MASSDEVELOPMENT CONTRACT DRAWINGS FOR PATTON WATER TREATMENT PLANT DEVENS, MASSACHUSETTS



APPROVED BY THE DEVENS ENTERPRISE COMMISION:

DATE:

CHAIRMAN:

UNIFIED PERMIT

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APPLICANT: MASSDEVELOP ADDRESS: 33 ANDREWS PAR DEVENS, MA, 01434

OWNER OF RECORD: MDFA/PATTO ADDRESS: 99 HIGH STREET, 11TH PARCEL# 010.0-0099-0200. BOSTON, MA 02110

> DESIGNER OF RECORD WRIGHT-PIERCE ATTN: JIM CRAY, PE 600 FEDERAL STREET ANDOVER, MA 0180

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	SIGNATURE:

GENERAL NOTES

- . THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS OF WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE OWNER.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE MUTCD AND ALL STATE AND LOCAL REGULATIONS. THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER PRIOR TO COMMENCING CONSTRUCTION. THE POLICE DEPARTMENT AND FIRE DEPARTMENT ARE TO BE NOTIFIED AT LEAST 24-HOURS IN ADVANCE OF ANY STREET CLOSING OR DETOUR.
- 4. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS
- 6. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.

EXISTING SITE CONDITIONS

- 1. THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE BASED ON PREVIOUS CONSTRUCTION DESIGN PLANS. WHICH ARE AVAILABLE FOR INSPECTION AT THE ENGINEER'S OFFICE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN, OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD WITH TEST PITS AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES OR PIPING THAT MAY BE AFFECTED. THE CONTRACTOR WILL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.
- 2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED.
- 3. PER DEVENS PUBLIC WORKS THE CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL AND ANY REPAIRS DUE TO CONSTRUCTION VEHICLE DAMAGE TO PATTON ROAD FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL PHOTO/VIDEO DOCUMENT THE ROAD CONDITION BEFORE STARTING CONSTRUCTION NOTING ANY AREAS CURRENTLY IN NEED OF REPAIR.
- SITE IS LOCATED ON FEMA FIRM MAP 25027C0313E WITH EFFECTIVE DATE JULY 4, 2011 AND IS WITHIN FLOOD ZONE X.

SITE DEMOLITION

- 5. REFER TO THE EXISTING SITE PLAN, FOR ADDITIONAL INFORMATION REGARDING EXISTING FACILITIES. REFER TO THE LAYOUT DRAWING FOR LIMITS OF WORK.
- 6. REFER TO ARCHITECTURAL, STRUCTURAL, PROCESS, MECHANICAL, PLUMBING, INSTRUMENTATION AND ELECTRICAL DRAWINGS FOR SPECIFIC INFORMATION REGARDING DEMOLITION AND REMOVAL
- 7. DEMOLISH/REMOVE EXISTING PIPING AS REQUIRED FOR CONSTRUCTION OF NEW FACILITIES. ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE SHALL BE COORDINATED WITH THE OWNER AND ENGINEER BEFORE COMMENCING THAT WORK. EXISTING PIPING THAT NEEDS TO BE REMOVED TO CONSTRUCT THE NEW FACILITIES. BUT IS TO REMAIN. SHALL BE REINSTALLED/REPLACED AS NEEDED. EXISTING PIPES AND CONDUIT DESIGNATED AS "ABANDONED" MAY BE REMOVED IF THE CONTRACTOR SO CHOOSES. IF ABANDONED PIPE CONFLICTS WITH NEW SITE PIPING OR FACILITIES, THEN A PORTION OF THE ABANDONED PIPE SHALL BE REMOVED, AND THE NEW ENDS OF ABANDONED PIPE CAPPED OR PLUGGED WITH CONCRETE.
- 8. ALL EXISTING PIPING AND UTILITIES WHICH ARE BENEATH PROPOSED STRUCTURES, AND ARE TO BE ABANDONED, SHALL BE REMOVED TO A MINIMUM OF 5-FEET OUTSIDE OF THE STRUCTURE. PIPE AND UTILITIES BENEATH PROPOSED STRUCTURES THAT ARE TO REMAIN SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE INDICATED. REFER TO THE STRUCTURAL DRAWINGS FOR DETAILS.
- 9. SEVERING OF EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTINGS, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. PLUG ENDS OF ABANDONED PIPE SEGMENTS WITH CONCRETE UNLESS SPECIAL CIRCUMSTANCES DICTATE PLUGGING ABANDONED PIPES WITH BLIND FLANGES, RESTRAINED MECHANICAL JOINT PLUGS, ETC. AS APPROPRIATE.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE OWNER/ENGINEER.
- 11. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS.
- 12. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ENSURE THAT ALL PROCESS FLOWS ARE MAINTAINED DURING CONSTRUCTION. GRAVITY OR PUMPED BYPASSES AND OTHER MEANS OF MAINTAINING FLOW SHALL BE SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE ENGINEER. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY STOPPAGES OR BYPASSES WITH THE OWNER AND ENGINEER. FEDERAL AND STATE REGULATIONS REQUIRE THAT THE TREATMENT FACILITY REMAIN IN OPERATION (ALL TREATMENT, DISINFECTION, SLUDGE HANDLING AND DISPOSAL PROCESSES) THROUGHOUT CONSTRUCTION, AND THAT DISCHARGE PERMITS ARE MET.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND GROUNDWATER DEWATERING OPERATIONS.

SITE CLEARING, GRUBBING AND GRADING

- 1. NO SOIL SHALL BE REMOVED FROM THE SITE WITHOUT WRITTEN AUTHORIZATION FRON THE DEVENS DEC. EXCESS SOIL FROM EARTHWORK OPERATIONS SHALL BE STOCKPILED AND RE-USED ON SITE. SEE PLANS FOR STOCKPILE LOCATION.
- 2. REFER TO THE LAYOUT AND GRADING DRAWINGS FOR LIMIT OF WORK AND TOPSOIL STRIPPING.
- CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS OF WAY AND PROPERTY LINES ON STATE OR COUNTY OWNED PROPERTY OR EASEMENTS. ALL CLEARING AND GRUBBING MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.
- 4. THE CONTRACTOR SHALL FOLLOW ALL ENDANGERED SPECIES ACT 4(D) RULES REGARDING THE NORTHERN LONG EARED BAT. THIS INCLUDES AVOIDANCE OF TREE REMOVAL DURING THE MONTHS OF JUNE AND JULY. CONTRACTOR SHALL PLAN ACCORDINGLY.
- 5. CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM, CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT
- 6. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY HAY BALE FILTERS TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM. REFER TO THE CIVIL DETAIL DRAWINGS.
- 7. THE GEOTECHNICAL DATA REPORT FOR THE PROJECT SITE IS INCLUDED IN APPENDIX A AND IS DESCRIBED IN SPECIFICATION SECTION 00800 (SUPPLEMENTAL CONDITIONS).
- 8. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER,
- 9. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS AND PLANT DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.

