9 GREEN STREET PARKING LOT PROJECT

9 Green Street
Holliston, Massachusetts

OWNER/APPLICANT:
TOWN OF HOLLISTON
1750 WASHINGTON STREET
HOLLISTON, MA 01746

CIVIL ENGINEER:
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE, LINCOLN, RI 02865, 401-334-4100
10 LINCOLN ROAD, SUITE 210, FOXBORO, MA 02035, 508-543-1755
14 BOBALA ROAD, SUITE 2B, HOLYOKE, MA 01040, 413.507.3448

LANDSCAPE ARCHITECT:
SHADLEY ASSOCIATES, P.C.
1730 MASSACHUSETTS AVENUE
LEXINGTON, MA 02420

ELECTRICAL CONSULTANT:
GGD CONSULTING ENGINEERS, INC.
375 FAUNCE CORNER ROAD, SUITE D
DARTMOUTH, MA 02747

SCALE: N.T.S.

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FEBRUARY 23, 2023

REFERENCE

1. PROJECT LOCATION: TOWN OF HOLLISTON, 9 GREEN STREET, HOLLISTON, MA 01746.
   ASSESSOR'S MAP 8E, LOT 61.
2. EXISTING CONDITIONS MAPPING TAKEN FROM PLAN ENTITLED "EXISTING CONDITIONS PLAN 9 GREEN STREET HOLLISTON, MA" PREPARED BY LAND PLANNING INC., DATED 1/28/2021.
3. EXISTING CONDITIONS COMPILED FROM AVAILABLE RECORD PLANS, "EXISTING CONDITIONS PLAN 9 GREEN STREET HOLLISTON, MA" PREPARED BY LAND PLANNING INC., DATED 1/28/2021.
4. WETLAND FLAGS IDENTIFYING WETLAND RESOURCE AREAS WERE PLACED BY PARE CORPORATION ON 6/15/2022 AND LOCATED BY PARE CORPORATION USING A GPS DEVICE (LOCATED BY PARE CORPORATION).

GENERAL NOTES

1. THE COMMONWEALTH OF MASSACHUSETTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGE CONSTRUCTION, 2021 EDITION OR LATEST REVISION, AND THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARD DETAILS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO. ALL WORK SHALL MEET OR EXCEED THE MASSACHUSETTS STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, WITH LATEST REVISIONS. THE LATEST REVISION OF THE STANDARD SPECIFICATIONS MAY BE OBTAINED AT THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION.
2. THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE ENGINEER AND OWNER'S REPRESENTATIVE AS REQUIRED.
3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AND/OR BARRIERS AROUND ALL OPEN EXCAVATED AREAS IN ACCORDANCE WITH OSHA FEDERAL, STATE, AND LOCAL REQUIREMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED. NO FIELD ADJUSTMENTS IN THE LOCATION OF SITE ELEMENTS SHALL BE MADE WITHOUT THE ENGINEERS APPROVAL.
5. IF ANY DEVIATION OR ALTERATION OF THE WORK PROPOSED ON THESE DRAWINGS IS REQUIRED, THE CONTRACTOR SHALL IMMEDIATELY CONTACT AND COORDINATE ANY DEVIATIONS WITH THE ENGINEER AND OWNER.
6. ANY AREA OUTSIDE OF THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
7. ALL SITE WORK SHALL MEET OR EXCEED THE SITE WORK SPECIFICATIONS PREPARED FOR THIS PROJECT.
8. ALL SIGNS SHALL BE REFLECTORIZED TYPE III SHEETING AND CONFORM WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION.
9. ALL UTILITIES (LOCATION AND ELEVATION) DEPICTED SHALL BE CONSIDERED APPROXIMATE ONLY. BEFORE COMMENCING SITE WORK IN ANY AREA, CONTACT "DIG SAFE" AT 1-888-DIG-SAFE (1-888-344-7233) TO ACCURATELY LOCATE UNDERGROUND UTILITIES. ALL DAMAGE TO EXISTING UTILITIES OR STRUCTURES, AND THE COST TO REPAIR THE DAMAGES TO INITIAL CONDITIONS, AS SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
10. NO EXCAVATION SHALL BE DONE UNTIL COMPANIES ARE PROPERLY NOTIFIED IN ADVANCE. NOTE THAT NOT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL RESPECTIVE UTILITY COMPANIES TO VERIFY AND LOCATE EXISTING UTILITIES.

LAYOUT NOTES

1. ALL LINES ARE PERPENDICULAR OR PARALLEL TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
2. ACCESSIBLE RAMPS SHALL BE PER THE AMERICAN WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES AND CODE OF MASSACHUSETTS REGULATIONS (CMR) TITLE 521 OF THE ARCHITECTURAL ACCESS BOARD REGULATIONS.
3. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL PERFORM BENCHMARK FIELD LEVEL VERIFICATION AND COORDINATE LAYOUT CHECK. THE CONTRACTOR SHALL CONTACT PARE CORPORATION IF ANY DISCREPANCIES ARE FOUND.
4. DIMENSIONS OF PARKING SPACES AND DRIVEWAYS ARE FROM FACE OF CURB TO FACE OF CURB. DIMENSIONS FROM BUILDING ARE FROM FACE OF BUILDING TO FACE OF CURB.
5. ALIGN WALKWAYS ON DOORWAYS THEY SERVE TO PROVIDE MINIMUM REQUIRED MANEUVERING CLEARANCE IN ACCORDANCE WITH THE AMERICAN WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES AND CODE OF MASSACHUSETTS REGULATIONS (CMR) TITLE 521 OF THE ARCHITECTURAL ACCESS BOARD REGULATIONS.

DEMOLITION NOTES

1. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION OF STRUCTURES, PAVEMENT AND CONCRETE MATERIALS, AND UTILITIES WITH APPROPRIATE PROPOSED SITE GENERAL, GRADING, UTILITY, AND LANDSCAPING DRAWINGS.
2. ALL NOTED UTILITIES TO BE REMOVED AND DISPOSED OF, RELOCATED OR CAPPED REPRESENT ALL KNOWN SITE CONDITIONS TO BE DEMOLISHED. THE CONTRACTOR SHALL COORDINATE ALL UNFORESEEN CONDITIONS WITH THE PROJECT ENGINEER, OWNER AND/OR RESPECTIVE UTILITY COMPANIES PRIOR TO PROCEEDING WITH WORK.
3. WATER, SEWER, DRAINAGE, GAS, AND OTHER SITE UTILITIES SERVICING THE EXISTING FACILITIES ARE TO REMAIN ACTIVE THROUGHOUT CONSTRUCTION.
4. THERE SHALL BE NO INTERRUPTION OF UTILITY SERVICES DURING THE CONSTRUCTION OPERATION WITHOUT APPROVAL OF THE OWNER.

GRADING AND UTILITY NOTES

1. UNDERGROUND UTILITIES DEPICTED WERE COMPILED FROM AVAILABLE RECORD PLANS AND SHALL BE CONSIDERED APPROXIMATE ONLY. BEFORE COMMENCING SITE WORK IN ANY AREA, CONTACT "DIG SAFE" AT 1-888-DIG-SAFE (1-888-344-7233) TO ACCURATELY LOCATE UNDERGROUND UTILITIES. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES DEPICTED OR NOT DEPICTED ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS TO REPAIR SUCH DAMAGES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO EXCAVATION SHALL BE DONE UNTIL UTILITY COMPANIES ARE PROPERLY NOTIFIED.
2. ALL WORK PERFORMED AND ALL MATERIALS FURNISHED SHALL CONFORM WITH THE LINES AND GRADES ON THE PLANS AND SITE WORK SPECIFICATIONS.
3. AT ALL LOCATIONS WHERE EXISTING CURBING OR PAVEMENT ABUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT AND CURBS SMOOTHLY INTO EXISTING BY MATCHING LINES, GRADES AND JOINTS.
4. ALL UTILITY COVERS, GRATES, ETC. SHALL BE ADJUSTED TO BE FLUSH WITH THE SURROUNDING SURFACE OR PAVEMENT FINISH GRADE. RIM ELEVATIONS OF STRUCTURES AND MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH THE GRADING PLANS.
5. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION OF PRIVATE UTILITIES BY THE UTILITY COMPANIES, AS REQUIRED.
6. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION SHALL BE PROVIDED ON A SKETCH TO SCALE OF THE EXISTING UTILITY WITH TIES TO KNOWN POINTS, PHOTOS AND FURNISHED TO THE ENGINEER FOR RESOLUTION.
7. THE CONTRACTOR SHALL PROTECT ALL UNDERGROUND DRAINAGE, SEWER AND UTILITY FACILITIES FROM EXCESSIVE VEHICULAR LOADS DURING CONSTRUCTION. ANY DAMAGE TO THESE FACILITIES RESULTING FROM CONSTRUCTION LOADS SHALL BE RESTORED TO ORIGINAL CONDITION.
8. GAS, ELECTRIC, AND COMMUNICATIONS ROUTING ARE SUBJECT TO REVIEW AND APPROVAL BY APPROPRIATE UTILITY COMPANIES.
9. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES BY PROVIDING TEMPORARY SUPPORTS OR SHEETING AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
10. ALL WATER LINE BENDS AND TEES SHALL BE REINFORCED WITH THRUST BLOCKS. ALL WATER DISTRIBUTION PIPING AND FITTINGS MUST ADHERE TO THE TOWN OF HOLLISTON WATER DEPARTMENT SPECIFICATIONS AND SHALL BE INSPECTED BEFORE, DURING, AND AFTER CONSTRUCTION PRIOR TO TAPPING THE SERVICE MAIN.
11. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
12. PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MIN. OF 1/8" PER FOOT UNLESS SPECIFIED.
13. THE PROPOSED WALKWAYS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2% AND A MAXIMUM RUNNING SLOPE OF 5% AS SHOWN ON CONSTRUCTION DETAILS AND GRADING PLAN.

EROSION AND SEDIMENTATION CONTROL NOTES - MASSACHUSETTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROLS IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY'S (EPA) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT (CGP) AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL PREPARE AND SUBMIT A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL PREPARE AND SUBMIT AN ELECTRONIC NOTICE OF INTENT (eNOI) WITH THE EPA IN ACCORDANCE WITH THE NDPES PERMIT REQUIREMENTS PRIOR TO CONSTRUCTION.
4. SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" AND THE NOTES AND DETAILS SHOWN IN THIS PLAN SET.
5. THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE PLANS ARE INTENDED TO REPRESENT THE MINIMUM CONTROLS NECESSARY TO MEET ANTICIPATED SITE CONDITIONS. ADDITIONAL MEASURES SHALL BE IMPLEMENTED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
6. REQUIRED PERIMETER CONTROL SHALL BE PROPERLY ESTABLISHED, CLEARLY VISIBLE AND IN OPERATION PRIOR TO INITIATING ANY LAND CLEARING ACTIVITY AND/OR OTHER CONSTRUCTION RELATED WORK. SUCH FACILITIES SHALL REPRESENT THE LIMIT OF WORK. WORKERS SHALL BE INFORMED THAT NO CONSTRUCTION ACTIVITY IS TO OCCUR BEYOND THE LIMIT OF WORK AT ANY TIME THROUGHOUT THE CONSTRUCTION PERIOD.
7. AS FEASIBLE, CONSTRUCTION SHALL BE PHASED TO LIMIT THE AREA OF EXPOSED SOIL AND THE DURATION OF EXPOSURE. ALL DISTURBED AREAS SHALL BE TEMPORARILY AND/OR PERMANENTLY STABILIZED WITHIN 14 DAYS FOLLOWING COMPLETION OF GRADING ACTIVITIES.
8. THE CONTRACTOR SHALL INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
9. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED ON A WEEKLY BASIS AND AFTER EACH STORM EVENT OF 0.25 INCH OR GREATER DURING CONSTRUCTION TO ENSURE THAT THE EROSION CONTROL BARRIERS ARE INTACT.
10. CLEAN AND MAINTAIN SEDIMENTATION CONTROL BARRIERS WHEN SEDIMENT ACCUMULATES TO ONE HALF THE HEIGHT OF THE BARRIER. MATERIAL COLLECTED FROM THE SEDIMENTATION BARRIER SHALL BE REMOVED AS NECESSARY AND DISPOSED IN AN UPLAND AREA.
11. THE CONTRACTOR SHALL MAINTAIN A SUFFICIENT RESERVE OF VARIOUS EROSION CONTROL MATERIALS ONSITE AT ALL TIMES FOR EMERGENCY PURPOSES OR ROUTINE MAINTENANCE.
12. THE CONTRACTOR SHALL SCHEDULE HIS WORK TO ALLOW THE FINISHED SUB GRADE ELEVATIONS TO DRAIN PROPERLY WITHOUT PUDDLING. SPECIFICALLY, ALLOW WATER TO ESCAPE WHERE PROPOSED CURB MAY RETAIN RUNOFF PRIOR TO PAVING. PROVIDE TEMPORARY POSITIVE DRAINAGE, AS REQUIRED, TO STABILIZED DISCHARGE POINTS.
13. SOIL AND OTHER MATERIALS RESULTING FROM SITE CLEARING MAY BE RECYCLED AND/OR REUSED ON THE SITE AS APPROPRIATE. WASTE MATERIALS SHALL BE REMOVED FROM THE SITE.
14. CRUSHED STONE CONSTRUCTION ENTRANCES SHALL BE ESTABLISHED AT ALL POINTS OF INGRESS AND EGRESS.
15. TEMPORARY DIVERSIONS (TD) MAY CONSIST OF A DITCH OR SWALE, OR MAY BE ACHIEVED USING WOOD CHIP PILES, COIR LOGS, OR SIMILAR MATERIALS.
16. TEMPORARY SEDIMENT TRAPS (TST) AND TEMPORARY SWALES (TS) SHALL BE SIZED BY THE CONTRACTOR USING THE PARAMETERS CONTAINED IN THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES.
17. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
18. CATCH BASINS AND STORM DRAINS SHALL BE PROTECTED WITH HAY BALES OR SEDIMENT BAGS IN PAVED AREAS UNTIL CONTRIBUTING AREA IS PERMANENTLY STABILIZED.
19. DEWATERING WASTEWATER PUMPED FROM EXCAVATIONS SHALL BE CONVEYED BY HOSE TO AN UPLAND AREA AND DISCHARGED INTO A DEWATERING BASIN, HAY BALE CORRALS, OR SEDIMENTATION BAGS.
20. CONSTRUCTION SITE WASTE MATERIALS SHALL BE PROPERLY CONTAINED ONSITE AND DISPOSED OFF SITE AT A LOCATION IN ACCORDANCE WITH THE LOCAL AND STATE REGULATIONS.
21. RIPRAP OR OTHER ENERGY DISSIPATERS SHALL BE USED WHERE NECESSARY TO CONTROL EROSION.
22. ANY EQUIPMENT THAT IS NOT READILY MOBILE (TRACK MACHINERY) SHALL BE PARKED WITHIN THE PROJECT LIMIT OF DISTURBANCE. LARGE AND/OR BULKY MATERIALS SHALL BE STORED SUCH THAT THEY DO NOT INTERFERE WITH THE ONGOING CONSTRUCTION ACTIVITIES OR EROSION CONTROL MEASURES.
23. NEWLY VEGETATED AREAS SHALL BE REGULARLY INSPECTED AND MAINTAINED TO ENSURE THE ESTABLISHMENT OF STABLE VEGETATED SURFACES.
24. THE CONTRACTOR SHALL NOT REMOVE ANY COMPOST FILTER SOCKS OR OTHER EROSION CONTROLS UNTIL THE CONTRIBUTING AREA IS PERMANENTLY STABILIZED.
25. ALL DRAINAGE STRUCTURES SHALL BE CLEARED OF ACCUMULATED SEDIMENT PRIOR TO ACCEPTANCE OF THE FINAL PROJECT. THE CONTRACTOR SHALL SCHEDULE HIS WORK TO ALLOW THE FINISHED SUB GRADE ELEVATIONS TO DRAIN PROPERLY WITHOUT PONDING. SPECIFICALLY, ALLOW WATER TO ESCAPE WHERE PROPOSED CURB MAY RETAIN RUNOFF PRIOR TO APPLICATION OF SURFACE PAVING. PROVIDE TEMPORARY POSITIVE DRAINAGE, AS REQUIRED, TO STABILIZED DISCHARGE POINTS.
26. INSTALLATION OF THE EROSION CONTROL BARRIERS AS ILLUSTRATED IS INTENDED TO REPRESENT THE MINIMUM SEDIMENTATION CONTROL FACILITIES NECESSARY TO MEET ANTICIPATED SITE CONDITIONS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
27. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS UPON COMPLETION OF WORK IN THAT AREA.

STATE RIGHT-OF-WAY NOTES

1. ALL WORK TO BE PERFORMED WITHIN THE COMMON WEALTH OF MASSACHUSETTS PUBLIC RIGHT-OF-WAY (ROW) SHALL CONFORM TO THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGE CONSTRUCTION, 1988 EDITION OR LATEST REVISION, AND THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARD DETAILS.
2. THE CONTRACTOR SHALL APPLY FOR AND OBTAIN A UTILITY PERMIT FROM THE MASSDOT FOR UTILITY WORK WITHIN THE PUBLIC ROW AND MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS, PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE ENGINEER AND OWNER'S REPRESENTATIVE AS REQUIRED.
3. THE CONTRACTOR SHALL PREPARE A TRANSPORTATION MANAGEMENT PLAN INCLUDING A TEMPORARY TRAFFIC CONTROL PLAN AS REQUIRED FOR THE MASSDOT UTILITY PERMIT APPLICATION AT NO ADDITIONAL EXPENSE TO THE OWNER.
4. ALL TEMPORARY TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), LATEST REVISION.

CONSTRUCTION NOTES - MASSDOT STANDARDS

106.3.0	=	METHOD OF SETTING VERTICAL CURB - M.A. STD. 106.3.0
107.6.0	=	WHEELCHAIR RAMPS FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL - M.A. STD. 107.6.0
107.6.5	=	DETECTABLE WARNING PANEL FOR WHEELCHAIR RAMPS - M.A. STD. 107.6.5
201.4.0	=	PRECAST CONCRETE CATCH BASIN - M.A. STD. 201.4.0

PARE

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Town of Holliston
9 Green Street
Holliston, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
JAMES A. JACKSON, JR.
CIVIL
No. 42263
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	20212.00
DATE:	OCTOBER 2022
SCALE:	
DESIGNED BY:	GLH
CHECKED BY:	SL
DRAWN BY:	AWB
APPROVED BY:	JAJ

DRAWING TITLE:
NOTES

DRAWING NO.:
C1.1

SHEET NO. 1 OF 10

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUST
APPROX	APPROXIMATE
AC	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
ASSF	AREA SUBJECT TO STORM FLOWAGE
ATD	ASPHALT TURNDOWN
ATG	ADJUST TO GRADE
BB	BITUMINOUS BERM
BC	BOTTOM OF CURB (FINISHED GRADE ON LOW SIDE OF CURB)
BD	BOUND
BIT	BITUMINOUS
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BMP	BEST MANAGEMENT PRACTICE
BO	BY OTHERS
BOL	BOLLARD
BOS	BOTTOM OF SLOPE
BOT	BOTTOM
BPM	BLACKOUT PAVEMENT MARKING
BR	BRIDGE
BS	BOTTOM OF STAIR (FINISHED GRADE AT BOTTOM STAIR)
BW	BOTTOM OF WALL (FINISHED GRADE ON LOW SIDE OF WALL)
BWL	BROKEN WHITE LINE
BYL	BROKEN YELLOW LINE
C=	CURVE LENGTH
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CCW	CEMENT CONCRETE WALK
CD	CHECK DAM
CE	CONSTRUCTION ENTRANCE
CEM	CEMENT
CFS	COMPOST FILTER SOCK
CG	CLEAR AND GRUB VEGETATION
CH	CHORD LENGTH
CI	CURB INLET
CIP	CAST IRON PIPE
CL	CENTERLINE
CLDI	CEMENT-LINED DUCTILE IRON
CLF	CHAIN LINK FENCE
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CLR	CLEAR
CLS	CLASS
CM	SAWCUT AND MATCH
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CP	CONCRETE PAD
CR GR	CROWN GRADE
CSP	CORRUGATED STEEL PIPE
CSTR	CONCRETE STAIRS
CTE	CONNECT TO EXISTING
CW	CROSSWALK
DEMO	DEMOLITION
DET	DETECTABLE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DIV	DIVERSION
DMH	DRAIN MANHOLE
DTP	DRIPLINE TREE PROTECTION
DWL	DOTTED WHITE LINE
DWLEx	DOTTED WHITE LINE EXTENSION
DBWL	DOUBLE WHITE LINE
DWP	DETECTABLE WARNING PAVER
DYL	DOTTED YELLOW LINE
DYLEx	DOTTED YELLOW LINE EXTENSION
DBYL	DOUBLE YELLOW LINE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL)	ELEVATION
EMB	EMBANKMENT
EMH	ELECTRIC MANHOLE
EOP	EDGE OF PAVEMENT
ETR	EXISTING TO REMAIN. PROTECT DURING CONSTRUCTION.
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN	FOUNDATION
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
FLDSTN	FIELDSTONE
FND	FOUND
FT	FOOT
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
GTD	GRADE TO DRAIN
GV	GATE VALVE
HCPS	HANDICAP ACCESSIBLE PARKING SIGN
HDBC	HEAVY DUTY BITUMINOUS CONCRETE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HDPS	HANDICAP ACCESSIBLE PARKING SIGN
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HMAW	HOT MIXED ASPHALT WALKWAY
HOR	HORIZONTAL
HPR	HEADWALL PROTECTION RACK
HYD	HYDRANT
ID	INSIDE DIAMETER
INV	INVERT
JCT	JUNCTION
L=	LENGTH OF CURVE
LB	LEACH BASIN
LOD	LIMIT OF DISTURBANCE
LP	LOW POINT
LS	LOAM AND SEED
LSOD	LOAM AND SOD
LT	LEFT
LTP	LIGHT POLE
MAX	MAXIMUM
MB	MAILBOX
MCW	MONOLITHIC CONCRETE WALK
MH	MANHOLE
MIN	MINIMUM
MON	MONITORING
MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OCS	OUTLET CONTROL STRUCTURE
OD	OUTSIDE DIAMETER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OWS	OIL WATER SEPARATOR
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCFES	PRECAST CONCRETE FLARED END SECTION
PCTC	PRECAST CONCRETE TRANSITION CURB
PCR	PEDESTRIAN CURB RAMP
PE	POLYETHYLENE
PERF	PERFORATED
PGL	PROFILE GRADE LINE
PHMA	POROUS HOT MIXED ASPHALT PAVEMENT
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PM	PAVEMENT MARKING
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVCH	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
QPA	QUALIFYING PERVIOUS AREA
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
R=	RADIUS
RA	RAILING
RCP	REINFORCED CONCRETE PIPE
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
RRLS	RIPRAP LEVEL SPREADER
ROW	RIGHT OF WAY
RR	RAILROAD
RRS	RIPRAP SLOPE
RS	RIPRAP SPILLWAY
RT	RIGHT
RTAD	REFER TO ARCHITECTURAL DRAWINGS
RTED	REFER TO ELECTRICAL DRAWINGS
RTFPD	REFER TO FIRE PROTECTION DRAWINGS
RTLD	REFER TO LANDSCAPE DRAWINGS
RTMD	REFER TO MECHANICAL DRAWINGS
RTPD	REFER TO PLUMBING DRAWINGS
RTSD	REFER TO STRUCTURAL DRAWINGS
S=	SLOPE
SB	SAND BAG EROSION CONTROL BARRIER
SDR	STANDARD DIMENSIONAL RATIO
SED	SEDIMENT
SESC	SOIL EROSION AND SEDIMENT CONTROL
SFL	STATE FREEWAY LINE
SFCD	SEDIMENT FOREBAY CHECK DAM
SG	SWING GATE
SHL	STATE HIGHWAY LINE
SHLD	SHOULDER
SHLO	STATE HIGHWAY LAYOUT
SHP	HANDICAP PARKING PAVEMENT MARKING
SM	SEDIMENT MARKER
SMH	SEWER MANHOLE
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
SW	SIDEWALK
SWL	SINGLE SOLID WHITE LINE
SWR	SEWER
SYL	SINGLE SOLID YELLOW LINE
T=	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TD	TEMPORARY DIVERSION
TEMP	TEMPORARY
TC	TOP OF CURB
TDS	TEMPORARY DIVERSION SWALE
TGP	TREE GROUP PROTECTION
TIP	TEMPORARY INLET PROTECTION
TMH	TELEPHONE MANHOLE
TOS	TOP OF SLOPE
TP	TEST PIT
TRAN	TRANSITION
TRM	TURF REINFORCEMENT MAT
TS	TOP OF STAIR (FINISHED GRADE OF TOP STAIR)
TST	TEMPORARY SEDIMENT TRAP
TSW	TEMPORARY SWALE
TW	TOP OF WALL
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
VCC	VERTICAL CONCRETE CURB
VCP	VEHICULAR CONCRETE PAVEMENT
VFC	VITRIFIED CLAY
VEG	VEGETATION
VEH	VEHICULAR
VFS	VEGETATED FILTER STRIP
VGC	VERTICAL GRANITE CURB
VGTC	VERTICAL GRANITE TRANSITION CURB
VLF	VINYL FENCE
w/	WITH
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
WMH	WATER MANHOLE
WPM	WATER PAINT MARK
X-SECT	CROSS SECTION
YD	YARD DRAIN
4DY	4" DOUBLE YELLOW EPOXY RESIN PAVEMENT MARKING
4W	4" SOLID WHITE EPOXY RESIN PAVEMENT MARKING
12W	12" SOLID WHITE EPOXY RESIN PAVEMENT MARKING

