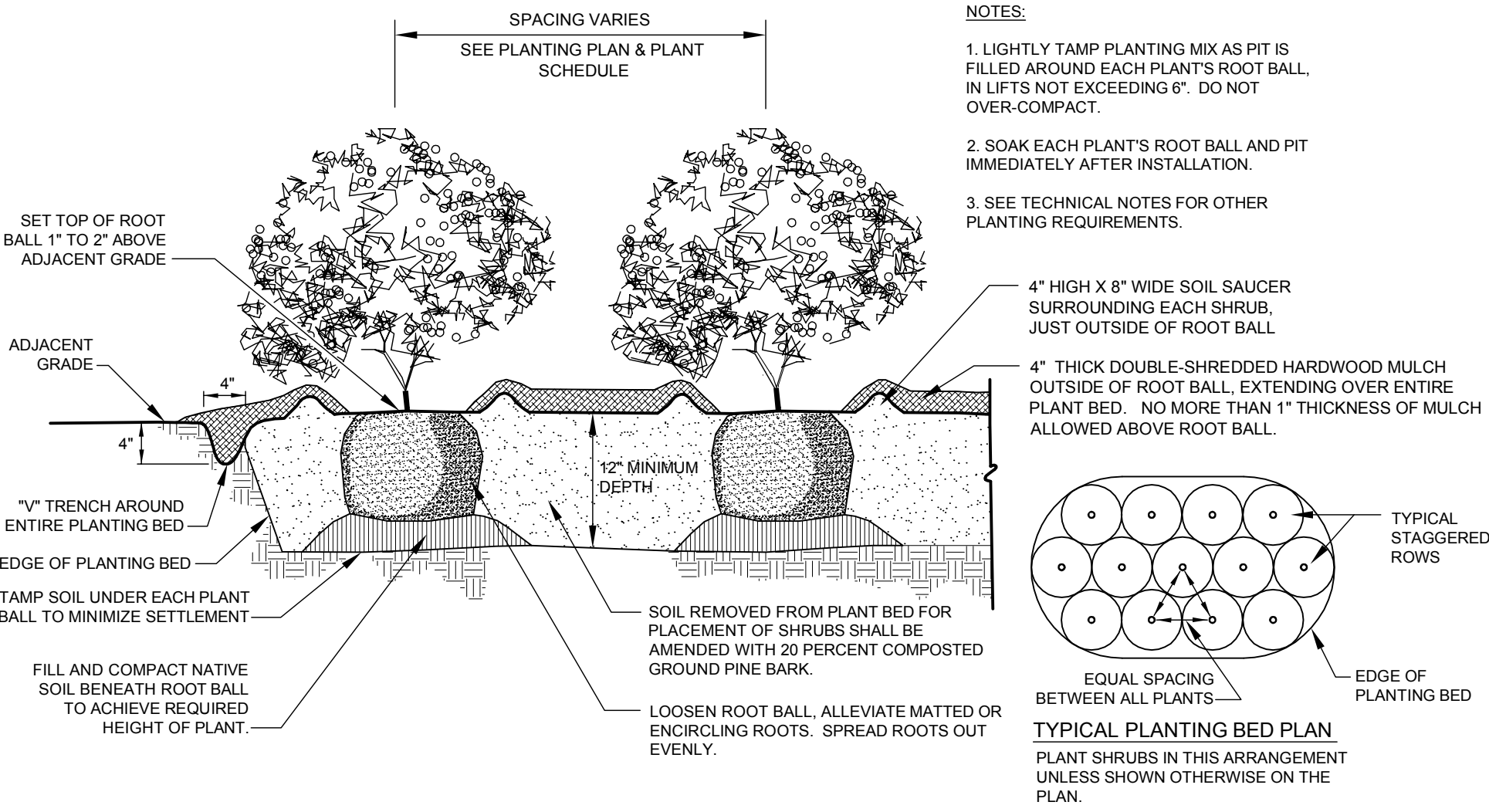
TREE PLANTING

NOT TO SCALE



TREE PLANTING ON SLOPE

NOT TO SCALE



SHRUB PLANTING

NOT TO SCALE

**PRELIMINARY -- NOT
FOR CONSTRUCTION**



PROJECT:
SINGLETARY ARMS
115 W. MAIN ST.
MILLBURY, MA

CLIENT:
DOUGLAS BACKMAN

DATE: 7-15-2020

REVISIONS:

NO.	DATE	DESCRIPTION

NOT TO SCALE

**LANDSCAPE
SCHEDULE &
DETAILS**

SHEET L-2

TECHNICAL NOTES FOR LOAM BORROW:

1) SCOPE OF WORK: FOR THIS PROJECT, THE WORK SHALL INCLUDE PLACING LOAM ALL AREAS TO RECEIVE PLANTS AND TURFGRASS SEEDING.

2) THE CONTRACTOR SHALL FURNISH A CERTIFIED LABORATORY REPORT SHOWING THE SOILS CLASSIFICATION AND NUTRIENT ANALYSIS OF REPRESENTATIVE SAMPLES OF THE LOAM THIS IS PROPOSED TO BE USED, INCLUDING THE EXTENT OF LIME AND FERTILIZER REQUIRED. ALL COSTS FOR SUCH WORK SHALL BE BORNE BY THE CONTRACTOR.

3) IN ACCORDANCE WITH THE SPECIFIC REQUIREMENTS OF THIS PROJECT, EXISTING ON-SITE SOIL MAY BE RE-USED AS LOAM BORROW ONLY IF IT MEETS THIS SPECIFICATION. EXISTING TOPSOIL THAT DOES NOT MEET THIS SPECIFICATION MAY BE RE-USED ONLY UP TO THE SUBGRADE ELEVATION WITHIN THE LIMITS OF AREAS TO RECEIVE NEW LOAM BORROW. THE CONTRACTOR SHALL FURNISH ALL REQUIRED LOAM BORROW, FROM OFF-SITE SOURCES, AS NECESSARY, TO COMPLETE THE PROJECT.

4) SCREENED LOAM SHALL BE "FINE SANDY LOAM" OR "SANDY LOAM" DETERMINED BY MECHANICAL ANALYSIS (ASTM D-422) AND BASED ON THE "USDA CLASSIFICATION SYSTEM". SCREENED LOAM SHALL HAVE THE FOLLOWING MECHANICAL ANALYSIS:

<u>TEXTURAL CLASS PERCENTAGE</u>	<u>PERCENTAGE OF TOTAL WEIGHT</u>	<u>AVERAGE PERCENTAGE</u>
SAND (0.05 - 2.0 MM)	45 - 75	60
SILT (0.002 - 0.05 MM)	5 - 35	25
CLAY (LESS THAN 0.002 MM)	5 - 20	15

5) SCREENED LOAM SHALL BE A NATURAL PRODUCT CONSISTING PRIMARILY OF NATURAL TOPSOIL, FREE FROM SUBSOIL, AND OBTAINED FROM AN AREA THAT HAS NEVER BEEN STRIPPED BEFORE. SCREENED LOAM SHALL NOT CONTAIN LESS THAN FIVE PERCENT (5%) NOR MORE THAN TEN PERCENT (10%) ORGANIC MATTER. TO ADJUST ORGANIC MATTER CONTENT, THE SOIL MAY BE AMENDED, PRIOR TO SITE DELIVERY, BY THE ADDITION OF COMPOSTED LEAF MOLD OR PEAT MOSS. NO MIXING OR AMENDING OF LOAM IS PERMITTED ON SITE.