10. ALL CATCH BASINS, MANHOLES, VALVE PITS, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.

11. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT THE LOCATION SHOWN ON THE DRAWINGS. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL REUSE ON SITE UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS

12. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.

13. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER.

14. ALL ROAD AND DRIVE CROSS SLOPES SHALL PITCH 1/4-INCH PER FOOT MINIMUM. ALL PAVED SURFACES SHALL PITCH 1% UNLESS OTHERWISE NOTED. REFER TO THE CIVIL DETAIL DRAWINGS.

15. ALL NON-ROADWAY AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4-INCHES OF SOIL SHALL BE LOAM.

CIVIL SITE LAYOUT

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

2. CONTRACTOR SHALL EXCAVATE TEST PITS, WHERE NECESSARY, PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE TO THE PLANS. TEST PITS ARE REQUIRED WHERE SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.

3. IN GENERAL, THE GIVEN STRUCTURE LOCATIONS ARE TO THE OUTSIDE FACE OF THE STRUCTURE FOUNDATION WALL, NOT FOOTINGS. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING AND STRUCTURE DIMENSIONS. RADII SHOWN FOR ROADS ARE TO EDGE OF PAVEMENT

PLACE CRUSHED STONE MOWING STRIP AROUND THOSE STRUCTURES AS INDICATED ON THE DRAWINGS. REFER TO THE CIVIL DETAIL DRAWINGS.

THE LOCATIONS AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE OWNER AND ENGINEER. THE CONTRACTOR SHALL LIMIT ACTIVITIES TO THESE AREAS.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF MASSACHUSETTS, AT NO ADDITIONAL COST TO THE OWNER.

7. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

8. BOLLARD LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE BOLLARD LOCATIONS WITH THE ENGINEER. REFER TO THE CIVIL DETAIL DRAWINGS.

9. ALL ELEVATIONS REFER TO THE NGVD29 DATUM. ORIENTATION IS GRID NORTH ON THE NAD83 MASSACHUSETTS STATE PLANE, U.S. FOOT COORDINATE SYSTEM. PROJECT BENCH MARK IS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS PRIOR TO USING IN CONSTRUCTION.

10. EXISTING CONDITIONS SITE PLAN DEVELOPED FROM SURVEY DRAWING PREPARED BY WRIGHT-PIERCE, DATED NOVEMBER 2, 2019 AND EXISTING RECORD DRAWING INFORMATION.

11. WETLAND BOUNDARIES DELINEATED BY CHUCK CARON IN OCTOBER 2019. WETLANDS FLAGS SURVEYED BY WRIGHT-PIERCE

CIVIL SITE PIPING

PROCESS FLOW DIAGRAM AND PIPING LEGEND ARE ON THE PROCESS DRAWINGS

2. ALL PIPE LINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS IN PIPING WILL BE PERMITTED CONCRETE THRUST BLOCKS OR OTHER ACCEPTABLE RESTRAINT SYSTEM IS REQUIRED ON ALL FITTINGS ON PRESSURE PIPE. WHERE A RESTRAINED JOINT SYSTEM IS USED. THE NUMBER OF PIPES WITH RESTRAINED JOINTS ON EITHER SIDE OF THE FITTING SHALL BE DESIGNED TO REFLECT THE PROJECT SOIL CONDITIONS AND PEAK SURGE PRESSURE IN THE PIPING SYSTEM. SEE THE CIVIL DETAIL DRAWINGS FOR THRUST BLOCK DETAILS. PROVIDE ALL BENDS (HORIZONTAL AND VERTICAL) AS REQUIRED TO MEET THE GRADES AND ALIGNMENT INDICATED ON THE DRAWINGS.

THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING PIPING AND UTILITIES IN THE FIELD BY TEST PIT EXCAVATION PRIOR TO COMMENCING INSTALLATION OF ANY OF THE NEW PIPING AFFECTED. WHERE NEW PIPE CONNECTS TO EXISTING PIPING OR STRUCTURAL PENETRATION, CONTRACTOR SHALL VERIFY ELEVATION BY TEST PIT, AS REQUIRED, PRIOR TO INSTALLATION OF ANY OF THE ASSOCIATED/AFFECTED NEW PIPING. IDENTIFIED CONFLICTS WITH EXISTING PIPING AND UTILITIES WILL BE REVIEWED WITH THE ENGINEER PRIOR TO COMMENCING INSTALLATION. THE HORIZONTAL ALIGNMENT OF NEW PIPING MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR REVIEW AND ACCEPTANCE OF THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS AND REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

4. ALL WASTEWATER PIPING (EXCLUDING BUILDING DRAINS) AND ALL PRESSURIZED PIPES (I.E. PLANT WATER, CITY WATER, SOLUTION LINES, HEAT, ETC.) INSTALLED BENEATH STRUCTURES SHALL BE ENCASED IN CONCRETE. SEE STRUCTURAL DRAWING FOR DETAILS.

5. ALL BURIED CONNECTIONS TO STRUCTURES SHALL HAVE SLEEVE TYPE FLEXIBLE CONNECTIONS APPROXIMATELY 4-FEET FROM THE STRUCTURES. ALL SLEEVE TYPE COUPLINGS ON PRESSURE LINES SHALL BE RESTRAINED (SOLID SLEEVE).

PROVIDE CAST OR DUCTILE IRON WALL CASTINGS, OR GALVANIZED STEEL PIPE SLEEVES, FOR ALL PIPE PENETRATIONS MADE THROUGH CONCRETE FOUNDATIONS, WALLS AND SLABS. ALL WALL SLEEVES AND WALL CASTINGS SHALL HAVE WATERSTOPS. SEE PROCESS, MECHANICAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF PENETRATIONS. NEW PENETRATIONS THROUGH EXISTING STRUCTURE WALLS SHALL BE BY CORING MACHINE AND LINK-TYPE SEALS, UNLESS OTHERWISE INDICATED. OPENINGS TO BE COMPATIBLE WITH REQUIRED PIPING AND STANDARD LINK SEAL SIZES. SEE PROCESS DETAIL DRAWINGS.

7. TRENCH INSULATION SHALL BE USED WHERE DEPTH OF COVER IS LESS THAN 5-FEET. REFER TO THE CIVIL DETAIL DRAWINGS FOR THE TRENCH INSULATION DETAIL.