MASSACHUSETTS ABBREVIATIONS

GENERAL

CMR	CODE OF MASSACHUSETTS REGULATIONS
MASSDEP	MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
MASSDOT	MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
MA STD.	MASSACHUSETTS STANDARD
MHB	MASSACHUSETTS HIGHWAY BOUND

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
SETBACKS		
EASEMENT LINE		
CONTOUR	255	262
SPOT ELEVATION	X 407.5	× 261.5
DRAINAGE LINE	D D D	D D D
WATER LINE	W W W	W W W
FIRE WATER LINE		FW FW
SANITARY SEWER LINE	S S S	S S S
GAS LINE	G G G	G G G
ELECTRIC	E E E	E E E
TELEPHONE LINE	T T T	T T T
OVERHEAD ELECTRIC LINE	OHW	OHW
LIMIT OF DISTURBANCE		LOD
LIMIT OF DISTURBANCE/COMPOST FILTER SOCK		LOD/CFS
CATCH BASIN		
HYDRANT		
DRAINAGE MANHOLE		
SEWER MANHOLE		
UTILITY POLE		
WATER VALVE	WV WV	
GAS GATE	GG	
LIGHT POLE		
TREE LINE		
STONE WALL		
CHAIN LINK FENCE	X X X	
WIRE FENCE		x x x x x x x
WOOD FENCE		
FENCE		
CURBING		
EDGE OF PAVEMENT		
SAWCUT LINE		
SIGN		
COMPOST FILTER SOCK		
SAND BAGS		
NO. OF PARKING SPACES	#	#
WETLAND EDGE	WF A52 WF A51	
25' WETLAND BUFFER		
50' NO DISTURB ZONE		
100' WETLAND BUFFER		

PARE

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Town of Holliston
9 Green Street
Holliston, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
JAMES A. JACKSON, JR.
CIVIL
No. 42563
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	20212.00
DATE:	OCTOBER 2022
SCALE:	
DESIGNED BY:	GLH
CHECKED BY:	SL
DRAWN BY:	AWB
APPROVED BY:	JAJ

DRAWING TITLE:
LEGEND

DRAWING NO.:
C1.2

SHEET NO. 2 OF 10

REMOVE INVASIVE UNDERSTORY VEGEATION ALONG STREAM CORRIDOR AS NOTED

CFS (TYP.)

EXISTING CRUSHED STONE BERM TO REMAIN, BERM TO EXTEND LIKE KIND TO EXTENTS SHOWN, DIRECTLY ADJACENT TO EDGE OF PAVEMENT

R&R HEADWALL (SEE DETAIL)

EXISTING PIPE TO BE ABANDONED IN PLACE CUT CAP WHERE LAYOUT INTERFERES WITH WORK

CFS (TYP)

LOD (TYP)

WASH STATION

R&D MH

R&D CONC

R&D FILL

R&D PVMT

CONSTRUCTION ENTRANCE

RET EXIST FOUNDATION WALL AS RETAINING WALL

JAPANESE KNOTWEED
NORWAY MAPLE SAPLING
AUTUMN OLIVE
AUTUMN OLIVE (CLUSTER OF 2)
GLOSSY BUCKTHORN
GLOSSY BUCKTHORN (CLUSTER OF 4)
SWALLOW WORT VINE
MULTIFLORA ROSE
TATARIAN HONEYSUCKLE
PRIVET

NOTES:

1. THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE PLANS ARE INTENDED TO REPRESENT THE MINIMUM CONTROLS NECESSARY TO MEET ANTICIPATED SITE CONDITIONS. ADDITIONAL MEASURES SHALL BE IMPLEMENTED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
2. CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN SILT SACKS IN ALL EXISTING AND NEWLY INSTALLED CATCH BASINS UNTIL THE UPSTREAM AREA IS STABILIZED.
3. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION ENTRANCES AT ALL POINTS OF EGRESS FROM THE SITE THROUGHOUT CONSTRUCTION.
4. THE CONTRACTOR SHALL MAINTAIN EROSION CONTROLS THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL REPLACE DAMAGED EROSION CONTROLS AT THE OWNER AND ENGINEER'S REQUEST AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. THE CONTRACTOR SHALL NOT LEAVE DISTURBED AREAS UNSTABILIZED FOR PERIODS MORE THAN 14 DAYS. PROVIDE TEMPORARY SEED OR MULCH ON DISTURBED AREAS THAT WILL REMAIN EXPOSED FOR GREATER THAN 14 DAYS.
6. REMOVE INVASIVE SHRUBS AND VINES FROM BUFFER ZONE (APPROXIMATELY 27 PLANTS), INCLUDING ROOT SYSTEMS. INVASIVE PLANTS TO BE REMOVED HAVE BEEN MARKED ONSITE WITH LABELED PINK FIELD FLAGGING.
7. INSTALL EROSION CONTROLS DOWNSTREAM OF ANY DISTURBED AREAS TO REDUCE POTENTIAL FOR EROSION. CONTRACTOR SHALL INDICATE LOCATIONS OF EROSION CONTROLS FOR REVIEW WITH GENERAL CONTRACTOR AND OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK.
8. REFER TO "CIVIL NOTES AND LEGEND" FOR ADDITIONAL NOTES.

Scale: 1"=10'
0 5' 10' 20'

PARE

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Town of Holliston
9 Green Street
Holliston, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
JAMES A. JACKSON, JR.
CIVIL
No. 42583
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	20212.00
DATE:	OCTOBER 2022
SCALE:	1"=10'
DESIGNED BY:	GLH
CHECKED BY:	SL
DRAWN BY:	AWB
APPROVED BY:	JAJ

DRAWING TITLE:

EROSION & SEDIMENT CONTROL PLAN

DRAWING NO.:
C2.1

SHEET NO. 3 OF 10

NOTES:

1. CONTRACTOR SHALL PROVIDE LOAM AND SEED ON ALL DISTURBED AREAS UNLESS NOTED OTHERWISE. REFER TO LANDSCAPE DRAWINGS.
2. ALL ACCESSIBLE RAMPS SHALL BE CONSTRUCTED WITH DETECTABLE WARNING PAVERS.
3. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS TO ESTABLISH CONTROL ON THE SITE AND TO PERFORM FIELD MEASUREMENTS AS REQUIRED TO LAYOUT THE PROPOSED BUILDING AND SITE IMPROVEMENTS. THE CONTRACTOR'S SURVEYOR SHALL COORDINATE THE BUILDING LAYOUT WITH THE PROJECT LAND SURVEYOR TO ACCURATELY LOCATE THE BUILDING ON THE SITE.

PROP RIP RAP SPLASH POOL
PROP HEADWALL REPLACEMENT
PROP RIP RAP SWALE
PROP LOAM AND SEED
PROP HMA
PROP TIMBER BACKED STEEL GUARDRAIL
PROP BIORETENTION AREA
SNOW STORAGE AREA
"VETERAN PARKING ONLY" SIGN AND HATCHING
PROP RIP RAP SWALE
PROP VGC (TYP)
PROP EV CHARGING STATION (TYP)
CONCRETE PAD
PROP SWL (TYP)
PROP BOLLARD (TYP)
PROP CONC PAD
PROP PAINTED STEEL RAILING
PROP RETAINING WALL BELOW (FOR RETAINING WALL DETAILS, SEE SHEET C6.1)
PROP LIGHTPOLE
PROP ACCESSIBLE PAVEMENT MARKINGS
PROP SW
PROP RETAINING WALL RAILING
PROP RAMP WALL RAILING
PROP SIGN "R7-8"
PROP SIGNS "R7-8""R7-8a"
PROP LOAM AND SEED

Scale: 1"=10'
0 5' 10' 20'

PARE

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DRAWN BY:	AWB
APPROVED BY:	JAJ

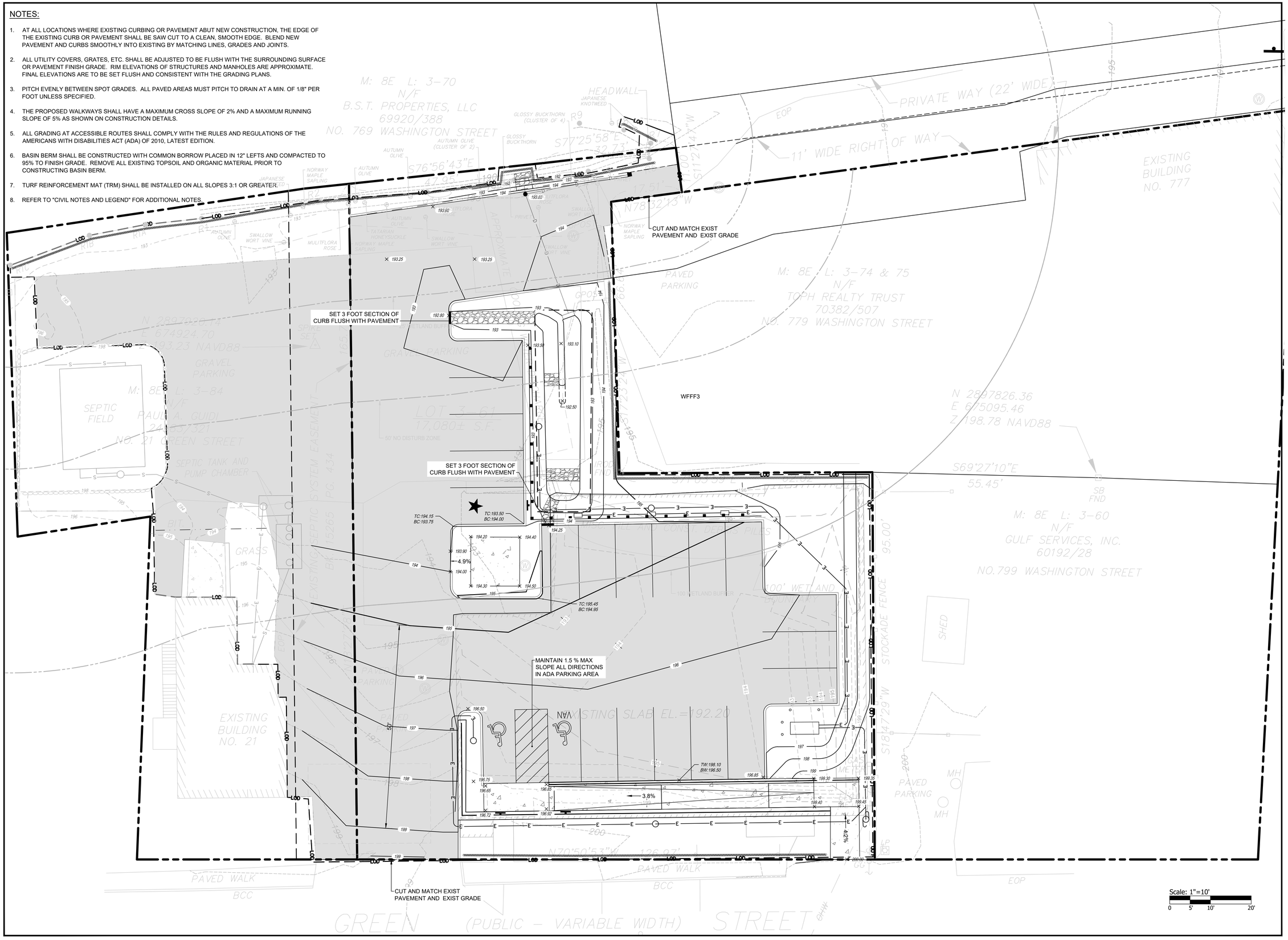
DRAWING TITLE:
GENERAL PLAN

DRAWING NO.:
C3.1

SHEET NO. 4 OF 10

NOTES:

1. AT ALL LOCATIONS WHERE EXISTING CURBING OR PAVEMENT ABUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT AND CURBS SMOOTHLY INTO EXISTING BY MATCHING LINES, GRADES AND JOINTS.
2. ALL UTILITY COVERS, GRATES, ETC. SHALL BE ADJUSTED TO BE FLUSH WITH THE SURROUNDING SURFACE OR PAVEMENT FINISH GRADE. RIM ELEVATIONS OF STRUCTURES AND MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH THE GRADING PLANS.
3. PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MIN. OF 1/8" PER FOOT UNLESS SPECIFIED.
4. THE PROPOSED WALKWAYS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2% AND A MAXIMUM RUNNING SLOPE OF 5% AS SHOWN ON CONSTRUCTION DETAILS.
5. ALL GRADING AT ACCESSIBLE ROUTES SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) OF 2010, LATEST EDITION.
6. BASIN BERM SHALL BE CONSTRUCTED WITH COMMON BORROW PLACED IN 12" LEFTS AND COMPACTED TO 95% TO FINISH GRADE. REMOVE ALL EXISTING TOPSOIL AND ORGANIC MATERIAL PRIOR TO CONSTRUCTING BASIN BERM.
7. TURF REINFORCEMENT MAT (TRM) SHALL BE INSTALLED ON ALL SLOPES 3:1 OR GREATER.
8. REFER TO "CIVIL NOTES AND LEGEND" FOR ADDITIONAL NOTES.



PARE

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COMMONWEALTH OF MASSACHUSETTS
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Civil
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SCALE:	1"=10'
DESIGNED BY:	GLH
CHECKED BY:	SL
DRAWN BY:	AWB
APPROVED BY:	JAJ

DRAWING TITLE:

GRADING PLAN

DRAWING NO.:

C4.1

SHEET NO. 5 OF 10

NOTES:

1. ALL CATCH BASINS AND DRAIN MANHOLES SHALL BE 4' DIA. PRECAST CONCRETE UNLESS NOTED OTHERWISE.
2. ALL DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED HIGH DENSITY POLYETHYLENE UNLESS NOTED OTHERWISE.
3. REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS III UNLESS NOTED OTHERWISE.
4. ALL SLOPES PROVIDED ARE FT/FT.
5. ALL CATCH BASINS AND AREA DRAINS SHALL BE INSTALLED WITH A SUMP AND OUTLET HOOD PER THE DETAIL.
6. ALL SEWER MANHOLES SHALL BE 4' DIA. UNLESS NOTED OTHERWISE.
7. REFER TO ELECTRICAL DRAWINGS FOR INFORMATION ON ELECTRIC AND TEL/DATA DUCT BANKS AND STRUCTURES. ALL ELECTRICAL FACILITIES DISPLAYED FOR REFERENCE ONLY.
8. REPAIR OR REPLACE DAMAGED IRRIGATION FACILITIES TO PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
9. MODIFICATIONS AND REPAIRS TO THE EXISTING IRRIGATION SYSTEM AND SUPPLY WATER SERVICE SHALL BE DESIGNED, FURNISHED AND INSTALLED BY THE CONTRACTOR. THIS INCLUDES ALL WATER AND ELECTRICAL COMPONENTS INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
10. REFER TO "CIVIL NOTES AND LEGEND" FOR ADDITIONAL NOTES.

RIP RAP SLOPE TO BE INSTALLED WITHOUT TREE CLEARING

RIP-RAP SPLASH POOL, 6" DEPTH

PROP 25 LF 12" CLDI S=0.01

RIP RAP SLOPE

PROP HEADWALL INV=191.00'

DMH-1
RIM = 193.80
INV IN = 191.15
INV OUT = 191.05

CB-1
RIM = 193.00 (SET TO GRADE)
INV OUT = 191.40

PROP 36 LF 12" CLDI S=0.028

PROP HEADWALL W/ 12' ORIFICE, INV=192.00'

SEDIMENT FOREBAY 2 W/ CHECK DAM

SEDIMENT FOREBAY 1 W/ CHECK DAM

TC:194.15
BC:193.75

TC:193.50
BC:194.00

4.9%

TC:195.45
BC:194.95

PROP ELECTRICAL CONDUIT (SEE ELECTRICAL PLANS FOR FURTHER DETAILS)

EXISTING SLAB EL.=192.20

TW:198.10
BW:196.50

3.8%

4.2%

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0 5' 10' 20'

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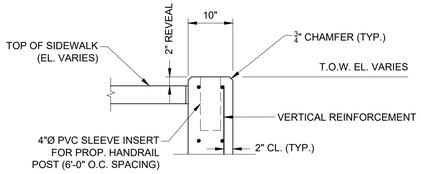
DRAWING TITLE:

DRAINAGE & UTILITY PLAN

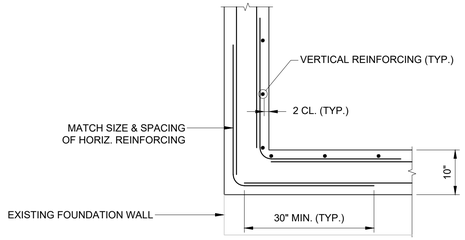
DRAWING NO.:

C5.1

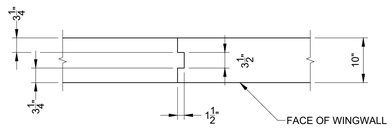
SHEET NO. 6 OF 10



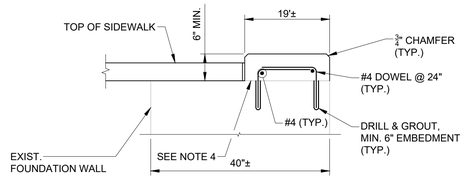
POST SLEEVE DETAIL
SCALE: 3/4" = 1'-0"



CORNER DETAIL - PLAN
SCALE: 3/4" = 1'-0"

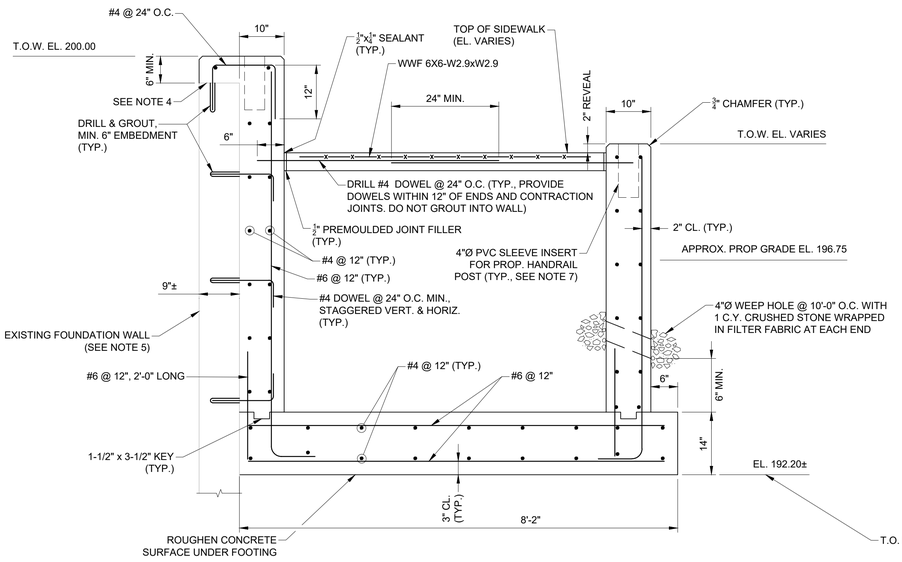


CONSTRUCTION JOINT DETAIL
SCALE: 3/4" = 1'-0"

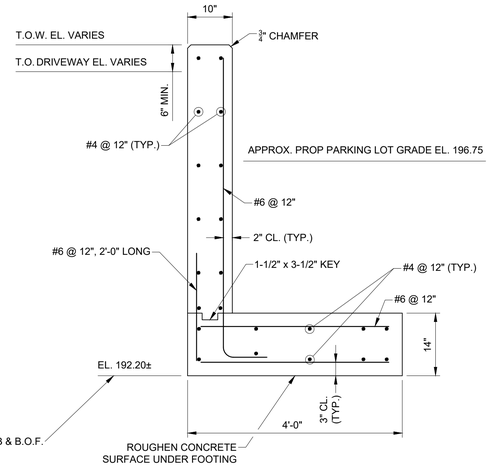


NOTE: THE WIDTH OF THE CONCRETE CAP SHALL MATCH THE WIDTH OF THE PROPOSED WALL BEING CAST AGAINST THE EXISTING FOUNDATION SHOWN IN SECTION A.

