LEGEND		
<u>EXISTING</u>	DESC.	<u>PROPOSED</u>
80	CONTOURS	80
x80.0	SPOT GRADES	80×50 ×80.0
	WETLANDS	
	F.E.M.A. FLODD ZONE	
	DITCH/SWALE	
D	DRAIN LINE	D
_	CATCH BASIN (CB)	Ħ
0	DRAIN MANHOLE (DMH)	0
Δ	FLARED END SECTION	Δ
S	SEWER LINE	s
S	SEWER MANHOLE (SMH)	S
E	ELECTRIC LINE	——Е—
Œ	ELECTRIC MANHOLE (EMH)	©
т	TELEPHONE LINE	——т—
•	TELEPHONE MANHOLE (TMH)	•
——— ОНШ ———	OVERHEAD WIRES	—— онw ——
₾-0-	UTILITY POLE	₾-0-
-0 ←	GUY POLE	-⊕ ←
	WATER GATE/VALVE	
 *\$	WATER SHUTOFF/CURB STOP	 **********************************
Z Ž	HYDRANT	黨黨
. Sy Sy	GAS GATE/VALVE	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	GAS SHUTOFF	* <u>*</u>
⊗	GAS METER	Ö
w	WATER LINE	w
G	GAS LINE	G
U	UNDERGROUND UTILITIES	U
\$	LIGHT POLE	\$
	SIGN	-
\cdot\cdot	FENCE	
-00	GUARD RAIL	
MB	MAILBOX	
CATV	CABLE TV	CATV
•	BOUND	
0	IRON PIPE/PIN/ROD	0
•	DRILLHOLE	
~~~~~~~~~~	STONEWALL	
	TREELINE	<b>、                                    </b>
PT TP	TEST PIT/PERC TEST	
	HAYBALE	

### ABBREVIATIONS

<u>ABBREVIATIONS</u>		
	ABANDON	
	ASPHALT COATED CORRUGATED METAL PIPE ADJUST	
APPROX	APPROXIMATE BOTTOM OF BERM	
3C	BOTTOM OF CURB	
BESW	BOUND BACK EDGE OF SIDEWALK	
	BITUMINOUS CONCRETE BUILDING	
	BENCHMARK BY OTHERS	
BVC	BEGINNING OF VERTICAL CURVE BORDERING VEGETATED WETLAND	
3 W	BOTTOM OF WALL	
	CABLE TELEVISION CATCH BASIN	
	CATCH BASIN WITH CURB INLET CONCRETE BOUND/DRILL HOLE	
CB	CAPE COD BERM CEMENT CONCRETE	
	CURB INLET	
CIP CLR	CAST IRON PIPE CLEARANCE	
	CHAIN LINK FENCE CEMENT LINED DUCTILE IRON	
CMP CPP	CORRUGATED METAL PIPE CORRUGATED PLASTIC PIPE	
	COUNTY COUNTY LAYOUT	
COND	CONDUIT	
SP CULV	CORRUGATED STEEL PIPE CULVERT	
) ) A	DRAIN DIAMETER	
)IP	DUCTILE IRON PIPE DRAIN MANHOLE	
)R	DRIVEWAY ELECTRIC	
LEV,EL	ELEVATION	
OP .	ELECTRIC MANHOLE EDGE OF PAVEMENT	
	END OF VERTICAL CURVE EXISTING	
	FINISH BASEMENT ELEVATION FOUNDATION	
Έ	FLARED END FINISH FLOOR ELEVATION	
ND	FOUND GAS	
G,GV	GAS GATE, GAS VALVE	
RAN	GALVANIZED IRON PIPE GRANITE	
	GROUND HIGH DENSITY POLYETHYLENE	
	HOUSE HYDRANT	
)	INSIDE DIAMETER INVERT	
_SF	ISOLATED LAND SUBJECT TO FLOODING MAXIMUM	
1B	MAILBOX	
1HB	MINIMUM MASSACHUSETTS HIGHWAY BOUND	
10N	MASSACHUSETTS HIGHWAY DEPARTMENT MONUMENT	
	NOT IN CONTRACT NOT TO SCALE	
	NATIONAL GEODETIC VERTICAL DATUM NOW OR FORMALLY	
DHW	OUTSIDE DIAMETER OVERHEAD WIRE	