TRENCH INSULATION SHALL BE USED WHEN THERE IS LESS THAN 2-FEET BETWEEN THE SEWER OR FORCE MAIN AND A CULVERT. REFER TO THE CIVIL DETAIL DRAWINGS FOR THE TRENCH INSULATION DETAIL.

9. MANHOLES ARE 4-FEET IN DIAMETER UNLESS OTHERWISE NOTED. THE TOP OF MANHOLE FRAMES SHALL BE SET FLUSH WITH FINISH GRADE, UNLESS OTHERWISE NOTED ON DRAWINGS. SEWER MANHOLE INVERTS SHOWN ON THE DRAWINGS ARE TO THE INSIDE FACE OF THE MANHOLE.

10. PIPES WITHIN VALVE PITS (MANHOLES) SHALL BE SUPPORTED 12-INCHES ABOVE BOTTOM OF MANHOLE ON ADJUSTABLE PIPE SADDLE SUPPORTS, UNLESS OTHERWISE INDICATED.

11. ANY SETTLEMENT OCCURRING WITHIN ONE-YEAR OF FINAL COMPLETION OF THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.

12. OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF THE WORKDAY. OPEN TRENCHES OUTSIDE OF THE ROADWAY MAY BE LEFT OPEN IF THE CONTRACTOR PROVIDES ADEQUATELY SAFE BARRICADING AND LIGHTS.

13. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTICE TO THE RESPECTIVE UTILITY POLE OWNER. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.

14. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED. FLOWABLE FILL MAY BE REQUIRED TO STABILIZE CONNECTIONS TO EXISTING ASBESTOS CEMENT MAINS. TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

15. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON THE CIVIL EXISTING CONDITIONS AND DEMOLITION PLAN. ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

16. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION MATERIALS.

17. WHERE POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER OR SLUDGE LINES. A MINIMUM SEPARATION OF 18-INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER OR SLUDGE LINE SHALL BE MAINTAINED, IF POSSIBLE. WHERE A WATER LINE CROSSES UNDER A WASTEWATER OR SLUDGE LINE, A FULL LENGTH OF PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE.

- PIPING.

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	BBREVIATIONS	EXISTING		PROPOSED) PER
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#, NO	NUMBER	· ·		· ·	2 2 4
APP'D	APPROVED		EDGE OF PAVEMENT		
CB	CATCH BASIN		CURBING		
CEN	CENTER		EDGE OF GRAVEL		S.DA NT NT
CFS	CUBIC FEET PER SECOND		EDGE OF CONCRETE	<u>4</u> . 4 ₹4	N.I.
CL	CENTERLINE	<i>122</i>	CONTOUR	(123)	BV:BV:
CMP	CORRUGATED METAL PIPE		BUILDING		
CONC	CONCRETE		STONEWALL		DESIG CAD (CAD: CAD: DATE
COR	CORNER	$\frown \frown \frown \frown \frown \frown$	TREELINE	\frown	
		OO	CHAIN LINK FENCE	oo	
DEIMO	DRAIN MANHOLE	OO	STOCKADE FENCE	oo	
DI	DUCTILE IRON	——————————————————————————————————————	BARB WIRE FENCE	——————————————————————————————————————	
DR	DRAIN	^^^	RETAINING WALL		
EL	ELEVATION	-0 0 0-	GUARDRAIL	0"0	
EMH	ELECTRIC MANHOLE	<u> </u>	SEWER	<u>85</u>	
FM FT	FORCE MAIN FFFT	<u></u> ғмғм	SEWER FORCE MAIN		
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HYD	HYDRANT	<u> </u>	WATER	<u> </u>	CHUSETTS 40
IN INF	INCH INFLUENT	<u> </u>	STORM DRAIN	6"UD	
INV	INVERT	<u> </u>	UNDERDRAIN		MES HARS
LBS	POUNDS		CULVERT		TEL 30 2
МАХ МН	ΜΑΧΙΜΟΜ		UNDERGROUND ELECTRIC		2 "ThNOMINGS
MIN	MINIMUM	OHE OHE	OVERHEAD ELECTRIC		THE STATE
MW	MONITORING WELL	UGT UGT UGT UGT UGT UGT	UNDERGROUND TELEPHON	E	
N NGVD	NORTH NATIONAL GEODETIC VERTICAL DATUM	CATV CATV	UNDERGROUND CABLE TV), H
N/A	NOT AVAILABLE/APPLICABLE	O	IRON PIPE/REBAR	•	e ()
NTS	NOT TO SCALE	۲	DRILLHOLE	۲	
OD PC	OUTSIDE DIAMETER PERFORATED CLAY				0
PSF	POUNDS PER SQUARE FOOT	124.4		131 5	II Ш.
PSI	POUNDS PER SQUARE INCH	× SMH	SPUT ELEVATION	× 134.3	
PS PT	PRIMARY SLUDGE POINT OF TANGENCY	Отн			
PVC	POLYVINYL CHLORIDE				
RCP	REINFORCED CONCRETE PIPE				
REQ'D	REQUIRED				
S	SLOPE, SEWER		SHUTOFF VALVE		60
SD	STORM DRAIN	×		8	E
SMH	SANITARY SEWER MANHOLE	σ	YARD HYDRANT	¥	
SQ	SQUARE	-0-	HYDRANT		
SIA T XEMR	STATION TRANSFORMER	(3)	GAS SERVICE SHUTOFF	-	
TBM	TEMPORARY BENCH MARK	G	GAS GATE VALVE		
THK	THICKNESS	Ø	UTILITY POLE	۶	
TUS TYP	TYPICAL	0	UTILITY POLE W/ GUY	*	
UD	UNDERDRAIN	x\$	UTILITY POLE W/ LIGHT	**	
UG			LIGHT POLE	*	
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W	POTABLE WATER	×	CONIFEROUS TREE	<u>×</u>	
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		C)	SHRUB	Ċ Ç	
		\bigtriangleup	WETLAND FLAG		
AF	PPLICANT: MASSDEVELOPMENT		EDGE OF WATER		
AD	DRESS: 33 ANDREWS PARKWAY		SLOPE RESOURCE AREA		
			STREAM		
OWNE	R OF RECORD: MDFA/PATTON WELL		EDGE OF WETLANDS		
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	PARCEL# 010.0-0099-0200.0	<u> 1117</u>	WETLANDS		
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	WRIGHT-PIERCE	→ Ł	PAVEMENT MARKINGS	→ &	¥Ζ Σ
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	ANDOVER, MA 01810		TEST BORING		
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APPRC ENTER CHAIRI

18. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO ANY TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURES CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE OWNER.