CONCRETE CAP DETAIL FOR EXISTING WALL AT TOP OF RAMP
SCALE: 3/4" = 1'-0"



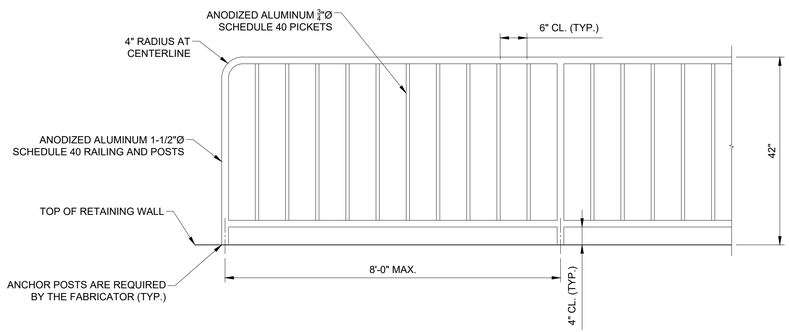
SECTION A - MODIFICATION TO EXISTING BUILDING FOUNDATION
SCALE: 3/4" = 1'-0"



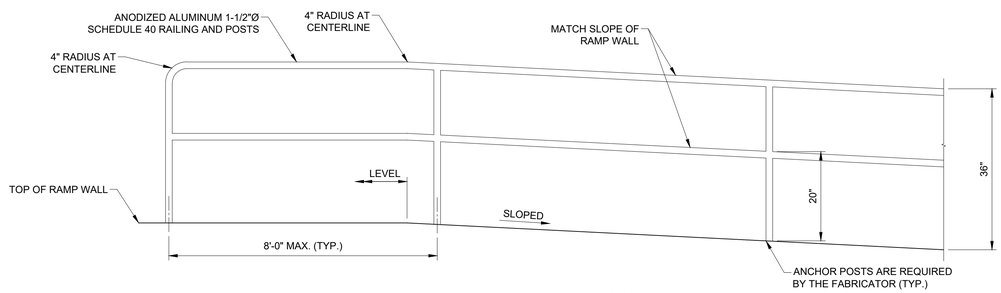
SECTION B - RETAINING WALL ALONG WEST DRIVEWAY
SCALE: 3/4" = 1'-0"

NOTES:

1. ALL WORK TO CONSTRUCT THE RETAINING WALLS SHOWN SHALL BE IN ACCORDANCE WITH THE 2022 MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
2. ALL CONCRETE SHALL BE 4000 PSI, 1.5 INCH, 565 CEMENT CONCRETE.
3. THE EXISTING CONCRETE SLAB SHALL BE MECHANICALLY ROUGHENED AND CLEANED OF ALL DEBRIS AND DIRT TO ALLOW PROPER ADHESION OF THE PROPOSED CONCRETE TO THE SLAB. ALL EXISTING SURFACES SHALL BE THOROUGHLY CLEANED AND WETTED TO SATURATED SURFACE DRY (ssd) CONDITION IMMEDIATELY PRIOR TO CASTING NEW CONCRETE.
4. REMOVE THE TOP OF EXISTING FOUNDATION WALL TO SOUND CONCRETE OR A MINIMUM OF 6" BELOW THE PROPOSED TOP OF WALL ELEVATION, WHICH EVER IS GREATER.
5. WHERE SECTIONS OF WALL ARE MISSING, THE WIDTH OF THE PROPOSED WALL STEM SHALL MATCH THE WIDTH OF THE OTHER PROPOSED PORTIONS OF WALL.
6. THE MAXIMUM SPACING BETWEEN CONSTRUCTION JOINTS SHALL BE 20 FEET.
7. POST SLEEVE SPACING SHALL BE AS REQUIRED BY THE RAILING FABRICATOR/DESIGNER.
8. PROVIDE SIDEWALK CONTRACTION JOINTS AT 10'-0" O.C. MAX.



RETAINING WALL RAILING DETAIL
SCALE: 3/4" = 1'-0"



RAMP WALL RAILING DETAIL
SCALE: 3/4" = 1'-0"

PARE

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0" 1"
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9 Green Street
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COMMONWEALTH OF MASSACHUSETTS
JAMES A. JACKSON, JR.
CIVIL
No. 42343
REGISTERED
PROFESSIONAL ENGINEER

REVISIONS:

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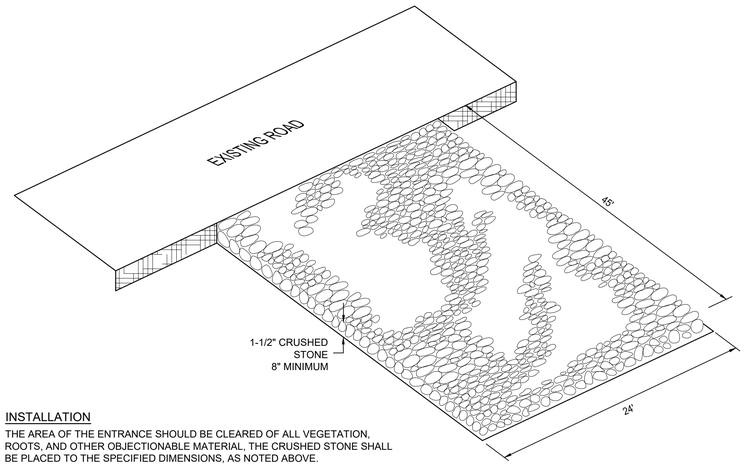
APPROVED BY:	JAJ

DRAWING TITLE:
RETAINING WALL DETAILS

DRAWING NO.:
C6.1

SHEET NO. 7 OF 10



INSTALLATION

THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. THE CRUSHED STONE SHALL BE PLACED TO THE SPECIFIED DIMENSIONS, AS NOTED ABOVE.

MAINTENANCE

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENTS ONTO PUBLIC RIGHT-OF-WAYS. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE, OR ADDITIONAL LENGTH, AS CONDITIONS DEMAND, AND REPAIR, AND / OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.

LOCATION

SEE PROJECT PLANS FOR LOCATION OF CONSTRUCTION ENTRANCE.

CONSTRUCTION ENTRANCE PROTECTION STONE STABILIZATION PAD

NOT TO SCALE

SPLASH POOL DETAIL

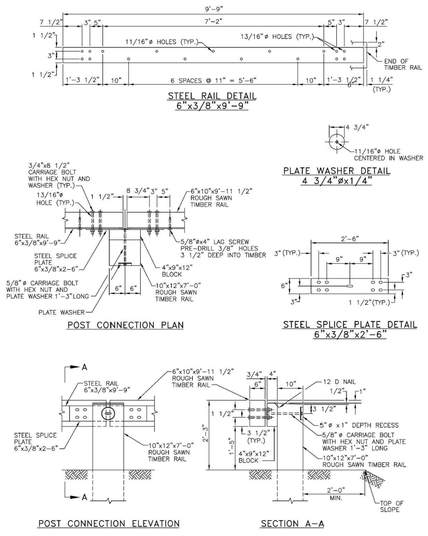
NOT TO SCALE

NOTES:

1. MAXIMUM LENGTHS USING 8' & 10' RADII, WITH 90° ANGLE, ARE 4'-2" AND 5'-3" RESPECTIVELY.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".
3. TOP SURFACE TO BE DRESSED BY SAW.
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 100' OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 100' RADIUS.
5. GRANITE CURB SHALL CONFORM TO MASSDOT STD. SPECIFICATION MATERIALS SECTION M9.04.1 GRANITE CURB, TYPE VB.

GRANITE CURB QUARRY SPLIT

NOT TO SCALE

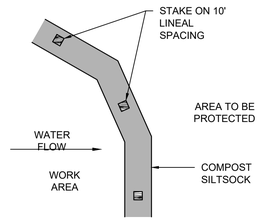


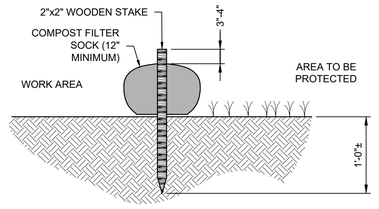
NOTES:

1. TIMBER ITEMS SHALL BE PRESSURE-TREATED SAWN STRUCTURAL LUMBER, EITHER SPRUCE OR FIR, AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M168; STANDARD SPECIFICATIONS FOR WOOD PRODUCTS, AND THE APPLICABLE REQUIREMENTS OF M9.05.3 AND M8.07.0 B2.
2. HARDWARE ITEMS SHALL INCLUDE ALL METAL FASTENINGS REQUIRED FOR TIMBER CONNECTIONS OR FOR CONNECTING TIMBER TO CONCRETE OR STEEL, AND SHALL CONFORM TO THE REQUIREMENTS OF M8.07.0 D OF THE STANDARD SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED. HARDWARE ITEMS SHALL INCLUDE SUCH ITEMS AS BOLTS, WASHERS, NUTS, TIE RODS, TURNBUCKLES AND OTHER ITEMS AS SPECIFIED. UNLESS OTHERWISE SPECIFIED, HARDWARE ITEMS SHALL BE GALVANIZED.
3. STEEL BACKING PLATES, UNLESS OTHERWISE SPECIFIED, SHALL BE CARBON STEEL CONFORMING TO AASHTO M270 (ASTM A709) GRADE 36.
4. TIMBER PRESERVATIVES SHALL BE IN ACCORDANCE WITH M9.05.5.
5. POSTS SHALL BE INSTALLED AT BOTTOM OF 2' HIGH WALL. RAIL SHALL BE 1'-3" ABOVE TOP OF WALL.
6. POSTS SHALL BE INSTALLED AT 5' O.C. TO ON CURVED INSTALLATIONS TO MAKE UP RADIUS WITH STRAIGHT RAIL SECTIONS.

STEEL BACKED TIMBER GUARD RAIL

NOT TO SCALE



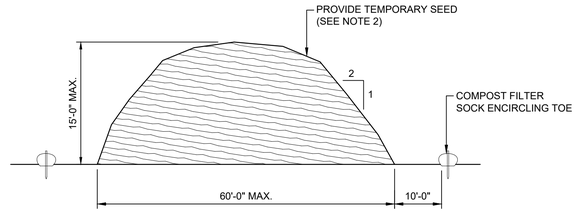


NOTES:

1. COMPOST/ SOIL/ ROCK/ SEED FILL TO MEET APPLICATION REQUIREMENTS.
2. COMPOST MATERIAL TO BE REMOVED OR DISPERSED ON SITE AS DETERMINED BY ENGINEER.
3. IF SOCK NETTING MUST BE JOINED, FIT BEGINNING OF NEW SOCK OVER END OF OLD SOCK, OVERLAPPING BY 2 FEET AND STACK OVERLAP. IF SOCK NETTING IS NOT JOINED, OVERLAP OLD SOCK WITH NEW ONE BY MINIMUM OF 2 FEET.

COMPOST FILTER SOCK DETAIL

NOT TO SCALE

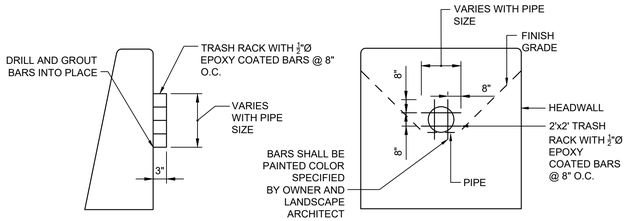


NOTES:

1. STOCKPILE AREA SHALL NOT EXCEED SPECIFIED DIMENSIONS WITHOUT APPROVAL FROM ENGINEER.
2. STOCKPILED ERODIBLE MATERIAL THAT WILL NOT BE USED FOR GREATER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEED IMMEDIATELY FOLLOWING PLACEMENT. USE RIDOT STD. M.18.10.5 SEED MIX.

ERODIBLE MATERIAL STOCKPILE

NOT TO SCALE

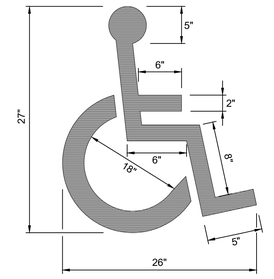


NOTES:

1. CONTRACTOR SHALL PROVIDE NUMBER OF BARS REQUIRED TO CONSTRUCT RACK. NUMBER OF BARS WILL VARY WITH PIPE SIZE.

HEADWALL PROTECTION RACK DETAIL

NOT TO SCALE

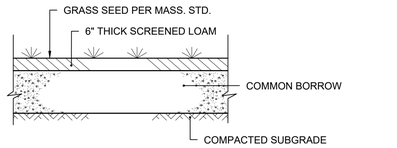


NOTE:

ACCESSIBLE PARKING AND SIGNAGE SHALL BE IN CONFORMANCE WITH THE RULES & REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT.

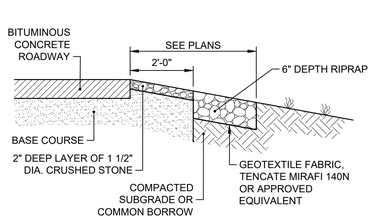
ACCESSIBLE PAVEMENT MARKING

NOT TO SCALE



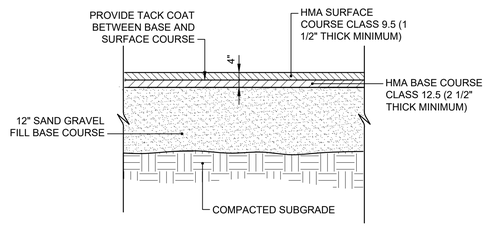
LOAM & SEED DETAIL

NOT TO SCALE



RIPRAP EDGE

NOT TO SCALE

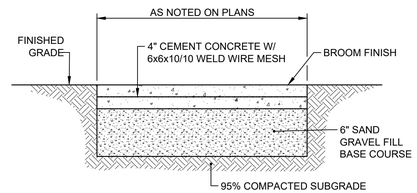


NOTE:

1. SUBMIT JOB MIX FORMULAS TO ENGINEER FOR APPROVAL PRIOR TO PLACEMENT.

HOT MIX ASPHALT PAVEMENT

NOT TO SCALE



NOTES:

1. CONCRETE SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH WITH MASSDOT STANDARD SPECIFICATIONS.
2. WIRE MESH SHALL BE IN ACCORDANCE WITH MASSDOT STANDARD SPECIFICATIONS.

TYPICAL CEMENT CONCRETE SIDEWALK

NOT TO SCALE

PARE

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Town of Holliston
9 Green Street
Holliston, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
JAMES A. JACKSON, JR.
CIVIL
No. 42563
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	20212.00
DATE:	OCTOBER 2022
SCALE:	
DESIGNED BY:	GLH
CHECKED BY:	SL
DRAWN BY:	AWB
APPROVED BY:	JAJ

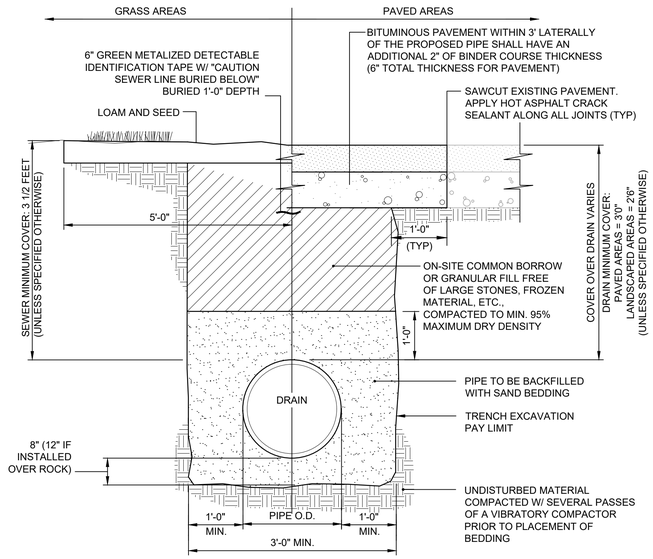
DRAWING TITLE:

DETAILS 1

DRAWING NO.:

C7.1

SHEET NO. 8 OF 10

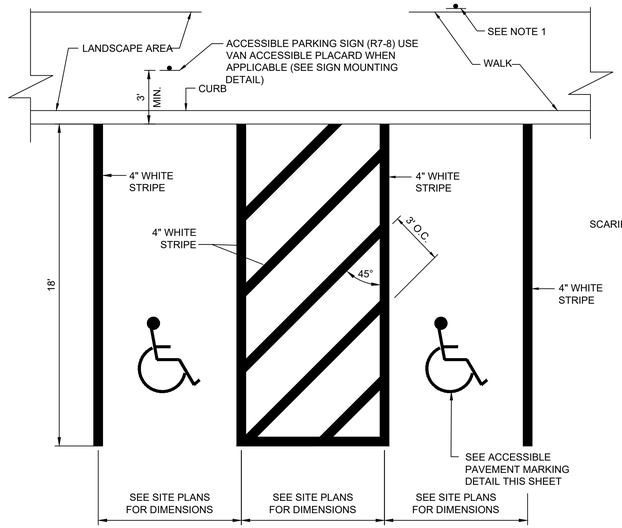


NOTES:

1. WHERE THE DISTANCE BETWEEN THE SAWCUT AND EDGE OF PAVEMENT IS 3' OR LESS, THE CONTRACTOR SHALL REPLACE THE PAVEMENT FROM THE TRENCH EDGE TO THE EXISTING EDGE OF PAVEMENT.
2. 3/4" DIA. CRUSHED STONE SHALL BE USED AS BEDDING WHERE TRENCH IS BELOW THE GROUND WATER TABLE.

DRAIN/SEWER TRENCH DETAIL

NOT TO SCALE



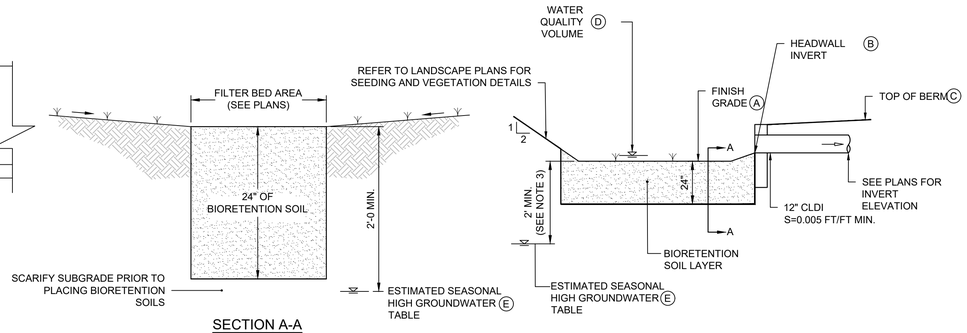
NOTES:

1. WHERE STALLS ABUT SIDEWALK, PARKING SIGNS SHOULD BE PLACED AT BACK EDGE OF SIDEWALK.
2. ALL PAVEMENT MARKINGS TO BE EPOXY RESIN.

ACCESSIBLE PARKING STALLS @ 90°

NOT TO SCALE

BIO	1
A	192.00
B	192.08
C	193.00
D	192.08
E	187.00



SECTION A-A

BIORETENTION SOIL: 85-88% SAND, 8-12% SILT, 3-5% COMPOST ORGANIC CONTENT SHALL BE 1.5%-3%

BIORETENTION VEGETATION: SEE LANDSCAPING PLANS FOR ALL SEEDING AND VEGETATION FEATURES FOR THE BIORETENTION AREA.

NOTES:

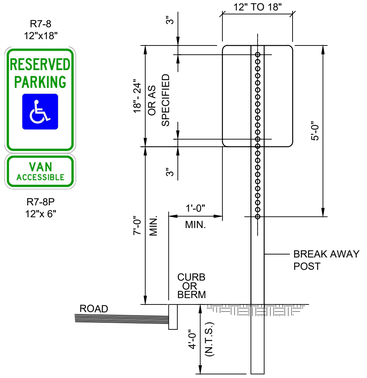
1. DRAIN BASINS SHALL BE CUSTOM MANUFACTURED FOR THE PROJECT WITH THE INLETS & OUTLETS REQUIRED.
2. DRAIN BASINS SHALL BE CONSTRUCTED OF HIGH DENSITY POLYETHYLENE.
3. ESHGWT WAS DETERMINED BY OBSERVED REDOX AND WEEPING IN SOIL FROM TEST PIT DATA PERFORMED ON DECEMBER 29, 2011.
4. HARDWOOD MULCH LAYER OMITTED TO ACCOMMODATE VEGETATIVE SEED APPLICATION.

BIORETENTION DETAIL

NOT TO SCALE

SEDIMENT FOREBAY CHECK DAM

NOT TO SCALE

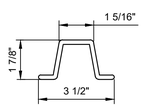


NOTE:

5/16" x 2-1/2" GALVANIZED BOLTS & WASHERS

STEEL SPECIFICATION - A.S.T.M. DESIGNATION A499-64 ZINC (HOT GALVANIZED) SPECIFIED BY- A.S.T.M. A 123.