6) THE LOAM SHALL NOT BE DELIVERED IN A WET OR FROZEN CONDITION.

7) SCREENED LOAM SHALL CONSIST OF FERTILE, FRIABLE, LOAM CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. LOAM SHALL BE WITHOUT ADMIXTURE OF SUBSOIL AND REFUSE. IT SHALL BE A HOMOGENEOUS MATERIAL FREE OF STONES GREATER THAN ONE-HALF (1/2) INCH IN THE LONGEST DIMENSION; FREE OF LUMPS, PLANTS, GRASS, ROOTS, STICKS, EXCESSIVE STONE CONTENT, DEBRIS, AND EXTRANEOUS MATTER AS DETERMINED BY THE OWNER.

8) SCREENED LOAM SHALL BE WITHIN THE PH RANGE OF 6.0 TO 6.5. IT SHALL BE UNCONTAMINATED BY SALT WATER, FOREIGN MATTER, AND SUBSTANCES HARMFUL TO PLANT GROWTH. THE MAXIMUM SOLUBLE SALT INDEX SHALL BE 100. SCREENED LOAM SHALL NOT HAVE LEVELS OF ALUMINUM GREATER THAN 200 PARTS PER MILLION.

9) SEE TURFGRASS NOTES FOR LIME AND FERTILIZER REQUIREMENTS FOR LAWN AREAS.

10) TOPSOIL STRUCTURE SHALL NOT BE DESTROYED THROUGH EXCESSIVE AND UNNECESSARY HANDLING OR COMPACTION. INAPPROPRIATE HANDLING LEADING TO THE COMPACTION OF DETERIORATION OF SOIL STRUCTURE WILL RESULT IN REJECTION OF TOPSOIL FOR USE.

11) AT NO TIME SHALL EQUIPMENT OR MATERIAL REST ON THE SOIL.

12) THE CONTRACTOR SHALL FURNISH AND SPREAD LOAM TO A MINIMUM 6 INCH DEPTH (AFTER SOIL SETTLEMENT) IN ALL LAWN AND PLANT BED AREAS. SUBSOIL SHALL BE SCARIFIED PRIOR TO PLACEMENT OF LOAM. THE TOP OF THE SETTLED LOAM BORROW LAYER SHALL BE TO GRADES SPECIFIED ON THE DRAWINGS. NO COMPACTION SHALL BE REQUIRED BEYOND THAT EXTENT NECESSARY TO PLACE SOD OR OR TO PLANT TREES AND SHRUBS TO ENSURE AGAINST UNEVENNESS OR SETTLING BELOW ACCEPTED GROWTH LINES.

TECHNICAL NOTES FOR TURFGRASS SEEDING:

1) SCOPE OF WORK: FOR THIS PROJECT, THE WORK SHALL INCLUDE SEEDING AREAS DENUDED BY CONSTRUCTION.

2) ALL AREAS SHALL BE SEEDED WITHIN 30 DAYS AFTER FINISHED GRADES ARE ESTABLISHED AND OTHER ELEMENTS INCLUDED IN THIS CONTRACT ARE CONSTRUCTED.

3) TURFGRASS SEED SPECIFICATIONS:

B) AREAS RECEIVING FULL SUN OR PART SHADE

FESCUE/BLUEGRASS/PERENNIAL RYEGRASS MIXTURE:

MIXTURE REQUIREMENTS ARE AS FOLLOWS (WITH APPROXIMATE PERCENTAGES):

35% FINE FESCUE (ENDOPHYTIC)
35% KENTUCKY BLUEGRASS
30% PERENNIAL RYEGRASS (ENDOPHYTIC)

C) AREAS RECEIVING MOSTLY SHADE:

FESCUE/PERENNIAL RYEGRASS MIXTURE:

MIXTURE REQUIREMENTS ARE AS FOLLOWS (WITH APPROXIMATE PERCENTAGES):

90% FINE FESCUE (ENDOPHYTIC)
10% PERENNIAL RYEGRASS (ENDOPHYTIC)

D) ANY PROPOSED SUBSTITUTIONS SHALL BE PRESENTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO SEEDING.

E) ALL TURFGRASS SEED SHALL HAVE A MINIMUM PURITY OF 98 PERCENT AND A GERMINATION RATE OF 85 PERCENT.

F) ALL TURFGRASS SEED SHALL BE LABELED TO SHOW THAT IT IS WITHIN THE REQUIREMENTS OF THE USDA AS TO PURITY, GERMINATION, AND PRESENCE OF RESTRICTED OR PROHIBITED WEEDS.

4) BED PREPARATION FOR AREAS TO BE SEEDED WITH TURFGRASS: A ROTOVATOR, CHISEL PLOW, OR CULTIVATOR SHALL BE USED TO WORK THE SOIL TO A DEPTH OF SIX INCHES. AFTER THIS OPERATION, REMOVE AND DISPOSE OF STICKS, STONES OVER 1 INCH DIAMETER, AND RUBBISH TO A MINIMUM DEPTH OF TWO INCHES.

5) LIME AND NUTRIENTS FOR TURFGRASS AREAS: LIME SHALL BE GROUND DOLOMITIC LIMESTONE, APPLIED AT THE RATE OF 50 POUNDS PER 1000 SQUARE FEET. LIME SHALL BE WELL-MIXED INTO THE TOP THREE INCHES OF LOAM.

6) FERTILIZER FOR TURFGRASS AREAS: FERTILIZER SHALL BE A COMMERCIAL GRADE WITH A MINIMUM OF 50 PERCENT OF THE NITROGEN COMPONENT IN A CONTROLLED RELEASE FORM LABELED TO RELEASE NITROGEN FOR A MINIMUM OF SIX WEEKS. FERTILIZER SHALL HAVE AN N/P/K RATIO IN THE RANGE OF 1:1:1 TO 1:2:2. IT SHALL BE APPLIED AT A RATE WHICH ACHIEVES ONE POUND OF NITROGEN PER 1000 SQUARE FEET.