19. FLOWABLE FILL SHALL BE UTILIZED TO STABILIZE CONNECTIONS TO THE EXISTING ASBESTOS-CEMENT WATER MAINS. CONTRACTOR SHALL COORDINATE WITH ENGINEER FOR INSPECTION PRIOR TO BACKFILL

20. PIPING ON THE SITE PIPING PLAN HAS BEEN SHOWN BROKEN FOR CLARITY ONLY. PIPE BREAKS DO NOT INDICATE RELATIVE ELEVATIONS OF

ELECTRICAL CONDUIT RUNS ARE INDICATED ON THE ELECTRICAL DRAWINGS AND ARE SHOWN IN DASHED/PHANTOM LINEWEIGHT ON THE CIVIL DRAWINGS FOR CONVENIENCE. CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION, EXCAVATION AND BACKFILLING REQUIRED FOR THE ELECTRICAL CONDUITS, AND SHALL FURNISH AND INSTALL ELECTRICAL MANHOLES AND HANDHOLES. COORDINATE THE LOCATION OF THE ELECTRICAL MANHOLES AND HANDHOLES, AND THE REQUIRED OPENING SIZES, WITH THE ELECTRICAL CONTRACTOR.

22. WHENEVER PROPOSED STRUCTURES ARE LOCATED PARTLY WITHIN A PAVED AREA AND PARTLY IN A NON-PAVED AREA, A BITUMINOUS CONCRETE PAVED APRON 2-FEET WIDE SHALL BE SUPPLIED AROUND THE PROPOSED COVER. PAVEMENT SHALL SLOPE AWAY FROM THE COVER.







LAST SAVED BY: DANIEL.METZ 11/20/2020 12:02

velocencestion = 11/23/2020 9:18:32 am = Date = 11/23/2020 9:18:32 am = Danie

LAST SAVED BY: DANIEL.METZ 11/20/2020 12:49 PM

SpecificationsDepth (D1):7"Depth (D2):1.5"Height:9"Width:11.5"Weight:13.5 lbs

[A] - WDGE2 LED P3SW 30K 80CRI VW

WDGE2 LED

Architectural Wall Sconce

NOTES:

- 1. REFLECTANCES ASSUMED: SURFACE:50
- 2. MOUNTING HEIGHTS: 12'-0" AFG
- 3. TASK HEIGHT: AT SURFACE
- 4. CALCULATION POINT SPACING 7' x 7' OC

STATISCTICS						
DESCRIPTION	SYMBOL	AVG.	MAX	MIN.	MAX / MIN	AVG / MIN
OUTER PERIMETER	+	0.13 FC	8.05 FC	0.00 FC	N/A	N/A
PARKING LOT	+	0.79 FC	11.01 FC	0.00 FC	N/A	N/A

SCHEDULE										
SYMBOL	LABEL	QUANTITY	MANUFACTURER	CATALOG NUMBER	DESCRIPTOIN	LAMP	# OF LAMPS	LUMENS PER LAMP	LLF	WATTAGE
OUTER PERIMETER	R	11	LITHONIA LIGHTING	WDGE2 LED P3SW 30K 80CRI VW	WDGE2 LED WITH P3SW - PERFORMANCE PACKAGE, 3000K, 80CRI, VISUAL COMFORT WIDE OPTIC	LED	1	3015	0.9	22.99
		1	•		I		1			1

