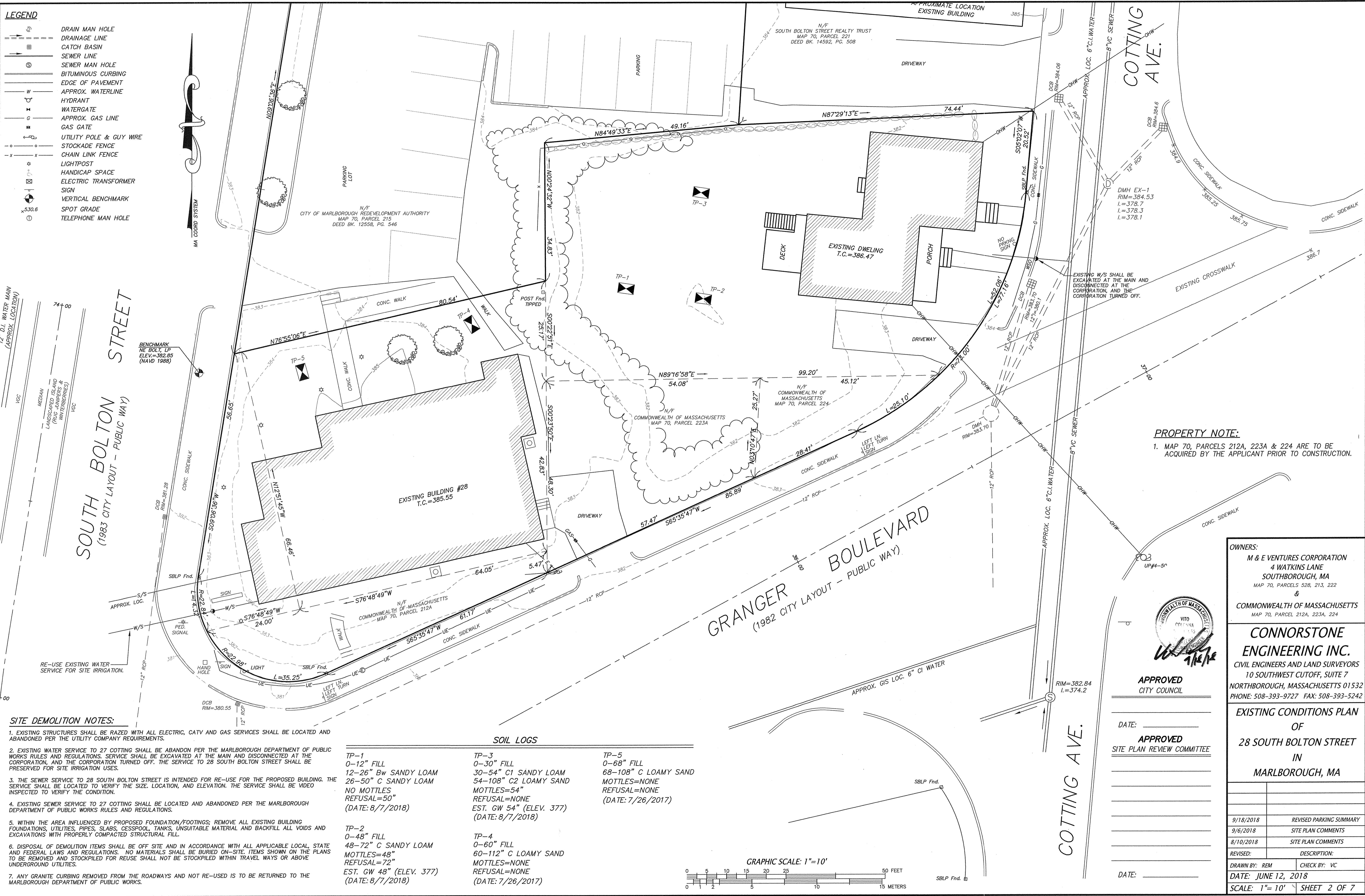


- LEGEND**
- DRAIN MAN HOLE
 - DRAINAGE LINE
 - CATCH BASIN
 - SEWER LINE
 - SEWER MAN HOLE
 - BITUMINOUS CURBING
 - EDGE OF PAVEMENT
 - APPROX. WATERLINE
 - HYDRANT
 - WATERGATE
 - APPROX. GAS LINE
 - GAS GATE
 - UTILITY POLE & GUY WIRE
 - STOCKADE FENCE
 - CHAIN LINK FENCE
 - LIGHTPOST
 - HANDICAP SPACE
 - ELECTRIC TRANSFORMER
 - SIGN
 - VERTICAL BENCHMARK
 - SPOT GRADE
 - TELEPHONE MAN HOLE

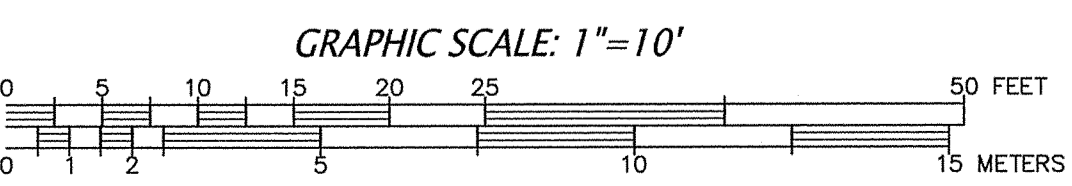


PROPERTY NOTE:
 1. MAP 70, PARCELS 212A, 223A & 224 ARE TO BE ACQUIRED BY THE APPLICANT PRIOR TO CONSTRUCTION.

- SITE DEMOLITION NOTES:**
- EXISTING STRUCTURES SHALL BE RAZED WITH ALL ELECTRIC, CATV AND GAS SERVICES SHALL BE LOCATED AND ABANDONED PER THE UTILITY COMPANY REQUIREMENTS.
 - EXISTING WATER SERVICE TO 27 COTTING SHALL BE ABANDON PER THE MARLBOROUGH DEPARTMENT OF PUBLIC WORKS RULES AND REGULATIONS. SERVICE SHALL BE EXCAVATED AT THE MAIN AND DISCONNECTED AT THE CORPORATION, AND THE CORPORATION TURNED OFF. THE SERVICE TO 28 SOUTH BOLTON STREET SHALL BE PRESERVED FOR SITE IRRIGATION USES.
 - THE SEWER SERVICE TO 28 SOUTH BOLTON STREET IS INTENDED FOR RE-USE FOR THE PROPOSED BUILDING. THE SERVICE SHALL BE LOCATED TO VERIFY THE SIZE, LOCATION, AND ELEVATION. THE SERVICE SHALL BE VIDEO INSPECTED TO VERIFY THE CONDITION.
 - EXISTING SEWER SERVICE TO 27 COTTING SHALL BE LOCATED AND ABANDONED PER THE MARLBOROUGH DEPARTMENT OF PUBLIC WORKS RULES AND REGULATIONS.
 - WITHIN THE AREA INFLUENCED BY PROPOSED FOUNDATION/FOOTINGS; REMOVE ALL EXISTING BUILDING FOUNDATIONS, UTILITIES, PIPES, SLABS, CESSPOOL, TANKS, UNSUITABLE MATERIAL AND BACKFILL ALL VOIDS AND EXCAVATIONS WITH PROPERLY COMPACTED STRUCTURAL FILL.
 - DISPOSAL OF DEMOLITION ITEMS SHALL BE OFF SITE AND IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. NO MATERIALS SHALL BE BURIED ON-SITE. ITEMS SHOWN ON THE PLANS TO BE REMOVED AND STOCKPILED FOR REUSE SHALL NOT BE STOCKPILED WITHIN TRAVEL WAYS OR ABOVE UNDERGROUND UTILITIES.
 - ANY GRANITE CURBING REMOVED FROM THE ROADWAYS AND NOT RE-USED IS TO BE RETURNED TO THE MARLBOROUGH DEPARTMENT OF PUBLIC WORKS.

SOIL LOGS

- | | | |
|---|--|--|
| <p>TP-1
 0-12" FILL
 12-26" Bw SANDY LOAM
 26-50" C SANDY LOAM
 NO MOTTLES
 REFUSAL=50"
 (DATE: 8/7/2018)</p> | <p>TP-3
 0-30" FILL
 30-54" C1 SANDY LOAM
 54-108" C2 LOAMY SAND
 MOTTLES=54"
 REFUSAL=NONE
 EST. GW 54" (ELEV. 377)
 (DATE: 8/7/2018)</p> | <p>TP-5
 0-68" FILL
 68-108" C LOAMY SAND
 MOTTLES=NONE
 REFUSAL=NONE
 (DATE: 7/26/2017)</p> |
| <p>TP-2
 0-48" FILL
 48-72" C SANDY LOAM
 MOTTLES=48"
 REFUSAL=72"
 EST. GW 48" (ELEV. 377)
 (DATE: 8/7/2018)</p> | <p>TP-4
 0-60" FILL
 60-112" C LOAMY SAND
 MOTTLES=NONE
 REFUSAL=NONE
 (DATE: 7/26/2017)</p> | |



OWNERS:
 M & E VENTURES CORPORATION
 4 WATKINS LANE
 SOUTHBOROUGH, MA
 MAP 70, PARCELS 528, 213, 222
 &
 COMMONWEALTH OF MASSACHUSETTS
 MAP 70, PARCEL 212A, 223A, 224



APPROVED
 CITY COUNCIL

APPROVED
 SITE PLAN REVIEW COMMITTEE

DATE: _____

DATE: _____

CONNORSTONE ENGINEERING INC.
 CIVIL ENGINEERS AND LAND SURVEYORS
 10 SOUTHWEST CUTOFF, SUITE 7
 NORTHBOROUGH, MASSACHUSETTS 01532
 PHONE: 508-393-9727 FAX: 508-393-5242

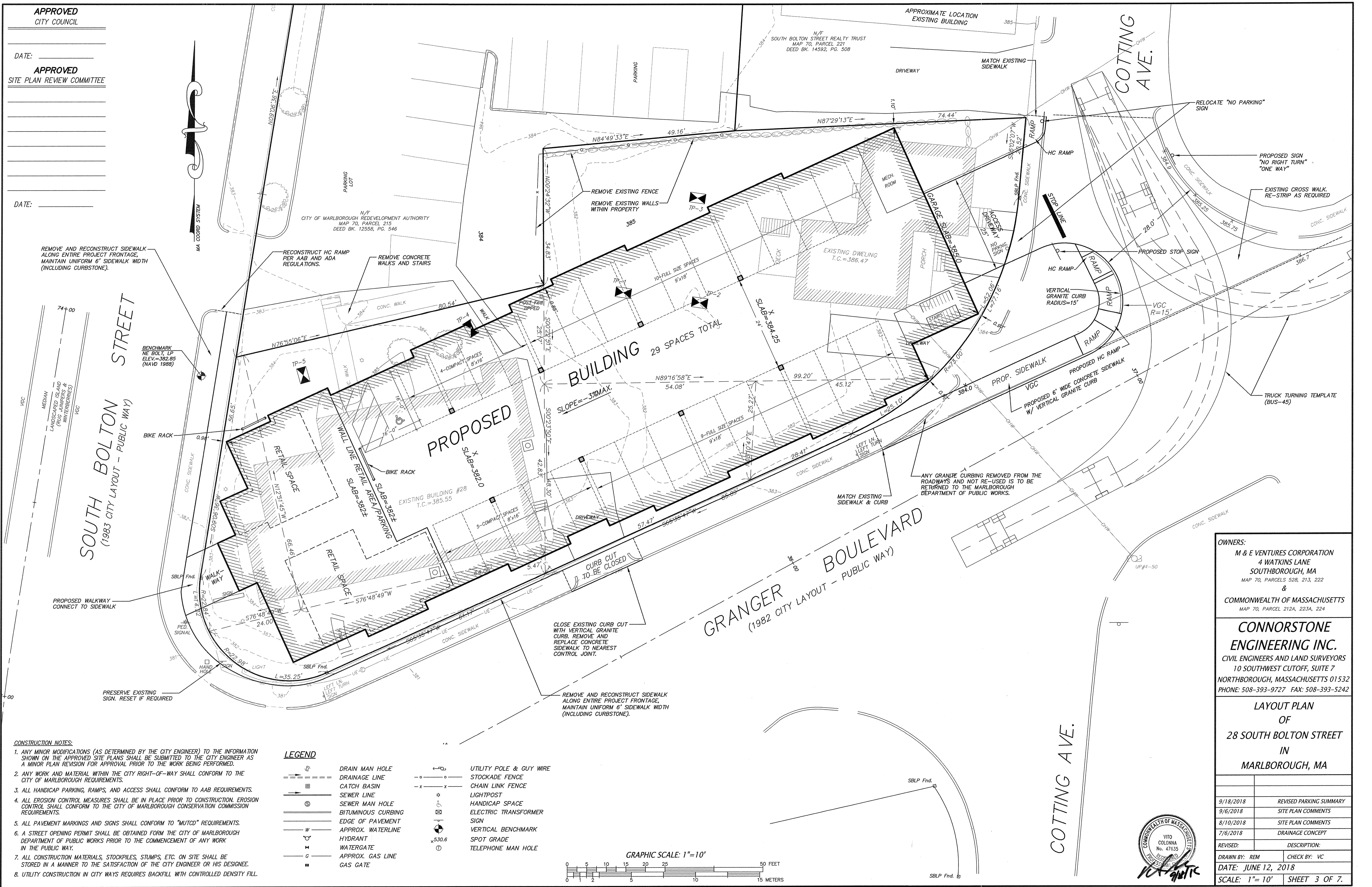
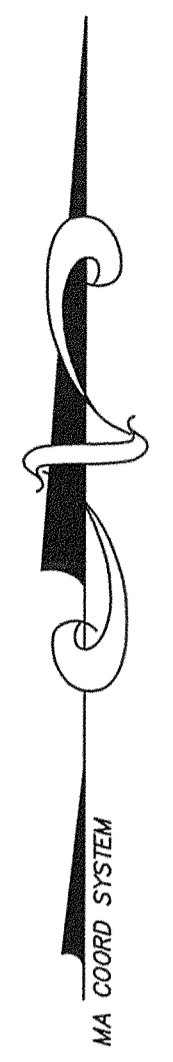
REVISED:	DESCRIPTION:
9/18/2018	REVISED PARKING SUMMARY
9/6/2018	SITE PLAN COMMENTS
8/10/2018	SITE PLAN COMMENTS
DRAWN BY: REM	CHECK BY: VC
DATE: JUNE 12, 2018	
SCALE: 1"=10' SHEET 2 OF 7	

APPROVED
CITY COUNCIL

DATE: _____

APPROVED
SITE PLAN REVIEW COMMITTEE

DATE: _____



REMOVE AND RECONSTRUCT SIDEWALK ALONG ENTIRE PROJECT FRONTAGE. MAINTAIN UNIFORM 6' SIDEWALK WIDTH (INCLUDING CURBSTONE).

RECONSTRUCT HC RAMP PER AAB AND ADA REGULATIONS.

REMOVE CONCRETE WALKS AND STAIRS

REMOVE EXISTING FENCE
REMOVE EXISTING WALLS WITHIN PROPERTY

REMOVE AND RECONSTRUCT SIDEWALK ALONG ENTIRE PROJECT FRONTAGE. MAINTAIN UNIFORM 6' SIDEWALK WIDTH (INCLUDING CURBSTONE).

ANY GRANITE CURBING REMOVED FROM THE ROADWAYS AND NOT RE-USED IS TO BE RETURNED TO THE MARLBOROUGH DEPARTMENT OF PUBLIC WORKS.

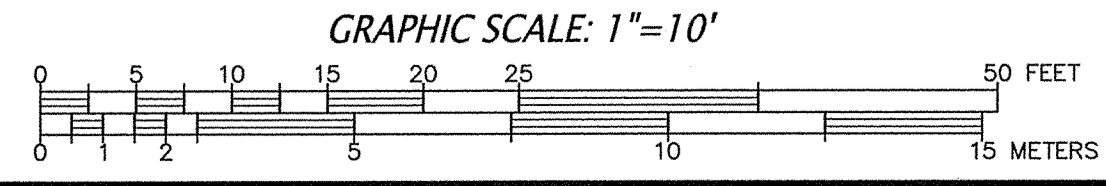
CURB CUT TO BE CLOSED

REMOVE AND RECONSTRUCT SIDEWALK ALONG ENTIRE PROJECT FRONTAGE. MAINTAIN UNIFORM 6' SIDEWALK WIDTH (INCLUDING CURBSTONE).

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 8. UTILITY CONSTRUCTION IN CITY WAYS REQUIRES BACKFILL WITH CONTROLLED DENSITY FILL.