7) SEEDING PROCEDURE FOR TURFGRASS: SOWING OF SEED SHALL BE DONE ONLY AFTER THE PREPARED SOIL, TO WHICH LIME AND FERTILIZER HAVE BEEN ADDED AS SPECIFIED, HAS BEEN THOROUGHLY SETTLED BY RAINFALL OR ARTIFICIAL WATERING. IMMEDIATELY BEFORE ANY SEED IS SOWN, THE GROUND SHALL BE SCARIFIED AS SPECIFIED. LAWN AREAS SHALL BE SEEDED EVENLY WITH A MECHANICAL SPREADER. SEED MIXTURES SHALL BE SOWN AT A RATE OF 5 POUNDS PER 1000 SQUARE FEET. AFTER SEEDING, THE LAWN SHALL BE LIGHTLY RAKED, ROLLED WITH A 200-POUND ROLLER, AND WATERED WITH A FINE SPRAY. THIS METHOD OF SEEDING MAY BE VARIED AT THE DISCRETION OF THE CONTRACTOR ON HIS OWN RESPONSIBILITY TO ESTABLISH A SMOOTH, UNIFORMLY GRASSED LAWN.

8) SEED FOR PERMANENT TURFGRASS SHALL ONLY BE SOWN FROM THE THIRD WEEK IN APRIL THROUGH JUNE AND DURING THE MONTH OF SEPTEMBER.

9) TEMPORARY SEEDING FOR EROSION CONTROL: IN THE EVENT THAT THE CONTRACT IS SUSPENDED, TEMPORARY SEEDING SHALL BE USED ON ANY BARE AREAS THAT MAY BE SUBJECT TO EROSION AND WHERE TEMPORARY VEGETATION CAN BE USED TO RETARD EROSION FROM 2 TO 12 MONTHS. THE SEED TYPE USED FOR TEMPORARY COVER SHALL BE 100 PERCENT TALL FESCUE APPLIED AT A RATE OF 300 POUNDS PER ACRE.

10) MAINTENANCE: MAINTAIN THE TURFGRASS FROM TIME OF INSTALLATION UNTIL THE FINAL INSPECTION IMMEDIATELY PRIOR TO THE BEGINNING OF THE GUARANTEE PERIOD. MAINTENANCE SHALL INCLUDE WATERING OF TURF AREAS, REPAIRS TO TURF AREAS, AND OTHER NECESSARY OPERATIONS. THE MAINTAINED TURF AREAS SHALL BE MOWED TO A UNIFORM HEIGHT OF APPROXIMATELY TWO AND ONE-HALF INCHES. MOWING SHALL BE PROVIDED AS REQUIRED SO THAT THE TURF NEVER EXCEEDS FOUR INCHES IN HEIGHT. TURF SHALL BE PROTECTED AND REPLANTED AS NECESSARY TO ESTABLISH A UNIFORM STAND OF THE SPECIFIED TURF AND UNTIL ACCEPTANCE. SCATTERED BARE SPOTS, NONE OF WHICH IS LARGER THAN ONE SQUARE FOOT, WILL BE ALLOWED UP TO A MAXIMUM OF THREE PERCENT OF ANY TURF AREA. WHEN TURF AREAS ARE READY FOR FINAL INSPECTION, THE MAINTAINED TURF AREAS SHALL BE NEATLY MOWED TO THE UNIFORM HEIGHTS AS NOTED ABOVE. THE LAWNS SHALL BE CONSIDERED ESTABLISHED ONLY WHEN THE SPECIFIED GRASS IS VIGOROUS AND GROWING WELL IN ADDITION TO MEETING THE OTHER REQUIREMENTS SPECIFIED. AT THE TIME OF ACCEPTANCE FOLLOWING FINAL INSPECTION, THE CONTRACTOR IS RELIEVED OF ROUTINE MAINTENANCE RESPONSIBILITIES FOR THE TURF UNDER THIS CONTRACT.

11) FINAL INSPECTION, CLEANUP AND COMPLETION: FINAL INSPECTION SHALL BE FOR THE COMPLETED LANDSCAPE AND SHALL BE MADE AT THE CONCLUSION OF THE LANDSCAPE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL EQUIPMENT AND OTHER ARTICLES USED. ALL EXCESS SOIL, STONES, AND DEBRIS SHALL BE REMOVED FROM THE SITE. ALL WORK AREAS SHALL BE LEFT IN A CLEAN AND NEAT CONDITION. ALL DAMAGE TO EXISTING CONSTRUCTION CAUSED BY THE LANDSCAPING OPERATIONS SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.

12) GUARANTY AND REPLACEMENT: IF A SATISFACTORY STAND OF MAINTAINED TURF HAS BEEN PRODUCED AT THE TIME OF FINAL INSPECTION, IT SHALL BE GUARANTEED THROUGH ONE COMPLETE GROWING SEASON. IF RENOVATION AND/OR RESEEDING ARE REQUIRED AT THE END OF THE GUARANTEE PERIOD, THIS WORK SHALL BE DONE IN CONFORMANCE WITH THE REQUIREMENTS NOTED ABOVE. IF A SATISFACTORY STAND OF MAINTAINED TURF HAS NOT BEEN PRODUCED AT THE TIME OF FINAL INSPECTION, NECESSARY REPAIRS SHALL BE PERFORMED IN CONFORMANCE WITH THE REQUIREMENTS NOTED ABOVE. UPON COMPLETION OF THESE REPAIRS, THE TURF GRASS SHALL BE GUARANTEED AS NOTED ABOVE.

TECHNICAL NOTES FOR TREE, SHRUB, GROUNDCOVER, AND PERENNIAL PLANTINGS:

1) NOMENCLATURE: THE NAMES OF PLANTS REQUIRED UNDER THIS CONTRACT SHALL CONFORM TO THOSE GIVEN IN STANDARDIZED PLANT NAMES, LATEST EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF VARIETIES NOT INCLUDED THEREIN SHALL CONFORM GENERALLY WITH NAMES ACCEPTED IN THE NURSERY TRADE.

2) QUALITY AND SIZE: PLANTS SHALL HAVE A HABIT OF GROWTH THAT IS NORMAL FOR THE SPECIES AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE FROM INSECT PESTS, PLANT DISEASES, AND INJURIES. ALL PLANTS SHALL EQUAL OR EXCEED THE MEASUREMENTS SPECIFIED IN THE PLANT LIST, WHICH ARE MINIMUM ACCEPTABLE SIZES. THEY SHALL BE MEASURED BEFORE PRUNING IS DONE AT TIME OF PLANTING. REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND BURLAPPING OF PLANTS IN THE PLANT LIST SHALL FOLLOW THE CODE OF STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN ASSOCIATIONS OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK.

3) SUBSTITUTIONS: SUBSTITUTIONS WILL BE PERMITTED ONLY UPON SUBMISSION OF PROOF THAT ANY PLANT AS SPECIFIED IS NOT OBTAINABLE DURING THE SCHEDULED PLANTING SEASON. WRITTEN AUTHORIZATION BY THE LANDSCAPE ARCHITECT SHALL BE REQUIRED FOR ANY SUBSTITUTION. THE NEAREST EQUIVALENT SIZE OR VARIETY OF PLANT HAVING THE SAME ESSENTIAL CHARACTERISTICS SHALL BE PROPOSED FOR SUBSTITUTION.