°C	POINT OF CURVATURE PROPOSED	
PT T	POINT OF TANGENCY	
٧	POINT OF VERTICAL CURVATURE POINT OF VERTICAL INTERSECTION	
	POINT OF VERTICAL TANGENCY POLYVINYL CHLORIDE PIPE	
	PAVEMENT PAVED WATERWAY	
<b>)</b>	RADIUS REMOVE AND DISPOSE	
& R	REMOVE AND RESET REMOVE AND STACK	
CP	REINFORCED CONCRETE PIPE	
RR	RIGHT OF WAY RAILROAD	
RD S	ROAD SEWER	
SB/DH	STONE BOUND / DRILL HOLE	
	SEWER MANHOLE STATION	
ST	STREET	
SW 	SIDEWALK TANGENT	
	TELEPHONE TEMPORARY BENCHMARK	
MH	TOP OF CURB TELEPHONE MANHOLE	
	TOP OF FOUNDATION TOP OF SLOPE	
: P :YP	TEST PIT TYPICAL	
W	TOP OF WALL	
ISGS	UTILITY POLE US GEOLOGICAL SURVEY	
/CP V	VITRIFIED CLAY PIPE WATER	
VCR VG WV	WHEELCHAIR RAMP WATER GATE WATER VALVE	

WATER GATE, WATER VALVE

### CONSTRUCTION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF UTILITIES AND IS LIABLE FOR ANY DAMAGE BY CONSTRUCTION ACTIVITY.

2. ANY ADJUSTMENTS TO THE LOCATION OR ELEVATION OF ANY PROPOSED STRUCTURES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER AND/OR APPROPRIATE OFFICIALS.

3. ALL STRUCTURES, FRAMES, GRATES, COVERS, ETC. MUST MEET LATEST AASHTO  $H-20\ LOADING$ .

4. ALL BACKFILL MATERIALS SHALL BE PLACED (NOT DUMPED) AROUND STRUCTURES IN LOOSE 12" MAX. LIFTS, THEN COMPACTED TO 95% MAX. DENSITY WITH VIBRATORY PLATE COMPACTORS OR OTHER ACCEPTABLE MEANS.

5. ONCE STONE BACKFILL IS IN-PLACE AND APPROVED, THE CONTRACTOR SHALL RESTORE THE PAVEMENT AS SOON AS POSSIBLE. IF NOT PAVED SHORTLY, THE CONTRACTOR SHALL TAKE ANY AND ALL MEASURES TO PROTECT THE WORK UNTIL PAVEMENT IS RESTORED.

6. ALL BITUMINOUS PAVEMENT AND METHODS SHALL BE IN ACCORDANCE WITH THE LATEST MASS. HWY. DEPT. SPECIFICATIONS.

7. THE CONTRACTOR MAY PROPOSE SUBSTITUTIONS THAT FULFILL THE TECHNICAL REQUIREMENTS OF THIS PROJECT BY SUBMITTAL OF MFTR'S DATA SHEETS AND SHOP DRAWINGS. APPROVAL OF SUCH SUBSTITUTIONS MUST BE OBTAINED IN WRITING FROM THE OWNER AND/OR ENGINEER.

8. THE CONTRACTOR SHALL MINIMIZE THE DISTURBANCE OF EXISTING ROADWAYS/STRUCTURES BY USE OF TRENCH BOXES, COFFERS, SHORING, ETC. TO STABILIZE SANDY SOILS DURING CONSTRUCTION.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CONSTRUCTION LAYOUT AND SHALL MAINTAIN A RECORD PLAN SHOWING LOCATIONS/DIMENSIONS OF INSTALLED STRUCTURES, PIPES, FOUND UTILITIES, ETC.