LEGEND

	DRAIN MAN HOLE		UTILITY POLE & GUY WIRE
	DRAINAGE LINE		STOCKADE FENCE
	CATCH BASIN		CHAIN LINK FENCE
	SEWER LINE		LIGHTPOST
	SEWER MAN HOLE		HANDICAP SPACE
	BITUMINOUS CURBING		ELECTRIC TRANSFORMER
	EDGE OF PAVEMENT		SIGN
	APPROX. WATERLINE		VERTICAL BENCHMARK
	HYDRANT		SPOT GRADE
	WATERGATE		TELEPHONE MAN HOLE
	APPROX. GAS LINE		
	GAS GATE		



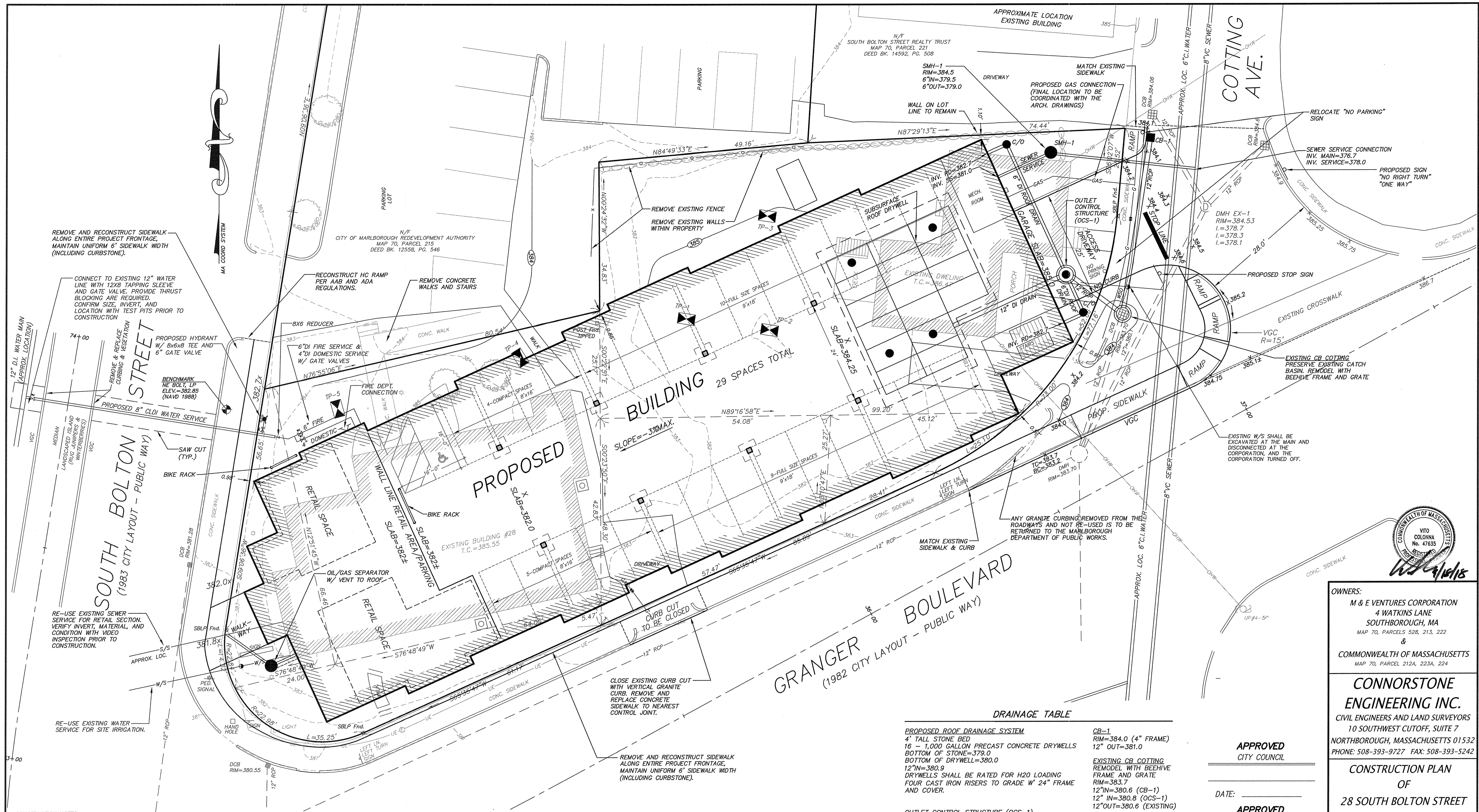
OWNERS:
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MAP 70, PARCELS 528, 213, 222
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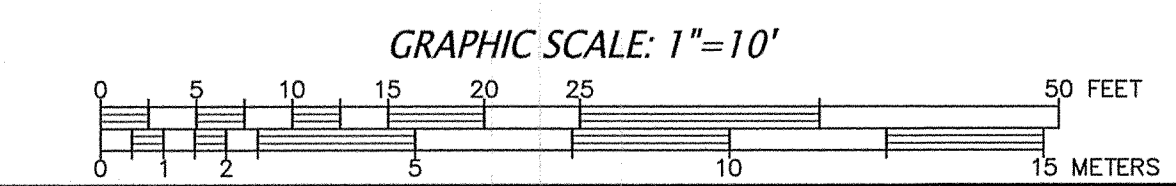
LAYOUT PLAN
OF
28 SOUTH BOLTON STREET
IN
MARLBOROUGH, MA

9/18/2018	REVISED PARKING SUMMARY
9/6/2018	SITE PLAN COMMENTS
8/10/2018	SITE PLAN COMMENTS
7/6/2018	DRAINAGE CONCEPT
REVISED:	DESCRIPTION:
DRAWN BY: REM	CHECK BY: VC
DATE: JUNE 12, 2018	
SCALE: 1"=10'	SHEET 3 OF 7.





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LEGEND

	DRAIN MAN HOLE		UTILITY POLE & GUY WIRE
	DRAINAGE LINE		STOCKADE FENCE
	CATCH BASIN		CHAIN LINK FENCE
	SEWER LINE		LIGHTPOST
	SEWER MAN HOLE		HANDICAP SPACE
	BITUMINOUS CURBING		ELECTRIC TRANSFORMER
	EDGE OF PAVEMENT		SIGN
	APPROX. WATERLINE		VERTICAL BENCHMARK
	WATERGATE		SPOT GRADE
	APPROX. GAS LINE		TELEPHONE MAN HOLE
	GAS GATE		

DRAINAGE TABLE

PROPOSED ROOF DRAINAGE SYSTEM	CB-1
4" TALL STONE BED	RIM=384.0 (4" FRAME)
16 - 1,000 GALLON PRECAST CONCRETE DRYWELLS	12" OUT=381.0
BOTTOM OF STONE=379.0	
BOTTOM OF DRYWELL=380.0	
12" IN=380.9	EXISTING CB COTTING
DRYWELLS SHALL BE RATED FOR H2O LOADING	REMODEL WITH BEEHIVE
FOUR CAST IRON RISERS TO GRADE W/ 24" FRAME	FRAME AND GRATE
AND COVER.	RIM=383.7
	12" IN=380.6 (CB-1)
	12" IN=380.8 (OCS-1)
	12" OUT=380.6 (EXISTING)
OUTLET CONTROL STRUCTURE (OCS-1)	
RIM=384.4	
4" DIA. CATCH BASIN W/ 4" SUMP	
(2) 6" DI ROOF DRAIN IN=382.1 (SIZE PER ARCH DRAWINGS)	
12" OUT=381.10 (TO DRYWELL)	
12" OUT/OVERFLOW=382.00 (TO EXISTING CB COTTING)	

- DRAINAGE NOTES:**
1. ALL DRAIN PIPE 10 FEET OUTSIDE THE BUILDING TO BE HDPE PIPE. ALL PIPE MATERIAL WITHIN THE BUILDING OR 10 FEET OF THE FOUNDATION SHALL BE PER THE ARCHITECTURAL PLANS. WITHIN
 2. ALL ROOF DRAINAGE SHALL CONNECT TO THE INFILTRATION SYSTEM. ROOF DRAIN COLLECTION SYSTEM PER THE ARCHITECTURAL DRAWINGS..

APPROVED
CITY COUNCIL

DATE: _____
APPROVED
SITE PLAN REVIEW COMMITTEE

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OWNERS:
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CONSTRUCTION PLAN
OF
28 SOUTH BOLTON STREET
IN
MARLBOROUGH, MA

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SCALE: 1"=10'	SHEET 4 OF 7.

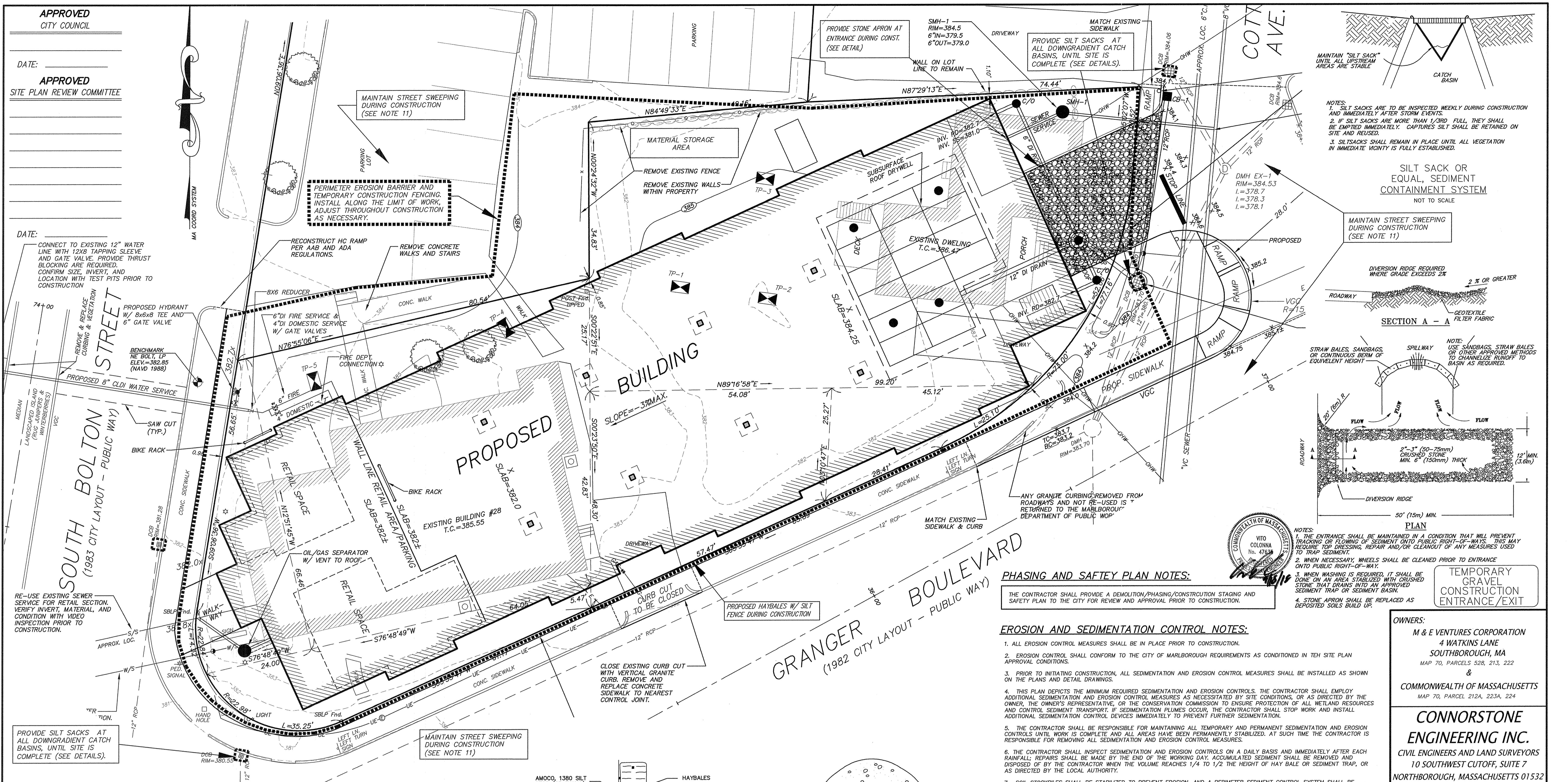


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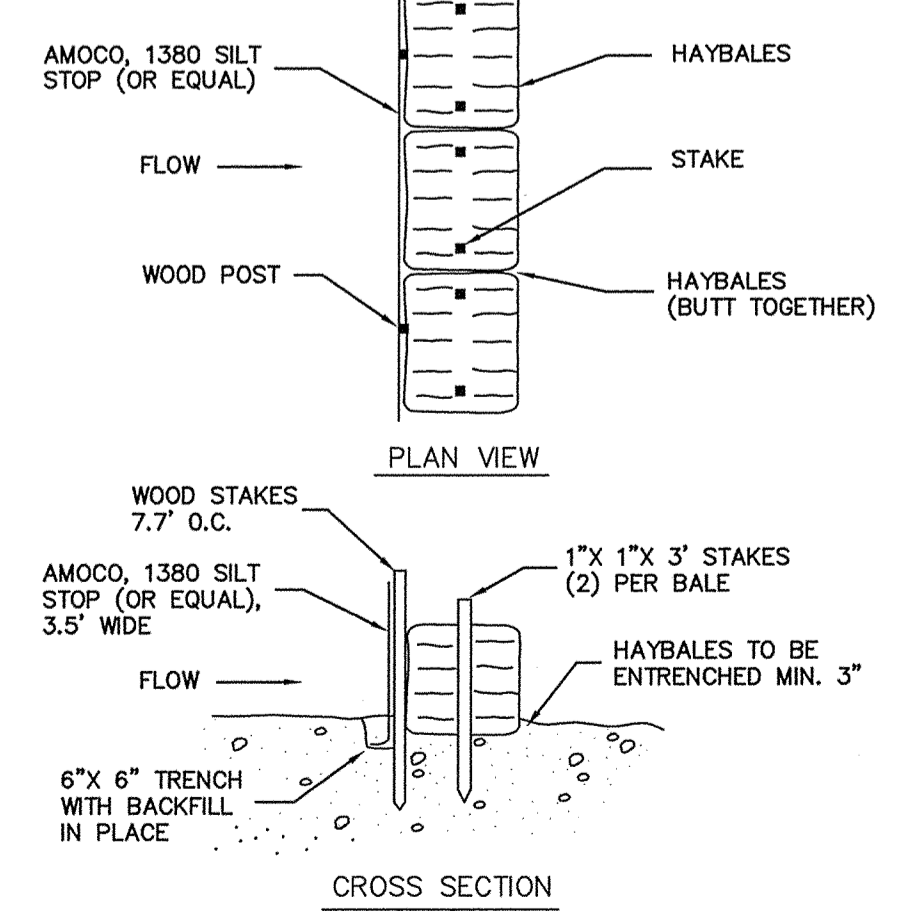
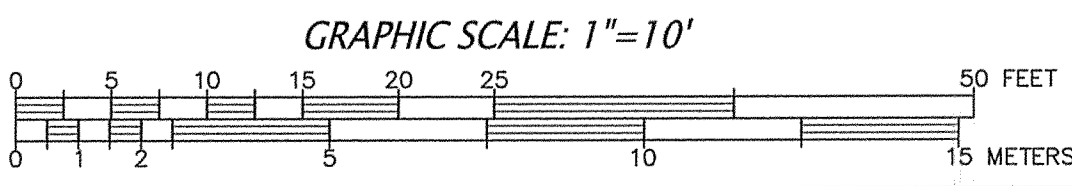
APPROVED
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APPROVED
SITE PLAN REVIEW COMMITTEE

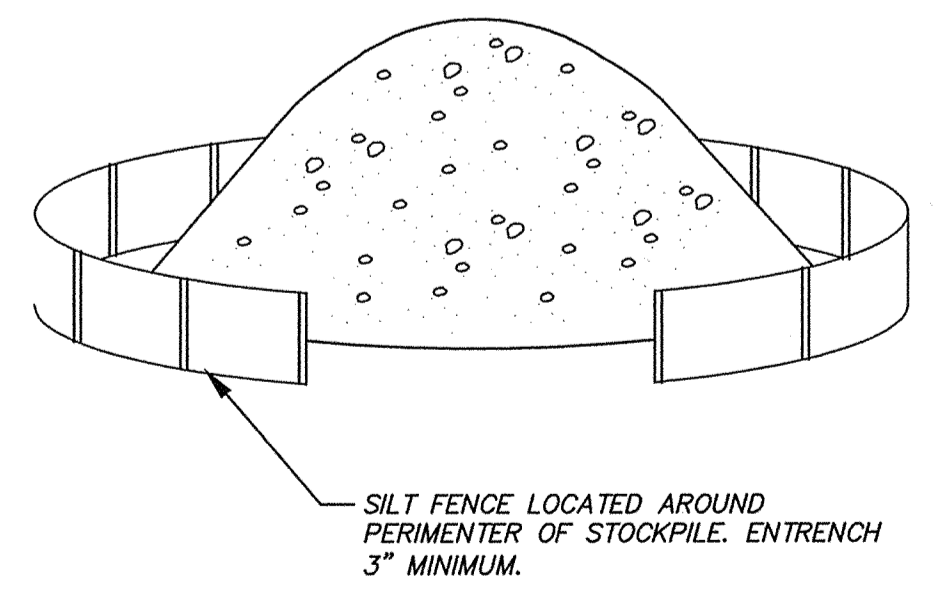
DATE: _____
CONNECT TO EXISTING 12" WATER LINE WITH 12X8 TAPPING SLEEVE AND GATE VALVE. PROVIDE THRUST BLOCKING AS REQUIRED. CONFIRM SIZE, INVERT, AND LOCATION WITH TEST PITS PRIOR TO CONSTRUCTION.



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EROSION CONTROL BARRIER
NOT TO SCALE



- NOTES:**
- NO MATERIALS SUBJECT TO EROSION SHALL BE STOCKPILED OVERNIGHT WITHIN 100 FEET OF A WETLAND UNLESS COVERED.
 - STOCKPILES SHALL BE LOCATED ON DRY STABLE AREAS.
 - STOCKPILE TO REMAIN FOR EXTENDED PERIODS SHALL BE STABILIZED WITH A TEMPORARY SEED MIXTURE.
 - PROVIDE SAFETY FENCING AROUND STOCKPILES OVER 10' IN HEIGHT OR OTHERWISE RESTRICT SITE ACCESS.