																														ىرى	ىرى	ىر	<u> </u>
																		ىرر	w	u	w	m	m	w	u	J.J.	ىرر	ىر	<u> </u>				
														J	ىرر	ىر	الحرر															+0.00	+0.00 +
													ىر	عر ر																+0.00	+0.00	+0.00	+0.00 +
												ىر	عر															0.00	+0.00	+0.00	+0.00	+0.00	+0.00 +
											ر)													/	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+ 0.00	+0.00 +
										Ţ	کر												_	0.00	+0.00	+ 0.00	+0.00	+0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.00 +
									~	كر												0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00 +
									كر										/	0.00	+0.00	+0.00	+ 0.00	+ 0.00	+ 0.00	+0.00	+0.00	+0.00		+0.00	⁺ 0.00	+ 0.00	+0.00 +
								لر)								/	0.00	+0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00	⁺ 0.00	+0.00 +
							ۍ ۲	5								0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.90	+0.00	10.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.00	+0.00	0.00	+0.00 +
						5	كر						/	[±] 0.00	+0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+ 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.00 +
						کې						[±] 0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	0.00	0.00	+0.00		⁺ 9.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00 + ~ #52
					ۍ چ				/	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	0.00	+0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00	+0.03	+0.00	+0.01	+0.01	+0.00	+0.00	+0.00	+0.00	+0.00 +
				J	5		/	+0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	⁺ 0.01	+0.01	+0.01	⁺ 0.01	+0.01	+0.01	+0.01	+0.01	+0.01	+0.00 +
				ر کر		+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.01	+0.01	+0.02	+0.02	+0.02	+0.02	+0.02	* 0.01	+0.01	+0.01 +
			کر ۔	+.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00	+0.00	⁺ 0.00	+0.00	•••••0.00	⁺ 0.01	⁺ 0.01	*0.01	+0.03	+0.05	+0.06	+0.06	÷.05	⁺ 0.04	⁺ 0.03	⁺ 0.02	+0.01 +
t	/	ر) 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	+	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	+	0.00	⁺ 0.00	+	0.00 ⁺	⁺ 0.01	⁺ 0.01	⁺ 0.01	⁺ 0.02	⁺ 0.03	⁺ 0.86	+0.13	⁺ 0.17	+0.17	0.11	⁺ 0.08	⁺ 0.05	⁺ 0.03	⁺ 0.01 ⁺
+0.00	ىر ^{0.00}	J U.00	0.00	+0.00	0.00	+0.00	+0.00	0.00	+0.00	+0.00	+0.00	0.00	0.00	0.00	0.00	0.00	0.00	°0.01	⁺ 0.02	0.01	+0.02	°0.03	0.06	⁺ 0.20	*0.07	+0.49	+0.63	+0.53	0.33	0.16	+0.08	+0.04	+0.02
نی 0.00 0.00 0.00 0 بر 1000 troo	+0.00	0.00	+0.00	0.00	+0.00	0.00	0.00 0.00	+0.00	+0.00	0.00	+0.00	0.00	0.00	+0.01	0.00	0.01	0.01	0.01 +	0.02 #51	0.03	+0.06	+0.24	+0.27	0.28	0.67	1.44 +	+2.35	⁺ 1.51	+0.70	0.31	0.14	+0.00	+0.04 +
0.00 کرون بر	+0.00	+0.00	+0.00	0.80	0.00	+0.00	+0.00	+0.00	+0.00	+0.00	*0.00	+0.00	+0.00	+0.01	+0.02	+0.03	+0.02	+0.03	+0.00	+0.32	+0.61	+0.88	+0.90	+1 27	+3.32	+6.68	+5.79	+2.64	⁺ 1.45	+0.67	0.25	0.09	+
0 ⁺ 0.00 ⁺ 0.00 ¹	÷0.00	+	0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	+	±0.00	+0.00	+0.01	+0.01	+0.02	+0.03	+0.05	+0.09	+015	+0.22	+0.45	+1.20	+2.65	+ 3.13	+2.12	+1.18	+	CON		⁺ 1.94	⁺ 3.21	⁺ 1.81	⁺ 0.58	⁺ 0.19	+
+0.00 +0.00 +	0.00 0 +0.00	.00 0.00 +0.00	+0.00	⁺ 0.00	⁺ 0.00	[•] 0.00	0.00	+	+0.00	+0.01	+0.01	+0.02	+0.04	+0.07	+0.15	+0.28	+0.44	+0.61	⁺ 1.02	⁺ 2.69	⁺ 7.07	⁺ 6.76	+					4.72	⁻ 7.82	4.29 ⁺	⁺ 1.42	'0.41 +	'0.14 +
0.00 ⁺ 0.00 ⁺ 0.00	+0.00	+ 0.00	+0.00	0.00 ⁺ 0.00	+0.00	+0.00	+0.00	+0.00	+0.01	+0.01	+0.02	+0.04	+0.08	⁺ 0.19	+0.49	+ 1.21	+ 1.88	+ 1.67	⁺ 1.47	+2.40	+	5.30							8.16	6.88 +	2.86	0.86	0.26
0.00 ⁺ 0.00 ⁺	+0.00	+0.00	[±] 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.01	+0.02	+0.02	0.07	⁺ 0.16	⁺ 0.47	⁺ 1.45	⁺ 3.84	⁺ 6.29	+3.66	+	1.10										+10.55	5.50	+3.82	+0.92
0 ⁺ 0.00 ⁺ 0.00 ⁺	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.01	+0.01	+0.02	+0.03	+0.05	+0.11	+0.27	⁺ 0.77	+2.43	+5.91		4.18											r r	**************************************	+11.01	+5.37	+1.48
0 +0.00 +0.00 +	+0.00	±0:00	+0.00	+ <mark>0.00</mark>	+0.00	+0.00	+0.01	+0.01	+0.02	+0.04	+0.07	⁺ 0.15	⁺ 0.48	⁺ 1.04	+2.87	+5.77									R,	#9 T\	YP OF	11, -		M/	⁴ ⁺ 7.04	4.85	+ 1.47
0.00 +0.00 +	⁺ 0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.01	+0.01	+0.02	+0.03	+0.06	⁺ 0.13	+0.29	⁺ 0.73	⁺ 1.54	+4.03	8.05	41			PA		N WT	<u>P</u>			SE	E DE I	AIL		1H	2.10		⁺ 0.90
0.00 ⁺ 0.00 ⁺ 0.00	⁺ 0.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.01	+0.01	0.03	+0.05	+0.10	+0.22	⁺ 0.56	+1.37	2.59	⁺ 2.64	5.87	*			FI	FE =	295.	5								V	+0.55	⁺ 0.85
	+0.00	0.00	⁺ 0.00	+0.00	[‡] 0.01	+0.01	+0.02	⁺ 0.03	[±] 0.07	+0.17	0.45	1.39	+3.68	5																-7F	5.27	+3.03	⁺ 1.29
+0.00 +0.00 +	+0.00	⁺ 0.00	+0.00	+0.00	+0.01	+0.01	+0.02	+0.04	+0.10	Azy	+0.64		+5.18	+7.89	ý													<u> </u>		5.03	⁺ 8.01	⁺ 4.67	⁺ 1.42
+0.00 +0.00 +	+0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.01	[†] 0.01	⁺ 0.02	+ +	+	0.24	+0.53	+1.26	+	.47														+0.37	⁺ 1.23	⁺ 3.45	⁺ 3.80	⁺ 2.19	⁺ 0.75
0.00 +	+	0.00 ⁺	°0.00	°0.00	⁺ 0.01	*	0.02	'0.04 + _{2.02}	'0.09 +	+0.24	+0.53	+0.51														+0.09	+0.12	+0.26	+0.61	⁺ 1.00	+0.99	⁺ 0.53	+0.22
0.00	+0.00	0.00	+0.00	+0.00	+0.00	0.01	0.02	+0.03	+0.07	0. <u>2</u> 2.	+0.79	+1.78	13									TT.		+0.62	+0.26	+0.13	+0.11	+0.15	+0.21	+0.24	+0.20	+0.13	+0.07
4	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.01	0.03	+0.05	+0.18	+0.91	+4.37	⁺ 6.								- Ve	6.94	⁺ 3.46	+1.29	+0.40	+0.15	+0.08	+0.07	+0.07	+0.07	+0.06	+0.04	+0.02
		+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.01	+0.04	+0.12	+0.51	⁺ 4.06	⁺ 7.53	1 00 + 1 00						1.68	+4.76	⁺ 7.77	⁺ 3.47	⁺ 1.09	⁺ 0.31	⁺ 0.11	⁺ 0.05	⁺ 0.04	⁺ 0.03	⁺ 0.03	⁺ 0.02	⁺ 0.01	⁺ 0.00
		+ 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.01	0.02	+0.07	+0.22	+ 0.75	3.78 +	2.007 +		Ó	+	0.11 +	0.35	+	'2.44 +	'2.56 +	'1.36	⁺ 0.45	'0.15	'0.06 +	⁺ 0.03	'0.02 +	'0.01	0.01	'0.01	+0.00	+0.00 +
			+0.00	+0.00	+0.00	+0.00	+0.00	[↓] 0.00	·+ 0.01	+0.03	+0.09	+0.23	1.08	+0.75	+014	+0.01	0.03	+0.09	0.22	0.45	0.66	0.57	0.30	0.14	0.06	+0.03	+0.02	0.01	0.01	±0.00	+0.00	⁺ 0.00	+0.00 +
			⁺ 0.00	⁺ 0.00	⁺ 0.00	+0.00	+0.00	+000 [₫]	₁ ⁺ 0.01 ▼	[†] 0,02	+0.04	⁺ 0.08	+0.14	0.21	⁺ 0.07	+0.01	+0.02	+0.03	+0.04	+0.05	+0.04	+0.04	+0.03	+0.01	0.02	+0.01	0.01	+0.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.00 +
				⁺ 0.00	+0.00	+0.00	+0.00	+0.00	, ↑ 0.00	+	+0.02	+0.03	+0.05	+0.05	+0.03	+0.02	+0.01	+0.01	+0.02	+0.02	+0.02	+0.01	±0.01	+0.01	+0.00	+0.00		+0.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.00 +
				+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	÷0 01	+0.02	+0.02	⁺ 0.03	+0.02	+0.01	+0.01	+0.01	+0.01	+0.01	+0.01	0.00	+0.00	+0.00	⁺ 0.00		⁺ 0.00	+0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00 +
					+0.00	⁺ 0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.01	+0.01	⁺ 0.01	+0.01	+0.01	⁺ 0.01	+0.01	0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00		+0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	+0.00 +
					⁺ 0.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.01	+0.01	+0.01	0.01		+0.00	+0.00	+0.00	+0.00	+0.00		⁺ 0.00	⁺ 0.00	+0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	+0.00 +
						⁺ 0.00	⁺ 0.00	+0.00	⁺ 0.00	+ _{0.00} `	+0.00	0.00	+0.00	+0.00	0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00	⁺ 0.00	+0.00	+0.00	⁺ 0.00	+0.00	+0.00	⁺ 0.00	+0.00	⁺ 0.00	+0.00 +				
						+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.00	⁺ 0.00	+0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	+0.00	+0.00 +
							+0.00	+0.00	+0.00	0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00 +
						/	+9.00	+0.00	⁺ 0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00	⁺ 0.00	+0.00	⁺ 0.00	+0.00	⁺ 0.00							
			/					⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	⁺ 0.00	+ +	⁺ 0.00	0.00									
	/	•						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
									0.00	0.00	0.00	0.00	0.00	0.00 ⁺	0.00	0.00	0.00	0.00 ⁺	0.00	0.00	0.00	0.00	0.00	0.00 ⁺	0.00	0.00	0.00						
									0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	5.00	0.00								
										+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	~	-										
											+0.00	+0.00	+0.00	+0.00	+0.00	+0.00	⁺ 0.00	⁺ 0.00	+0.00														
											+0.00	+0.00	+0.00	+0.00	⁺ 0.00	+0.00	+0.00							Pl	_A	N							
												+0.00	+0.00	+0.00	+ 0.00									SCAL	.E: 1	=20'							
												⁺ 0.00	⁺ 0.00																				