4) BALLED AND BURLAPPED MATERIALS: PLANTS DESIGNATED "B&B" IN THE PLANT LIST SHALL BE BALLED AND BURLAPPED. THEY SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEM NECESSARY FOR FULL RECOVERY OF THE PLANT. MATERIAL SHALL BE IN A CONDITION WHERE THE NATURAL ROOT COLLAR OF THE PLANT IS WITHIN APPROXIMATELY TWO (2) INCHES OF THE SOIL LEVEL OF THE BALL. BALLS SHALL BE FIRMLY WRAPPED WITH BURLAP OR SIMILAR MATERIAL AND BOUND WITH TWINE, CORD, OR WIRE MESH. NO SYNTHETIC FABRIC IS ALLOWED. WHERE NECESSARY TO PREVENT BREAKING OR CRACKING OF THE BALL DURING THE PROCESS OF PLANTING, THE BALL MAY BE SECURED TO A PLATFORM. BALLS SHALL BE KEPT MOIST AND SHADED UNTIL THEY ARE PLANTED. REMOVE ALL BALL TIES OR STRAPPING FROM ROOT BALL PRIOR TO PLANTING. PLANT IN ACCORDANCE WITH TREE AND SHRUB PLANTING DETAILS.

5) CONTAINER-GROWN MATERIALS: PLANTS NOT DESIGNATED OTHERWISE IN THE PLANT LIST MAY BE PURCHASED AS CONTAINER-GROWN OR BALLED/BURLAPPED. CONTAINER-GROWN PLANTS, IF STORED ON THE SITE, SHALL BE WATERED THOROUGHLY AT LEAST ONCE EVERY 48 HOURS. ROOT SYSTEMS OF CONTAINER-GROWN PLANTS SHALL BE WELL-DEVELOPED BUT NOT IN "POT-BOUND" CONDITION OF DENSE, ENCIRCLING ROOTS. THE ROOT BALL OF THE PLANT SHALL BE LOOSENED TO ALLEVIATE ENCIRCLING ROOTS AND TO PROVIDE AN INCREASED ROOT INTERFACE WITH THE FILL SOIL. PLANT IN ACCORDANCE WITH TREE, SHRUB, AND GROUNDCOVER PLANTING DETAILS.

6) PROTECTION OF PLANTS PRIOR TO INSTALLATION: THE ROOT ZONE OF ALL PLANTS NOT YET INSTALLED SHALL BE PROTECTED FROM FREEZING, DRYING, AND DIRECT SUNLIGHT.

7) MULCHING: DOUBLE-SHREDDED HARDWOOD MULCH SHALL BE USED AS THE MULCH FOR ALL PLANT BEDS INDICATED ON THE LANDSCAPE PLAN, INCLUDING AREAS SURROUNDING THE PLANTS AS SHOWN ON THE TREE, SHRUB, AND GROUNDCOVER PLANTING DETAILS.

8) PLANTING SEASON: THE NORMAL PLANTING SEASON IS APRIL THROUGH NOVEMBER. SOME PLANTS SPECIFIED AS BALLED AND BURLAPPED CANNOT BE DUG DURING PORTIONS OF THIS PLANTING SEASON -- CHECK WITH NURSERIES FOR SPECIFICS. PLANTING OPERATIONS SHALL BE CONDUCTED UNDER FAVORABLE WEATHER CONDITIONS DURING THE NORMAL PLANTING SEASON.

9) WEATHER CONDITIONS: PLANTING SHALL NOT TAKE PLACE WHEN SOILS ON SITE ARE FROZEN OR WET AND IN POOR TILTH.

10) LAYOUT: NEW PLANTINGS SHALL BE LOCATED ACCORDING TO THE LANDSCAPE PLAN. THE CONTRACTOR SHALL STAKE THE PLANT LOCATIONS, AND SHALL THEN CONTACT THE LANDSCAPE ARCHITECT FOR APPROVAL.

11) SETTING PLANTS: ALL PLANTS SHALL BE PLANTED IN PREPARED SOILS BEDS, AND SET ON FIRM SOIL TO SUCH DEPTH AS INDICATED IN THE PLANTING DETAILS. TREES, SHRUBS, GROUNDCOVERS, AND PERENNIALS SHALL BE SET SO THAT THE PLANT'S NATURAL ROOT COLLAR OR CROWN IS ABOVE FINISHED GRADE AT THE HEIGHTS INDICATED IN THE PLANTING DETAILS. NO BURLAP SHALL BE PULLED FROM UNDER THE BALLS. ROOTS ON BARE-ROOT PLANTS SHALL BE SPREAD IN THEIR NORMAL POSITION. ALL BROKEN OR FRAYED ROOTS SHALL BE CUT OFF CLEANLY. PREPARED SOIL SHALL BE PLACED AND COMPACTED CAREFULLY TO AVOID INJURY TO ROOTS, TO FILL ALL VOIDS, AND TO MINIMIZE ROCKING OF ROOT BALL. ADD WATER AND TAMP THE BACKFILL UNTIL THE BACKFILL IS COMPLETELY SATURATED, THEN ALLOW IT TO SOAK AWAY. FILL THE HOLE TO FINISHED GRADE, AND FORM A SAUCER AROUND EACH TREE AND SHRUB BY PLACING A RIDGE OF TOPSOIL AROUND THE EDGE OF EACH ROOT BALL, IN ACCORDANCE WITH THE PLANTING DETAILS. AFTER THE GROUND SETTLES, ADDITIONAL SOIL SHALL BE FILLED IN TO THE LEVEL OF THE FINISHED GRADE, AND WATERED.

12) STAKING TREES: DO NOT STAKE TREES, UNLESS TREES ARE PLANTED ON STEEP SLOPES, IN WHICH CASE THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT FOR PERMISSION TO STAKE THOSE TREES.

13) MAINTENANCE: MAINTAIN PLANTS AND PLANT BEDS FROM THE TIME OF INSTALLATION UNTIL THE FINAL INSPECTION IMMEDIATELY PRIOR TO COMMENCEMENT OF THE GUARANTEE PERIOD. MAINTENANCE SHALL INCLUDE WATERING AND PROTECTION OF PLANTINGS AND OTHER NECESSARY OPERATIONS.

14) FINAL INSPECTION: WHEN THE TREE AND SHRUB PLANTINGS ARE READY FOR FINAL INSPECTION, ALL MULCHED AREAS SHALL BE FREE FROM WEEDS AND MULCHED TO THE EXTENT INDICATED ON THESE DRAWINGS. PLANT TAGS SHALL BE REMOVED BY THE CONTRACTOR PRIOR TO THE INSPECTION FOR ACCEPTANCE.

15) GUARANTEE: AFTER ACCEPTANCE AT TIME OF FINAL INSPECTION, ALL PLANTS SHALL BE GUARANTEED FOR ONE (1) YEAR. PLANTINGS SHALL BE ALIVE AND IN SATISFACTORY VIGOR AT THE END OF THE GUARANTEE PERIOD.