		#
WT./FT.	3.00	4
Mom. Ix-x	0.484in	3
Sec Mod x-x	0.569in	4
Mon Iy-y	0.886in	3
Sec Mod y-y	0.506in	



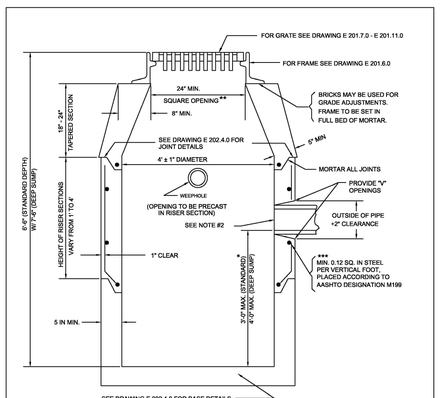
PARKING SIGNS SHALL BE SET AT AN ANGLE OF NOT LESS THAN 30° NOR MORE THAN 45° IN A LINE PARALLEL TO THE FLOW OF TRAFFIC.

NOTES:

1. ALL LAG SCREWS, BOLTS AND WASHERS SHALL BE GALVANIZED 5/16"x2 1/2" LONG UNLESS OTHERWISE NOTED.
2. WASHERS SHALL BE 0.07" THICK.
3. ALL SIGN COLORS, RADII AND BORDERS AS SPECIFIED IN "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE STANDARD SPECIFICATIONS.
5. PARKING SIGNS SHALL BE SET AT AN ANGLE OF NOT LESS THAN 30° NOT MORE THAN 45° WITH A LINE PARALLEL TO FLOW OF TRAFFIC, 1'-6" (1'-0" MIN.) FROM THE EDGE OF CURB FACE.
6. ALL ACCESSIBLE PARKING AND SIGNAGE SHALL BE IN CONFORMANCE WITH THE RULES & REGULATIONS AS SPECIFIED BY THE AMERICAN DISABILITIES ACT (ADA).
7. SIGN(S) SHALL BE LOCATED SO THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.
8. FOR ACCESSIBLE VAN SPACE USE SIGN AS DETAILED.
9. FOR ACCESSIBLE SPACE FOR AUTOMOBILES USE ONLY HANDICAPPED PARKING SIGN.

ACCESSIBLE SIGN MOUNTING

NOT TO SCALE



* MINIMUM DEPTH OF SUMP TO BE 2 FT
** WHEN A CURB INLET IS INSTALLED, THE OPENING IS TO BE 24"±1" X 23"±1"
*** REINFORCING STEEL BASED ON A WALL THICKNESS OF 5".

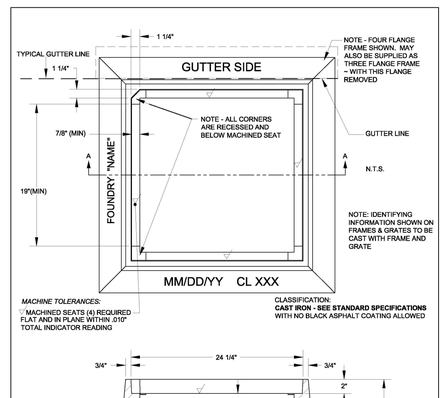
NOTES:

1. DETAILS NOT INDICATED ABOVE ARE TO BE SIMILAR TO THOSE SHOWN ON E 201.3.0
2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.
3. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHOD, SEE STANDARD SPECIFICATIONS.
4. ALL CONCRETE TO BE AIR ENTRAINED

massDOT Highway Division — CONSTRUCTION STANDARDS

PRECAST CONCRETE CATCH BASIN

DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 201.4.0**



WEIGHTS:
3-FLANGE FRAME 240 LBS. MIN
4-FLANGE FRAME 270 LBS. MIN

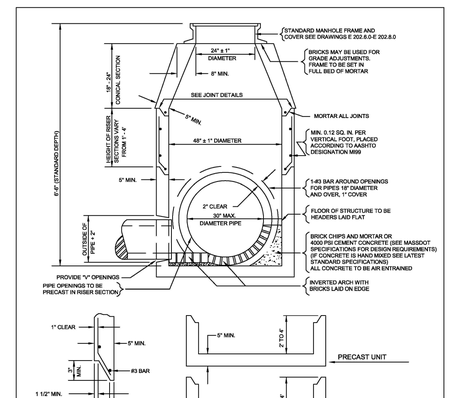
AASHTO HS 20 LOAD RATED

CASTING TOLERANCES:
SHALL CONFORM TO AASHTO M306

massDOT Highway Division — CONSTRUCTION STANDARDS

CATCH BASIN FRAME

DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 201.6.0**



NOTE:
1. FOR DESCRIPTIONS, MATERIALS AND CONSTRUCTION METHODS, SEE LATEST STANDARD SPECIFICATIONS.

massDOT Highway Division — CONSTRUCTION STANDARDS

PRECAST CONCRETE MANHOLES 9' OR LESS IN DEPTH

DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 202.4.0**

PARE

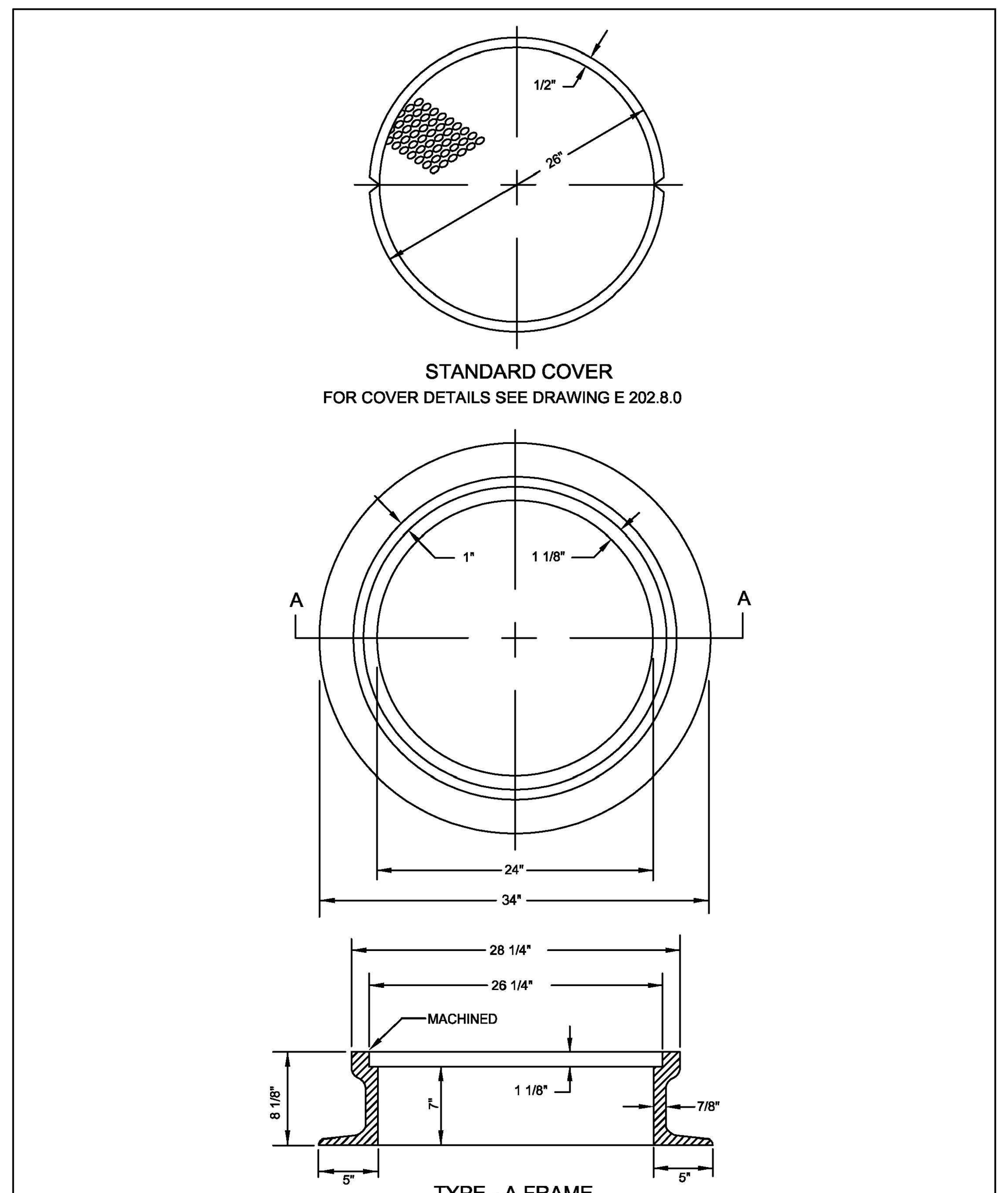
Town of Holliston
9 Green Street
Holliston, Massachusetts

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

COMMONWEALTH OF MASSACHUSETTS
JAMES A. JACKSON, JR.
Civil
No. 42563
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	20212.00
DATE:	OCTOBER 2022
SCALE:	
DESIGNED BY:	GLH
CHECKED BY:	SL
DRAWN BY:	AWB
APPROVED BY:	JAJ
DRAWING TITLE:	DETAILS 2
DRAWING NO.:	C7.2
SHEET NO.	9 OF 10



NOTES:
1. MINIMUM MASS - 265 LBS.
2. MATERIAL - CAST IRON - SEE STANDARD SPECIFICATIONS WITH NO BLACK ASPHALT COATING ALLOWED

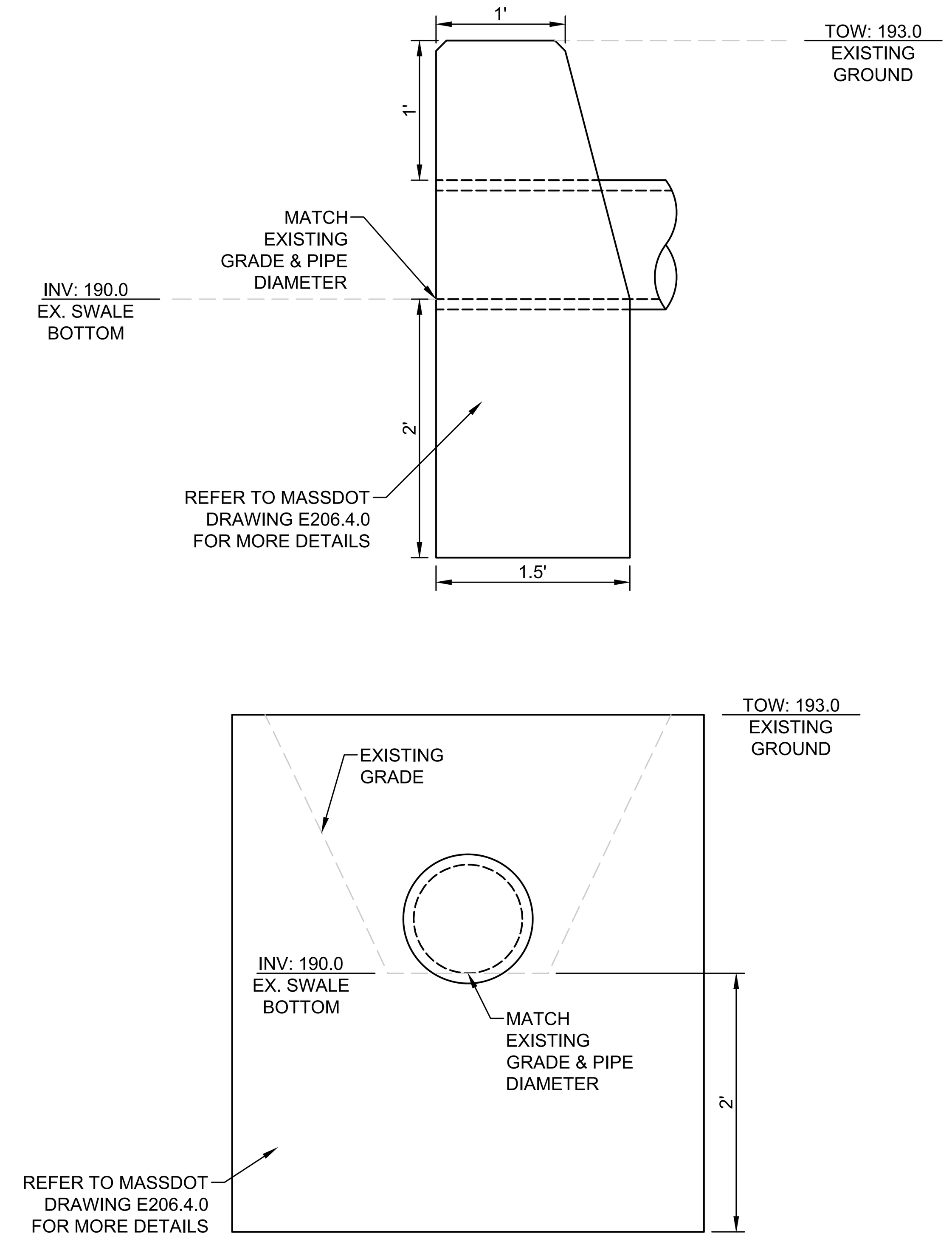
massDOT CONSTRUCTION STANDARDS — MANHOLE FRAME AND COVER - A FRAME — DATE OF ISSUE OCTOBER 2017 — DRAWING NUMBER E 202.6.0

ENGLISH UNITS

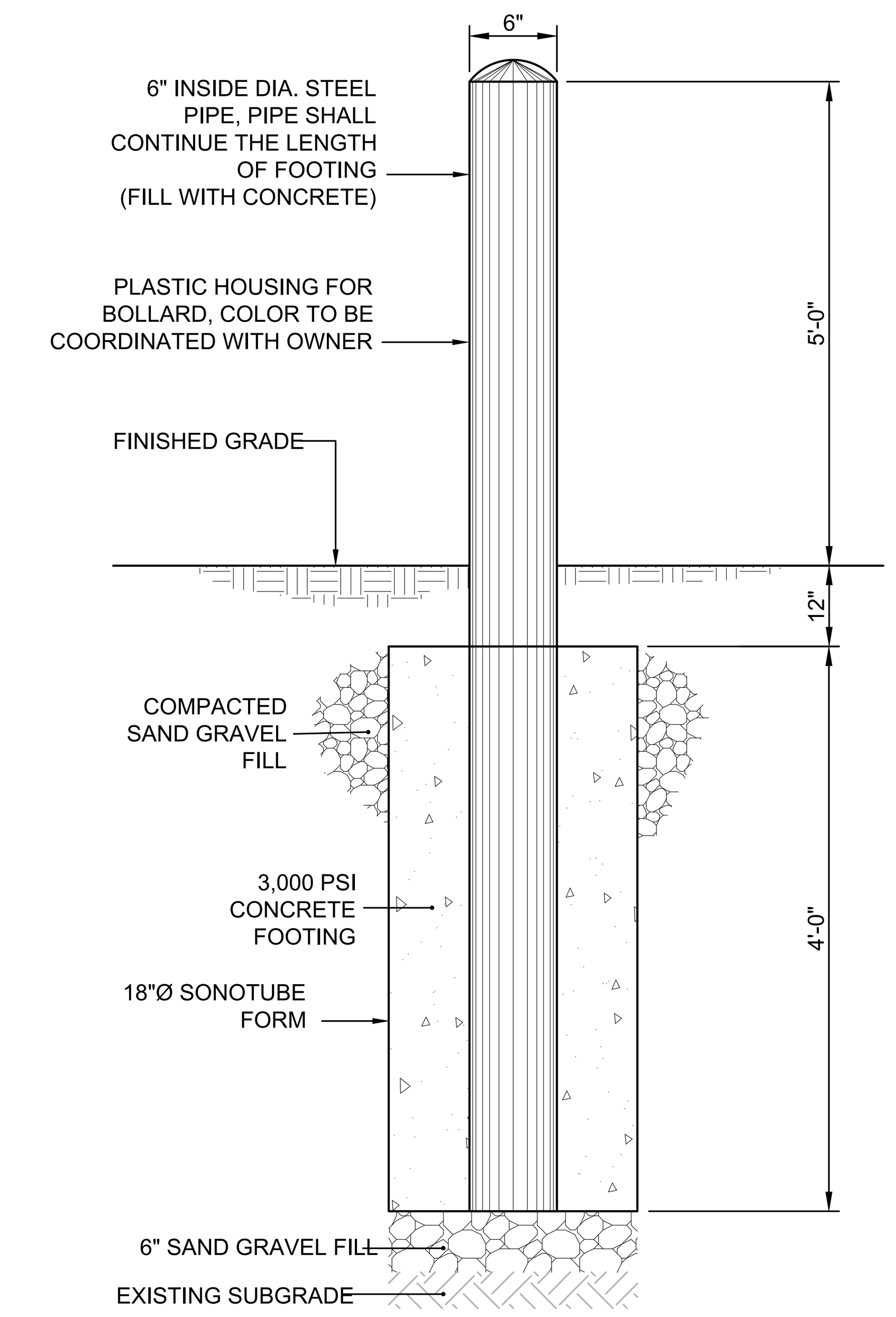
PIPE DIAM. D	1 1/2 : 1 SLOPE L	CONC. OR F.S.M. CU. YDS.	STEEL LBS.	TRENCH EXCAV. 1'-0" DEPTH CU. FT.	2 : 1 SLOPE L	CONC. OR F.S.M. CU. YDS.	STEEL LBS.	TRENCH EXCAV. 1'-0" DEPTH CU. FT.
8"	4'-2"	0.77	15	21.60	5'-10"	1.08	21	27.40
10"	4'-10"	0.92	20	23.91	6'-8"	1.28	23	30.35
12"	5'-6"	1.08	21	26.25	7'-6"	1.49	29	33.25
15"	6'-6"	1.34	24	29.75	8'-9"	1.82	32	37.63
18"	7'-6"	1.61	30	33.25	10'-0"	2.18	39	42.00
21"	8'-6"	1.95	34	37.35	11'-6"	2.62	43	47.25
24"	9'-3"	2.16	35	39.38	12'-6"	2.97	50	50.75
30"	10'-6"	2.63	44	43.75	15'-0"	3.86	62	59.50

Y	
4" FOR 1 1/2 : 1 SLOPE	6" FOR 2 : 1 SLOPE

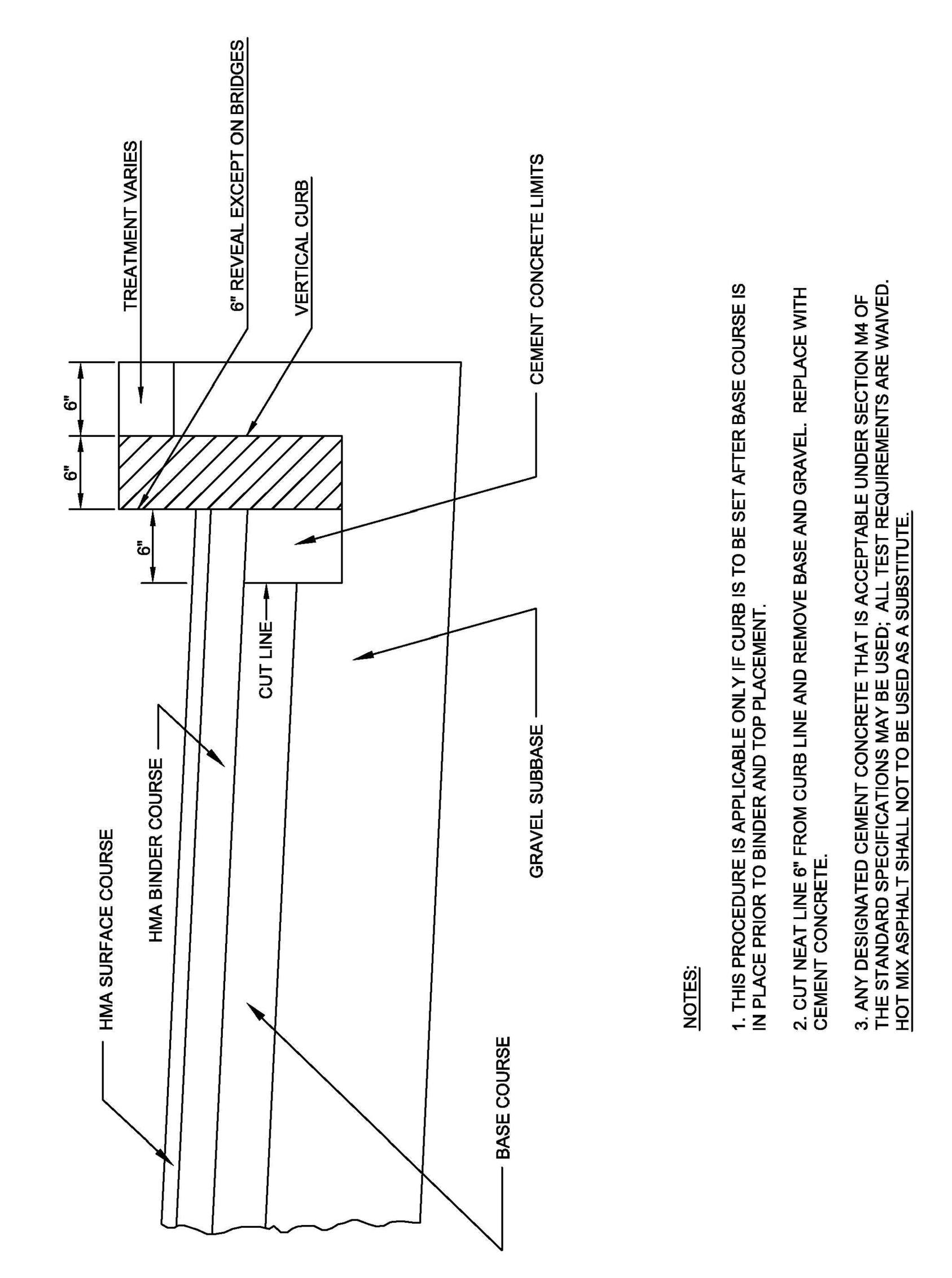
massDOT CONSTRUCTION STANDARDS — QUANTITY TABLES FOR CONCRETE AND FIELD STONE MASONRY PIPE ENDS — DATE OF ISSUE OCTOBER 2017 — DRAWING NUMBER E 206.4.1