### DEMOLITION NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND APPARATUS NECESSARY AND SHALL DO ALL WORK REQUIRED TO COMPLETE THE DEMOLITION, REMOVAL, AND ALTERATIONS OF EXISTING FACILITIES, INCLUDING PIPING SYSTEMS AND APPURTENANCES, DRAINAGE, LANDSCAPE AND SITE FEATURES ENCOUNTERED DURING THE INSTALLATION OF THE SYSTEM, AND AS INDICATED ON THE DRAWINGS, AS HEREIN SPECIFIED, AND/OR AS DIRECTED BY THE ENGINEER.

2. ALL EQUIPMENT, PIPING, AND OTHER MATERIALS THAT ARE NOT TO BE RELOCATED OR TO BE RETURNED TO THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM, AWAY FROM THE SITE OF THE WORK AND AT HIS OWN EXPENSE.

3. ALL DEMOLITION OR REMOVAL OF EXISTING STRUCTURES, UTILITIES, EQUIPMENT, AND APPURTENANCES, LANDSCAPE AND SITE FEATURES SHALL BE ACCOMPLISHED WITHOUT DAMAGING THE INTEGRITY OF EXISTING STRUCTURES, EQUIPMENT, APPURTENANCES, AND TREES TO REMAIN.

4. SUCH ITEMS THAT ARE DAMAGED SHALL BE EITHER REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXISTED PRIOR TO THE START OF HIS WORK TO THE SATISFACTION OF THE TOWN, ITS REPRESENTATIVE AND/OR THE OWNER.

5. SUBMIT TWO (2) COPIES OF PROPOSED METHODS AND OPERATIONS OF DEMOLITION TO THE ENGINEER FOR REVIEW PRIOR TO THE START OF WORK. INCLUDE IN THE SCHEDULE THE COORDINATION FOR SHUTOFF, CAPPING AND CONTINUATION OF UTILITY SERVICES AS REQUIRED.

6. PROVIDE A DETAILED SEQUENCE, TO THE TOWN OF DEMOLITION AND REMOVAL WORK TO ENSURE THE UNINTERRUPTED PROGRESS OF THE OWNER'S OPERATIONS.

7. ENSURE THE SAFE PASSAGE OF PERSONS AROUND THE AREA OF DEMOLITION. CONDUCT OPERATIONS TO PREVENT INJURY TO ADJACENT BUILDINGS, STRUCTURES, OTHER FACILITIES AND PERSONS. ERECT TEMPORARY, COVERED PASSAGEWAYS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

8. PROVIDE INTERIOR AND EXTERIOR SHORING, BRACING, OR SUPPORT TO PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF STRUCTURES TO BE DEMOLISHED AND ADJACENT FACILITIES TO REMAIN.

9. THE CONTRACTOR SHALL PROMPTLY REPAIR DAMAGES CAUSED BY DEMOLITION

OPERATIONS TO ADJACENT FACILITIES AT NO COST TO THE OWNER.

### GENERAL NOTES

1. IN GENERAL, THE PLANS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EVERY FITTING, CHANGE IN DIRECTION OR DETAIL OF CONSTRUCTION.

2. ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS AND IN PART FROM FIELD SURVEY AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD. BEFORE EXCAVATING, BLASTING, INSTALLING, BACK FILLING, GRADING, PAVEMENT RESTORATION, OR REPAIRING, ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE MGL CHAPTER 370, ACTS OF 1963. CONTRACTORS MUST CALL DIG—SAFE. G.A.F. ENGINEERING, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

3. THE CONTRACTOR SHALL NOTIFY DIG SAFE PRIOR TO ANY EXCAVATION.

4. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.

5. THE EXACT LOCATION OF ALL PROPOSED PIPE, STRUCTURES, TIE-INS, PAVEMENTS, ETC. SHALL BE DETERMINED IN THE FIEID BY THE ENGINEER.

6. THE CONTRACTOR SHALL GIVE ALL NOTICES, COMPLY WITH ALL LAWS AND REGULATIONS. AND PAY ALL FEES ASSOCIATED WITH THIS CONTRACT.

7. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, SUPERVISION, TOOLS, EQUIPMENT, FUEL, POWER, SANITARY FACILITIES AND INCIDENTALS NECESSARY FOR THE FURNISHING, PERFORMANCE, TESTING, STARTUP AND COMPLETION OF THIS WORK.