16) REPLACEMENT: AT THE END OF THE GUARANTEE PERIOD, ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR IN POOR VIGOR SHALL BE REMOVED FROM THE SITE. THESE AND ANY MISSING PLANTS SHALL BE REPLACED AS SOON AS CONDITIONS PERMIT, BUT DURING THE NORMAL PLANTING SEASON. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AS ORIGINALLY PLANTED AND SHALL BE OF SIZE EQUAL TO THAT ATTAINED BY ADJACENT PLANTS OF THE SAME KIND AT THE TIME REPLACEMENT IS MADE. ONLY ONE REPLACEMENT WILL BE REQUIRED FOR EACH PLANT DECLARED DEAD, IN AN UNHEALTHY OR BADLY IMPAIRED CONDITION, OR MISSING AT THE TIME OF FINAL INSPECTION.

PRELIMINARY -- NOT
FOR CONSTRUCTION



PROJECT:
SINGLETERARY ARMS
115 W. MAIN ST.
MILLBURY, MA

CLIENT:
DOUGLAS BACKMAN

DATE: 7-15-2020

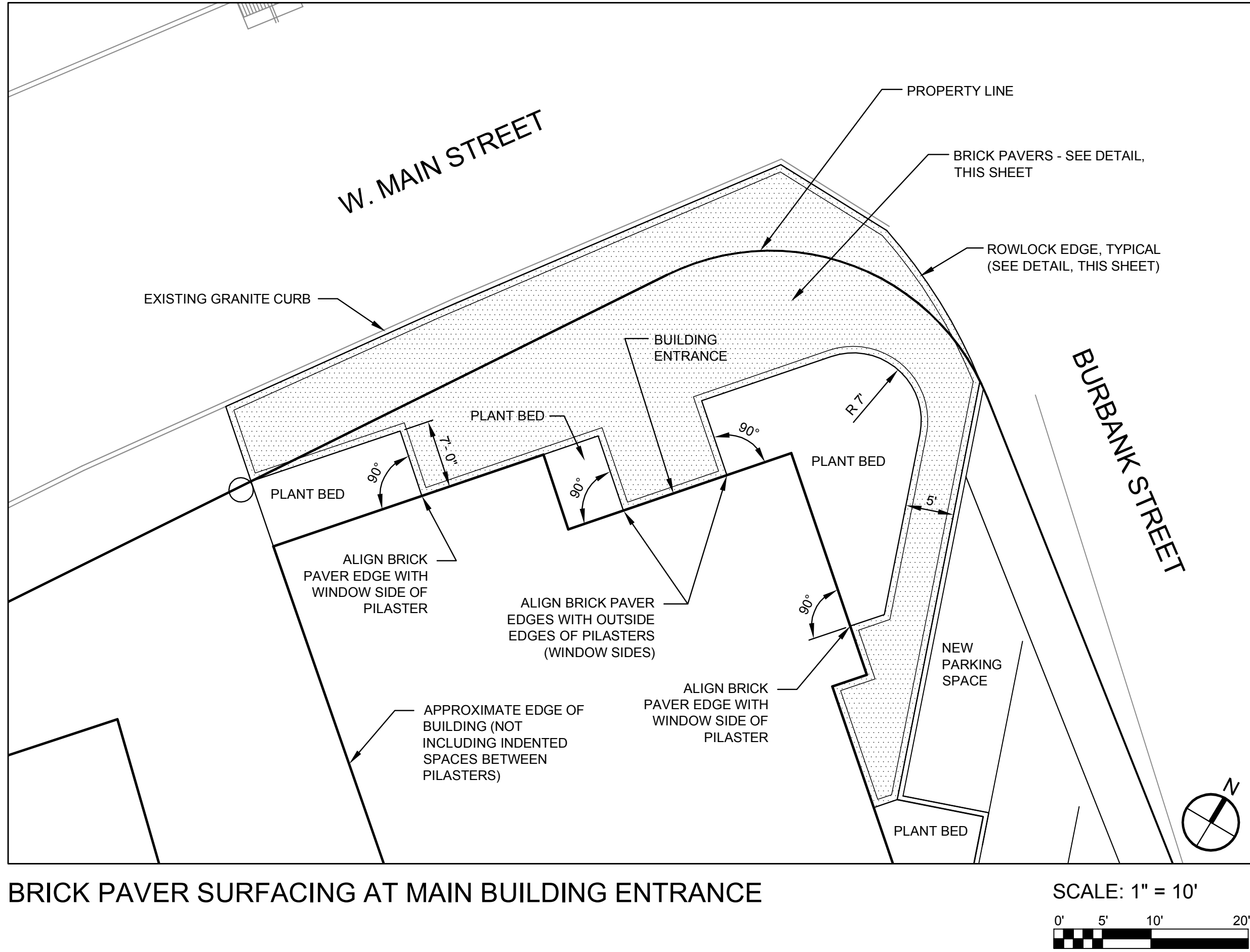
REVISIONS:

NO.	DATE	DESCRIPTION

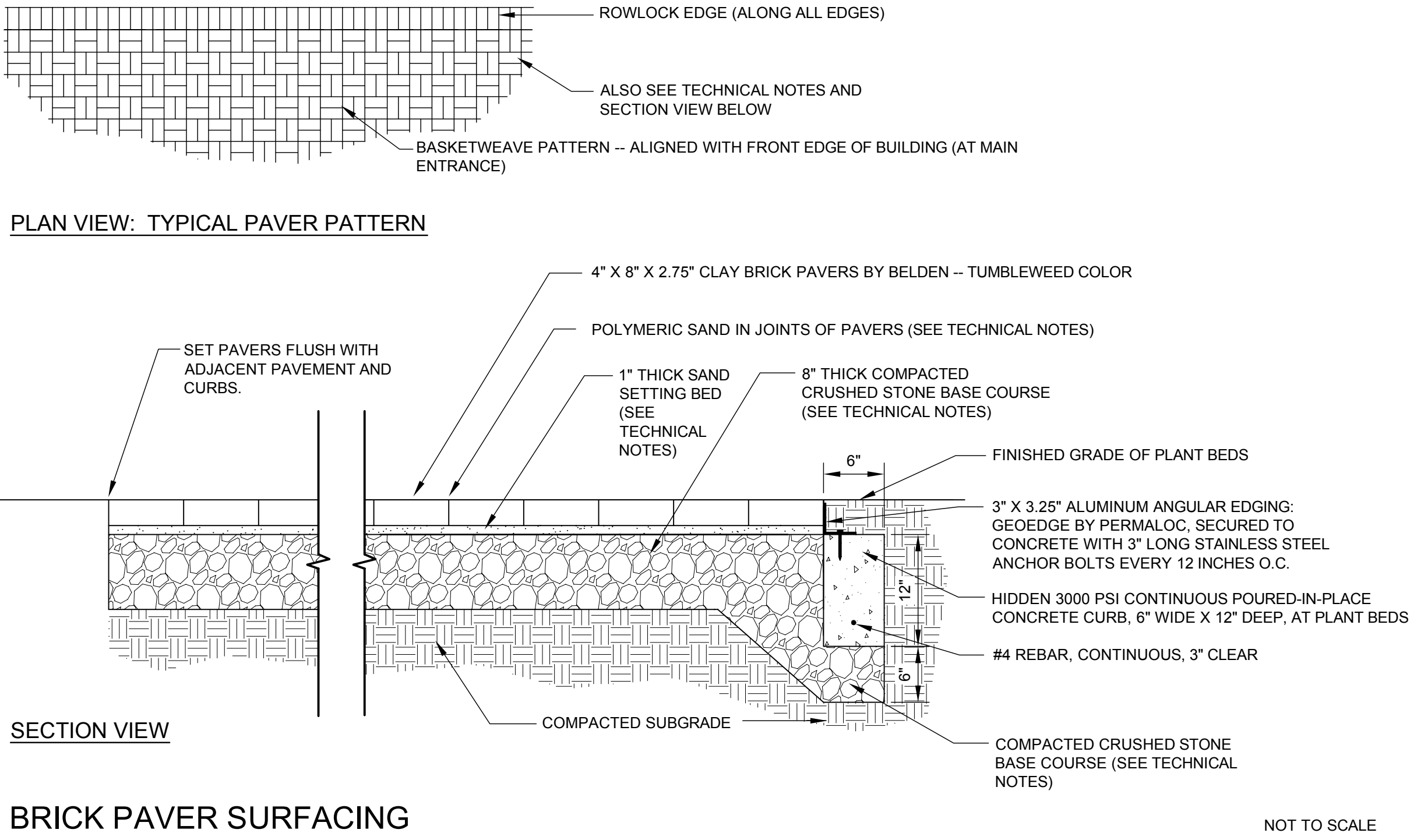
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LANDSCAPE
NOTES