HEADWALL PROFILE
NOT TO SCALE

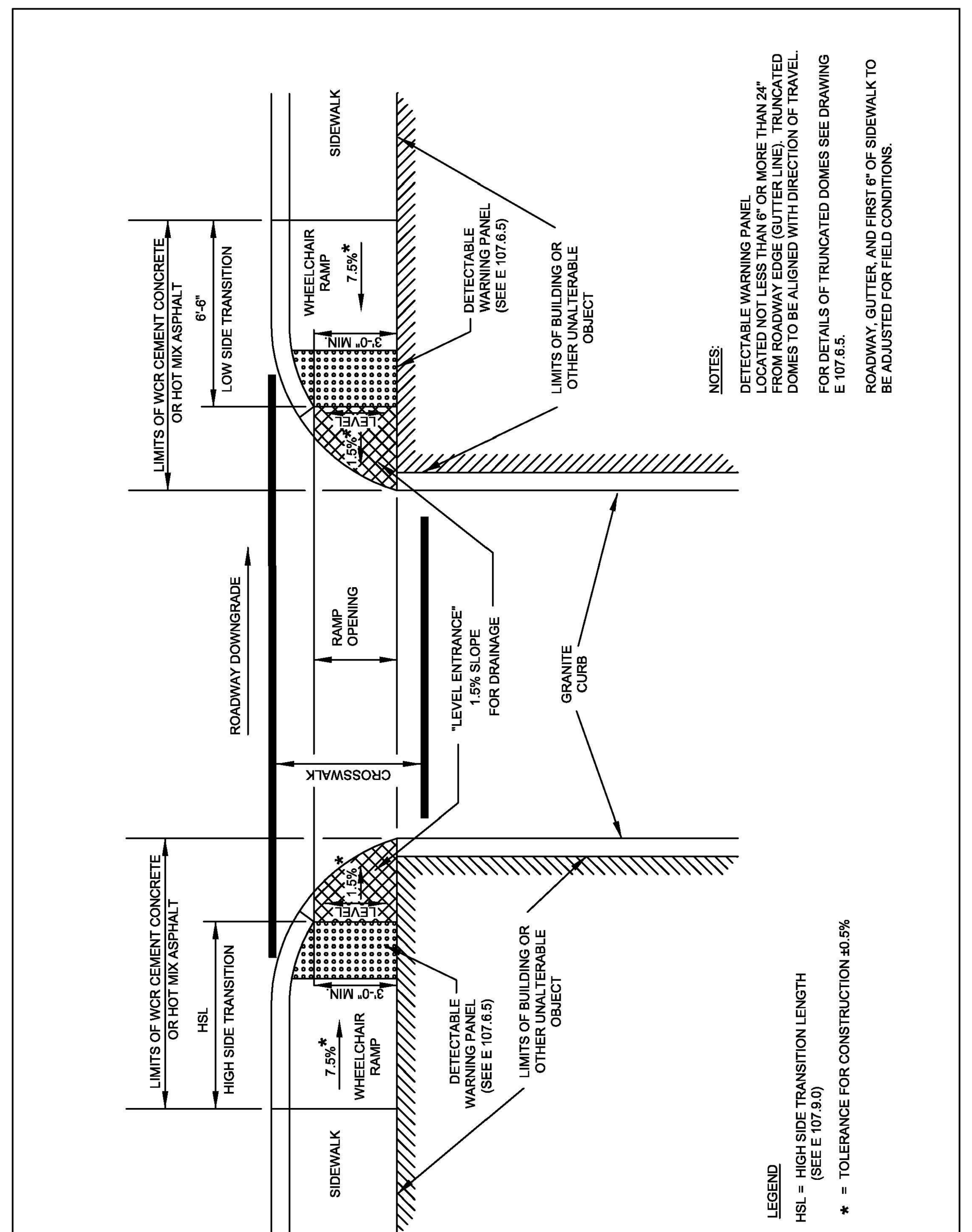


BOLLARD DETAIL
NOT TO SCALE



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 NEAT LINE 8" 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 MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

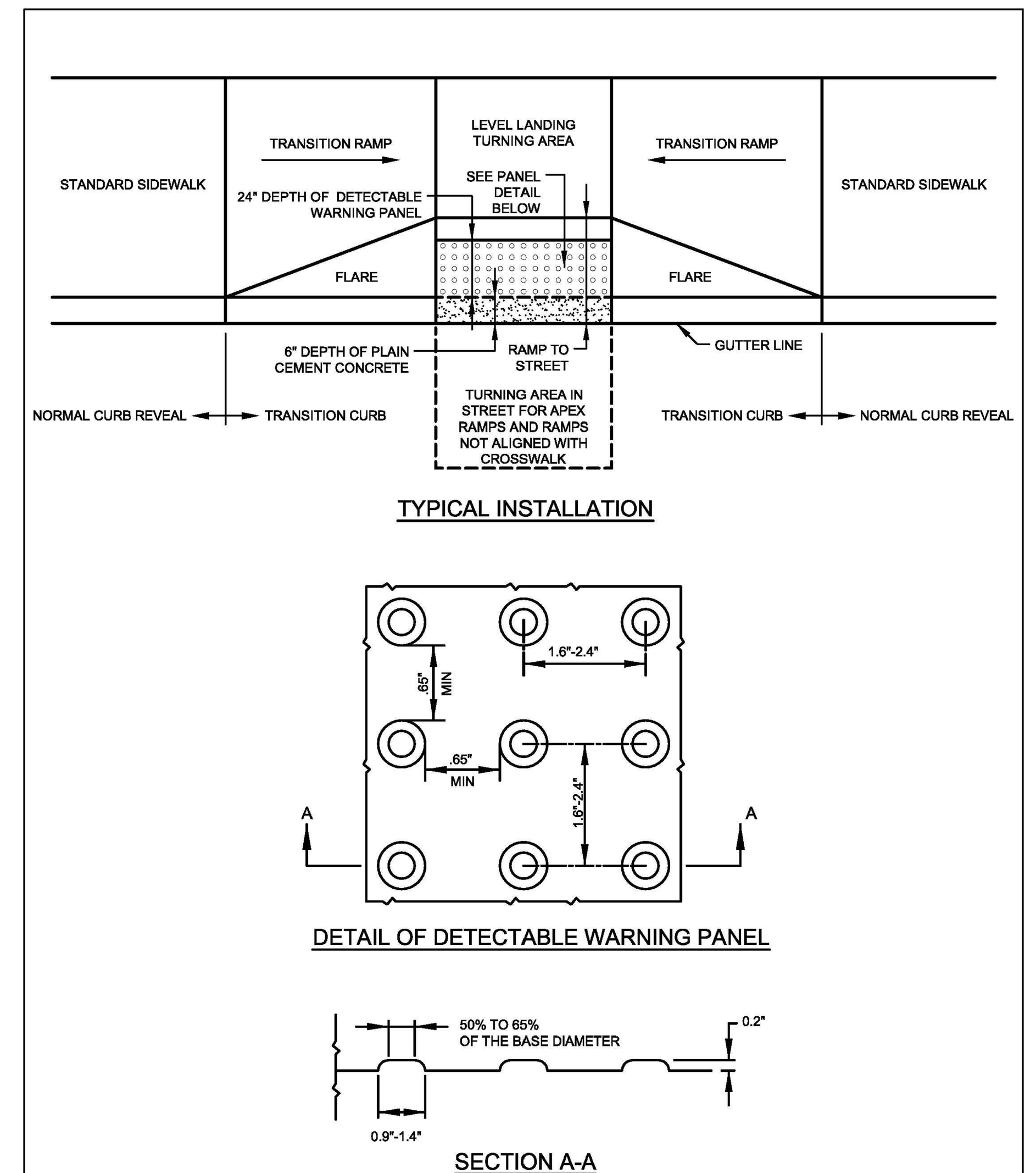
massDOT CONSTRUCTION STANDARDS — METHOD OF SETTING VERTICAL CURB — DATE OF ISSUE OCTOBER 2017 — DRAWING NUMBER E 106.3.0



NOTES:
DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" NOR MORE THAN 8" FROM ROADWAY EDGE (GUTTER LINE). TRUNCATED DOMES TO BE ALIGNED WITH DIRECTION OF TRAVEL.
FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.
ROADWAY, GUTTER, AND FIRST 8" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.

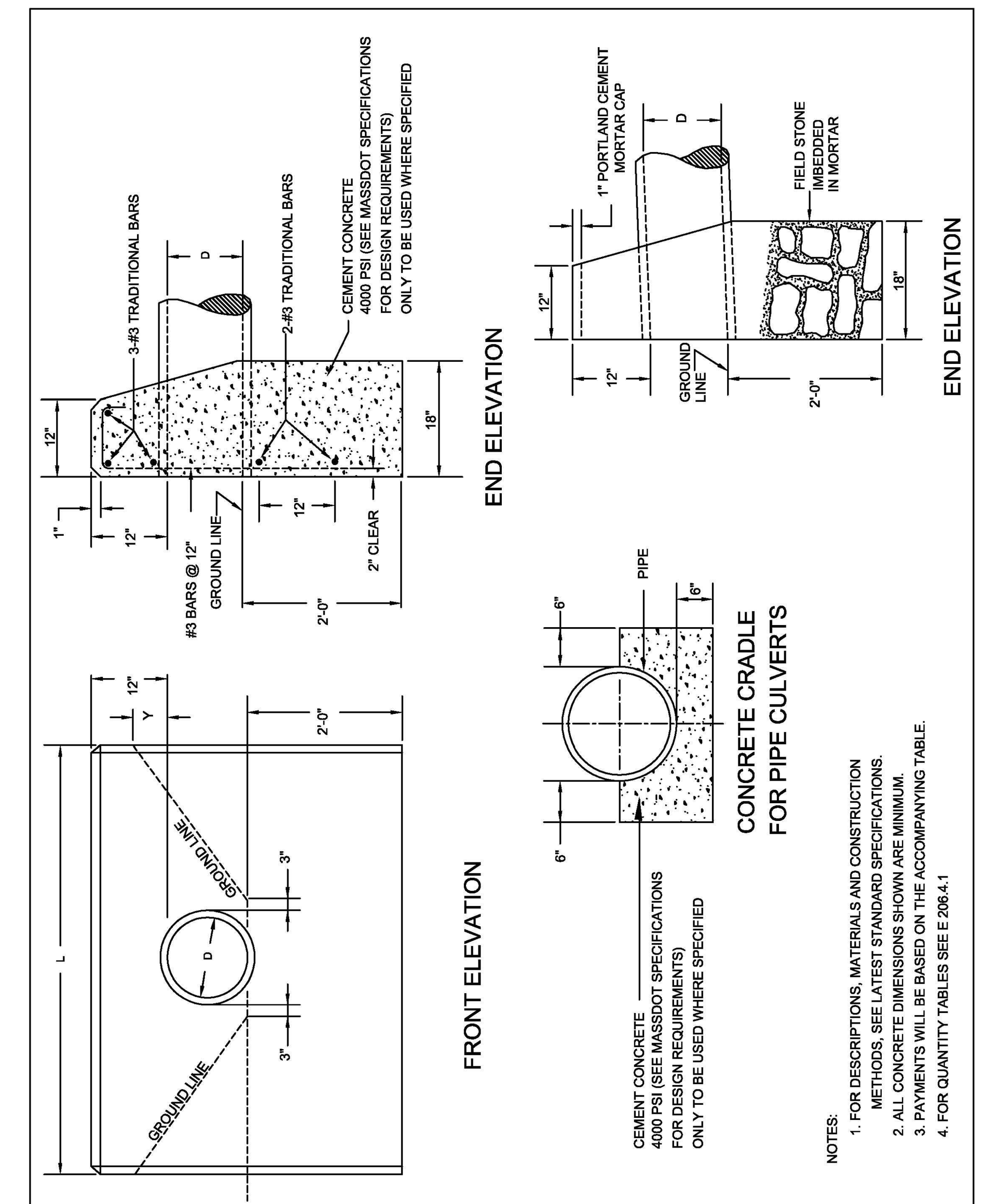
LEGEND
HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.8.0)
* = TOLERANCE FOR CONSTRUCTION ±0.5%

massDOT CONSTRUCTION STANDARDS — WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL — DATE OF ISSUE OCTOBER 2017 — DRAWING NUMBER E 107.6.0



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.

massDOT CONSTRUCTION STANDARDS — DETECTABLE WARNING PANEL FOR WHEELCHAIR RAMPS AND STANDARD RAMP TERMINOLOGY — DATE OF ISSUE OCTOBER 2017 — DRAWING NUMBER E 107.6.5



NOTES:
1. FOR DESCRIPTIONS, MATERIALS AND CONSTRUCTION METHODS, SEE LATEST STANDARD SPECIFICATIONS.
2. ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM.
3. PAYMENTS WILL BE BASED ON THE ACCOMPANYING TABLE.
4. FOR QUANTITY TABLES SEE E 206.4.1

massDOT CONSTRUCTION STANDARDS — CONCRETE AND FIELD STONE MASONRY PIPE ENDS FOR 8" TO 30" PIPE — DATE OF ISSUE OCTOBER 2017 — DRAWING NUMBER E 206.4.0

PARE

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Town of Holliston
9 Green Street
Holliston, Massachusetts

COMMONWEALTH OF MASSACHUSETTS — JAMES A. JACKSON, JR. CIVIL No. 42563 — PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	20212.00
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DESIGNED BY:	GLH
CHECKED BY:	SL
DRAWN BY:	AWB
APPROVED BY:	JAJ
DRAWING TITLE:	DETAILS 3
DRAWING NO.:	C7.3
SHEET NO.	10 OF 10

ELECTRICAL SYMBOL LIST

LEGEND NOTES: THIS SHEET IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS AND SHALL BE USED AS A DICTIONARY TO DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT. ALL EQUIPMENT IS TO BE PROVIDED UNDER THIS SECTION UNLESS SPECIFICALLY INDICATED OTHERWISE.

RECEPTACLES

TYPICAL OUTLET NOTATIONS (typically mtd. at 18" a.f.f., uno)

"a" = SWITCHED OUTLET, "a" INDICATES SWITCH CONTROL
"C" = MOUNTED 6" ABOVE COUNTER OR 42" AFF. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.
"F" = FURNITURE MTD, COORDINATE EXACT LOCATION WITH FURNITURE PLANS.
"GFC" = GROUND FAULT INTERRUPTER TYPE MOUNTED AT 42" AFF.
"GFI" = GROUND FAULT INTERRUPTER TYPE.
"H" = HORIZONTALLY MOUNTED.
"IG" = ISOLATED GROUND RECEPTACLE WITH SEPERATE GREEN GROUND CONDUCTOR WITH YELLOW STRIPE TO ISOLATED GROUND BUS IN PANEL.
"M" = MODULAR FURNITURE SERVICE - PROVIDE FLEXIBLE CONNECTION, COORDINATE EXACT LOCATION WITH FURNITURE PLANS.
"SP" = SURGE PROTECTION RECEPTACLE.
"T" = TAMPER RESISTANT SAFETY RECEPTACLE.
"TL" = TWIST LOCK TYPE.
"WP" = WEATHER PROOF RECEPTACLE WITH "NTRL" LISTED COVER PLATE FOR WET LOCATION WITH GFI TYPE RECEPTACLE INSTALLED IN NEMA 4 ENCLOSURE WITH KEY LOCK.
"CD" = CABLE DROP RECEPTACLE - REFER TO CABLE DROP DETAIL.
"P" = PEDESTAL MOUNTED ON CASEWORK WITH GFI RECEPTACLE. COORDINATE WITH EQUIPMENT DRAWINGS FOR EXACT LOCATION.
"CR" = CORD REEL RECEPTACLE (WHITE) - REFER TO CORD REEL DETAIL.
"E" = RECEPTACLE CONNECTED TO NORMAL/EMERGENCY CIRCUIT.
"G" = OUTLET FOR GOGGLE CABINET, MTD 6'-6" AFF (REFER TO ARCH ELEVATIONS.)
"REF = OUTLET FOR REFRIGERATOR
"MIC" = OUTLET FOR MICROWAVE

20AMP, 120 VOLT SINGLE RECEPTACLE

2 — 20 AMP, 120 VOLT DUPLEX RECEPTACLE; "2" INDICATES CIRCUIT NUMBER.

20AMP, 120 VOLT DOUBLE DUPLEX RECEPTACLE.

SPECIAL PURPOSE OUTLET - RATING AS INDICATED ON DRAWINGS. EXAMPLE; ELECTRIC DRYER= 30A, 125/250V, 3 POLE, 4 WIRE, NEMA 14-30R ELECTRIC RANGE= 50A, 125/250V, 3 POLE, 4 WIRE, NEMA 14-50R

20 AMP, 120 VOLT DUPLEX RECEPTACLE FLUSH FLOOR MOUNTED EQUAL TO STEEL CITY #664-S WITH COVER #664-CST & (1) 664-S-RP.

20 AMP, 120 VOLT DOUBLE DUPLEX RECEPTACLE FLUSH FLOOR MOUNTED EQUAL TO STEEL CITY #664-S WITH COVER #664-CST & (2) 664-S-RP.

20AMP, 120VOLT DUPLEX RECEPTACLE CONNECTED TO NORMAL/ EMERGENCY CIRCUIT.

20 AMP, 120 VOLT GFI, HORIZONTALLY MOUNTED ON FURNITURE DUPLEX RECEPTACLE INTENDED FOR COMPUTER USE. COLOR OF OUTLET TO BE SELECTED BY OWNER.

20 AMP, 120 VOLT DUPLEX RECEPTACLE INTENDED FOR COMPUTER USE. COLOR OF OUTLET TO BE SELECTED BY OWNER.

20AMP, 120VOLT DOUBLE DUPLEX RECEPTACLE INTENDED FOR COMPUTER USE. COLOR OF OUTLET TO BE SELECTED BY OWNER.

TWO DUPLEX RECEPTACLES, MOUNTED AT 18" AFF AND 84" AFF.

POWER

120/208 VOLT, 3 PHASE, 4 WIRE PANELBOARD.

PANELBOARD FLUSH MOUNTED.

T5 T — DRY TYPE TRANSFORMER - REFER TO TRANSFORMER SCHEDULE FOR RATINGS "T5"-INDICATES 45KVA TRANSFORMER. "K13" INDICATES TRANSFORMER WITH A K13 RATING.

E — ELECTRIC MANHOLE

T — TELEPHONE MANHOLE

C — CATV MANHOLE

M — METER SOCKET

JB J — JUNCTION BOX - SIZE AS REQUIRED.

3R — FUSED DISCONNECT SWITCH HEAVY DUTY TYPE-"3R" INDICATES NEMA 3R
20 — INDICATES TIME DELAY FUSE SIZE.
30 — INDICATES SAFETY SWITCH SIZE

3R — UNFUSED DISCONNECT SWITCH HEAVY DUTY TYPE-"3R" INDICATES NEMA 3R

RV — MAGNETIC MOTOR STARTER, "RV" INDICATES REDUCED VOLTAGE.

COMBINATION FUSED DISCONNECT AND MOTOR STARTER

TS — HORSEPOWER RATED THERMAL SWITCH WITH PILOT LIGHT

ON/OFF PUSHBUTTON SWITCH.

70AT / 100AF — CB — ENCLOSED CIRCUIT BREAKER-"70AT" INDICATES 70 AMP TRIP; "100AF" INDICATES 100 AMP FRAME.

PB — PULL BOX-SIZE AS REQUIRED.

MISCELLANEOUS DEVICES

1 / E1.1 — DETAIL IDENTIFIER-INDICATES DETAIL #1 ON DWG. E1.1 OF THE SAME BUILDING DESIGNATION AS THE DWG. THE REFERENCE IS MADE UNLESS OTHERWISE NOTED. GENERAL SHEETS (DESIGNATION "G") HAVE UNIQUE DRAWING NUMBERS AND SHALL NOT HAVE ADDITIONAL NOTATION.

GROUND BAR 24W" X 1/8" THICK X 18" LONG COPPER BUS, U.N.O.

1 / E-3 (A A) — SECTION IDENTIFIER- INDICATES SECTION A-A, DETAIL #2 ON DWG. E-3.

1 — NOTE SYMBOL, "1" INDICATES TO REFER TO NOTE #1

3 — CIRCUIT SIZE NUMBER, REFER TO "CIRCUIT SIZE SCHEDULE".

XX / 01 — EQUIPMENT TAG. REFER TO ASSOCIATED EQUIPMENT SCHEDULES.

DUAL EV CHARGING STATION

ONE LINE POWER

LOAD-BREAK SWITCH.

CIRCUIT BREAKER.

K-1 — KIRK-KEY INTERLOCK.

CURRENT TRANSFORMER

POTENTIAL TRANSFORMER.

LA — LIGHTNING ARRESTER AND GROUNDING TO PROTECT ALL PHASES.

CONTACT, NORMALLY OPEN (NO).

CONTACT, NORMALLY CLOSED (NC).

ST — SHUNT TRIP COIL.

CM — CUSTOMER METERING, ELECTRONIC SOLID STATE, EQUAL TO WESTINGHOUSE IQ DATA PLUS, UNLESS OTHERWISE INDICATED.

POWER TRANSFORMER.

FUSE, SIZE AS INDICATED.

GF — GROUND FAULT SENSOR & RELAY.

DRAWOUT CIRCUIT BREAKER.

300A 400A — SWITCH AND FUSE
"400A" - INDICATES AMPERE SWITCH SIZE.
"300A" - INDICATES AMPERE FUSE SIZE.

SYSTEM GROUND OR EQUIPMENT GROUND.

N E L O — AUTOMATIC TRANSFER SWITCH.

MO — ELECTRONICALLY OPERATED MOTORIZED CIRCUIT BREAKER

WIRING AND RACEWAYS

WIRING AND RACEWAY - NO. OF DIAGONAL LINES INDICATES NO. #12 AWG CONDUCTORS. ABSENCE OF DIAGONAL LINES INDICATES 2 #12 AWG+#12AWG GROUND UNLESS NOTED OTHERWISE. GROUND WIRE IS NOT SHOWN IN COUNT BUT SHALL BE PROVIDED.

HOMERUN TO PANEL - NO. OF ARROWS INDICATES NO. OF 20 AMP/1 POLE CIRCUITS TO PANEL - UNLESS NOTED OTHERWISE.

NE — NORMAL/EMERGENCY WIRING - MIN. 2#10 AWG + #10 AWG GROUND. RUN IN SEPARATE RACEWAY.