SOIL STOCKPILE DETAIL
NOT TO SCALE

PHASING AND SAFETY PLAN NOTES:

THE CONTRACTOR SHALL PROVIDE A DEMOLITION/PHASING/CONSTRUCTION STAGING AND SAFETY PLAN TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

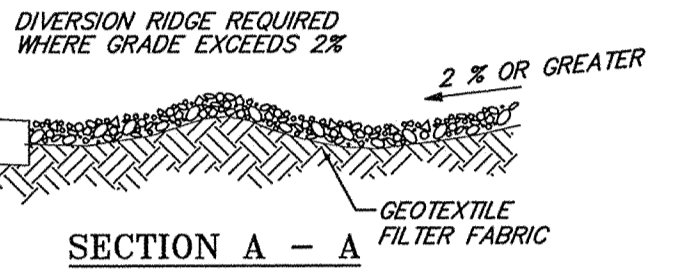
EROSION AND SEDIMENTATION CONTROL NOTES:

- ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION.
- EROSION CONTROL SHALL CONFORM TO THE CITY OF MARLBOROUGH REQUIREMENTS AS CONDITIONED IN THE SITE PLAN APPROVAL CONDITIONS.
- PRIOR TO INITIATING CONSTRUCTION, ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND DETAIL DRAWINGS.
- THIS PLAN DEPICTS THE MINIMUM REQUIRED SEDIMENTATION AND EROSION CONTROLS. THE CONTRACTOR SHALL EMPLOY ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES AS NECESSITATED BY SITE CONDITIONS, OR AS DIRECTED BY THE OWNER, THE OWNER'S REPRESENTATIVE, OR THE CONSERVATION COMMISSION TO ENSURE PROTECTION OF ALL WETLAND RESOURCES AND CONTROL SEDIMENT TRANSPORT. IF SEDIMENTATION PLUMES OCCUR, THE CONTRACTOR SHALL STOP WORK AND INSTALL ADDITIONAL SEDIMENTATION CONTROL DEVICES IMMEDIATELY TO PREVENT FURTHER SEDIMENTATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY AND PERMANENT SEDIMENTATION AND EROSION CONTROLS UNTIL WORK IS COMPLETE AND ALL AREAS HAVE BEEN PERMANENTLY STABILIZED. AT SUCH TIME THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SEDIMENTATION AND EROSION CONTROL MEASURES.
- THE CONTRACTOR SHALL INSPECT SEDIMENTATION AND EROSION CONTROLS ON A DAILY BASIS AND IMMEDIATELY AFTER EACH RAINFALL. REPAIRS SHALL BE MADE BY THE END OF THE WORKING DAY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR WHEN THE VOLUME REACHES 1/4 TO 1/2 THE HEIGHT OF HAY BALE OR SEDIMENT TRAP, OR AS DIRECTED BY THE LOCAL AUTHORITY.
- SOIL STOCKPILES SHALL BE STABILIZED TO PREVENT EROSION, AND A PERIMETER SEDIMENT CONTROL SYSTEM SHALL BE INSTALLED. FENCING SHALL BE INSTALLED AROUND STOCKPILES IN EXCESS OF 10 FEET IN HEIGHT.
- DISTURBED AREAS SHALL BE STABILIZED BY LOAMING AND SEEDING, OR BY ANOTHER APPROVED METHOD, AS SOON AS POSSIBLE AFTER THE FINISHED GRADE HAS BEEN MET. DISTURBED AREAS WITH SLOPES 3:1 (H:V) OR GREATER SHALL BE COVERED WITH LOAM AND STABILIZED WITH HYDROSEED AND SOIL TACKIFIER. IF FINAL GRADING DOES NOT OCCUR DURING THE GROWING SEASON, THESE AREAS SHALL BE MULCHED WITH HAY SECURED.
- DE-WATERING OPERATIONS, IF REQUIRED, SHALL DISCHARGE ONTO STABILIZED AREAS, AND ALL DISCHARGE WATER IS TO PASS THROUGH SEDIMENTATION CONTROL DEVICES TO PREVENT IMPACTS UPON WATER BODIES, BORDERING VEGETATED WETLANDS, DRAINAGE SYSTEMS AND ADJACENT PROPERTIES. AT A MINIMUM ALL DISCHARGES SHALL BE INTERCEPTED BY HAY BALE CORRAL AND HAY BALE CHECK DAMS SPACED 10' APART.
- STAKED HAY BALES AND SILT FENCE SHALL BE INSTALLED ALONG THE EDGE OF PROPOSED DEVELOPMENT OR AS INDICATED ON THE PLANS. ADDITIONAL HAY BALES AND SILT FENCE SHALL BE LOCATED AS CONDITIONS WARRANT, AND IN SOME AREAS HAYBALE/SILT FENCING STRUCTURES MAY HAVE TO BE DUPLICATED AT REGULAR INTERVALS UP GRADIENT OF WETLANDS.
- STREET SWEEPING IN THE VICINITY OF THE PROJECT AREA SHALL BE PERFORMED AS NEEDED UNTIL THE PROJECT LIMITS HAVE BEEN STABILIZED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS SHALL BE SWEEPED AT THE END OF EACH WORKING DAY.
- ALL EXISTING AND PROPOSED DRAINAGE SYSTEM INLETS, WHICH MAY RECEIVE STORM WATER FLOW FROM DISTURBED AREAS, SHALL BE PROVIDED WITH INLET PROTECTION (CATCH BASIN INSERTS, STREAMGUARD - MODEL 3003, OR APPROVED EQUAL), AND CONTRACTOR SHALL MAINTAIN THESE DEVICES PER THE MANUFACTURERS RECOMMENDATIONS UNTIL ALL WORK IS COMPLETED AND ALL AREAS HAVE BEEN ADEQUATELY STABILIZED.
- DUST CONTROL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED PROPERLY THROUGHOUT DRY WEATHER PERIODS UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. METHODS FOR DUST CONTROL SHALL INCLUDE WATER SPRINKLING AND/OR OTHER METHODS APPROVED BY THE ENGINEER.
- ALL VEHICLES SHALL ENTER AND EXIT THE SITE VIA THE STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF 3/4"-1 1/2" INCH CRUSHED STONE TO A DEPTH OF 12" FOR THE FIRST 50 FEET FROM EXISTING PAVED STREETS, IF THE SITE CONDITIONS ARE SUCH THAT THE GRAVEL PAD DOES NOT WASH THE MAJORITY OF THE MUD AND DEBRIS, THEN THE TIRES SHALL BE WASHED BEFORE ANY VEHICLES ENTER ADJACENT ROADWAYS. ALL WATER USED FOR TIRE WASHING SHALL BE COLLECTED AND TREATED PRIOR TO ENTERING THE DRAINAGE SYSTEM. THE CONTRACTOR SHALL INSPECT THE CONSTRUCTION ENTRANCE DAILY AND AFTER HEAVY USE.
- EQUIPMENT SHALL NOT BE PARKED WITHIN WETLANDS.

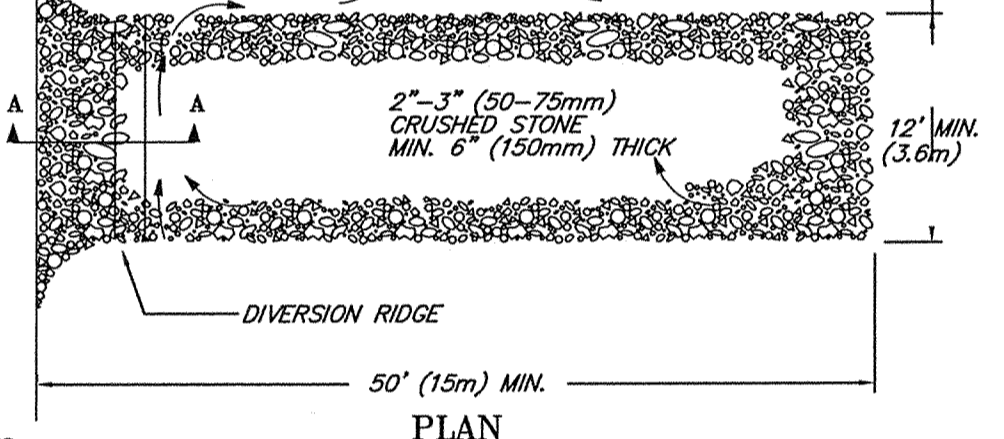
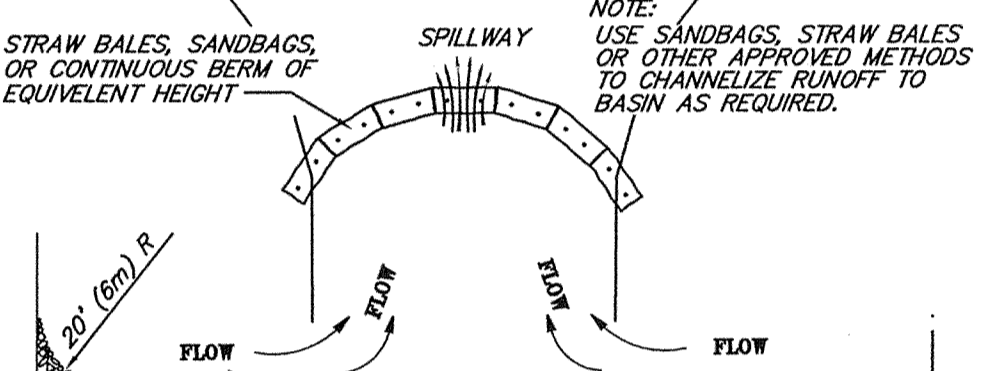
- NOTES:**
- SILT SACKS ARE TO BE INSPECTED WEEKLY DURING CONSTRUCTION AND IMMEDIATELY AFTER STORM EVENTS.
 - IF SILT SACKS ARE MORE THAN 1/3RD FULL, THEY SHALL BE EMPTIED IMMEDIATELY. CAPTURED SILT SHALL BE RETAINED ON SITE AND REUSED.
 - SILT SACKS SHALL REMAIN IN PLACE UNTIL ALL VEGETATION IN IMMEDIATE VICINITY IS FULLY ESTABLISHED.

SILT SACK OR EQUAL, SEDIMENT CONTAINMENT SYSTEM
NOT TO SCALE

MAINTAIN STREET SWEEPING DURING CONSTRUCTION (SEE NOTE 11)



SECTION A - A



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT PLAN

- NOTES:**
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 - STONE APRON SHALL BE REPLACED AS DEPOSITED SOILS BUILD UP.



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EROSION CONTROL PLAN OF 28 SOUTH BOLTON STREET IN MARLBOROUGH, MA

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SCALE: 1"=10'	SHEET 5 OF 7.

STORMWATER OPERATIONS AND MANAGEMENT PLAN
FINAL COMMISSIONING AND LONG-TERM MAINTENANCE PROGRAM

STORMWATER MANAGEMENT SYSTEM OWNER: SITE OWNER
RESPONSIBLE PARTY: SITE OWNER

THIS OPERATION AND MAINTENANCE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE MA DEPARTMENT OF ENVIRONMENTAL PROTECTION STORMWATER STANDARDS AND RECOMMENDATIONS OUTLINED IN THE STORMWATER HANDBOOK. THIS PLAN OUTLINES THE MINIMUM EFFORTS NECESSARY TO ENSURE THAT THE STORMWATER COLLECTION AND TREATMENT SYSTEM AND SEDIMENTATION AND EROSION CONTROL SYSTEM FOR THIS SITE OPERATES IN ACCORDANCE WITH MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) STORMWATER MANAGEMENT POLICY. EFFORTS IN ADDITION TO THE MINIMUM LISTED HEREIN MAY BE REQUIRED TO ENSURE ADEQUATE STORMWATER MANAGEMENT.

THIS PLAN INCLUDES GENERAL SITE RESTRICTIONS, ROUTING/NON-ROUTINE OPERATION AND MAINTENANCE; REPORTING AND RECORD KEEPING; AND AN ESTIMATED BUDGET.

GENERAL CONDITIONS
THE FOLLOWING CONDITIONS ARE IMPOSED AS PART OF THIS PLAN.
• ILLICIT DISCHARGES INTO STORMWATER MANAGEMENT SYSTEM ARE PERPETUALLY PROHIBITED.
• THE USE OF FERTILIZERS SHOULD BE LIMITED TO SLOW-RELEASE, LOW-NITROGEN FERTILIZERS.

ALL INSPECTION REPORTS SHALL BE SUBMITTED TO THE CITY ENGINEERING DEPARTMENT ANNUALLY BY JUNE 1ST OF EACH YEAR.
THE CITY ENGINEER OR ITS DESIGNEE SHALL HAVE THE RIGHT TO ENTER THE PROPERTY AT REASONABLE TIMES AND IN A REASONABLE MANNER FOR INSPECTIONS.

OPERATION AND MAINTENANCE:
ALL STORMWATER MANAGEMENT FACILITIES SHOULD BE INSPECTED A MINIMUM OF TWO TIMES PER YEAR, WITH AT LEAST ONE OF THE INSPECTIONS FOLLOWING A MAJOR STORM (GREATER THAN 1 INCH) PER YEAR. UPON COMPLETION OF INSPECTION, THE INSPECTOR SHOULD SPECIFY ANY NECESSARY CORRECTIVE ACTIONS TO BE TAKEN BY OWNERSHIP OF THE FACILITY. THE ITEMS TO BE INSPECTED AND MAINTAINED ARE DESCRIBED IN THE FOLLOWING SECTIONS.

BASED ON THE OBSERVED CONDITIONS, THE RESPONSIBLE PARTY SHALL IMMEDIATELY SCHEDULE THE APPROPRIATE MAINTENANCE. SOME MINOR MAINTENANCE, SUCH AS THE REMOVAL OF BLOCKAGES, DEBRIS AND SAPLINGS IN THE BASINS MAY BE CONDUCTED AT THE TIME OF THE INSPECTION. MORE DIFFICULT MAINTENANCE ACTIVITIES, REQUIRING SPECIAL EQUIPMENT, WILL HAVE TO BE SCHEDULED, SUCH AS THE REMOVAL OF EXCESSIVE SEDIMENT OR THE REPAIR OF ERODED AREAS. ALL SEDIMENT MUST BE REMOVED AT LEAST ONCE PER YEAR.

CATCH BASINS AND MANHOLES
THE ACTUAL REMOVAL OF SEDIMENTS AND ASSOCIATED POLLUTANTS AND TRASH OCCURS ONLY WHEN SUMPS ARE CLEANED OUT. THEREFORE, REGULAR MAINTENANCE IS REQUIRED. THE MORE FREQUENT THE CLEANING, THE LESS LIKELY SEDIMENTS WILL BE RESUSPENDED AND SUBSEQUENTLY DISCHARGED. FREQUENT CLEANING ALSO RESULTS IN MORE VOLUME AVAILABLE FOR FUTURE STORMS AND ENHANCES THE OVERALL PERFORMANCE.

AT A MINIMUM, DEEP SUMPS SHOULD BE INSPECTED TWICE ANNUALLY, AND CLEANED WHENEVER SEDIMENT ACCUMULATION EXCEEDS HALF THE SUMP DEPTH (TYPICALLY TWO FEET). DISPOSAL OF THE ACCUMULATED SEDIMENT AND HYDROCARBONS MUST BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL GUIDELINES AND REGULATIONS. AT EACH INSPECTION, INSPECT GAS TRAP HOODS AND REPAIR AS NECESSARY. INSPECT OUTLET PIPE AND REMOVE DEBRIS.

CLAMSHHELL BUCKETS ARE TYPICALLY USED TO REMOVE SEDIMENT IN MASSACHUSETTS. HOWEVER, VACUUM TRUCKS ARE PREFERABLE, BECAUSE THEY REMOVE MORE TRAPPED SEDIMENT AND SUPERNATANT THAN CLAMSHHELLS. VACUUMING IS ALSO A SPEEDIER PROCESS AND IS LESS LIKELY TO SNAP THE CAST IRON HOOD WITHIN THE DEEP SUMP CATCH BASIN.

DEBRIS ACCUMULATION
THE INSPECTOR SHALL CHECK PAVEMENT AND PEROUS SURFACES FOR BOTH SEDIMENT AND DEBRIS ACCUMULATIONS. DEBRIS AND SEDIMENT SHALL BE REMOVED AT THE TIME OF THE INSPECTION, IF FEASIBLE. SEDIMENT SHALL NOT BE ALLOWED TO ACCUMULATE AND RESTRICT FLOWS. MOST DEBRIS CAN BE REMOVED BY HAND OR WITH HAND TOOLS (E.G. SHOVEL). SOME LARGER OBJECTS, SUCH AS FALLEN TREE LIMBS, MAY HAVE TO BE CUT UP BEFORE REMOVAL BY HAND IS POSSIBLE.

VEGETATION
THE INITIAL VEGETATION INSPECTION SHALL OCCUR FOUR (4) WEEKS AFTER FINAL STABILIZATION OF THE SITE; VEGETATION SHALL BE DENSE (AND AESTHETICALLY ACCEPTABLE ON ALL PORTIONS OF THE PROJECT, INCLUDING THE SIDE SLOPES, BUFFER STRIPS AND THE EMBANKMENTS). THE INSPECTOR SHALL DETERMINE AND DOCUMENT: (1) WHETHER FERTILIZING IS REQUIRED (2) THE AREAS WHERE GRASS SHALL BE MOWED, AND (3) THE AREAS WHICH SHALL BE PROTECTED AGAINST EROSION. IN ADDITION, RECENTLY SEEDED AREAS SHALL BE INSPECTED FOR FAILURES.