8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF PERSONNEL AND PROTECTION OF PROPERTY AT THE SITE OR ADJACENT THERETO INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADS, STRUCTURES AND UTILITIES NOT DESIGNATED FOR REMOVAL, RELOCATION OR REPLACEMENT UNDER THIS CONTRACT.

9. ALL MATERIALS SHALL BE NEW, FREE FROM DEFECTS AND OF GOOD QUALITY. ANY SOIL MATERIALS STOCKPILED SHALL BE SURROUNDED BY STAKED HAYBALES TO PREVENT EROSION/SEDIMENTATION.

10. THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM THE ACCUMULATION OF WASTE MATERIALS AND OTHER DEBRIS THAT MAY RESULT FROM HIS WORK.

11. THE CONTRACTOR SHALL INSTITUTE ALL SAFETY MEASURES NECESSARY TO PROTECT THE PUBLIC SAFETY. THIS SHALL INCLUDE, BUT NOT LIMITED TO, BARRICADES, SIGNS, LIGHTING, FENCES, POLICE DETAIL AND ANY OTHER MEANS AS DIRECTED BY THE OWNER, ENGINEER OR PUBLIC SAFETY OFFICIAL. TRENCHES SHALL NOT REMAIN OPEN OVERNIGHT.

12. ALL DRAIN PIPE, STRUCTURES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND THE MARION DEPT. OF PUBLIC WORKS STANDARDS OR AS DIRECTED BY THE ENGINEER.

13. THE CONTRACTOR SHALL CONSIDER AS INCIDENTAL, ANY COST ASSOCIATED WITH SHORING OF PROPOSED EXCAVATIONS. THE CONTRACTOR SHALL APPLY ALL MEASURES NECESSARY TO PROTECT PERSONNEL & PROPERTY DURING EXCAVATIONS.

### **EROSION CONTROL NOTES:**

1. THE SITE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SUITABLE EROSION AND SEDIMENTATION CONTROL DEVICES ON SITE DURING CONSTRUCTION AS REQUIRED TO PREVENT SILT FROM LEAVING THE SITE. SILT WILL NOT BE ALLOWED BEYOND CONSTRUCTION LIMITS. ADDITIONAL PROTECTION: ON—SITE PROTECTION MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNFORSEEN CONDITIONS OR ACCIDENTS.

2. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLANS DOES NOT PROVIDE SUFFICIENT EROSION AND SEDIMENT CONTROL, ADDITIONAL CONTROL MEASURES SHALL BE IMPLEMENTED. CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING EROSION CONTROL DEVICES WHICH BECOME INEFFECTIVE.

3. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR ALL GRADING AND OTHER LAND DISTURBING ACTIVITIES PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR IS RESPONSIBLE FOR THE CLEANUP AND REMOVAL OF ANY BUILDUP OF SEDIMENT WHICH ESCAPES FROM THE SITE.

5. CONTRACTOR IS RESPONSIBLE FOR CLEANING SILT AND DEBRIS OUT OF ALL STORM DRAINAGE STRUCTURES UPON THE COMPLETION OF CONSTRUCTION.

6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TEMPORARY EROSION CONTROL MEASURES AFTER CONSTRUCTION IS COMPLETE AND ALL DISTURBED AREAS HAVE BEEN STABILIZED.

7. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ANY FINES LEVIED AGAINST THE SITE FOR VIOLATIONS OF EROSION CONTROL REGULATIONS.

8. CONTRACTOR SHALL PROVIDE TEMPORARY GROUND COVER FOR ALL AREAS WITH EXPOSED SOIL WHICH WILL NOT BE DISTURBED BY GRADING OPERATIONS FOR A PERIOD OF THIRTY DAYS OR MORE.

9. IF WORK ON THIS PROJECT IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROL FACILITIES IN GOOD CONDITION DURING THE SUSPENSION OF WORK.

10. SPRINKLE OR APPLY DUST SUPPRESSORS TO KEEP DUST WITHIN TOLERABLE LIMITS AT THE CONSTRUCTION SITE.

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EMEDIATION PLAN
LEGEND & NOTES
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