SHEET L-3



BRICK PAVER SURFACING AT MAIN BUILDING ENTRANCE



BRICK PAVER SURFACING

TECHNICAL NOTES FOR BRICK UNIT PAVING

- 1) SOME OF THE PRODUCTS AND EXECUTION METHODS ARE SPECIFIED IN THIS SECTION BY REFERENCE TO PUBLISHED SPECIFICATIONS OR STANDARDS OF THE FOLLOWING, WITH RESPECTIVE ABBREVIATIONS USED:
- A) AASHTO: AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
B) ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS
C) MA DOT: MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
- 2) REQUIRED INSTALLER QUALIFICATIONS: AN EXPERIENCED INSTALLER WHO HAS COMPLETED UNIT PAVER INSTALLATIONS SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT, AND WHOSE WORK HAS RESULTED IN CONSTRUCTION WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
- 3) THE CONTRACTOR SHALL PROTECT BRICKS, SAND, AND AGGREGATE DURING STORAGE AND CONSTRUCTION AGAINST SOILING OR CONTAMINATION FROM EARTH AND OTHER MATERIALS. BRICKS SHALL BE COVERED WITH PLASTIC OR OTHER PACKAGING MATERIALS THAT WILL PREVENT RUST MARKS FROM STEEL STRAPPING, WHEN PRESENT. THE CONTRACTOR SHALL STORE CEMENTITIOUS MATERIALS ON ELEVATED PLATFORMS, UNDER COVER, AND IN A DRY LOCATION.
- 4) THE CONTRACTOR SHALL NOT USE FROZEN MATERIALS OR MATERIALS MIXED OR COATED WITH ICE OR FROST. HE/SHE SHALL NOT BUILD ON FROZEN SUBGRADE OR SETTING BEDS. HE/SHE SHALL REMOVE AND REPLACE UNIT PAVER WORK DAMAGED BY FROST OR FREEZING.
- 5) CLAY BRICKS SHALL BE 4" X 8" X 2.75" THICK, TUMBLEWEED COLOR, BY THE BELDEN BRICK CO., PHONE # 330-451-2031, WWW.BELDENBRICK.COM
- 6) ALUMINUM EDGE RESTRAINTS SHALL BE GEOEDGE BY PERMALOC, PHONE # 616-39-9600, WWW.PERMALOC.COM. ANCHOR BOLTS SHALL BE 3" LONG STAINLESS STEEL.
- 7) SAND FOR LEVELING COURSE SHALL BE WASHED CONCRETE SAND, FREE OF SOIL AND OTHER FOREIGN DEBRIS.
- 8) POLYMERIC SAND FOR JOINTS SHALL CONSIST OF CLEAR POLYMERS, AND SHALL NOT CONTAIN ANY PORTLAND CEMENT.
- 9) AGGREGATE BASE COURSE SHALL BE 3/4" CRUSHED STONE AND SHALL MEET THE REQUIREMENTS OF MA DOT SPECIFICATION SECTION M2.01.4 OF DIVISION 3 -- MATERIALS.
- 10) THE CONTRACTOR SHALL NOT USE ANY BRICKS THAT HAVE CHIPS, CRACKS, VOIDS, DISCOLORATIONS, AND OTHER DEFECTS THAT MIGHT BE VISIBLE OR CAUSE STAINING IN FINISHED WORK.
- 11) WHEN CUTTING IS NECESSARY, THE CONTRACTOR SHALL CUT BRICKS WITH MOTOR-DRIVEN MASONRY SAW EQUIPMENT TO PROVIDE CLEAN, SHARP, UN-CHIPPED EDGES. HE/SHE SHALL CUT UNITS TO PROVIDE PATTERN INDICED AND TO FIT ADJOINING WORK NEATLY. HE/SHE SHALL USE FULL UNITS WITHOUT CUTTING WHERE POSSIBLE. HAMMER CUTTING IS NOT ACCEPTABLE.
- 12) JOINT AND COLOR PATTERNS SHALL BE AS INDICATED ON THE PLANS AND IN THE CONSTRUCTION DETAILS.
- 13) TOLERANCES: THE CONTRACTOR SHALL NOT EXCEED 1/32-INCH UNIT-TO-UNIT OFFSET FROM FLUSH (LIPPAGE) NOR 1/8-INCH IN 10 FEET FROM INDICATED SLOPE, FOR FINISHED SURFACE OF PAVEMENT.
- 14) INSTALLATION PROCESS:
- A) COMPACT SOIL SUBGRADE UNIFORMLY TO 95 PERCENT OF ASTM D 1557 LABORATORY DENSITY.
- B) PLACE CRUSHED STONE BASE COURSE OVER COMPACTED SUBGRADE. PROVIDE COMPACTED THICKNESS INDICATED. COMPACT BASE COURSE TO 100 PERCENT OF ASTM D 1557 MAXIMUM LABORATORY DENSITY AND SCREED TO DEPTH REQUIRED TO ALLOW SETTING OF PAVERS.
- C) INSTALL HIDDEN CURBING (SEE CEMENT CONCRETE NOTES).
- D) PLACE LEVELING COURSE OF SAND OVER AGGREGATE BASE COURSE AND SCREED TO THICKNESS INDICATED ON THE DRAWINGS, TAKING CARE THAT MOISTURE CONTENT REMAINS CONSTANT AND DENSITY IS LOOSE AND CONSTANT UNTIL BRICKS ARE SET AND COMPACTED.
- E) SET BRICKS WITH A MINIMUM JOINT WIDTH OF 1/16 INCH AND A MAXIMUM WIDTH OF 1/8 INCH, BEING CAREFUL NOT TO DISTURB LEVELING COURSE. IF BRICKS HAVE SPACER LUGS, PLACE BRICKS HAND-TIGHT AGAINST LUGS. USE STRING LINES TO KEEP STRAIGHT LINES. FILL GAPS BETWEEN UNITS THAT EXCEED 3/8 INCH WITH PIECES CUT TO FIT FROM FULL-SIZE BRICKS.
- F) VIBRATE BRICKS INTO LEVELING COURSE WITH A LOW-AMPLITUDE PLATE VIBRATOR CAPABLE OF A 3500- TO 5000-LBF (16- TO 22-kN) COMPACTION FORCE AT 80 TO 90 Hz. PERFORM AT LEAST THREE PASSES ACROSS PAVING SURFACE WITH VIBRATOR. VIBRATE UNDER THE FOLLOWING CONDITIONS:
1. AFTER EDGE BRICKS ARE INSTALLED AND THERE IS A COMPLETED SURFACE OR BEFORE SURFACE IS EXPOSED TO RAIN
 2. BEFORE ENDING EACH DAY'S WORK, FULLY-COMPACT INSTALLED BRICKS TO WITHIN 36 INCHES OF THE LAYING FACE. COVER OPEN LAYERS WITH NON-STAINING PLASTIC SHEETS OVERLAPPED 48 INCHES ON EACH SIDE OF THE LAYING FACE TO PROTECT IT FROM RAIN.
- G) SPREAD DRY POLYMERIC SAND AND FILL JOINTS IMMEDIATELY AFTER VIBRATING BRICKS INTO LEVELING COURSE. POLYMERIC SAND SHALL ONLY BE INSTALLED WHEN BRICKS ARE COMPLETELY DRY, AND NO PRECIPITATION IS IN THE FORECAST FOR AT LEAST 48 HOURS. VIBRATE PAVERS AND THEN ADD THE POLYMERIC SAND UNTIL JOINTS ARE COMPLETELY FILLED TO THE BASE OF THE BEVELED EDGES, OR TOPS OF NON-BEVELED BRICK EDGES. REMOVE ALL EXCESS POLYMERIC SAND FROM SURFACE OF BRICKS PRIOR TO WETTING THE JOINTS. THEN LIGHTLY MOISTEN JOINTS UNTIL THEY WILL NOT ACCEPT ANY MORE WATER, TO ENSURE THAT THE ENTIRE DEPTH OF THE JOINT IS MOISTENED, WHILE TAKING CARE NOT TO LET SAND WASH OUT OF THE JOINTS DURING THIS PROCESS. DO NOT ALLOW ANY TRAFFIC (PEDESTRIAN OR VEHICULAR) ONTO THE BRICK PAVEMENT FOR AT LEAST 24 HOURS AFTER JOINTS HAVE BEEN WATERED. IF UNEXPECTED PRECIPITATION HAPPENS DURING THIS PERIOD, COVER BRICK PAVEMENT WITH NON-STAINING PLASTIC SHEETS AS NOTED IN F2 ABOVE.
- 15) REPAIR AND PROTECTION: THE CONTRACTOR SHALL REMOVE AND REPLACE BRICKS THAT ARE LOOSE, CHIPPED, BROKEN, STAINED, OR OTHERWISE DAMAGED, OR THAT DO NOT MATCH ADJOINING UNITS AS INTENDED, AND THOSE WHOSE SURFACES HAVE BEEN STAINED WITH POLYMERIC SAND. THE CONTRACTOR SHALL REPLACE THESE BRICKS TO MATCH ADJOINING BRICKS, AND INSTALL IN SAME MANNER AS ORIGINAL BRICKS, WITH SAME JOINT TREATMENT AND WITH NO EVIDENCE OF REPLACEMENT.