NOTES

- CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL SITE CONDITIONS PRIOR TO BIDDING.

- GENERAL CONTRACTOR PRIOR TO PLACING LOAM.

- 10. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
- 11. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR

- 16. LANDSCAPE CONTRACTOR OR PLANT SUPPLIER SHALL GUARANTEE PLANTS AND PROVIDE REPLACEMENTS FOR TWO YEARS FROM INSTALLATION.

19.7"

6'-10"

CHAIRMAN:

LETTER OR NUMERAL DENOTED

\geq GENERAL NOTES: **COMMON FILL COMPACTED** 1. FOR ELECTRICAL LEGEND, ABBREVIATIONS, AND **TO 95% DRY DENSITY** ADDITIONAL GENERAL DEMOLITION NOTES AND GENERAL NOTES, REFER TO DRAWINGS E-1 AND E-2. 2. ALL PRE-CAST PRIMARY ELECTRICAL MANHOLES, TAL TAL ELECTRICAL AND TELEPHONE MANHOLES, EXCAVATIONS, **BEDDING, BACKFILLING AND COMPLETE INSTALLATIONS REINFORCEMENT LENGTH** SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 2. SA(SA(THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL REQUIREMENTS FOR A COMPLETE AND ЫШ ACCEPTABLE INSTALLATION. DEV APPLICANT: MASSDEVELOPMENT ADDRESS: 33 ANDREWS PARKWAY ∎ × **DEVENS, MA, 01434** DEV -**OWNER OF RECORD: MDFA/PATTON WELL** ADDRESS: 99 HIGH STREET, 11TH FLOOR PARCEL# 010.0-0099-0200.0 I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES BOSTON, MA 02110 AND REGULATIONS OF THE REGISTERS OF DEEDS. **DESIGNER OF RECORD** WRIGHT-PIERCE DRAWING ATTN: JIM CRAY, PE ENTERPRISE COMMISSION: DATE: 600 FEDERAL STREET ANDOVER, MA 01810 **C-11**

NOTES (TYPICAL TRANSFORMER PAD DETAIL):

1. "FRONT" DENOTES THE SIDE ON WHICH THE ACCESS DOORS ARE LOCATED. THE FOUNDATION MUST BE LOCATED SO THAT THE "FRONT" IS ACCESSIBLE BY TRUCK AND SUITABLY PROTECTED FROM PLOW AND TRUCK DAMAGE.

2. THE CONCRETE BASE SHALL BE SET ON A SUITABLE GRAVEL BASE AS NOTED. PROVIDE ADEQUATE DRAINAGE AWAY FROM THE BASE. FINISH GRADE SHALL **BE GRADED AWAY FROM THE FOUNDATION.**

3. PROVIDE CONDUIT BOND OUTS (SIZED AS REQUIRED FOR INSTALLATION) A MINIMUM OF 8" (TO BOTTOM) UP THE WALL FROM THE BASE. LOCATE A MINIMUM OF ONE BOND OUT PER WALL, MORE IF NECESSARY. LINE UP THE BOND OUTS WITH THE TRENCH AND DUCT BANKS AS INDICATED AND SHOWN ON THE DRAWINGS.

4. PROVIDE 3/4"x10'-0" COPPER CLAD STEEL GROUND ROD INSTALLED AS SHOWN ON THE GROUNDING PLAN THIS SHEET FOR THE TRANSFORMER PAD FOUNDATION. THE TOP OF THE GROUND ROD SHALL BE DRIVEN VERTICALLY TO **6" BELOW FINISHED GRADE.**

5. PROVIDE A GROUND WIRE FROM THE GROUND GRID THROUGH THE CABLE HOLE AT THE BOTTOM OF THE PAD AS SHOWN ON THE GROUNDING PLAN THIS SHEET. ENOUGH GROUND WIRE SHALL BE PROVIDED SUCH THAT IT CAN BE INSTALLED THROUGH THE TWO GROUNDING LUGS AND CONNECTED TO THE NEUTRAL SPADE OF THE TRANSFORMER.

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6. CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI @ 28 DAYS. FOR CAST-IN-PLACE EARLY HIGH STRENGTH MAY BE USED WITH A MINIMUM OF SEVEN DAY CURE TIME.

7. REINFORCING STEEL TO HAVE: FY=60 KSI.

8. FOR PRECAST UNITS: THE PRECAST SUPPLIER SHALL PROVIDE LIFTING LUGS IN THE SLAB FOUNDATION AND BASE. THE PRECAST SUPPLIER SHALL ASSEMBLE THE SLAB TO THE BASE PRIOR TO SHIPPING TO THE SITE TO ENSURE THAT THE SLAB AND BASE FIT PROPERLY (WITH NO ROCKING OF THE BASE EVIDENT).