4F — FIRE ALARM WIRING - "4F" INDICATES 4 #14 THHN SOLID IN 3/4" MIN. SIZE CONDUIT.

E — EMERGENCY ONLY WIRING-MINIMUM 2#10 AWG IN SEPARATE RACEWAY.

P — UNDERGROUND PRIMARY ELECTRIC SERVICE

SE — UNDERGROUND SECONDARY ELECTRIC SERVICE

T — UNDERGROUND TELEPHONE SERVICE

CTV — UNDERGROUND CABLE TV SERVICE

F — UNDERGROUND FIRE ALARM SERVICE

4" CONDUIT SLEEVE THRU-WAY, ACROSS CORRIDOR OR BETWEEN ROOMS FOR TEL/DATA - LOCATE ABOVE CEILING.

CONDUIT SLEEVE EXTENDED TO NEAREST ACCESSIBLE CEILING-TERMINATE WITH INSULATED BUSHING.

FLEXIBLE CONNECTION TO EQUIPMENT

ABBREVIATIONS

A = AMPERE
AL = ALUMINIUM
AF = AMP, FRAME
AFF = ABOVE FINISHED FLOOR
AFG = ABOVE FINISHED GRADE
AIC = INTERRUPTING CAPACITY
ALCS = AUTOMATED LIGHTING CONTROL SYSTEM
ARCH = ARCHITECT
AT = AMP TRIP
ATC = AUTO-TEMP CONTROL CONTRACTOR
ATS = AUTOMATIC TRANSFER SWITCH
AWG = AMERICAN WIRE GAUGE
C = CONDUIT (GENERIC TERM FOR RACEWAY PROVIDE AS SPECIFIED)
CATV = CABLE TELEVISION
CB = CIRCUIT BREAKER
CKT = CIRCUIT
CLG = CEILING
CM = CONSTRUCTION MANAGER
CU = COPPER
℄ = CENTERLINE
DEP = DEPARTMENT OF ENVIRONMENTAL PROTECTION
DP = DEEP
DWG = DRAWING
EC = ELECTRICAL CONTRACTOR
EPA = ENVIRONMENTAL PROTECTION AGENCY
EWC = ELECTRIC WATER COOLER
EMT = ELECTRIC METALLIC TUBING
FA = FIRE ALARM
FPC = FIRE PROTECTION SYSTEM CONTRACTOR
F&I = FURNISH(ED) AND INSTALL(ED)
G, GND = GROUND
GC = GENERAL CONDITIONS
GFI = GROUND FAULT INTERRUPTER
HVAC = HEATING, VENTILATING, AND AIR CONDITIONING CONTRACTOR HORSEPOWER
HP = HORSEPOWER
IG = ISOLATED GROUND
IMC = INTERMEDIATE METALLIC CONDUIT
IT = INFORMATION TECHNOLOGY CONTRACTOR
JB = JUNCTION BOX
KCMIL = THOUSAND CIRCULAR MILS
KES = KITCHEN EQUIPMENT SUPPLIER
KVA = KILO-VOLT AMPERE
KW = KILO-WATT
LTG = LIGHTING
MCB = MAIN CIRCUIT BREAKER
MCC = MOTOR CONTROL CENTER
MCM = THOUSAND CIRCULAR MILS
MDP = MAIN DISTRIBUTION PANEL
MH = MOUNTING HEIGHT
MLO = MAIN LUGS ONLY
MTD = MOUNTED
MTG = MOUNTING
MTS = MANUAL TRANSFER SWITCH
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
NIC = NOT IN CONTRACT
NO, # = NUMBER
NRTL = NATIONALLY RECOGNIZED TESTING LABORATORY
NTS = NOT TO SCALE
OSHA = OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION
P = POLE(S)
PB = PULL BOX
PC = PLUMBING CONTRACTOR
PH = PHASE
PVC = POLY-VINYL CHLORIDE CONDUIT
PWR = POWER
REF = REFRIGERATOR
RGS = RIGID GALVANIZED STEEL CONDUIT
SN = SOLID NEUTRAL
SWBD = SWITCHBOARD
TEL/DATA = TELEPHONE/DATA
TGP = TELECOMMUNICATIONS GROUND BUS
TYP = TYPICAL
UNO = UNLESS NOTED OTHERWISE
UTP = UNSHIELDED TWISTED PAIR
WG = WIRE GUARD
WP = WEATHER PROOF
XFMR = TRANSFORMER
XP = EXPLOSION PROOF
W/ = WITH
@72" = MOUNT 72 INCHES TO CENTERLINE ABOVE FINISHED FLOOR OR GRADE

ELECTRICAL GENERAL NOTES

1. THE SCOPE OF WORK SHALL INCLUDE PROVIDING ALL WORK INDICATED, AND COORDINATION WITH ALL TRADES. SCOPE OF WORK IS INDICATED ON THE CONTRACT DOCUMENTS INCLUDING THE DRAWINGS AND THE SPECIFICATIONS, WHICH ARE COMPLIMENTARY. WORK INDICATED IN ANY CONTRACT DOCUMENT SHALL BE CONSIDERED PART OF THE SCOPE OF WORK. IN GENERAL, WORK REQUIREMENTS ARE NOT INDICATED IN BOTH DOCUMENTS . WHERE DOCUMENTS CONFLICT WITHIN THEMSELVES OR WITH CODES AND REGULATIONS, PROVIDE THE HIGHER QUANTITY AND QUALITY AND FOLLOW THE STRICTER REQUIREMENTS.
2. COORDINATE WITH THE GENERAL CONTRACTOR, OTHER TRADES AND OF MANUFACTURERS EQUIPMENT AND MAKE ALL FINAL CONNECTIONS AS REQUIRED, I.E., POWER, CONTROL, INTERLOCK, ETC.
3. ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE ELECTRICAL CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE ALL WORK REQUIRED BY CODES AND AUTHORITIES.
4. TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, CODES, LOCAL AUTHORITIES AND REGULATIONS. INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, APPROVALS AND CERTIFICATIONS.
5. DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATION, MOUNTING HEIGHTS OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED WITH THE EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.
6. FURNISH AND INSTALL ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
7. ALL MOUNTING HEIGHTS ARE TO CENTERLINE UNLESS OTHERWISE INDICATED.
8. IF EXACT MOUNTING OR RACEWAY ROUTINGS ARE NOT INDICATED (LOCATION OR HEIGHT) REQUEST CLARIFICATION PRIOR TO ROUGHING, OR INSTALLATION.
9. PROVIDE ELECTRICAL OUTLET PLATE GASKET SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
10. WIRE AND CONDUIT SIZES INDICATED ON HOMERUNS SHALL BE CONTINUOUS THROUGHOUT CIRCUIT.
11. INSTALL A GREEN GROUNDING CONDUCTOR WITHIN EACH RACEWAY SIZED IN ACCORDANCE WITH THE ELECTRIC CODE.
12. PROVIDE WATERTIGHT AND GAS TIGHT SEALS INSIDE AND OUTSIDE OF CONDUITS THAT PENETRATE THE BUILDING BELOW GRADE, O.Z. GEDNEY OR APPROVED EQUAL. PROVIDE WEATHER TIGHT SEAL AT PENETRATIONS ABOVE GRADE.
13. USE CAUTION TO AVOID DAMAGE TO EXISTING UTILITY LINES AND/OR HARM TO PERSONNEL WORKING IN THESE AREAS.
14. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER MINIMUM #12 AWG. SIZE UNLESS OTHERWISE INDICATED.
15. PROVIDE A PULL LINE IN EVERY EMPTY CONDUIT PROVIDED UNDER THIS SECTION.
16. WIRING IS INDICATED ON DRAWINGS ONLY FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS.
17. WIRING AND CONDUIT SHALL BE REQUIRED BETWEEN ALL OUTLETS INDICATED WITH CIRCUIT NUMBERS AND PANEL DESIGNATIONS.
18. ALTHOUGH ALL BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE BRANCH CIRCUIT WIRING SYSTEM BE PROVIDED.
19. ALL SWITCH CONTROLS SHALL BE PROVIDED WITH WIRING AND CONDUIT AS REQUIRED.
20. RACEWAYS SHALL BE LIMITED TO SIX CURRENT CARRYING CONDUCTORS (THREE PHASE AND THREE NEUTRALS) AND GROUNDING CONDUCTOR, UNLESS OTHERWISE INDICATED. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH SINGLE PHASE RECEPTACLE CIRCUIT UNLESS AN OVERSIZED NEUTRAL IS SPECIFICALLY INDICATED.

LIGHTING FIXTURE SCHEDULE (1)(2)(3)(4)

TYPE	MANUFACTURER	MODEL / SERIES NUMBER	MTG.	VOLTAGE	LIGHTING SOURCE			DESCRIPTION	SCHEDULE NOTES
					LUMENS	WATTS	SOURCE/CCT		
SL1	VISCO LIGHTING	VI-C-1-F/15'-6" W/ (1) #199-22C-21C/8"-19C & #AVI-G3-SO-30-P2-IN-DLC	POLE	UNIVERSAL	6610	68	LED/3000K	SINGLE HEAD POLE FIXTURE W/ TYPE III DISTRIBUTION MOUNTED ON ROUND ALUMINUM TAPERED POLE RATED FOR 110MPH WIND CONDITIONS	(16'-0") A.F.G.
SL2	VISCO LIGHTING	VI-C-1-F/15'-6" W/ (2) #199-22C-21C/8"-19C & #AVI-G3-SO-30-P2-IN-DLC	POLE	UNIVERSAL	(2) 6610	(2) 68	LED/3000K	DOUBLE HEAD POLE FIXTURE W/ TYPE III DISTRIBUTION AND HOUSE SIDE SHIELD ON A ROUND ALUMINUM TAPERED POLE RATED FOR 110MPH WIND CONDITIONS	(16'-0") A.F.G.

LIGHTING FIXTURE SCHEDULE NOTES (-)

1. LIGHTING FIXTURE PACKAGE SUBMITTALS SHALL BE FULLY COORDINATED BETWEEN THE ELECTRICAL CONTRACTOR, LIGHTING FIXTURE REPRESENTATIVE(S), AND LIGHTING MANUFACTURERS TO ENSURE ALL PRODUCT, INSTALLATION, AND CONTROL REQUIREMENTS ARE MET PRIOR TO SUBMISSION FOR REVIEW. IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO PROVIDE A PACKAGE MEETING ALL REQUIREMENTS OF THE PROJECT FOR A COMPLETE AND FULLY FUNCTIONAL LIGHTING SYSTEM.=
2. SITE LIGHTING POLES SHALL BE PROVIDED WITH FULL BASE COVERS TO MATCH PROFILE OF POLE; NUT COVERS ONLY ARE NOT ACCEPTABLE.
3. PROVIDE LED SOURCES WITH A MAXIMUM COLOR VARIATION OF 3-STEP MCADAM ELLIPSE. PROVIDE STATEMENT OF COMPLIANCE WITH SUBMITTALS.
4. PROVIDE FIXTURES WITH A MINIMUM WARRANTY COVERAGE OF 5 YEARS ON ALL PARTS. MANUFACTURER SHALL PROVIDE WRITTEN WARRANTY TO PROVIDE REPLACEMENT PARTS, INCLUDING BUT NOT LIMITED TO, LED SOURCE MODULE AND DRIVER FOR A MINIMUM OF TEN YEARS. PARTS SHALL BE FULLY COMPATIBLE WITH FIXTURE TO PROVIDE SAME LIGHT OUTPUT, DISTRIBUTION, COLOR, AND COLOR RENDERING AT OR BELOW THE ORIGINAL WATTAGE. PROVIDE STATEMENT OF COMPLIANCE WITH SUBMITTALS.

LIGHTING GENERAL NOTES

1. MANUFACTURERS AND CATALOG NUMBERS IDENTIFIED IN THE "LIGHTING FIXTURE SCHEDULE" SHALL SERVE TO ESTABLISH THE BASIS OF DESIGN FOR EACH LIGHTING FIXTURE TYPE. PRODUCTS OF EQUAL APPEARANCE, CONSTRUCTION, PERFORMANCE, AND WARRANTY COVERAGE FROM MANUFACTURERS OTHER THAN THOSE IDENTIFIED MAY BE PROPOSED FOR USE ON THIS PROJECT, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND ENGINEER. THE "FIXTURE MANUFACTURER OPTIONS (OR EQUAL)" LISTING IS PROVIDED FOR GUIDANCE IN IDENTIFYING MANUFACTURERS CAPABLE OF PROVIDING EQUAL PRODUCTS, BUT IN NO WAY LIMITS MANUFACTURERS OR PRODUCTS THAT MAY BE PROPOSED AS EQUALS FOR THE PROJECT.
2. "LIGHTING FIXTURE SCHEDULE" REMARKS, "LIGHTING FIXTURE SCHEDULE NOTES", "LIGHTING GENERAL NOTES", AND NOTATIONS ELSEWHERE MAY INDICATE FEATURES AND ACCESSORIES THAT ARE NOT INDICATED IN THE CATALOG NUMBER BUT ARE REQUIRED FOR THE PROJECT. PRODUCTS OTHER THAN THOSE SPECIFIED SUBMITTED SHALL BE DOCUMENTED FOR CONFORMANCE IN PERFORMANCE, CONSTRUCTION, AND APPEARANCE WITH THE CRITERIA ESTABLISHED BY THE SPECIFIED PRODUCT.
3. FURNISH ALL LIGHTING FIXTURES COMPLETE WITH MOUNTING ACCESSORIES TO MEET THE JOB REQUIREMENTS. VERIFY ROOM SURFACE CONSTRUCTION AND FINISHES PRIOR TO ORDERING FIXTURES TO ENSURE PROPER MOUNTING PROVISIONS AND FIXTURE FITTINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS.
4. LED ARRAYS, MODULES, AND LIGHT ENGINES SHALL HAVE KELVIN COLOR TEMPERATURE AS SCHEDULED HAVING A MINIMUM COLOR RENDERING INDEX (CRI) OF 82 AND A MINIMUM L70 LIFETIME RATING OF 50,OOO HOURS AT 25°C AMBIENT. LED DRIVERS SHALL HAVE 0-10V DIMMING CONTROL WITH FULLY ISOLATED CONTROL INPUTS AND MINIMUM POWER LEVEL OF 10%%%. LED FIXTURES WITH ARRAY / MODULE AND DRIVER PACKAGES OR LIGHT ENGINES SHALL HAVE PUBLISHED IESNA LM-79 AND LM-80 TESTING DATA AS A STANDARD MANUFACTURED OFFERING. INDIVIDUAL COMPONENT TESTING DATA WILL NOT BE ACCEPTED. ALL FIXTURES SHALL BE "DESIGN LIGHTS CONSORTIUM" (DLC) OR "ENERGYSTAR" LISTED, OR FURNISHED WITH DATA INDICATING CONFORMANCE WITH LATEST APPLICABLE LISTING CRITERIA.
5. PROVIDE TYPE AND QUANTITY OF DRIVERS AND TRANSFORMERS AS REQUIRED TO PROVIDE CONTROL METHOD INDICATIONS ON THE PLANS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: SWITCHING SUBSCRIPTS, NOTES, SCHEDULE REMARKS / DESCRIPTIONS, AND DETAILS. QUANTITY OF DRIVERS AND TRANSFORMERS SHALL BE THE MINIMUM REQUIRED TO PROVIDE CONTROL INDICATED TO MAINTAIN THE LOWEST CONNECTED LOAD OF LIGHTING SYSTEM POSSIBLE. TANDEM WIRING OF FIXTURES SHALL BE PROVIDED WHERE NECESSARY AND WITHIN THE WIRING DISTANCE RESTRICTIONS OF THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
6. ALL LAMPS, LED SOURCES, DRIVERS, AND CONTROLS SHALL MEET THE LATEST UTILITY COMPANY INCENTIVE REQUIREMENTS. REFER TO THE LATEST PROGRAM REQUIREMENTS DOCUMENTATION AND COORDINATE WITH THE UTILITY COMPANY TO ENSURE COMPLIANCE.
7. FINISH FOR ALL FIXTURES SHALL BE SELECTED BY THE ARCHITECT/OWNER FROM THE MANUFACTURER'S CATALOG OPTIONS. BLACK AND WHITE SHALL BE CONSIDERED A STANDARD FINISH OPTION FOR ALL PRODUCTS SPECIFIED REGARDLESS OF WHAT IS LISTED.
8. WHERE FIXTURES OTHER THAN THE SPECIFIED PRODUCTS ARE PROPOSED, THE CONTRACTOR SHALL PROVIDE LIGHT LEVEL CALCULATIONS IN ACCORDANCE WITH IESNA STANDARDS TO JUSTIFY THAT THE SUBSTITUTED FIXTURES ARE OF EQUAL PERFORMANCE (WITH EQUAL OR LOWER INPUT WATTAGE) TO THE SPECIFIED PRODUCTS (APPLIES TO ALL FIXTURES IN ALL SPACES.)

PARE

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SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

TOWN OF HOLLISTON
9 Green Street
Holliston, Massachusetts

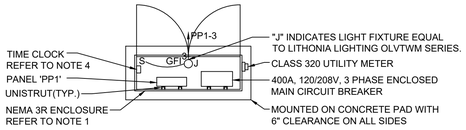
REVISIONS:

PROJECT NO.:	20212.00
DATE:	FEBRUARY 2023
SCALE:	AS NOTED
DESIGNED BY:	JGD
CHECKED BY:	JR
DRAWN BY:	JGD
APPROVED BY:	DMP

DRAWING TITLE:
ELECTRICAL SYMBOL LIST

DRAWING NO.:
E0.01

SHEET NO. 1 OF 3

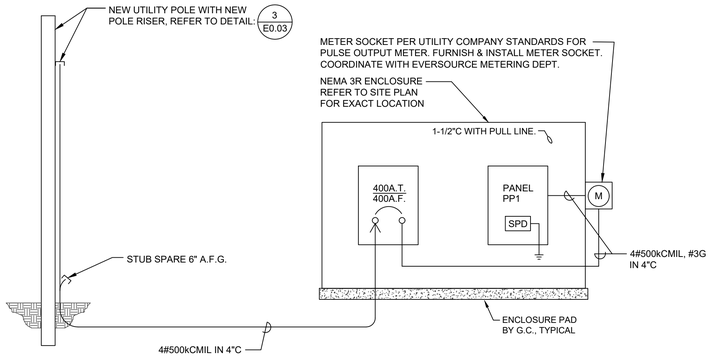


2 E0.02 NEMA 3R EQUIPMENT ENCLOSURE DETAIL

SCALE: 1/4" = 1'-0"

ENCLOSURE NOTES:

1. PROVIDE PAD MOUNTED NEMA 3R CABINET TO HOUSE ELECTRICAL EQUIPMENT, EQUAL TO APX ENCLOSURES CAT#APX727224.
2. CONFIRM CLEARANCES OF ELECTRICAL EQUIPMENT WITHIN ENCLOSURE PRIOR TO INSTALLATION.
3. PROVIDE ONE DUPLEX RECEPTACLE WITHIN EACH NEMA 3R ENCLOSURE FOR CONVIENCE POWER. RECEPTACLES TO BE CIRCUITED TO PP1-3.
4. PROVIDE AN ASTRONOMICAL TIME CLOCK TO CONTROL PARKING LOT LIGHTING. E.C. TO COORDINATE WITH OWNER FOR PROGRAMMING OF TIME CLOCK.



3 E0.02 ONE LINE RISER DIAGRAM

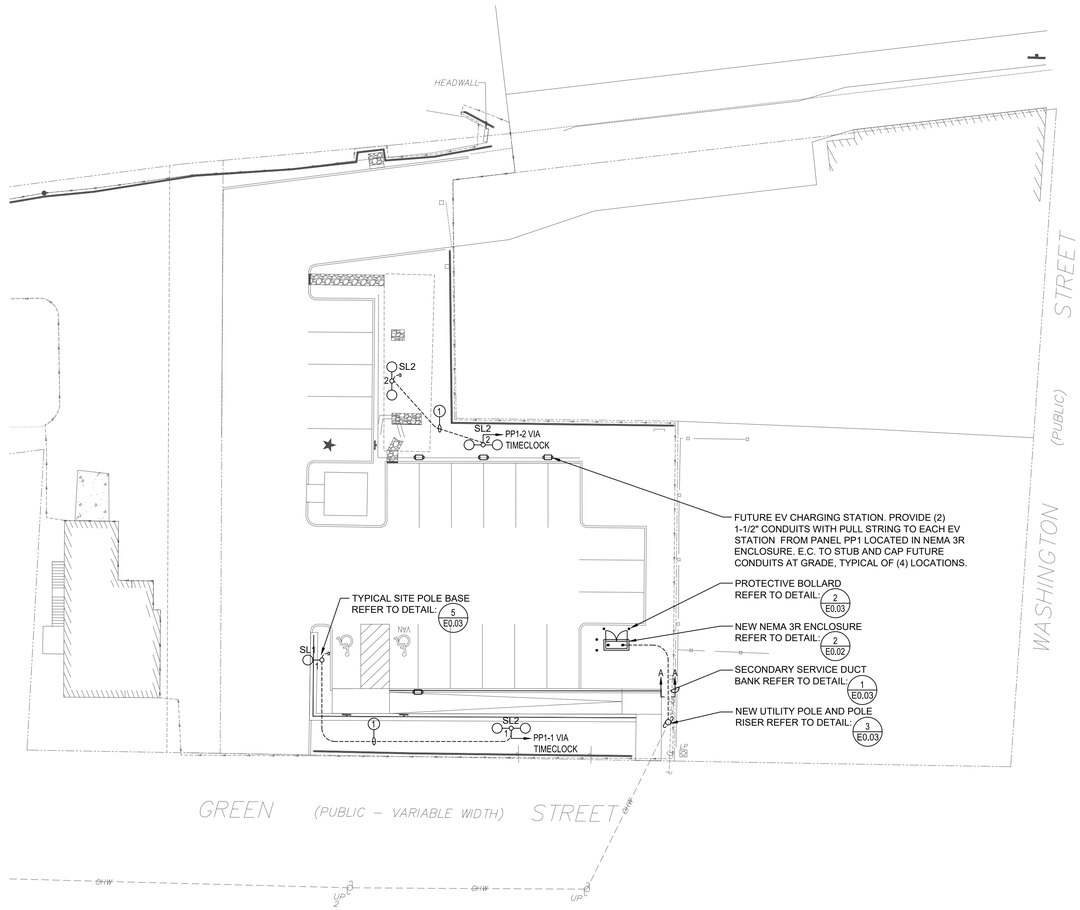
SCALE: N.T.S.