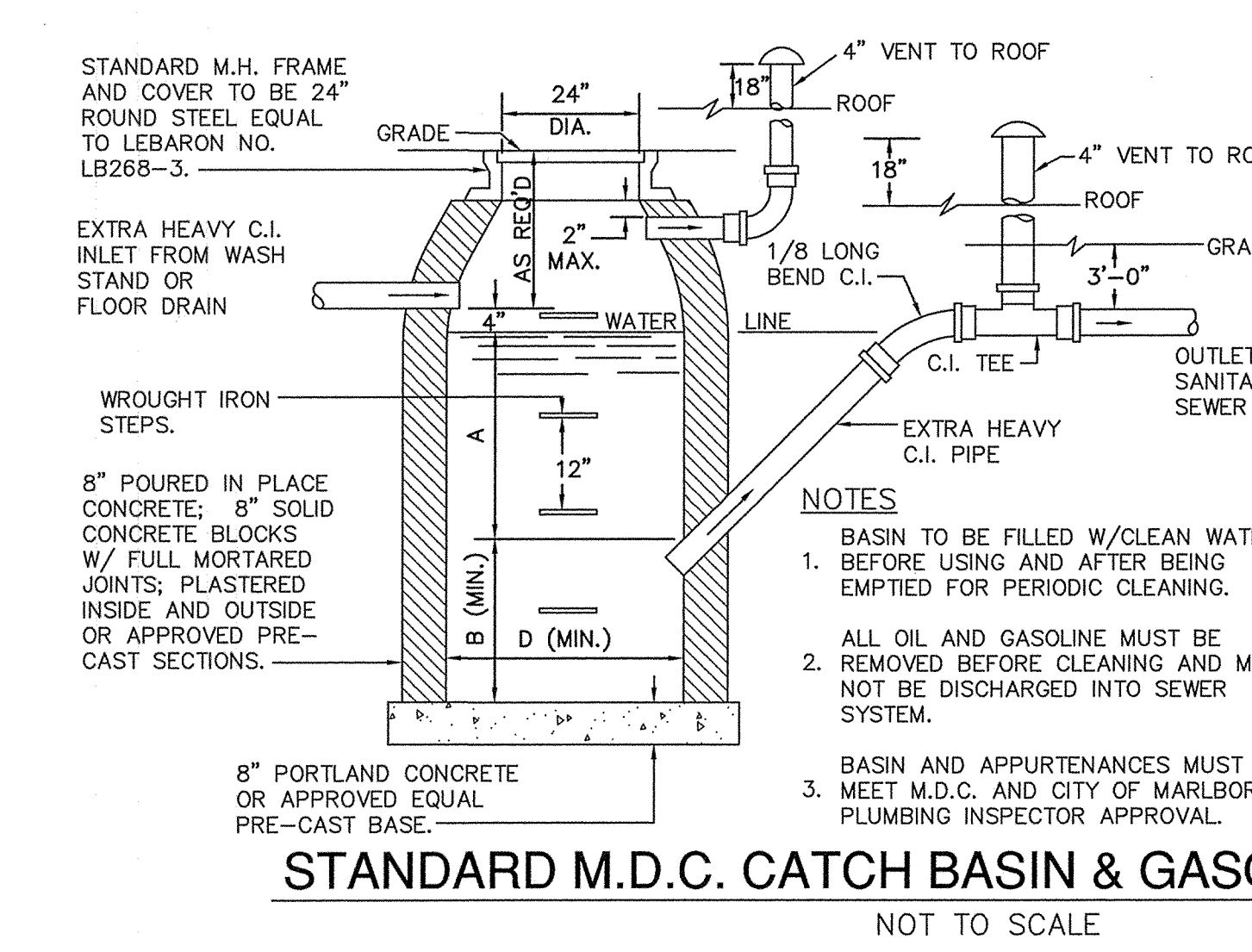
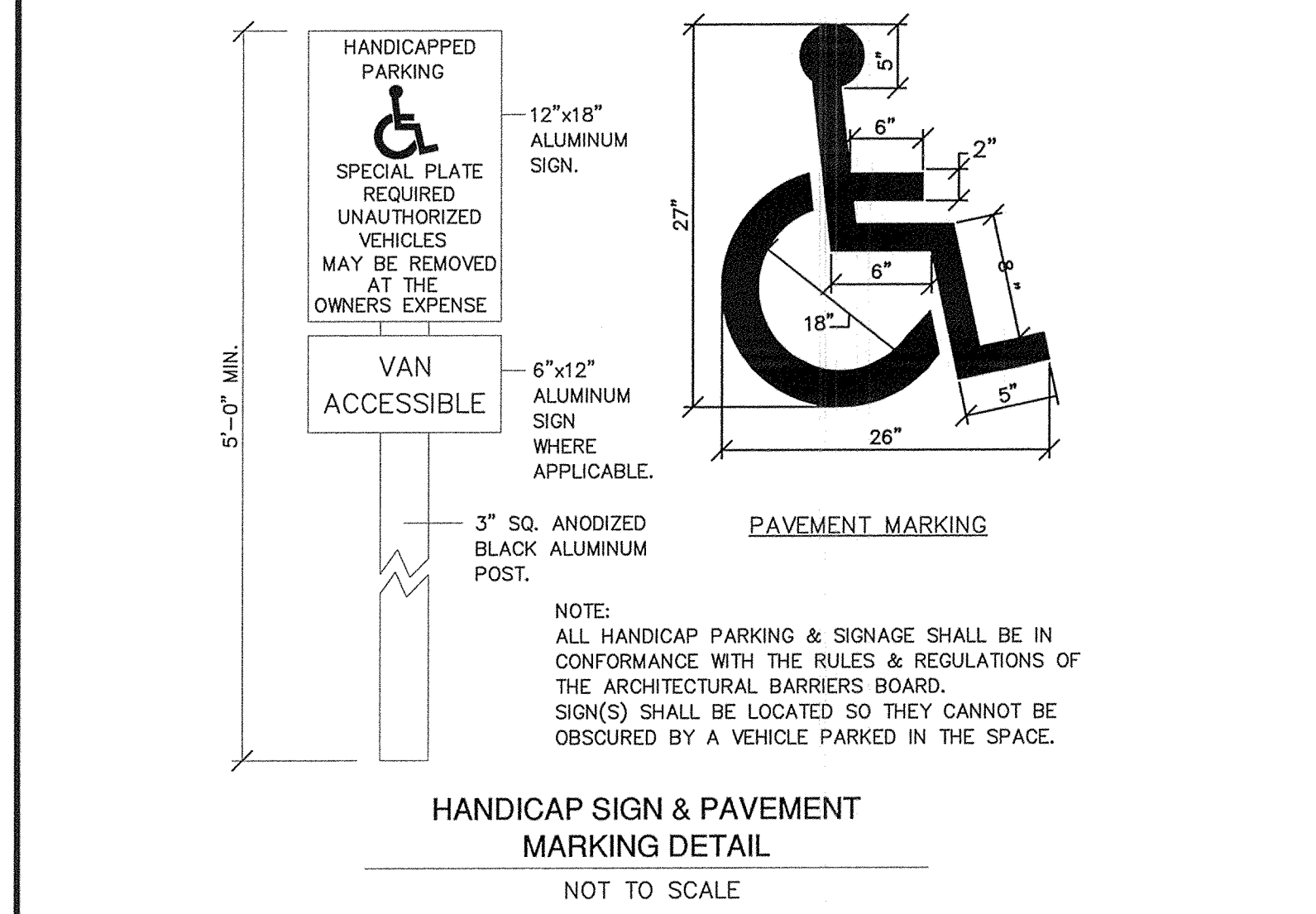
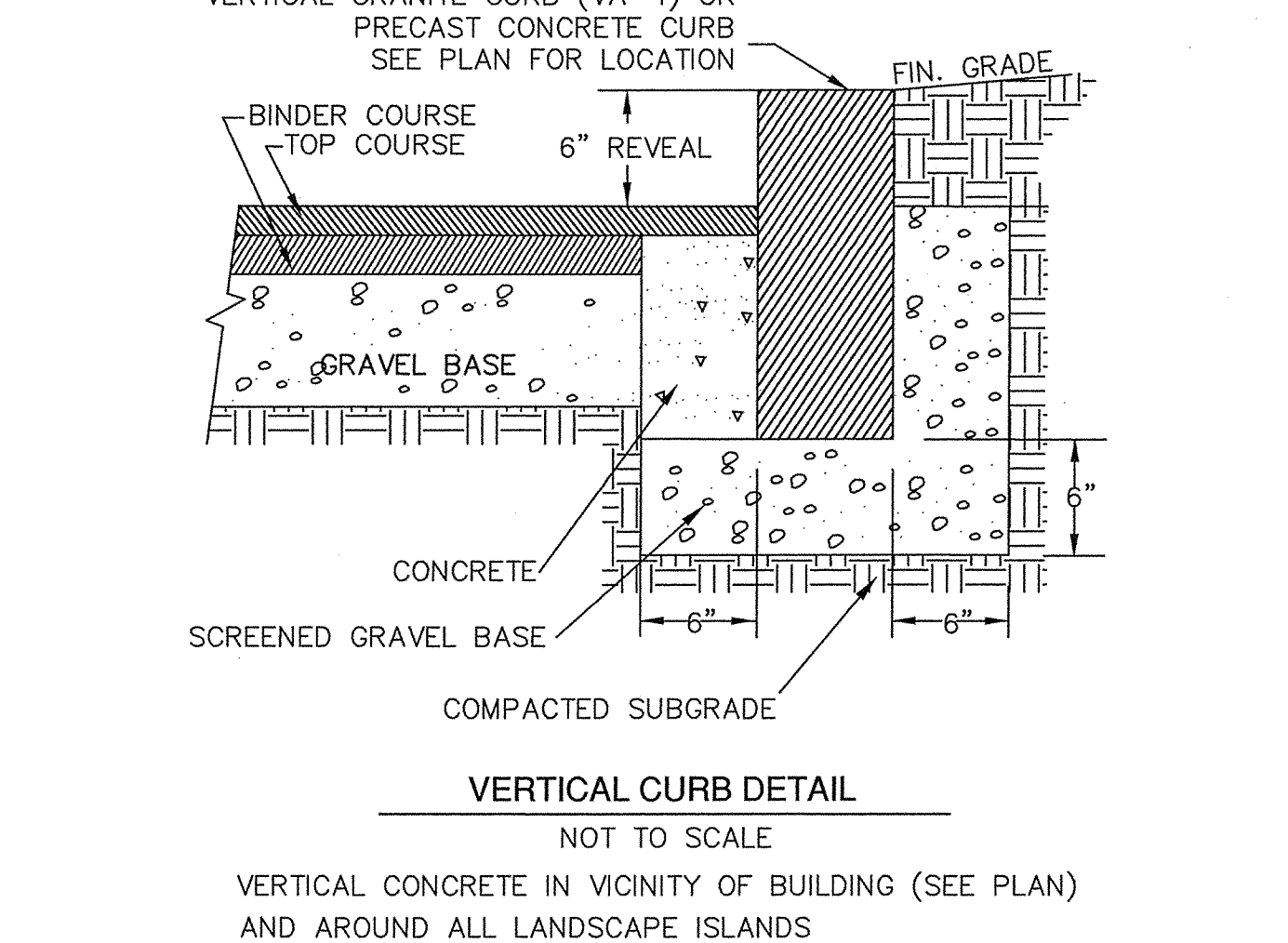
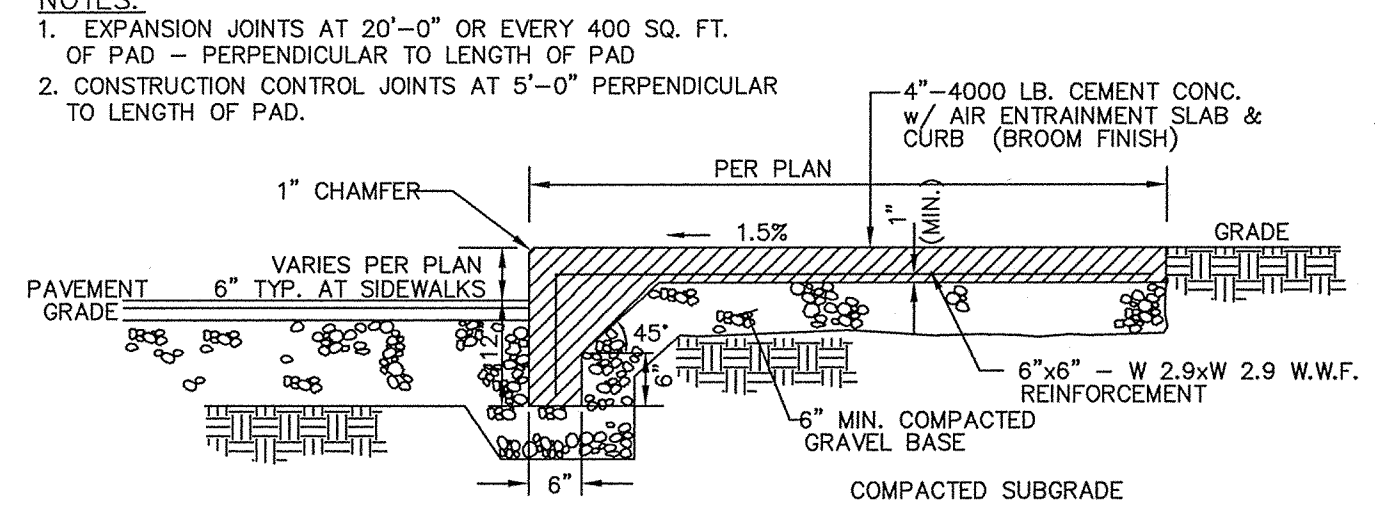
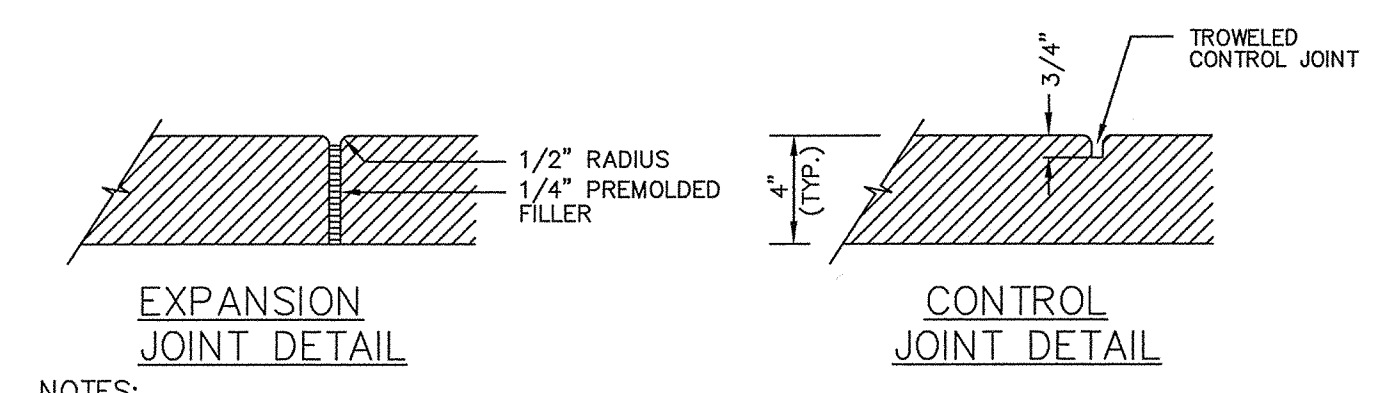
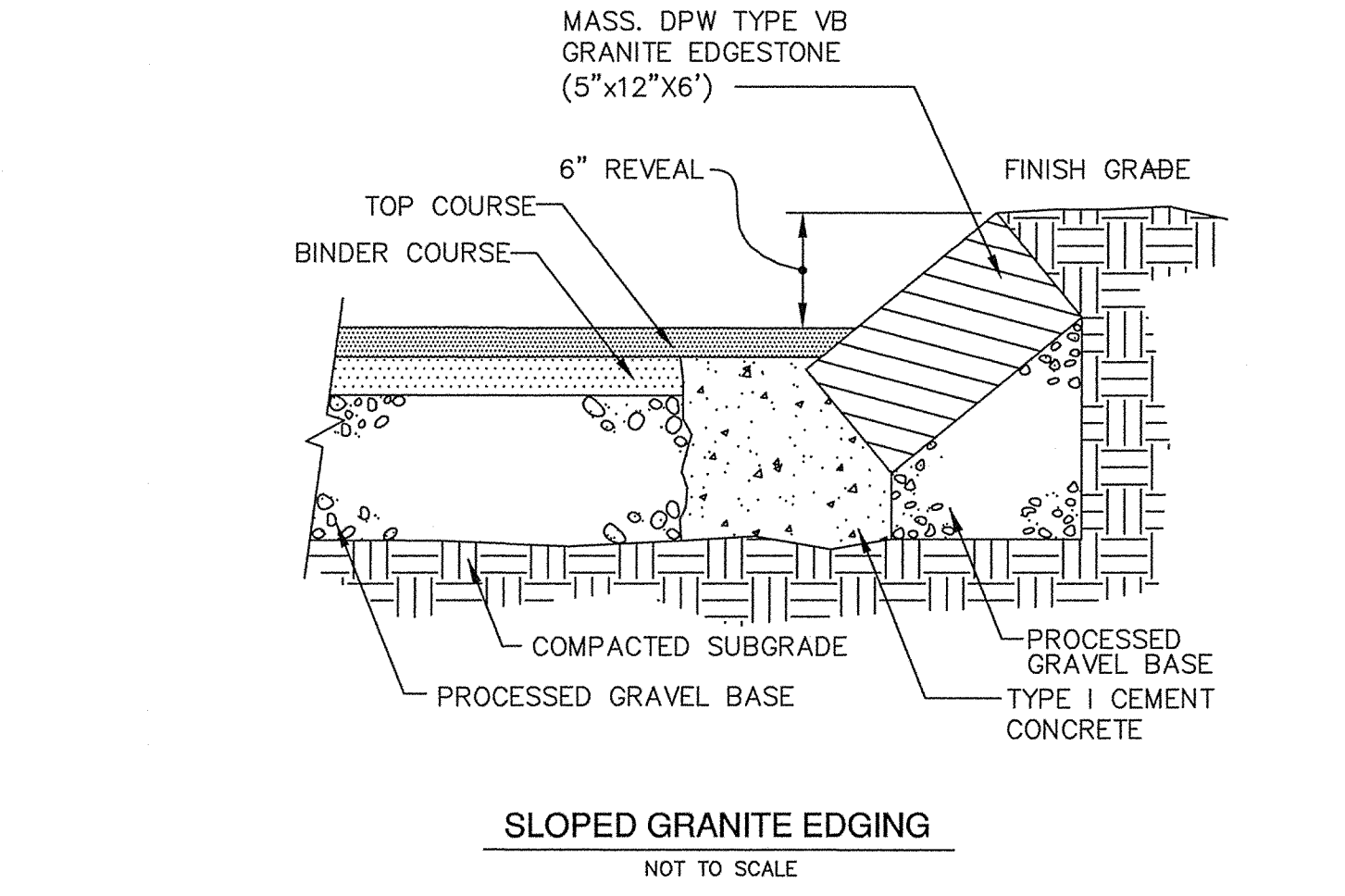
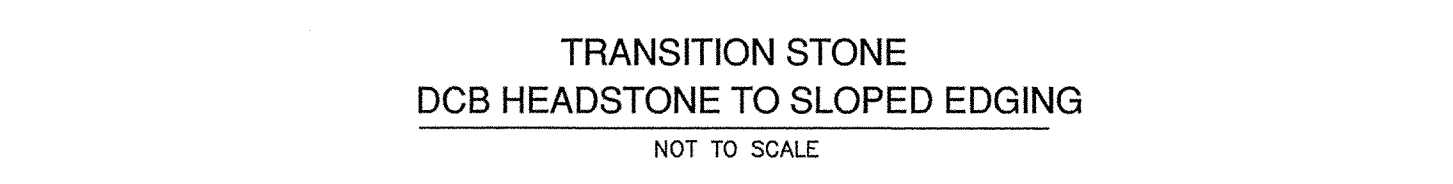
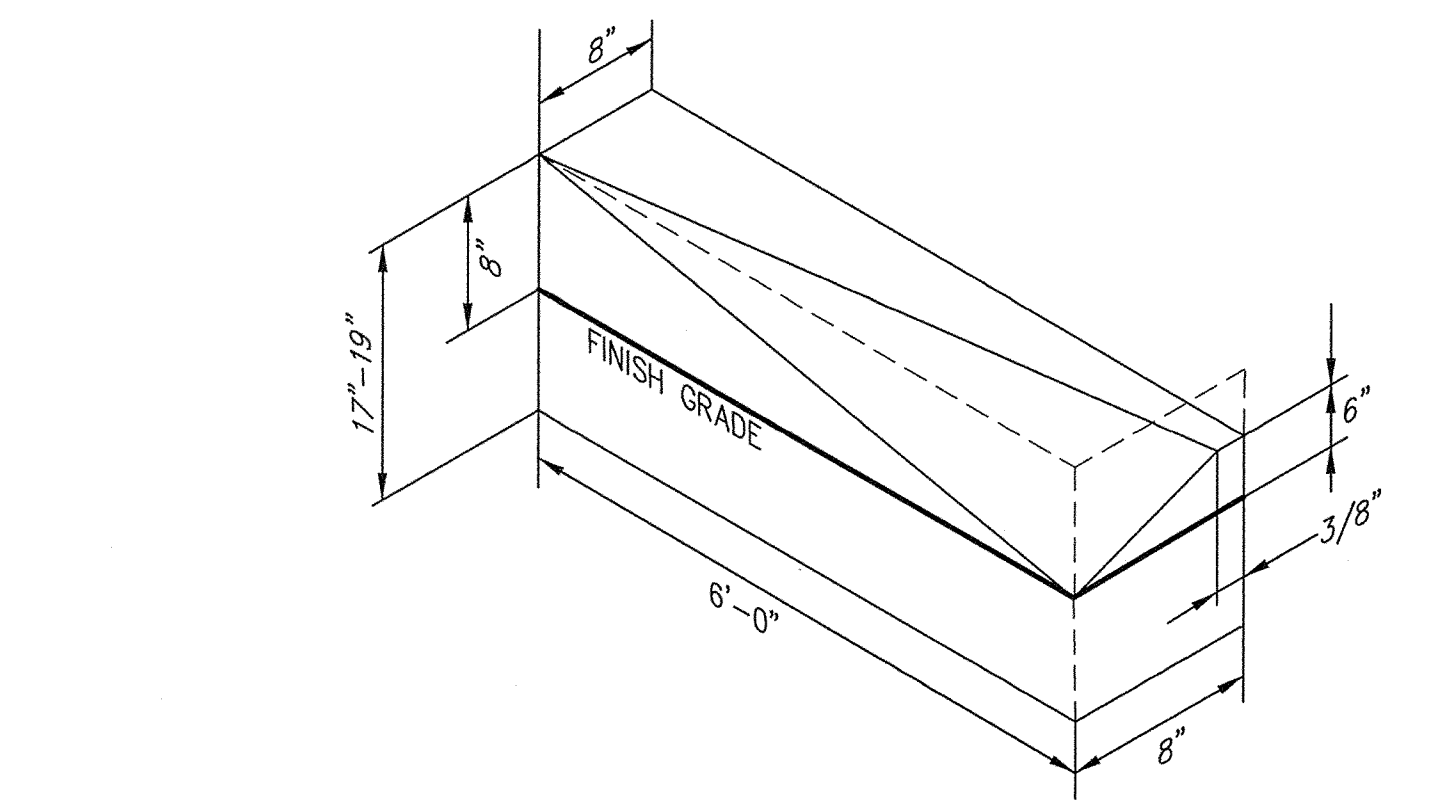
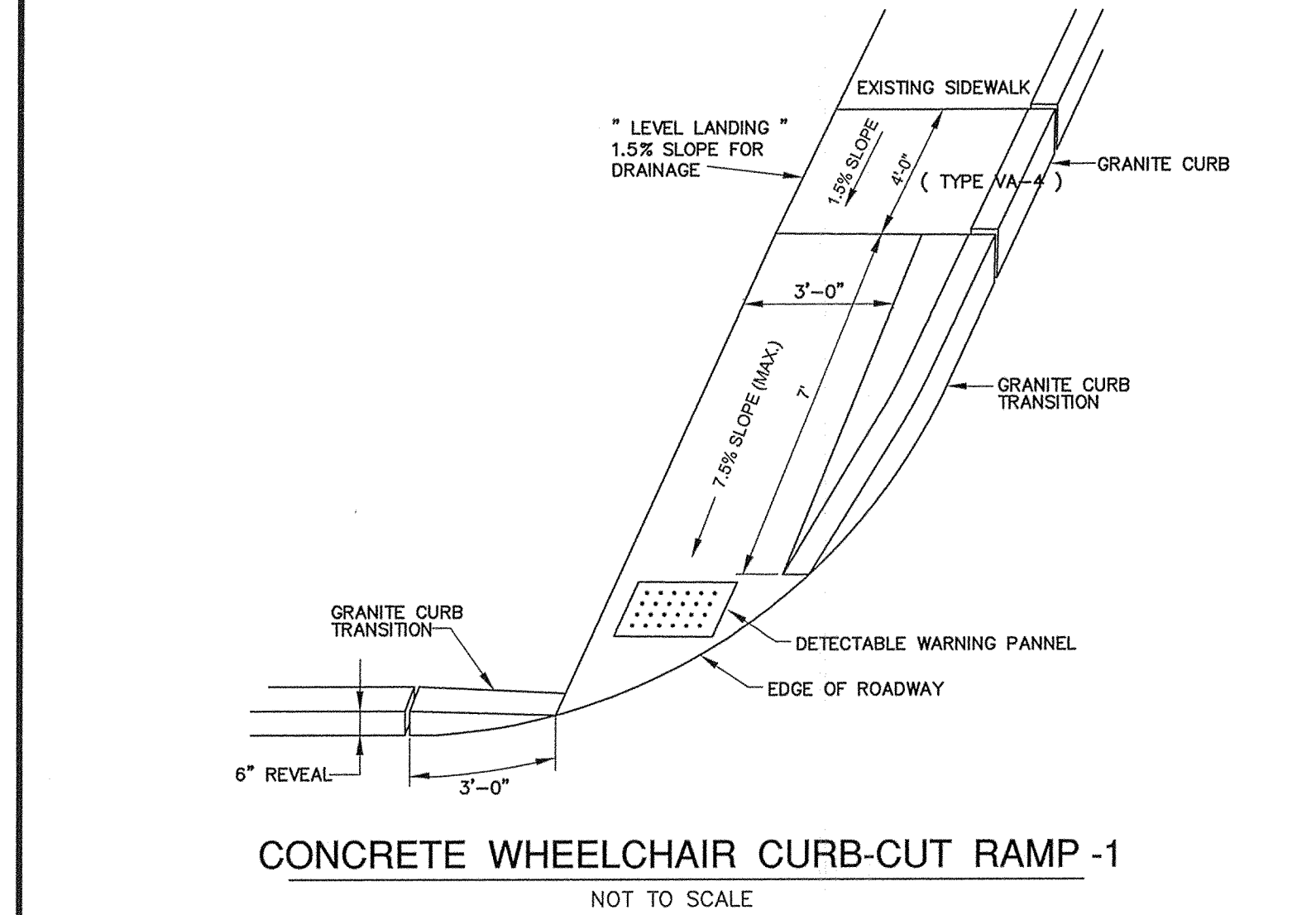
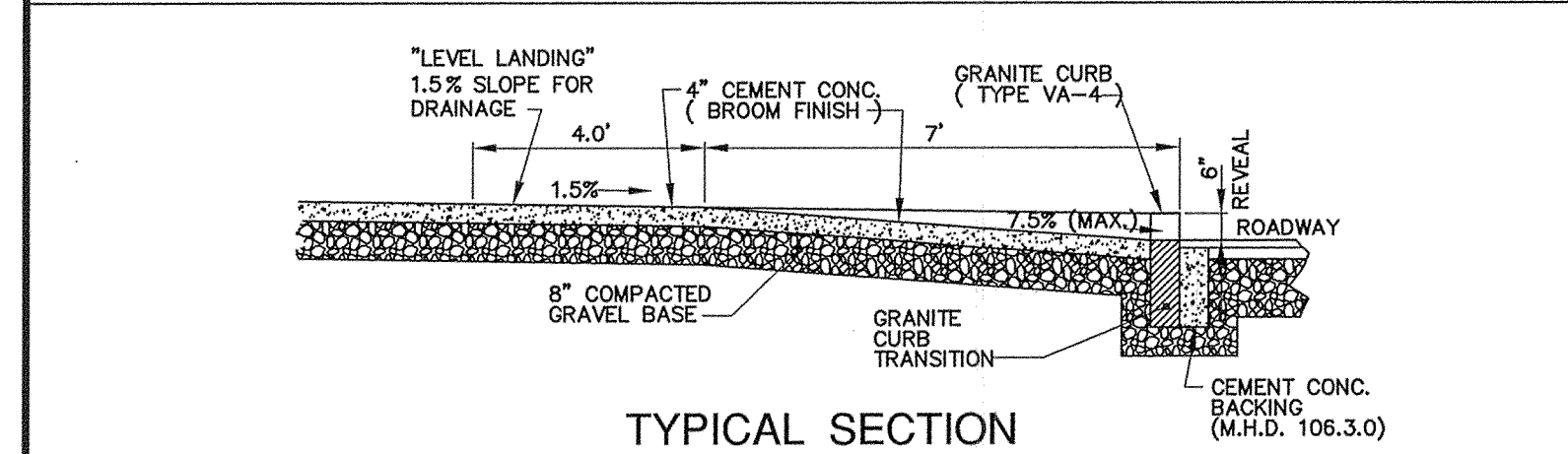
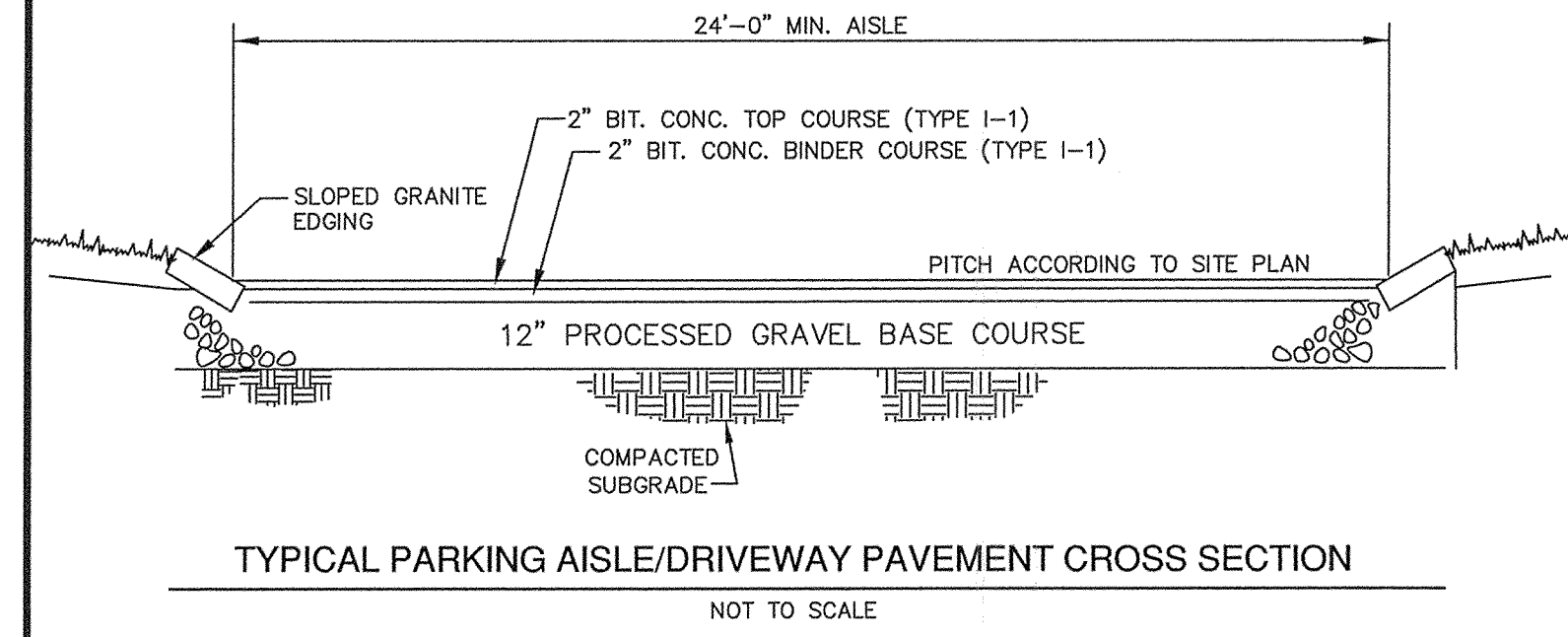
ERODED AREAS SHALL BE FILLED AND COMPACTED, IF NECESSARY, AND RESEDED AS SOON AS POSSIBLE. IF AN AREA ERODES TWICE, THEN A GEOTEXTILE FABRIC IS TO BE INSTALLED TO STABILIZE THE AREA TO ALLOW VEGETATION TO BE ESTABLISHED. THESE MAINTENANCE ACTIVITIES SHALL TAKE PLACE DURING THE PLANTING SEASON. AREAS AFFECTED BY LACK OF RAINFALL SHALL BE WATERED. IF A RECENTLY ESTABLISHED VEGETATED AREA IS DETERMINED TO BE INADEQUATE FOR EROSION CONTROL, IT SHALL BE REVEGETATED WITH MICROBIAL RELEASE, NOT SULFUR ENCAPSULATED, FERTILIZER, (USING HALF OF THE RATE ORIGINALLY APPLIED). IF THE STAND IS MORE THAN 60% DAMAGED, IT SHALL BE REESTABLISHED, FOLLOWING THE ORIGINAL PREPARATION AND SEEDING INSTRUCTIONS. AREAS OF REPEATED EROSION/SCOUR PROBLEMS SHALL BE LINED WITH RIPRAP ONLY AFTER TWICE ATTEMPTING TO STABILIZE THE AREA WITH GEOTEXTILE FABRIC.