9. THE FOUNDATION SUPPLIER SHALL SUPPLY A 16"x24"x1/4" GALVANIZED STEEL PLATE TO COVER A PORTION OF THE CABLE HOLE WHEN THE TRANSFORMER DOES NOT COMPLETELY COVER IT. THE GENERAL CONTRACTOR MAY BE REQUIRED TO CUT THE STEEL PLATE.

A. #5 REBAR 12" ON CENTER EVENLY SPACED EACH WAY TOP AND BOTTOM.

B. 2 #4 CORNER DIAGONAL REBAR 2'-0" LONG TOP AND BOTTOM.

C. 4"x4"x1/2" ANGLE 6" LONG WITH (2) 3/4" DIAMETER EXPANSION ANCHORS TYPICAL - 4 PLACES (TWO PIECE PRECAST ONLY).

D. CHAMFER TYPICAL

- E. 2" CONCRETE COVER OVER TOP REBAR.
- F. 3" CONCRETE COVER OVER BOTTOM REBAR
- G. #5 L-BAR @ 12" (CAST-IN-PLACE ONLY).
- H. 16"x24"x1/4" GALVANIZED STEEL PLATE.
- I. 6x6 WWM @ CENTER OF COVER.
- J. #5 REBAR ON 12" CENTERS.

K. PULLING EYE INSERT, FOR USE WITH 3/4" NATIONAL COURSE THREAD EYE-BOLT, (RICHMOND LCB-1 OR EQUIVALENT). LOCATED OPPOSITE EACH CABLE HOLE AND TWO FEET FROM THE BOTTOM.

L. ALL REBAR ENDS SHALL BE COVERED BY A MINIMUM OF 1" OF CONCRETE.

M. PROVIDE A SUITABLE (FULL LENGTH AND HEIGHT) BARRIER WALL SEPARATING THE PRIMARY FROM THE SECONDARY CONDUCTORS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

N. ALL CONCRETE WORK SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 3. ALL EXCAVATION AND BACKFILLING SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 2. ALL WORK OF DIVISION 2 AND 3 HAS BEEN NOTED HERE FOR **COORDINATION PURPOSES WITH DIVISION 16 - ELECTRICAL.**

O. THESE DETAILS ARE FOR BIDDING PURPOSES ONLY. THE CONTRACTOR SHALL **OBTAIN TYPICAL VAULT CONSTRUCTION DETAILS FROM THE UTILITY COMPANY** AND TRANSFORMER MANUFACTURER SUPPLIER AND SHALL PERFORM ALL WORK FROM THESE DETAILS. THE CONTRACTOR SHALL COORDINATE VAULT SIZES AND CONDUIT AND CABLE ENTRANCES WITH THE EQUIPMENT BEING FURNISHED AT EACH LOCATION SHOWN ON THE DRAWINGS.

EROSION AND SEDIMENTATION CONTROL NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN URBAN AND SUBURBAN AREAS AS CONTAINED IN THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS", FRANKLIN, HAMPDEN, HAMPSHIRE CONSERVATION DISTRICTS, DATED MARCH, 1997.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE GRADING/EROSION CONTROL PLANS, PROVIDE SILT FENCE, STONE CHECK DAMS AND OTHER EROSION CONTROL MEASURES AS REQUIRED TO ADEQUATELY PREVENT SEDIMENT TRANSPORT AS NOTED IN THE RMP

- 1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS", FRANKLIN, HAMPDEN, HAMPSHIRE CONSERVATION DISTRICTS, DATED MARCH, 1997.
- 2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE MAINTAINED IN AN UNTREATED OR UNVEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL, AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
- 3. INSTALL SILT FENCE AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #5.
- 4. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE.
- 5. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT TO BE COMPLETED 30 DAYS PRIOR TO THE ANTICIPATED DATE OF THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY PERMANENT SEEDING, UNTIL UPGRADIENT AREAS ARE STABILIZED.
- WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISH GRADED SHALL BE COMPLETED 30 DAYS PRIOR TO THE FIRST KILLING FROST
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND REVEGETATED AS FOLLOWS:
- A. A MINIMUM OF FOUR (4) INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
- B. FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED WITH A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED WITH A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYE GRASS: SEEDING RATE IS 3.0 LBS PER 1000 SQ. FT. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED.
- C. HAY MULCH AT THE RATE OF 70-90 LBS PER 1000 SQUARE FEET OR A HYDRO-APPLICATION OF CELLULOSE FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER WILL BE USED ON HAY MULCH FOR WIND CONTROL.
- 9. WETLANDS WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
- 10. IN GENERAL, AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS SHALL HAVE A MAXIMUM PERIOD OF EXPOSURE OF NOT MORE THAN 15 DAYS.
- 11. FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IN ALL AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS.