SERVICE: 120/208V,3 PHASE,4W
AIC: 22,000 kAIC

PANEL SCHEDULE

	PANEL NO.	LOCATION	MTG	MAIN BUS AMPS	MAIN CB	BRANCH CKT BREAKER (AMPS)														TOTAL POLES	OTHERS
						1 POLE			2 POLE						3 POLE						
						15	20	30	15	20	30	40	50	60	15	20	40	60	80		
①	PP1	NEMA 3R ENCLOSURE	S	400	-	-	4	-	-	-	-	-	-	-	-	-	-	1	6	42	-

① 60A/3P CIRCUIT BREAKER TO BE UTILIZED FOR INTERNAL SURGE PROTECTION DEVICE. REFER TO DETAIL 4 ON SHEET E0.03.



1 E0.02 ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

SITE NOTES:

1. DO NOT RUN ANY UNDERGROUND RACEWAYS WITHIN PLANTING AREAS OR LEACHING FIELDS. REFER TO DRAWINGS FOR LOCATIONS. COORDINATE ROUTING WITH LANDSCAPE ARCHITECT.
2. REFER TO CIVIL DRAWINGS FOR EXACT ROUTING OF UTILITIES.
3. ALL SITE WIRING SHALL BE 2#8&#10G,1"C MINIMUM UNLESS SHOWN OTHERWISE.
4. REMOVE ALL SITE ELECTRICS WHEN NO LONGER REQUIRED.

SITE WIRING LEGEND:

① 2#10, 1#10G, 1"C, 24" BELOW GRADE

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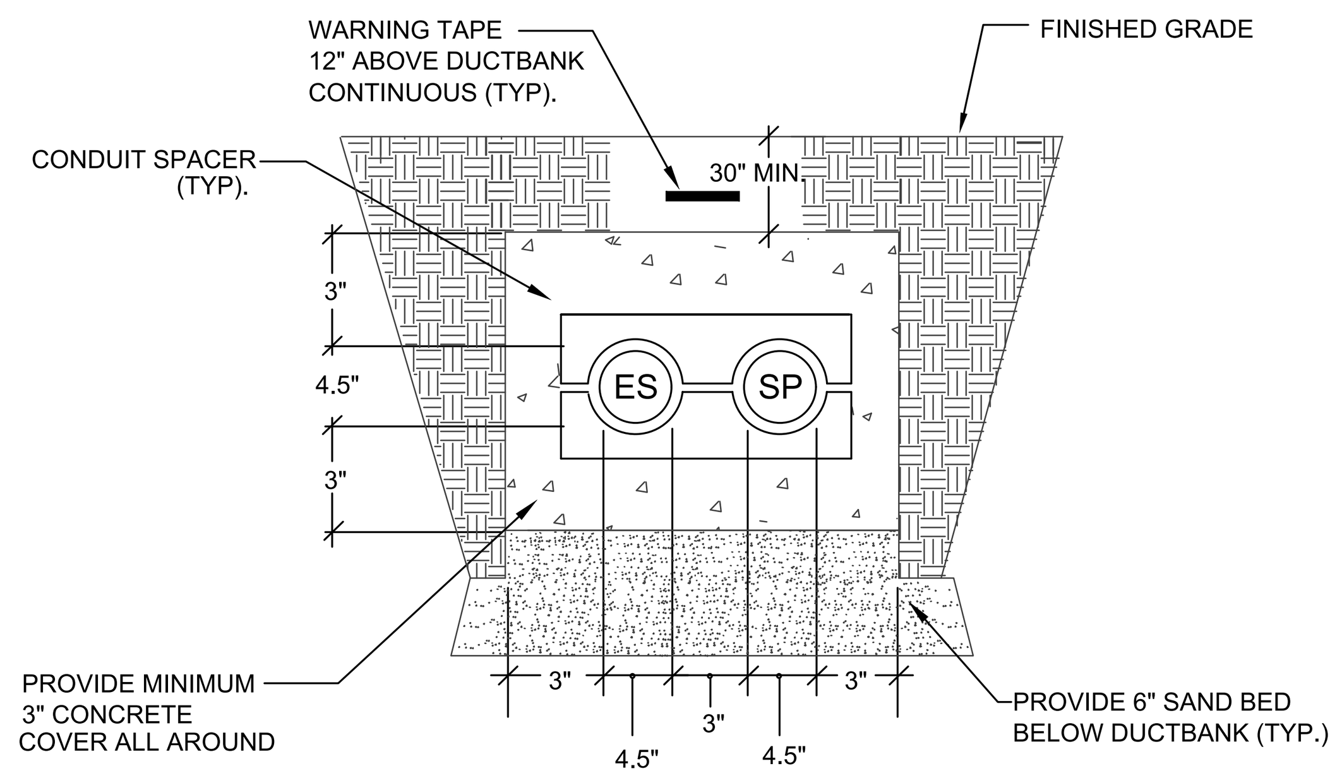
ELECTRICAL SITE PLAN

DRAWING NO.:
E0.02

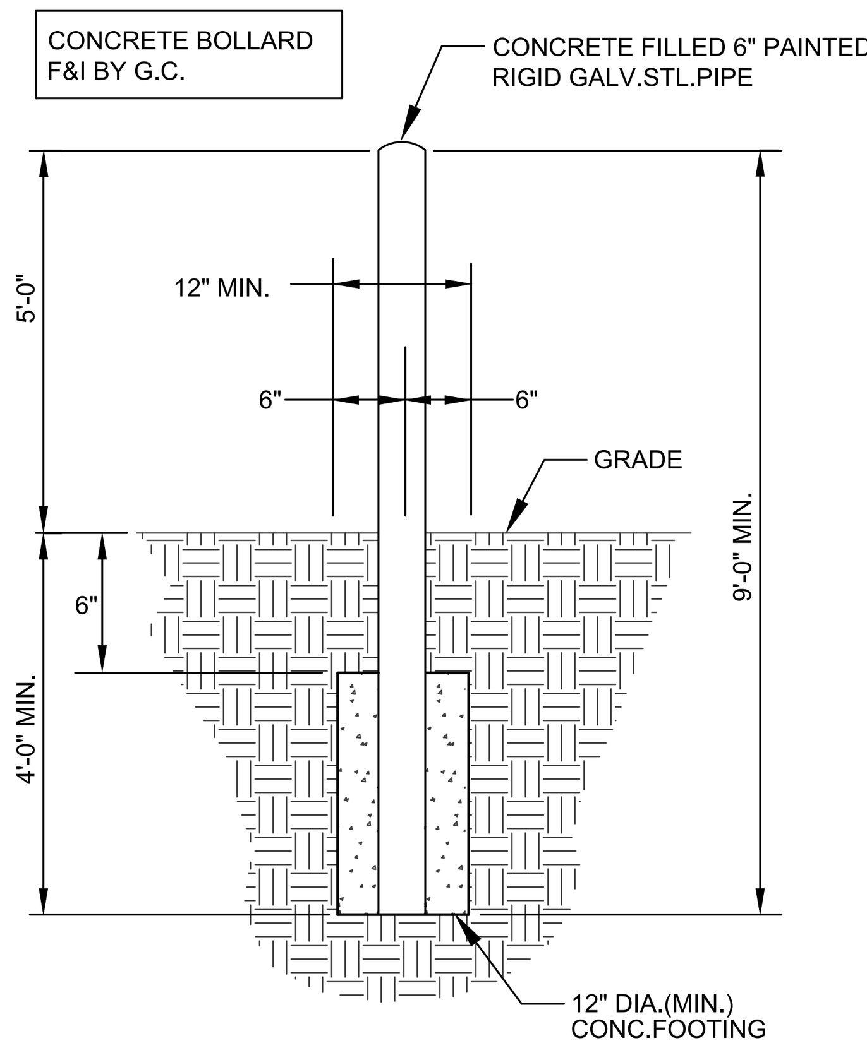
SHEET NO. 2 OF 3



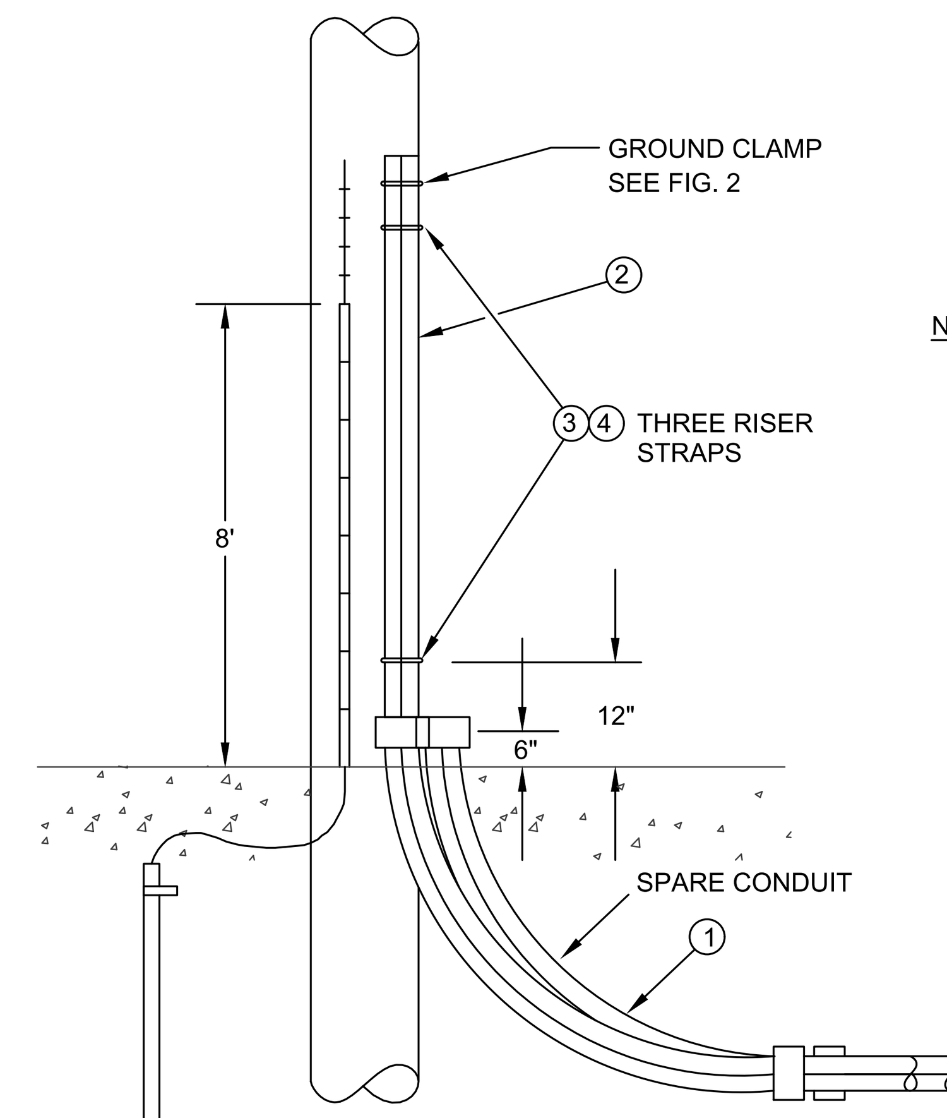
1 / E0.03
SECONDARY DUCT BANK SECTION "A-A"
SCALE: N.T.S.

ES — 4" SECONDARY- SCHEDULE 40 P.V.C. PROVIDE 3/16" PULL LINE IN CONDUIT.

SP — 4" SPARE - SCHEDULE 40 P.V.C. PROVIDE 3/16" PULL LINE IN CONDUIT.



2 / E0.03
TYPICAL BOLLARD DETAIL
SCALE: N.T.S



NOTES:
1. RISER CONDUITS SHALL BE LOCATED ON THE STREET QUARTER OF THE POLE,AND WHEN POSSIBLE ON THE QUARTER AWAY FROM APPROACHING TRAFFIC.
2. CAP SPARES @ BASE OF POLE 6" ABOVE GRADE.

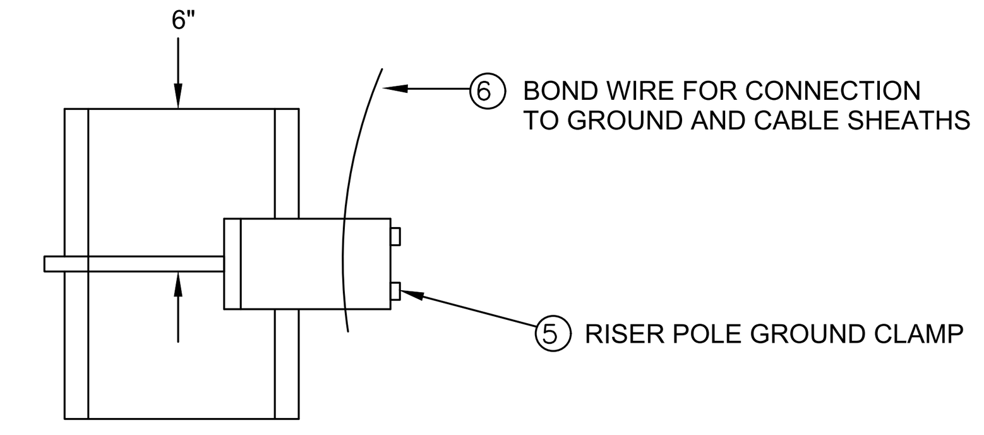


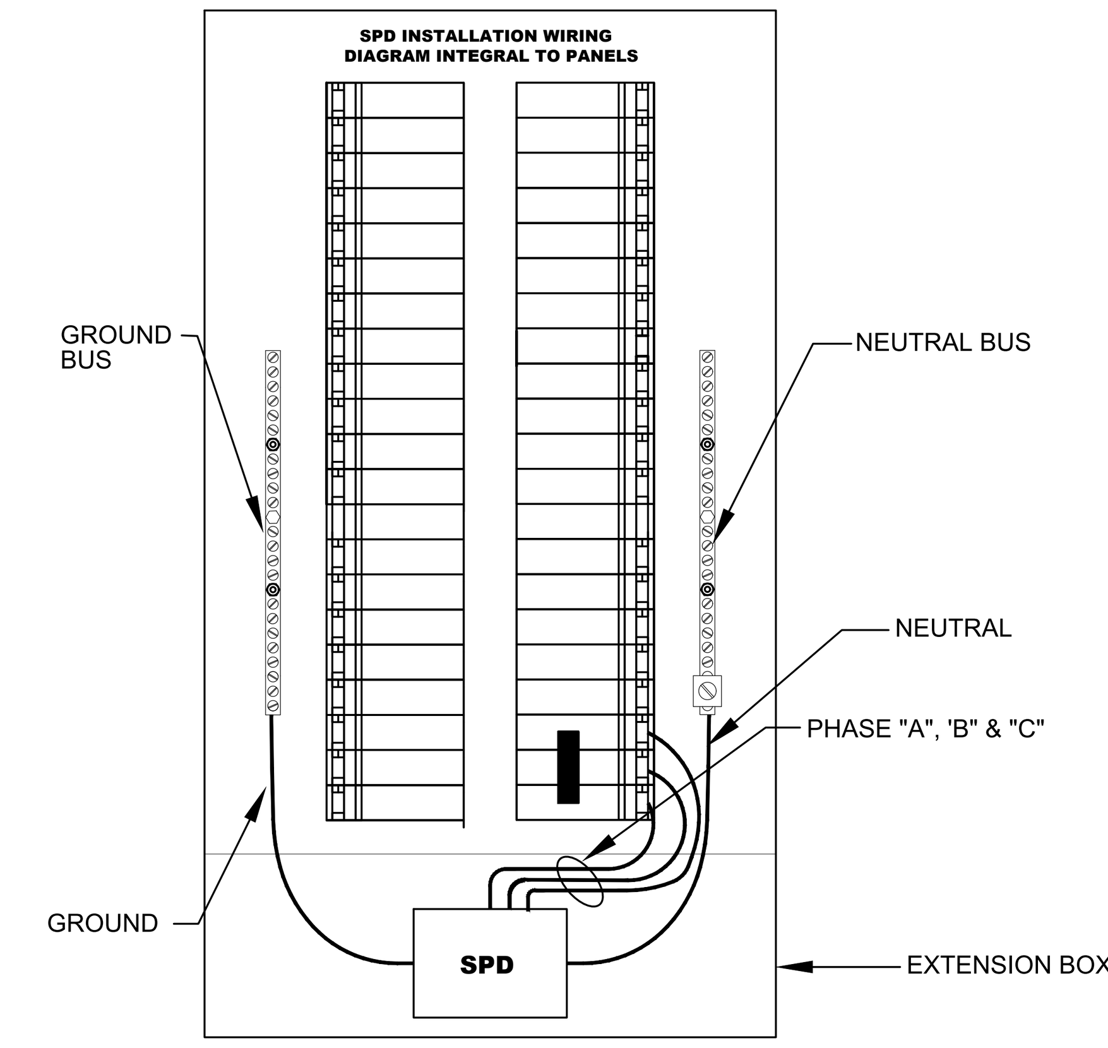
FIGURE 2 - RISER GROUND CLAMP

INSTALL GROUND CLAMP AS SHOWN. CONNECT TO POLE EQUIPMENT GROUNDING CONDUCTOR. INSTALL GROUND ROD AND RUN MINIMUM #6 SOLID COPPER UP POLE AND CONNECT TO COMMON NEUTRAL. INSTALL 8 FEET OF MOLDING OVER WIRE AND CONNECT RISER GROUND CLAMP TO GROUND WIRE ABOVE MOLDING AS SHOWN.

3 / E0.03
UTILITY POLE RISER DETAIL
SCALE: N.T.S.

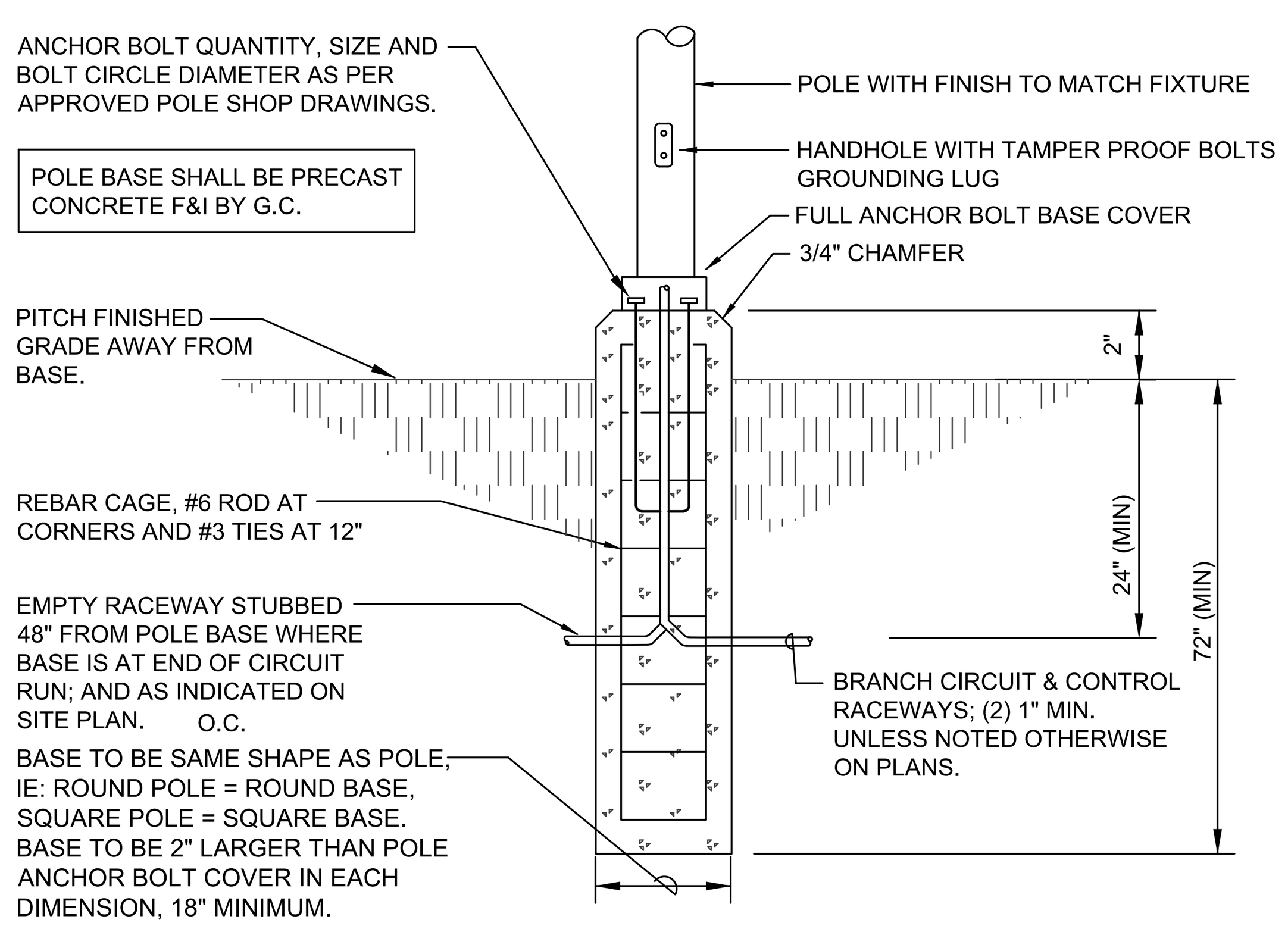
CODE NUMBERS FOR PIPE SIZES OF:

ITEM	DESCRIPTION
1	36" RADIUS
2	CONDUIT-10' LENGTH-GALVANIZED STEEL
3	RISER STRAPS
4	LAG SCREWS 3/8" x 3"
5	RISER PIPE CONNECTOR
6	#6 COPPER SOLID BARE (24" LONG)



4 / E0.03
SPD WIRING DIAGRAM
SCALE: N.T.S.