INFILTRATION SYSTEM
INFILTRATION STRUCTURES SHALL BE INSPECTED AFTER EVERY MAJOR STORM IN THE FIRST FEW MONTHS AFTER CONSTRUCTION. AFTER THIS INITIAL PERIOD, THE FULL SYSTEM SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY (SPRING AND FALL) AND AFTER AT LEAST ONE MAJOR STORM TO SEE IF THEY HAVE FULLY DRAINED. THE INSPECTION PORTS OR COVERS SHOULD BE OPENED AND THE INFILTRATION SYSTEM CHECKED FOR ACCUMULATED DEBRIS AND SEDIMENT. THE OUTLET STRUCTURE INCLUDES A CATCH BASIN GRATE FOR MORE FREQUENT OBSERVATION TO VERIFY DEWATERING. THIS SHOULD BE OBSERVED MORE FREQUENTLY THROUGH THE YEAR AFTER STORM EVENTS. IF ANY SEDIMENT IS PRESENT AND/OR IF THE INFILTRATION SYSTEM DOES NOT DRAIN WITHIN 72 HOURS OF THE END OF A STORM, THEN REMEDIATION MAY BE NECESSARY. THE OWNER SHOULD CONTACT AN ENGINEER FOR RECOMMENDATIONS ON REMEDIATION. THE OUTLET STRUCTURE ALSO INCLUDES A DEEP SUMP (4 FEET) WHICH SHOULD BE CLEANED OF ANY SEDIMENT (IF PRESENT) AT LEAST ONCE PER YEAR.