DEC EROSION AND SEDIMENTATION CONTROL NOTES

- PRIOR TO ANY LAND DISTURBANCE ACTIVITIES COMMENCING ON THE SITE. THE APPLICANT/CONTRACTOR SHALL BE RESPONSIBLE FOR PHYSICALLY MARKING THE LIMITS OF CONSTRUCTION ON THE SITE WITH TAPE, SIGNS, OR ORANGE CONSTRUCTION FENCE, SO THAT WORKERS UNDERSTAND THE AREAS TO BE PROTECTED. THE PHYSICAL MARKERS SHALL BE INSPECTED DAILY AND REPAIRED AS NECESSARY THROUGHOUT THE DURATION OF THE PROJECT.
- PERIMETER SEDIMENT CONTROL SYSTEM SHALL BE INSTALLED PRIOR TO SOIL DISTURBANCE AND MAINTAINED TO CONTAIN SOILS ON-SITE. AREAS OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST NOT BE DISTURBED UNLESS THE APPLICANT HAS OBTAINED PRIOR APPROVAL FROM THE DEC.
- MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA AND STREET SWEEPING OF ADJACENT STREETS AND ROADS SHALL BE INCLUDED WHERE NECESSARY.
- d. ALL RESOURCE AREAS SHALL BE PROTECTED FROM SEDIMENT.
- e. MONITORING AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE COURSE OF CONSTRUCTION SHALL BE REQUIRED. SEDIMENT SHALL BE REMOVED ONCE THE VOLUME REACHES 1/4 TO 1/2 THE HEIGHT OF THE EROSION CONTROL.
- DIVERT RUNOFF FROM OFFSITE AND UNDISTURBED AREAS AWAY FROM CONSTRUCTION TO MINIMIZE SOIL EROSION AND SEDIMENTATION ON AND OFF-SITE. TEMPORARILY STABILIZE ALL HIGHLY ERODIBLE SOILS AND SLOPES IMMEDIATELY.
- LAND DISTURBANCE ACTIVITIES EXCEEDING TWO ACRES IN SIZE SHALL NOT BE DISTURBED WITHOUT A SEQUENCING PLAN THAT REQUIRES STORMWATER CONTROLS TO BE INSTALLED AND EXPOSED SOILS STABILIZED, AS DISTURBANCE BEYOND THE TWO ACRES CONTINUES. A CONSTRUCTION PHASING PLAN, INCLUDING EROSION AND SEDIMENT CONTROL PLAN FOR EACH PHASE, SHALL BE SUBMITTED TO THE DEC PRIOR TO ANY CONSTRUCTION ON THE SITE. MASS CLEARINGS AND GRADING OF THE ENTIRE SITE SHALL BE AVOIDED.
- h. SOIL STOCKPILES MUST BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY. STOCKPILE SIDE SLOPES SHALL NOT BE GREATER THAN 2:1. ALL STOCKPILES SHALL BE SURROUNDED BY SEDIMENT CONTROLS.
- DISTURBED AREAS REMAINING IDLE FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED.
- PERMANENT SEEDING SHALL BE UNDERTAKEN IN THE SPRING FROM MARCH THROUGH MAY, AND IN LATE SUMMER AND EARLY FALL FROM AUGUST TO OCTOBER 15. DURING THE PEAK SUMMER MONTHS AND IN THE FALL AFTER OCTOBER 15, WHEN SEEDING IS FOUND TO BE IMPRACTICAL, AN APPROPRIATE TEMPORARY MULCH AND/OR NON-ASPHALTIC SOIL TACKIFIER WITH WINTER RYE SHALL BE APPLIED. PERMANENT SEEDING MAY BE UNDERTAKEN DURING THE SUMMER IF PLANS PROVIDE FOR ADEQUATE MULCHING AND WATERING.
- ANTI-TRACKING PAD(S) SHALL BE CONSTRUCTED AT ALL ENTRANCE/EXIST POINTS OF THE SITE TO REDUCE THE AMOUNT OF SOIL CARRIED ONTO ROADWAYS AND OFF THE SITE. DUST SHALL ALSO BE CONTROLLED AT THE SITE.
- ALL SLOPES STEEPER THAN 3:1 (H:V, 33.3%), AS WELL AS PERIMETER DIKES, SEDIMENT BASINS OR TRAPS, AND EMBANKMENTS MUST, UPON COMPLETION, BE IMMEDIATELY STABILIZED WITH SOD, SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES
- m. TEMPORARY SEDIMENT TRAPPING DEVICES MUST NOT BE REMOVED UNTIL PERMANENT STABILIZATION IS ESTABLISHED IN ALL CONSTRUCTION AREAS ASSOCIATED WITH THE PROJECT SIMILARLY, STABILIZATION MUST BE ESTABLISHED PRIOR TO CONVERTING TEMPORARY SEDIMENT TRAPS/BASINS INTO PERMANENT (POST-CONSTRUCTION) STORMWATER MANAGEMENT FACILITIES ALL FACILITIES USED FOR TEMPORARY MEASURES SHALL BE CLEANED AND RE-STABILIZED PRIOR TO BEING PUT INTO FINAL OPERATION.
- n. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS OF REMOVAL

EROSION CONTROL DURING WINTER CONSTRUCTION

- 1. WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH APRIL 15
- SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- PRECIPITATION EVENT.
- SURFACE IS NOT VISIBLE THROUGH THE MULCH.
- ACCORDANCE WITH THE STANDARD DETAILS.

B) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3%, FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.

C) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.

AND MULCHING PRIOR TO PLACEMENT.

MULCH ANCHORING

FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

DDITIONAL TEMPORARY SEED MIX	XTURE (OR PERIODS LESS THAN 12 MON	THS)
DATES	SEED	RATE
/1 - 7/1 /15 - 9/15	OATS	80 LBS/ACRE
/1 - 6/1 3/15 - 9/15)	ANNUAL RYE GRASS	40 LBS/ACRE
3/15 - 10/15)	WINTER RYE	120 LBS/ACRE
11/1 - 4/1)	MULCH W/ DORMANT SEED	80 LBS/ACRE*
5/1 - 6/30)	FOXTAIL MILLET	30 LBS/ACRE
SEED RATE ONLY		
MULCH AND MULCH ANCHORING		
MULCH		
LOCATION	MULCH	RATE (1000 S.F
PROTECTED AREA	STRAW OR HAY *	100 POUNDS
WINDY AREAS	STRAW OR HAY (ANCHORED) *	100 POUNDS
MODERATE TO HIGH	JUTE MESH,	AS REQUIRED
VELOCITY AREAS OR STEEP SLOPES (GREATER THAN 3:1)	EXCELSIOR MAT OR EQUIV.	AS REQUIRED
* A HYDRO-APPLICATION OF CEL SEEDING. A SUITABLE BINDER CONTROL.	LULOSE FIBER MAY BE APPLIED FOLLOW SHALL BE USED ON HAY MULCH FOR WI	/ING ND

CURLEX 1 MATTING BY AMERICAN EXCELSIOR CO. OR APPROVED EQUAL	

INSTALL ON SLOPES 3:1 OR GREATER

2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE

3. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY

4. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED, AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT SOIL

NORTH ELEVATION SCALE: 1/8" = 1'-0"

> APPLICANT: MASSDEV ADDRESS: 33 ANDREWS DEVENS, MA 01

			APP'D DATE J.CRA 9-20	
	IGHT	TOP OF MASONRY 2 311.50' TOP OF WALL PFAS 309.50' TOP OF MASONRY 1 305.50' AST NT BAND FIRST FLOOR 295.50'	NO SUBMISSIONS/REVISIONS 95% DESIGN REVIEW 2 2	<u>(4)</u>
<u>ATION</u> 1'–0"	5		DESIGNED BY: C.MIC CAD COORD: W.BAI CAD: E.SHI CHECKED BY: DATE: APPROVED BY:	DATE: PROJECT NO: 14083H
			RCE X	ght-pierce.com
			WRIGHT-PIE Engineering a Bett	888.621.8156 www.wri
		DATE:	MASSDEVELOPMENT DEVENS, MASSACHUESETTS TON WATER TREATMENT PLANT	ELEVATIONS
/ELOPMENT 'S PARKWAY 1434	CHAIRMAN: OWNER OF RE ADRESS: 99 PARCE BC	ECORD: MDFA/PATTON WELL HIGH STREET, 11TH FLOOR EL# 010.0-0099-0200.0 DSTON, MA 02110	DRAWII A-4	NG