PRELIMINARY -- NOT
FOR CONSTRUCTION



PROJECT:
SINGLETARY ARMS
115 W. MAIN ST.
MILLBURY, MA

CLIENT:
DOUGLAS BACKMAN

DATE: 7-15-2020

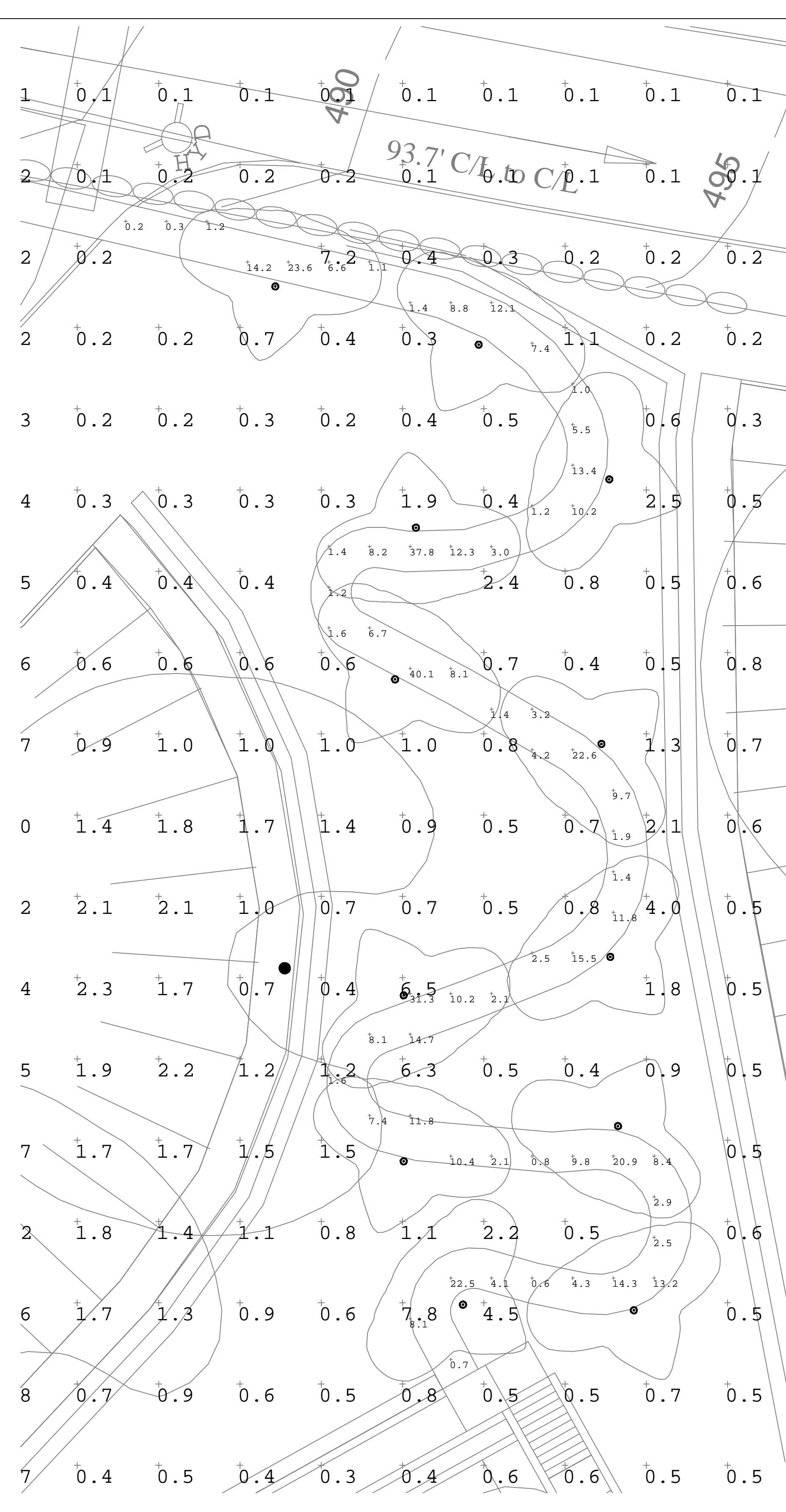
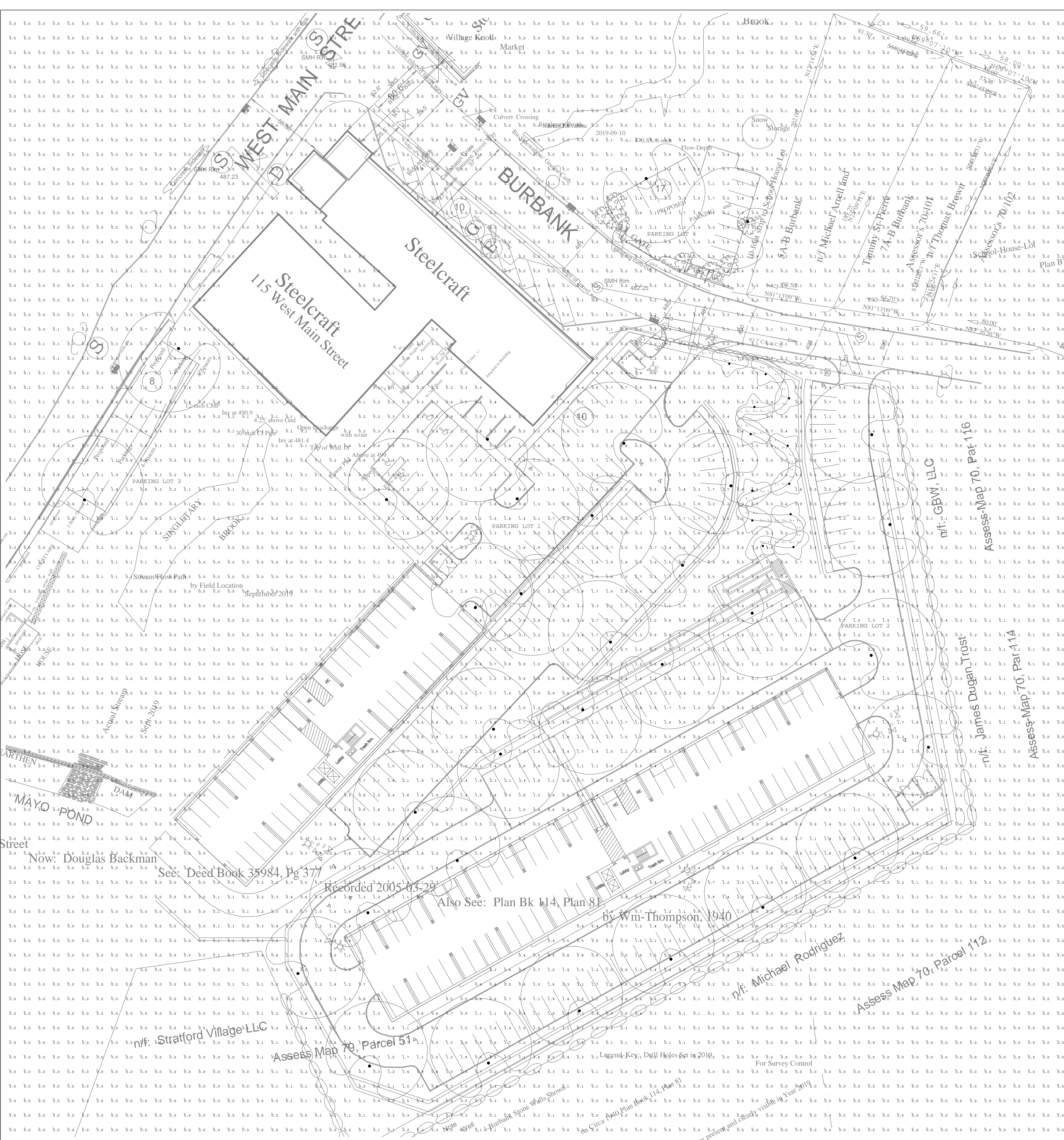
REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: VARIES

HARDSCAPE
DETAILS & NOTES

SHEET L-4



JOB NAME: 151 W MAIN ST - MILLBURY, MA
APEX LIGHTING SOLUTIONS
WORKPLANS/CALC PLANE: @ FINISH GRADE
MOUNTING HEIGHT: SEE LUMINAIRE SCHEDULE
APPS: BD
SALES: DT

Luminaire Schedule						
Qty	Label	Arrangement	Lumens	Input Watts	LLF	BUG Rating
33	SL1	SINGLE	8695	105.1	0.850	B2-U4-G5
12	SL3	SINGLE	2551	30.3	0.765	B1-U0-G1
Description						
HADCO CL32PHKN1AWHWA5NSP2 / MOUNTED TO 16FT POLE						
GARCO PBL-36-14L-600-WW-G2-3-UNV-PCB-P1-BK						

Calculation Summary						
Label	Grid Height	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	0	0.31	7.8	0.0	N.A.	N.A.
WALKWAY	0	8.59	40.1	0.2	42.95	200.50
PARKING LOT 1		1.48	2.9	0.3	4.93	9.67
PARKING LOT 2		1.23	2.4	0.4	3.08	6.00
PARKING LOT 3		1.01	2.1	0.4	2.53	5.25
PARKING LOT 4		1.22	2.3	0.4	3.05	5.75

GENERAL DISCLAIMER:
Calculations have been performed according to IES standards and good practice. Some differences may occur between measured values and calculated results due to variations in calculation methods, testing procedures, component performance, mounting height, and field conditions. The results are for informational purposes only and should not be used for legal or financial purposes. The results are for informational purposes only and should not be used for legal or financial purposes. The results are for informational purposes only and should not be used for legal or financial purposes.



PROJECT TITLE:

115 W MAIN ST
MILLBURY, MA

DRAWING TITLE:

EXTERIOR LIGHTING
PHOTOMETRIC CALCULATION

PROJECT NAME: SL1 115 W MAIN ST - MILLBURY, MA 07-22-2020 BD.dwg

SCALE : 1"=30'-0"

DATE: 7/22/20

DRAWN BY: BD

SHEET:

SL-1