SNOW REMOVAL
SNOW SHALL NOT BE PLOWED TO DRAINAGE FLOW PATHS OR OVER CATCH BASINS. ALL CATCH BASINS SHALL BE UNCOVERED AND FUNCTIONAL IMMEDIATELY AFTER SNOW FLOWING.

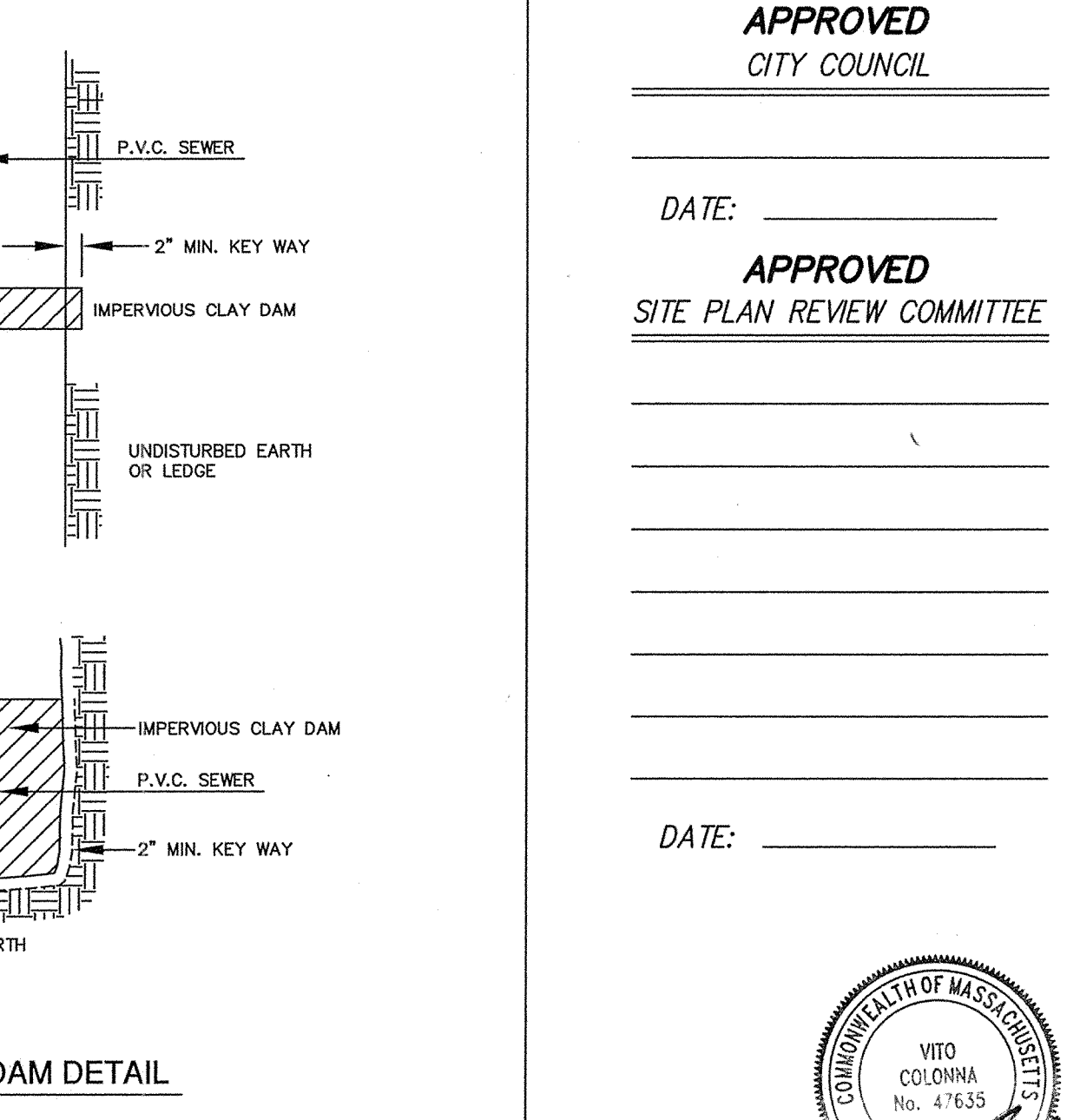
REPORTING AND RECORD KEEPING
THE RESPONSIBLE PARTY WILL BE RESPONSIBLE FOR MAINTAINING ACCURATE MAINTENANCE AND DISPOSAL LOGS FOR ALL MAINTENANCE AND INSPECTIONS. THE MAINTENANCE AND DISPOSAL LOGS SHALL BE KEPT ON SITE FOR A MINIMUM OF THREE (3) YEARS AND BE AVAILABLE FOR INSPECTION BY THE TOWN MUNICIPAL DEPARTMENTS OR OTHER AUDITING AUTHORITY, INCLUDING INSPECTIONS, REPAIRS, REPLACEMENT AND DISPOSAL (FOR DISPOSAL, THE LOG SHALL INDICATE THE TYPE OF MATERIAL AND THE DISPOSAL LOCATION). THIS WILL BE A PERPETUAL REQUIREMENT OF THE OWNERS OR THEIR DESIGNATED PARTY.

INSPECTION REPORTS SHALL BE SUBMITTED ANNUALLY, BY JUNE 1ST OF EACH YEAR TO THE CITY ENGINEER.



INLET	D	A	B
4"	4'-0" / 3'-6"ø	2'-3" / 3'-0"	1'-11" / 2'-6"
5"	3'-6"ø / 3'-6" x 3'-6" / 4'-0"ø / 4'-6"ø	5'-0" / 3'-6" / 3'-0"	4'-0" / 3'-0" / 2'-6" / 2'-6"
6"	4'-0"ø / 4'-0" x 4'-0" / 4'-6"ø / 5'-0"ø / 5'-0" x 5'-0"	5'-0" / 4'-0" / 4'-0" / 3'-6" / 3'-0"	4'-6" / 3'-6" / 3'-0" / 3'-0" / 2'-6"
8"	5'-0"ø / 5'-6" x 5'-6" / 6'-0"ø / 6'-0" x 6'-0" / 6'-6"ø / 6'-6" x 6'-6"	6'-0" / 4'-6" / 4'-0" / 3'-6" / 3'-0"	5'-0" / 4'-0" / 3'-6" / 2'-6" / 2'-6"

NOTE: FOR INLETS LARGER THAN 8", THE DESIGN AND DIMENSIONS WILL BE DETERMINED FOR EACH PARTICULAR CASE.
CIRCULAR BASINS ARE RECOMMENDED.



APPROVED
CITY COUNCIL

DATE: _____

APPROVED
SITE PLAN REVIEW COMMITTEE

DATE: _____

OWNERS:
M & E VENTURES CORPORATION
4 WATKINS LANE
SOUTHBOROUGH, MA
MAP 70, PARCELS 526, 213, 222
&
COMMONWEALTH OF MASSACHUSETTS
MAP 70, PARCEL 212A, 223A, 224

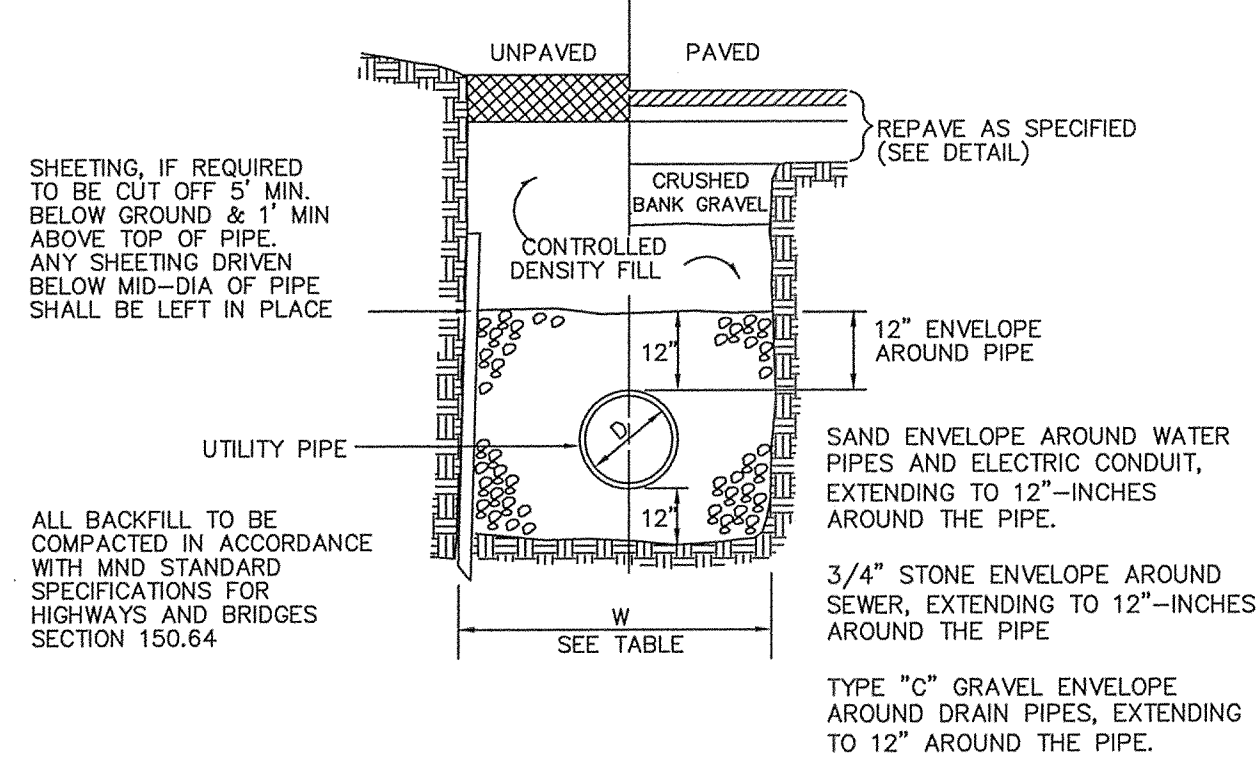
CONNORSTONE
ENGINEERING INC.
CIVIL ENGINEERS AND LAND SURVEYORS
10 SOUTHWEST CUTOFF, SUITE 7
NORTHBOROUGH, MASSACHUSETTS 01532
PHONE: 508-393-9727 FAX: 508-393-5242

CONSTRUCTION DETAILS
OF
28 SOUTH BOLTON STREET
IN
MARLBOROUGH, MA

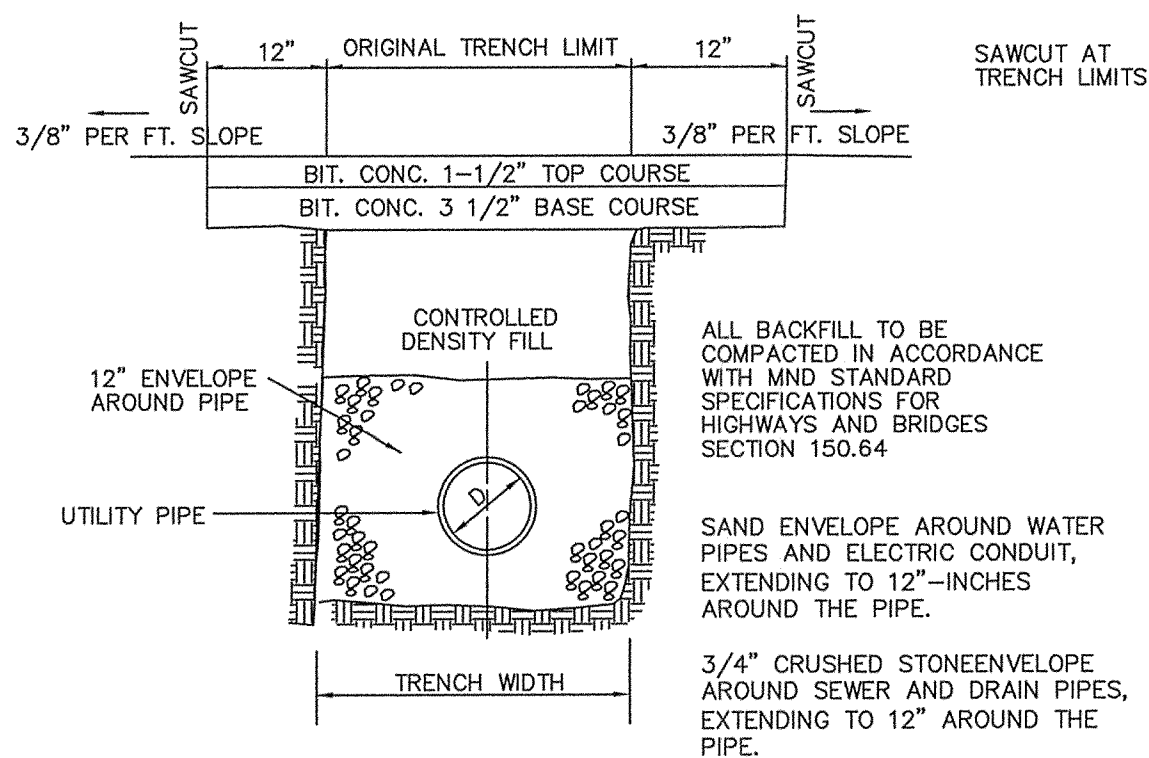
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9/16/2018	SITE PLAN COMMENTS
8/10/2018	SITE PLAN COMMENTS
7/6/2018	DRAINAGE CONCEPT
REVISED:	DESCRIPTION:
DRAWN BY: REM	CHECK BY: VC
DATE: JUNE 12, 2018	
SCALE: 1" = 10'	SHEET 6 OF 7.



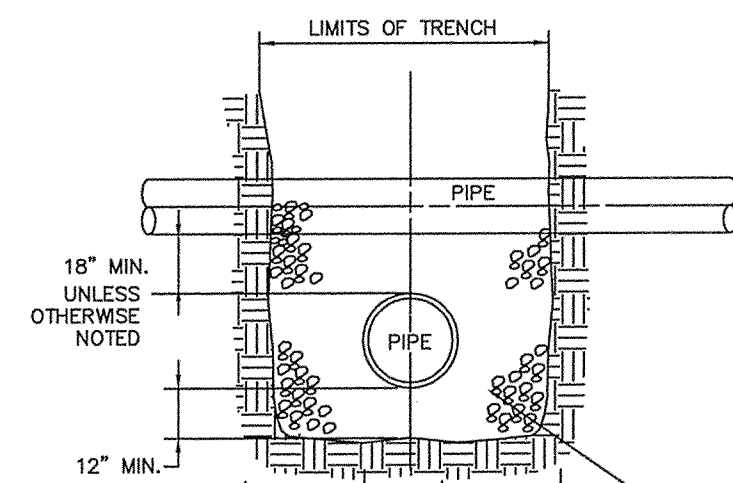
TRENCH WIDTH (W)		
D	W	W
DIAMETER OF PIPE	UN-SHEEDED	SHEEDED
TO 12"	3'	4'
14" TO 24"	4'	5'
30" TO 36"	5'	6'



TYPICAL TRENCH SECTION
NOT TO SCALE

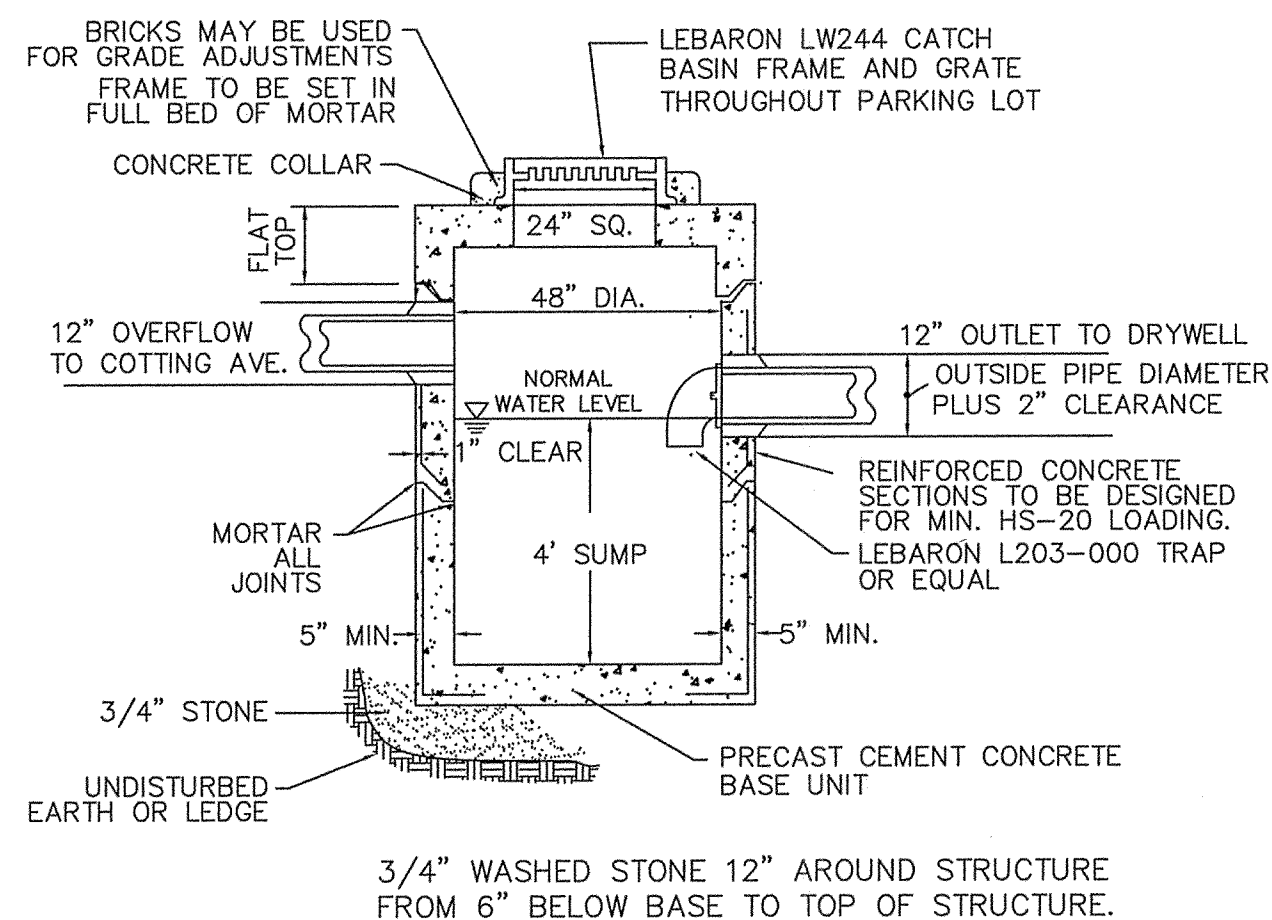


PERMANENT TRENCH PAVING
NOT TO SCALE

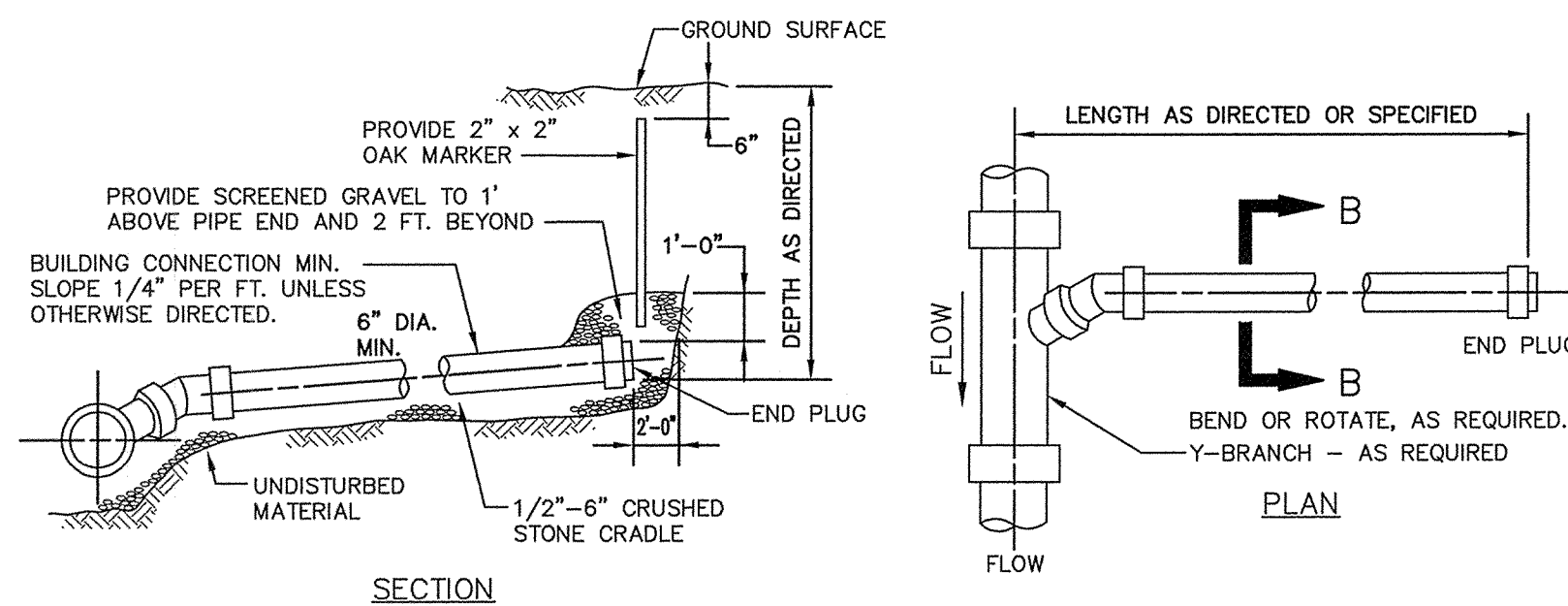


UTILITY CROSSING DETAIL
NOT TO SCALE

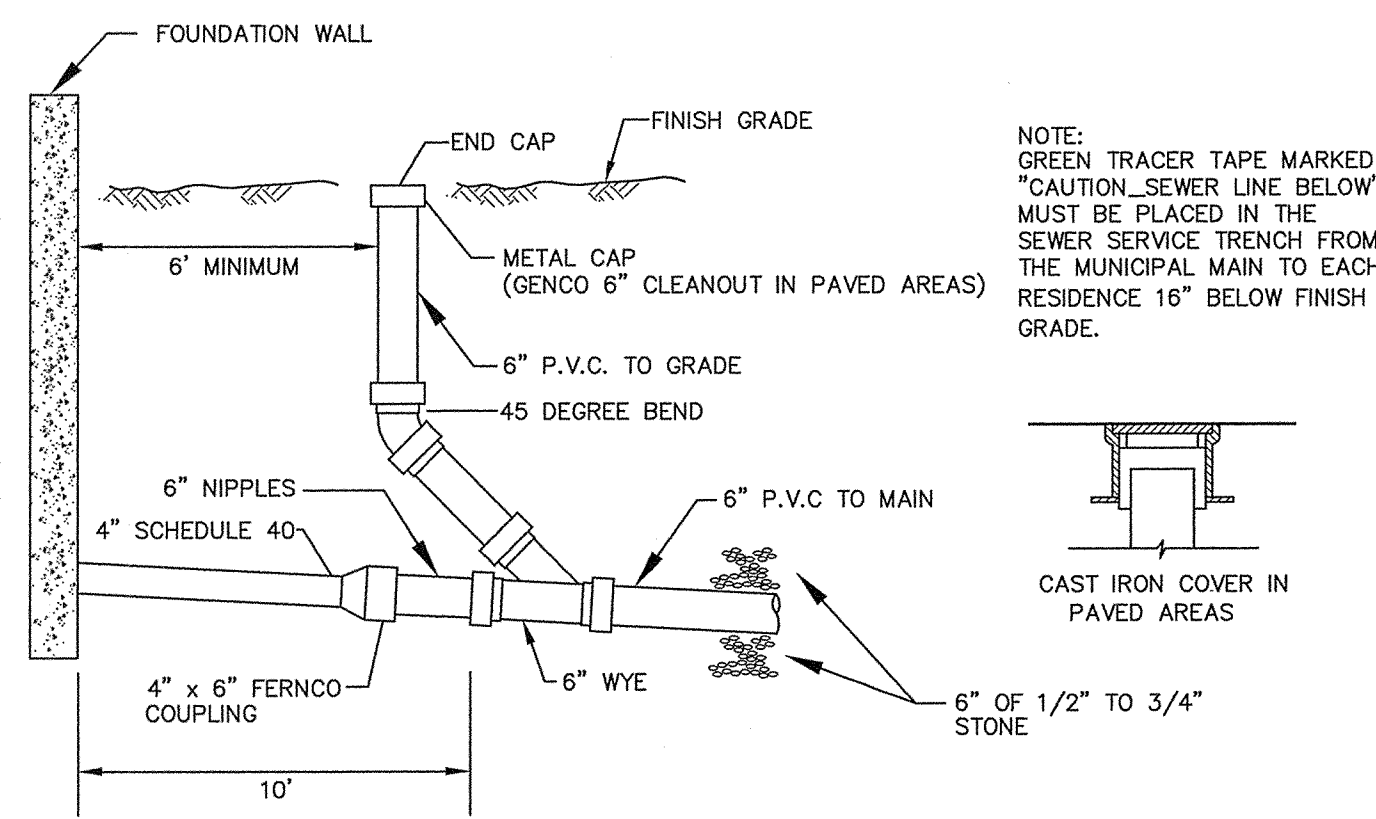
NOTE: FOR WATER AND SEWER CROSSINGS MAINTAIN 18 INCHES OF SEPARATION BETWEEN PIPES. LAY PIPES SUCH THAT CONNECTION JOINTS ARE 10 FEET EITHER SIDE OF THE CROSSING. ALL WATER PIPES LAID OVER SEWER PIPES.



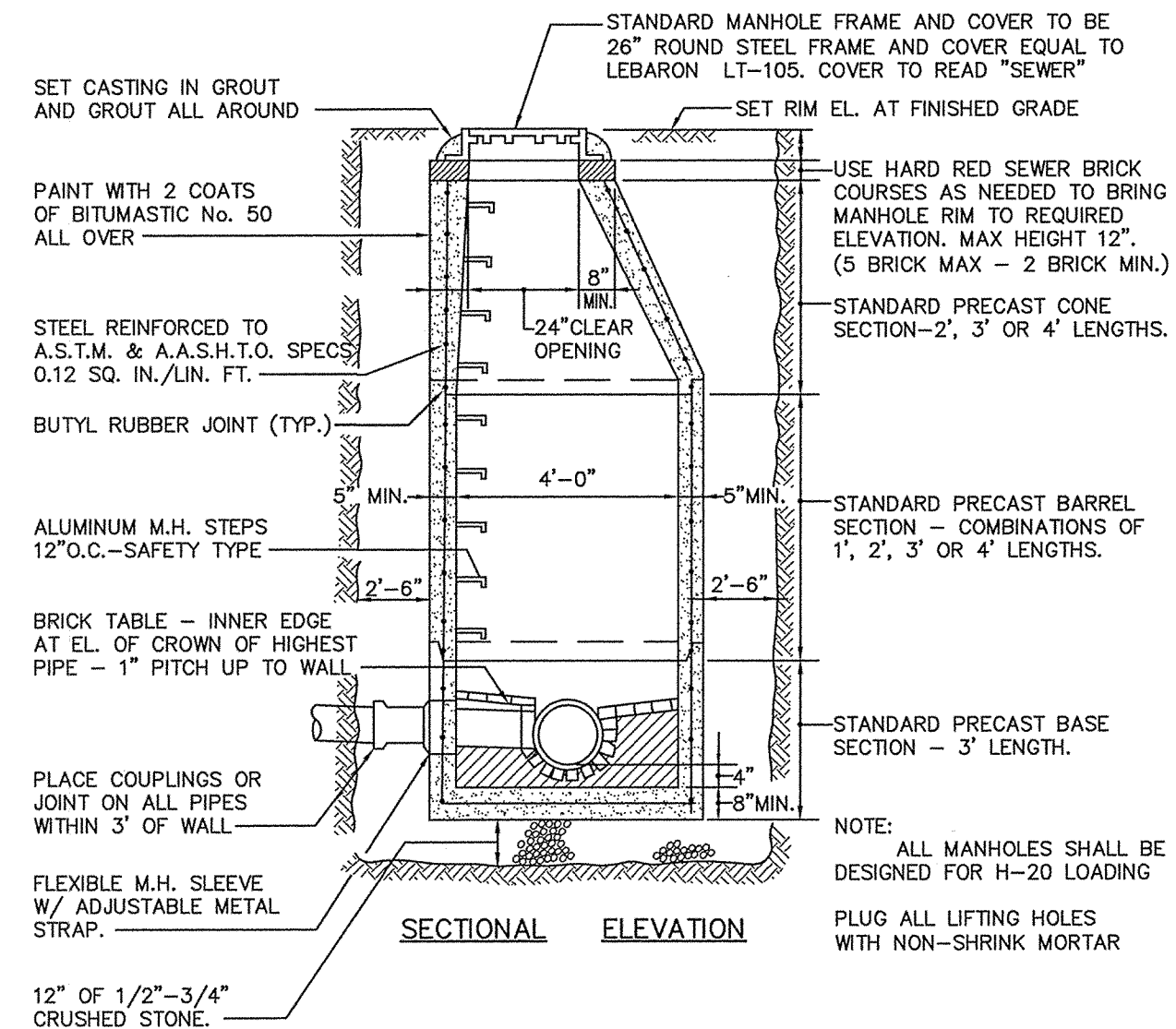
PRECAST CONCRETE CATCH BASIN OUTLET CONTROL STRUCTURE
NOT TO SCALE



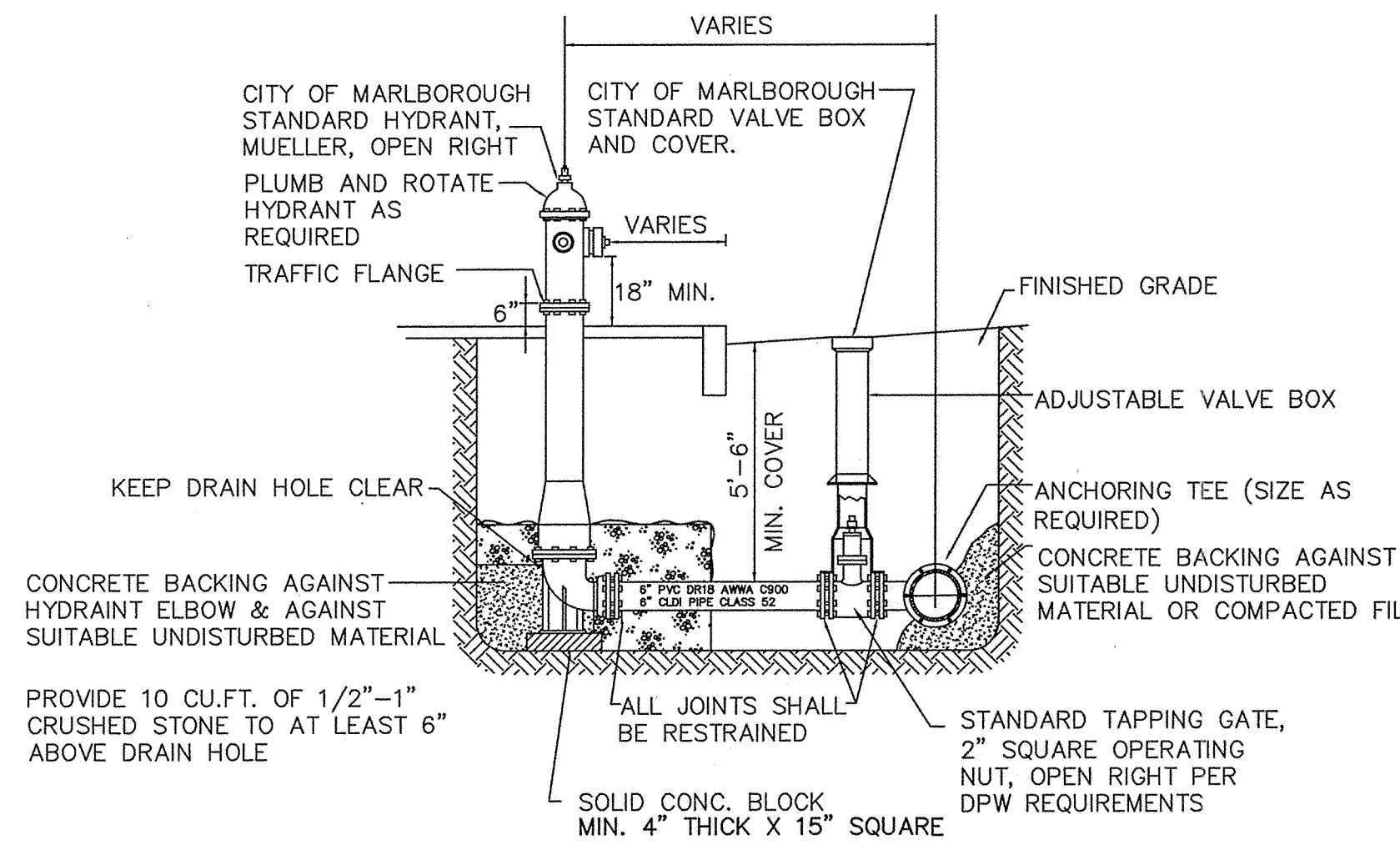
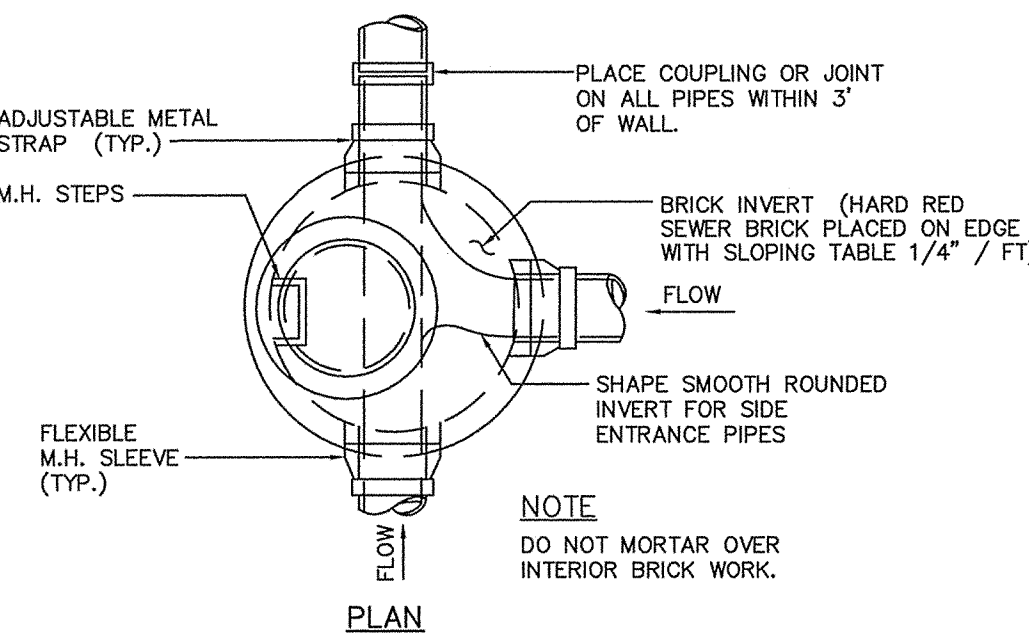
TYPICAL BUILDING CONNECTION
NOT TO SCALE



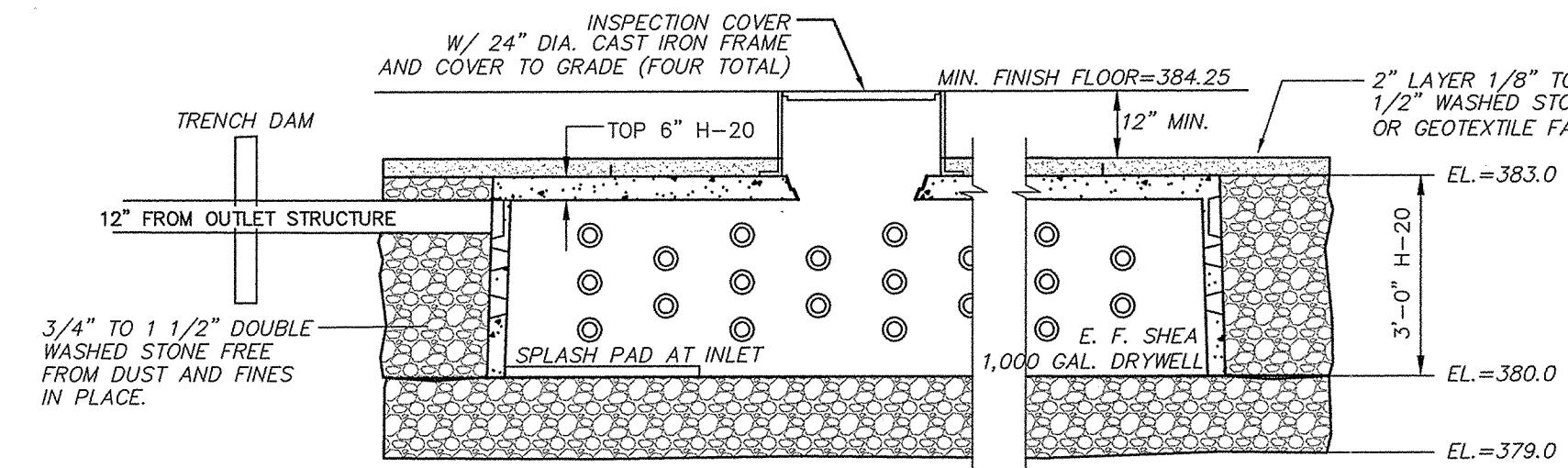
SEWER SERVICE LINES CLEANOUT & FITTINGS
NOT TO SCALE



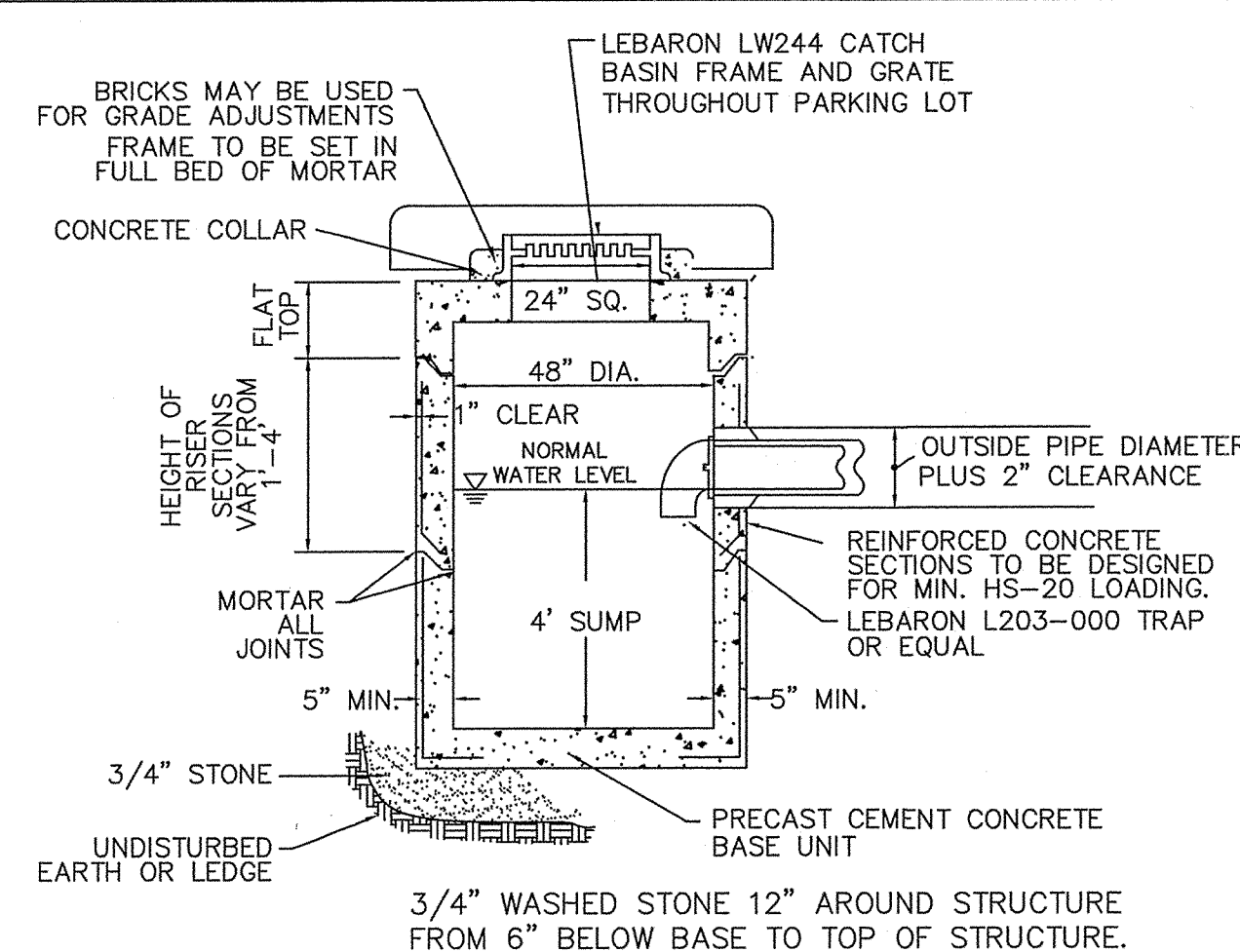
TYPICAL PRECAST CONCRETE MANHOLE DETAIL
NOT TO SCALE



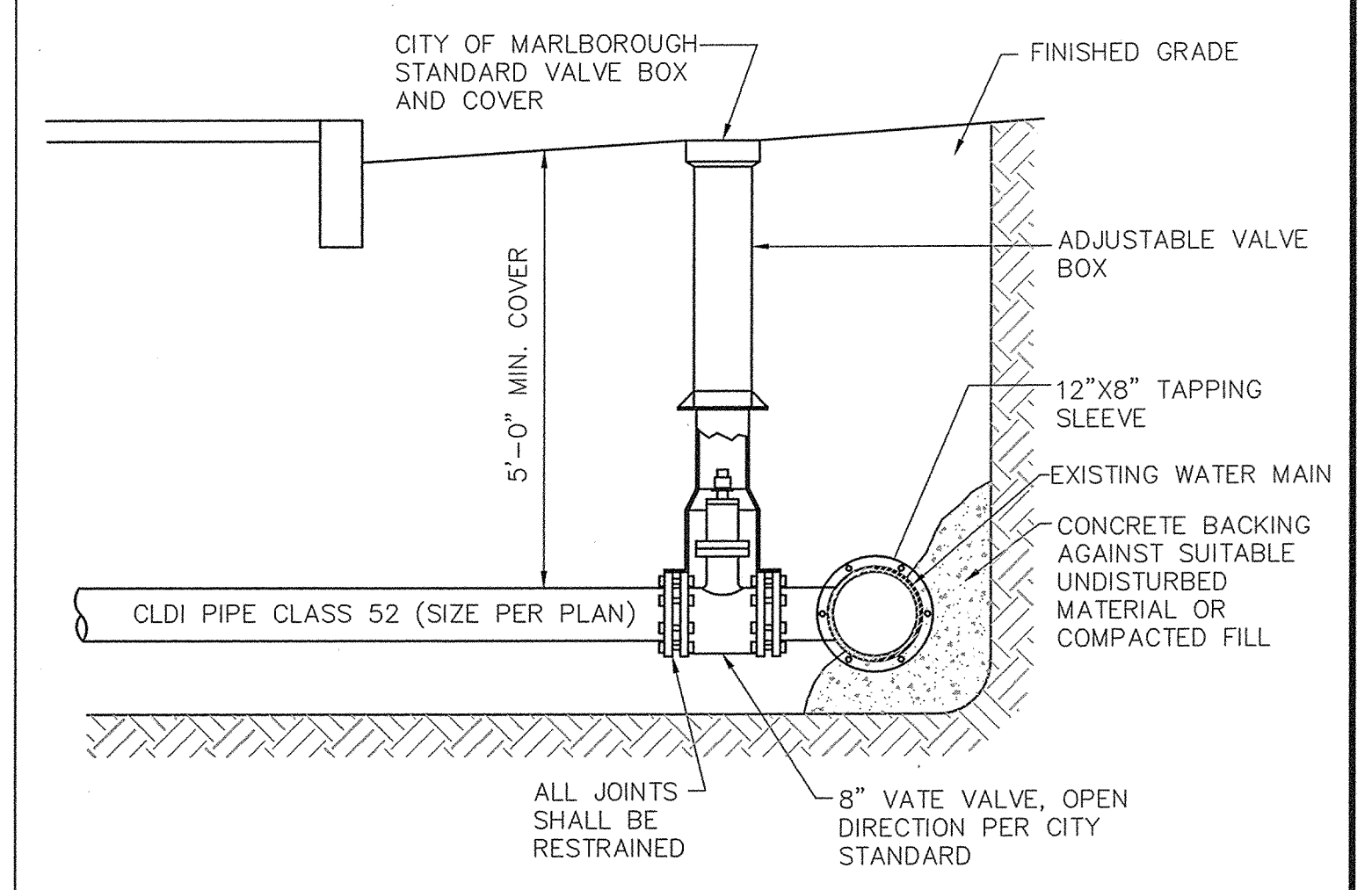
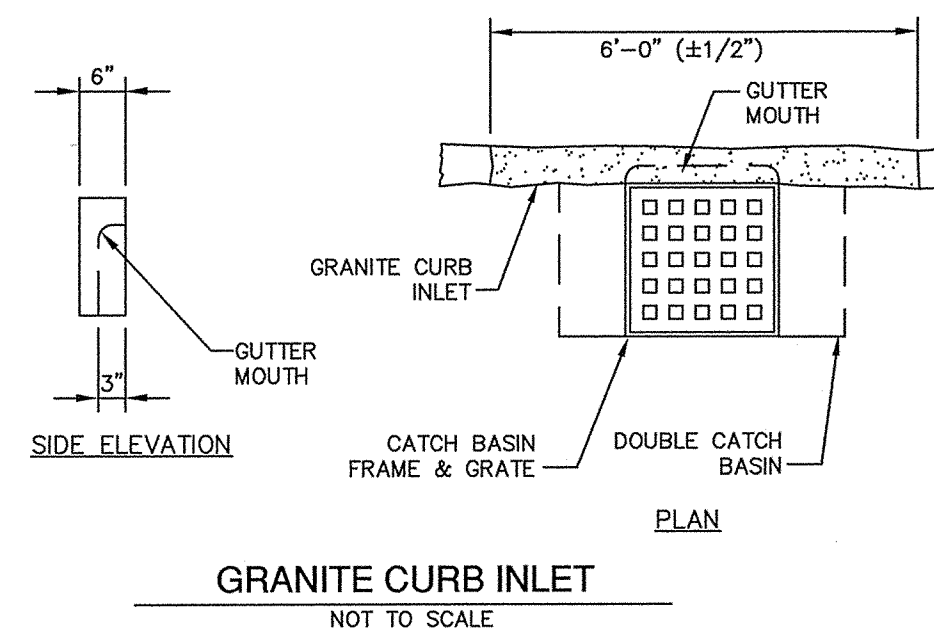
TYPICAL HYDRANT & VALVE DETAIL
NOT TO SCALE



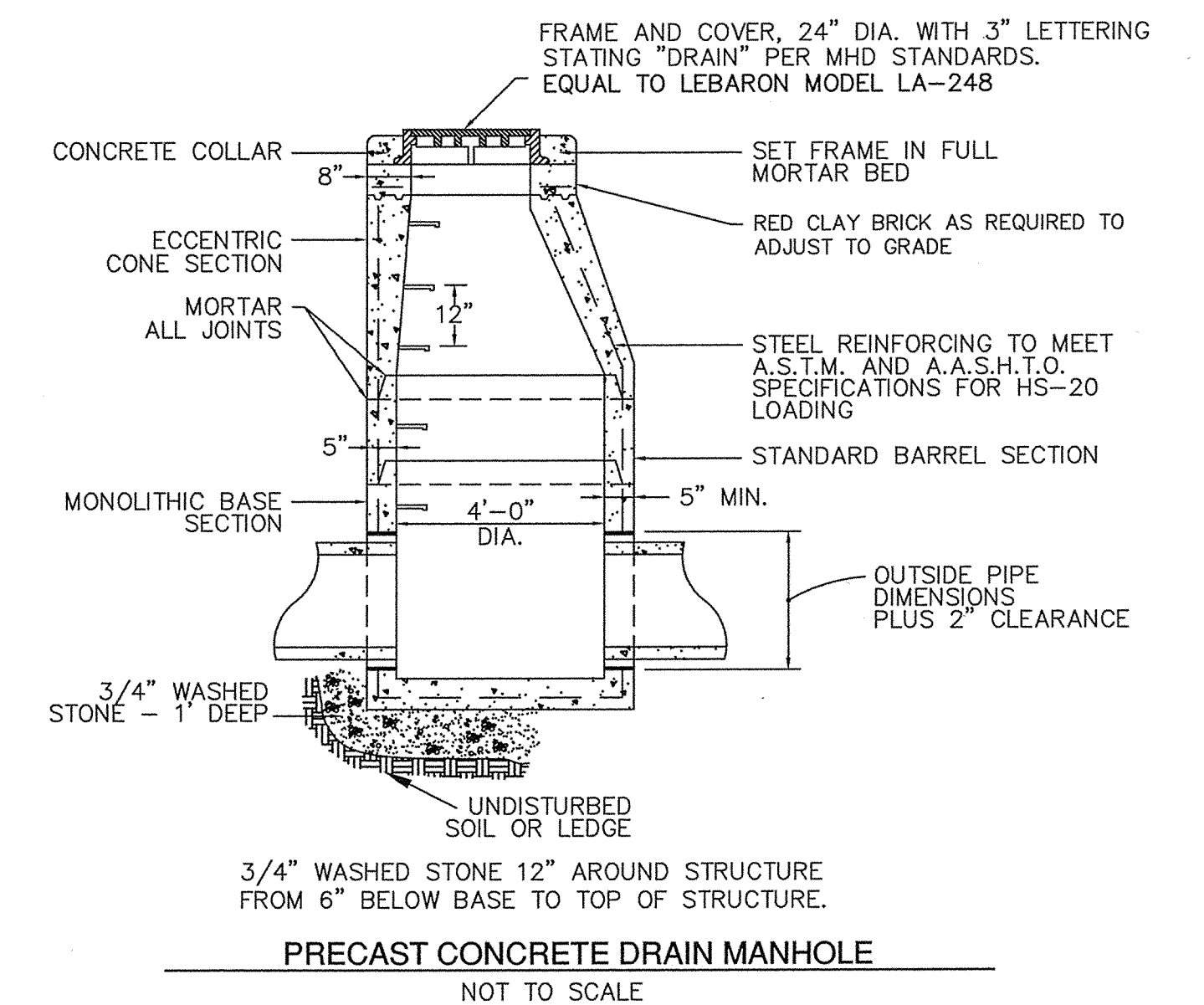
TYPICAL DRYWELL DETAIL
NOT TO SCALE



PRECAST CONCRETE CATCH BASIN
WITH GRANITE CURB INLET
NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE



PRECAST CONCRETE DRAIN MANHOLE
NOT TO SCALE

APPROVED
CITY COUNCIL

DATE: _____
APPROVED
SITE PLAN REVIEW COMMITTEE

DATE: _____

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MAP 70, PARCELS 528, 213, 222
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