NOTES:
1. CONNECT SPD TO NEAREST 60A BREAKER IN PANEL.
2. LIMIT WIRE LENGTH TO 18" OR LESS, KEEP WIRE FREE OF ANY SHARP BENDS.
3. DIRECT CONNECTION TO PHASE BUS IS NOT PERMITTED.
4. EXTERNAL SPD IS ACCEPTABLE; PROVIDE WITH 60A/3P BREAKER. ALSO CONFIRM/COORDINATE MOUNTING SPACE FOR EXTERNAL SPD.



5 / E0.03
LIGHTING POLE BASE BEHIND CURB
SCALE: N.T.S.

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DRAWING TITLE:
ELECTRICAL SITE DETAILS

DRAWING NO.:
E0.03

SHEET NO. 3 OF 3

PLANT LIST

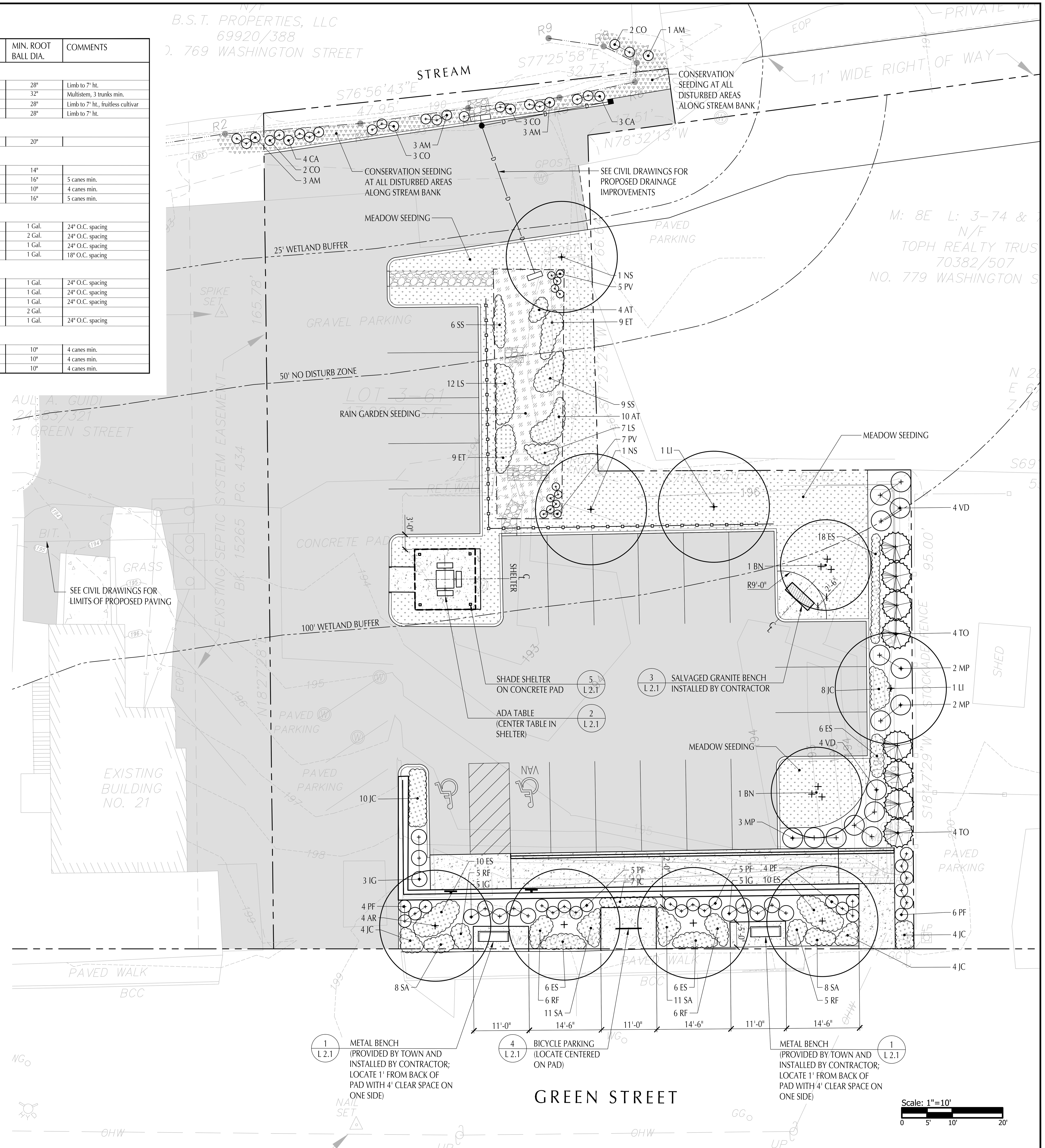
SYM	QTY	BOTANICAL NAME	COMMON NAME	HT./SPREAD	CALIPER	ROOT	MIN. ROOT BALL DIA.	COMMENTS
DECIDUOUS SHADE TREES AND ORNAMENTAL TREES								
AR	4	Acer rubrum 'October Glory'	October Glory Red Maple	14'-16' HT.	2 1/2" - 3" cal.	B&B	28"	Limb to 7' ht.
BN	2	Betula nigra 'Heritage'	Heritage River Birch	10-12' HT.	-	B&B	32"	Multistem, 3 trunks min.
LI	2	Liquidambar styraciflua 'Rotundiloba'	Sweet Gum	14'-16' HT.	2 1/2" - 3" cal.	B&B	28"	Limb to 7' ht., fruitless cultivar
NS	2	Nyssa sylvatica 'Wildfire'	Wildfire Black Gum	12'-14' HT.	2 1/2" - 3" cal.	B&B	28"	Limb to 7' ht.
EVERGREEN TREES								
TO	8	Thuja occidentalis 'Nigra'	Dark American Arborvitae	6'-7' HT.	—	B&B	20"	
SHRUBS								
IG	13	Ilex glabra 'Shamrock'	Shamrock Inkberry Holly (dwarf)	24-30" HT.	—	B&B	14"	
MP	7	Myrica pensylvanica	Northern Bayberry	3'-4' HT.	—	B&B	16"	5 canes min.
PF	24	Potentilla fruticosa 'Goldfinger'	Goldfinger Shrubby Cinquefoil	18"-24" HT.	—	Cont.	10"	4 canes min.
VD	8	Viburnum dentatum 'Blue Muffin'	Blue Muffin Arrowwood Viburnum	3'-4' HT.	—	B&B	16"	5 canes min.
PERENNIALS, ORNAMENTAL GRASSES & GROUNDCOVER								
ES	56	Eragrostis spectabilis	Purple Lovegrass	—	—	Cont.	1 Gal.	24" O.C. spacing
JC	37	Juniperus communis var. depressa 'AmiDak'	Blueberry Delight Common Juniper	—	—	Cont.	2 Gal.	24" O.C. spacing
RF	22	Rudbeckia fulgida 'Goldsturm'	Goldsturm Black-Eyed Susan	—	—	Cont.	1 Gal.	24" O.C. spacing
SA	38	Sisyrinchium angustifolium 'Lucerne'	Lucerne Blue-Eyed Grass	—	—	Cont.	1 Gal.	18" O.C. spacing
RAIN GARDEN PLANTING								
AT	14	Asclepias tuberosa	Butterfly Milkweed	—	—	Cont.	1 Gal.	24" O.C. spacing
ET	18	Eutrochium dubium 'Little Joe'	Dwarf Joe Pye Weed	—	—	Cont.	1 Gal.	24" O.C. spacing
LS	19	Liatris spicata	Blazing Star	—	—	Cont.	1 Gal.	24" O.C. spacing
PV	12	Panicum virgatum 'Shenandoah'	Shenandoah Switchgrass	—	—	Cont.	2 Gal.	
SS	15	Solidago sempervirens	Seaside Goldenrod	—	—	Cont.	1 Gal.	24" O.C. spacing
BUFFER RESTORATION PLANTING								
AM	10	Aronia melanocarpa	Black Chokeberry	18"-24" HT.	—	Cont.	10"	4 canes min.
CA	7	Clethra alnifolia	Summersweet Clethra	18"-24" HT.	—	Cont.	10"	4 canes min.
CO	10	Cornus amomum	Silky Dogwood	18"-24" HT.	—	Cont.	10"	4 canes min.

PLANTING NOTES:

1. LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND REPORT ANY CONFLICTS TO THE OWNER'S REPRESENTATIVE.
2. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
3. ALL NEW WOODY STEM PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE NOTED ON THE PLANS.
4. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE PLANS. IF MINOR DISCREPANCIES EXIST BETWEEN THE NUMBER OF PLANTS DRAWN ON THE PLANTING PLAN AND THE NUMBER OF PLANTS IN THE PLANT LIST, THE PLANTING PLAN SHALL GOVERN.
5. NO PLANT MATERIAL SHALL BE PLANTED BEFORE ACCEPTANCE OF ROUGH GRADING. PLANTS SHALL BEAR SAME RELATIONSHIP TO NEW FINISHED GRADE AS THEY BORE TO FINISHED GRADE BEFORE BEING DUG IN THE NURSERY. PRIOR TO PLANTING, REMOVE THE TOP OF THE BURLAP AND CONFIRM THAT PLANT ROOT CROWNS ARE NOT COVERED BY SOIL FROM THE NURSERY.
6. STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF PLANTING.
7. ALL NEW PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR FROM TIME OF WRITTEN ACCEPTANCE OF THE PROJECT.
8. ALL AREAS DISTURBED BY CONSTRUCTION OPERATIONS INSIDE AND OUTSIDE THE LIMIT OF WORK SHALL BE LOAMED AND SEEDED AS SPECIFIED, UNLESS OTHERWISE REQUIRED BY THE OWNER'S REPRESENTATIVE.
9. ALL AREAS TO BE SEEDED SHALL RECEIVE SOIL PREPARATION PRIOR TO SEEDING AS SPECIFIED, UNLESS OTHERWISE NOTED ON THE PLAN.
10. STOCKPILED ONSITE SOIL MAY BE REUSED FOR SEEDING AND PLANTING LOAM AFTER IT HAS BEEN TESTED FOR CONFORMANCE TO THE SOIL PREPARATION SPECIFICATION AND AMENDED ACCORDING TO THE APPROVED TEST REPORT AND THE APPROVED SOIL SUBMITTAL.
11. SEED MIXES - GENERAL INFORMATION (SEE SPECIFICATIONS FOR DETAILS):
    - MEADOW SEEDING - SEED MIX SHALL BE "NEW ENGLAND SHOWY WILDFLOWER MIX" AS SUPPLIED BY NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL.
    - CONSERVATION SEEDING - SEED MIX SHALL BE "NEW ENGLAND CONSERVATION/WILDLIFE MIX" AS SUPPLIED BY NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL.
    - RAIN GARDEN SEEDING - SEED MIX SHALL BE A CUSTOM BLEND OF RIVERBANK WILD RYE, BLUE VERVAIN, NODDING BUR MARIGOLD, HOLLOW-STEM JOE PYE WEED, BONESET, NEW ENGLAND ASTER, WOOL GRASS, AND SOFT RUSH.

LANDSCAPE LEGEND

SYMBOL	DESCRIPTION	REF.
	METAL BENCH	1 L 2.1
	SALVAGED GRANITE BENCH	3 L 2.1
	ADA TABLE	2 L 2.1
	BICYCLE PARKING	4 L 2.1
	PROPOSED DECIDUOUS SHADE TREE	1,2 L 2.2
	PROPOSED ORNAMENTAL TREE	1,2 L 2.2
	PROPOSED EVERGREEN TREE	4 L 2.2
	PROPOSED SHRUBS & ORNAMENTAL GRASSES	3 L 2.2
	PROPOSED PERENNIALS, ORNAMENTAL GRASSES AND GROUNDCOVER	5 L 2.2
	MEADOW SEEDING	6 L 2.2
	RAIN GARDEN SEEDING	6 L 2.2
	CONSERVATION SEEDING	6 L 2.2



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SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Town of Holliston
9 Green Street
Holliston, Massachusetts

MASSACHUSETTS PAMELA F. SHADLEY NO. 994 REGISTERED LANDSCAPE ARCHITECT

REVISIONS:

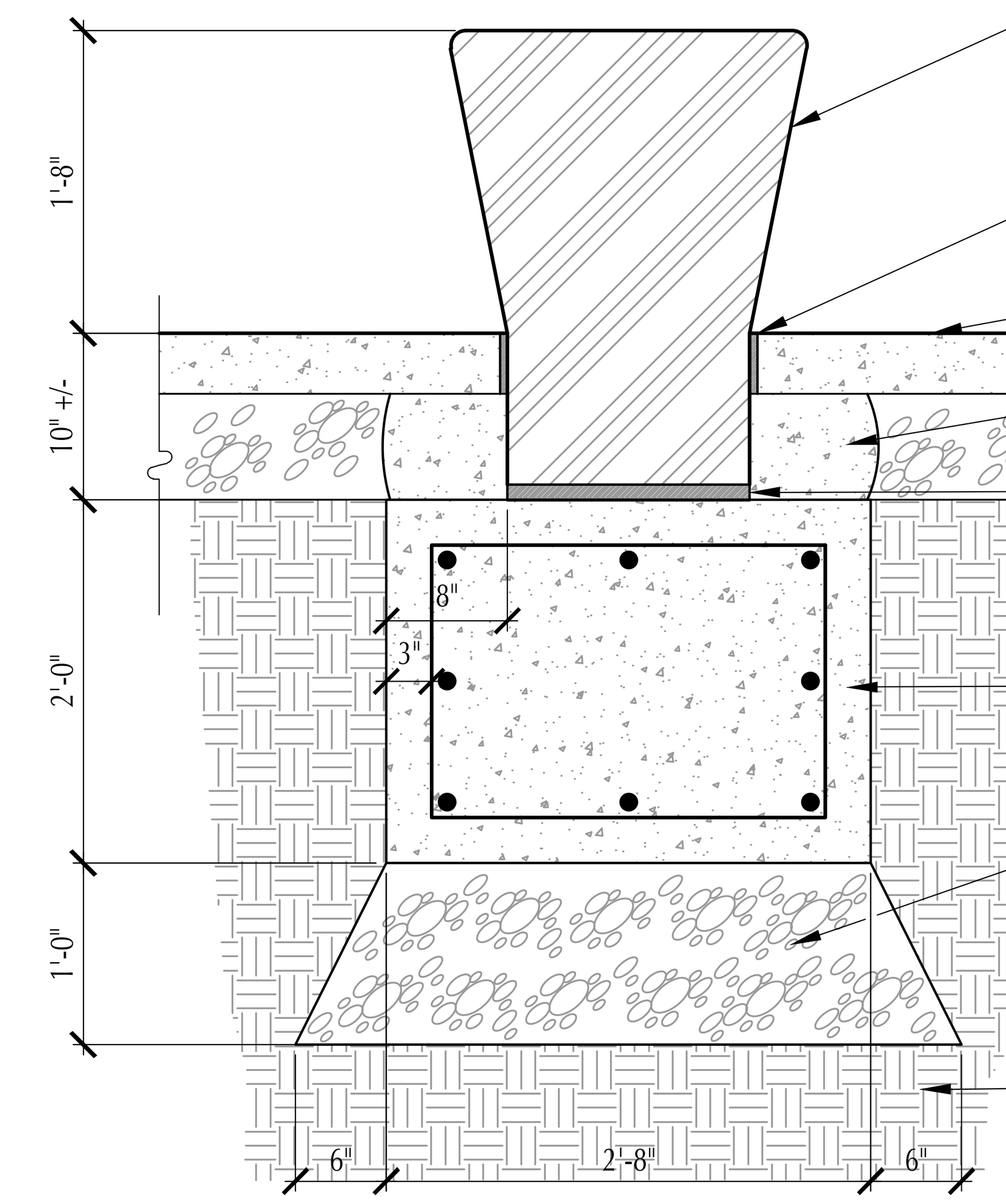
PROJECT NO.:	20212.00
DATE:	FEBRUARY 2023
SCALE:	AS NOTED
DESIGNED BY:	SC
CHECKED BY:	SC
DRAWN BY:	RJ
APPROVED BY:	PS

DRAWING TITLE:
LANDSCAPE SITE PLAN

DRAWING NO.:
L 1.1

SHEET NO. 1 OF 3

NOTE: SALVAGED GRANITE BENCH IS APPROXIMATELY 6' LONG X 2' WIDE X 1'-8" TALL WHEN INSTALLED. CONTRACTOR TO VERIFY DIMENSIONS.

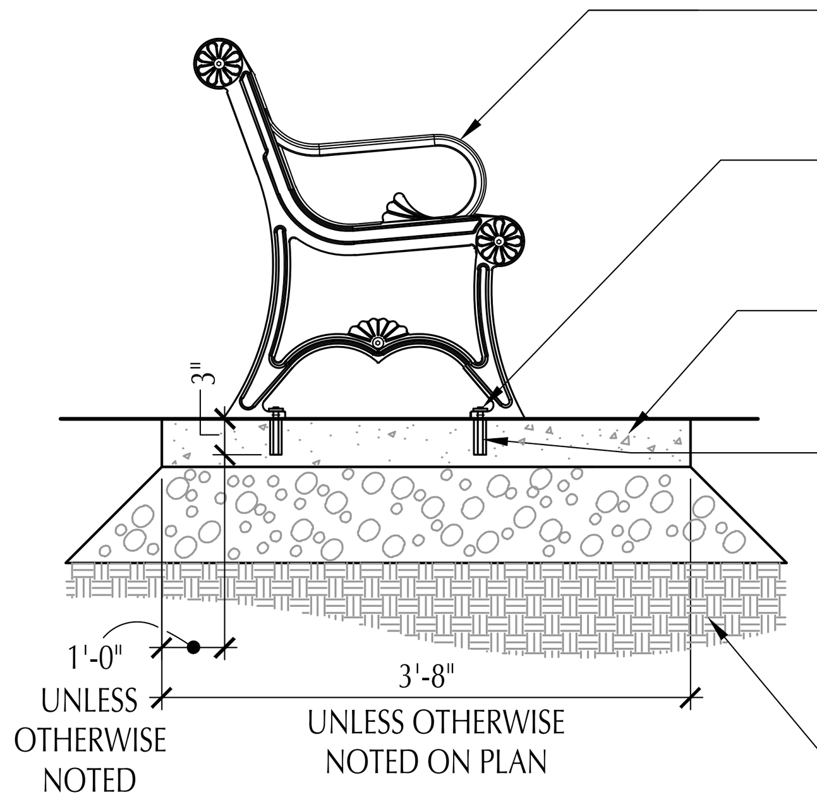


SECTION

PHOTO OF SALVAGED GRANITE BENCH

3 SALVAGED GRANITE BENCH

SCALE: 1"=1'-0"



1 METAL BENCH

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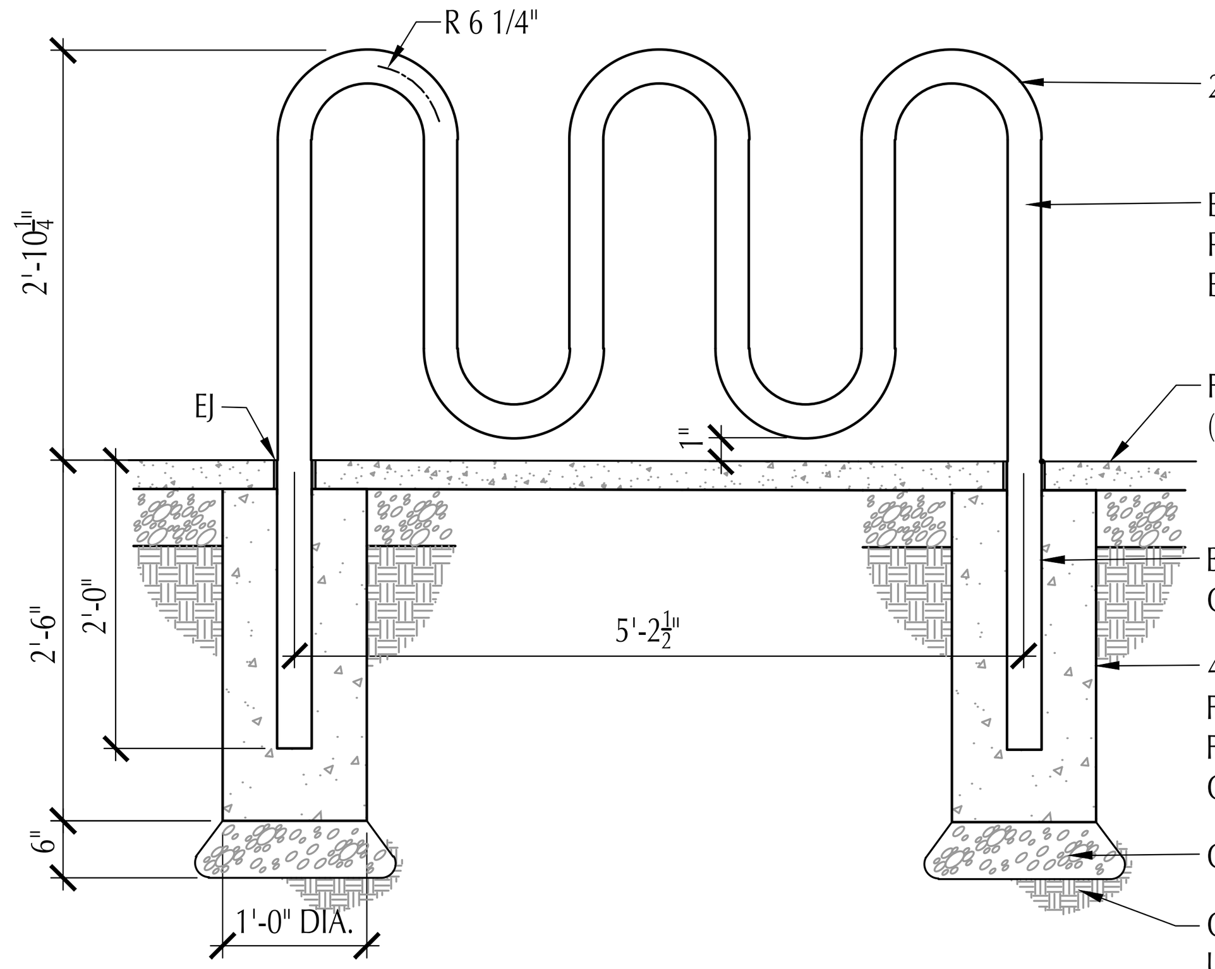
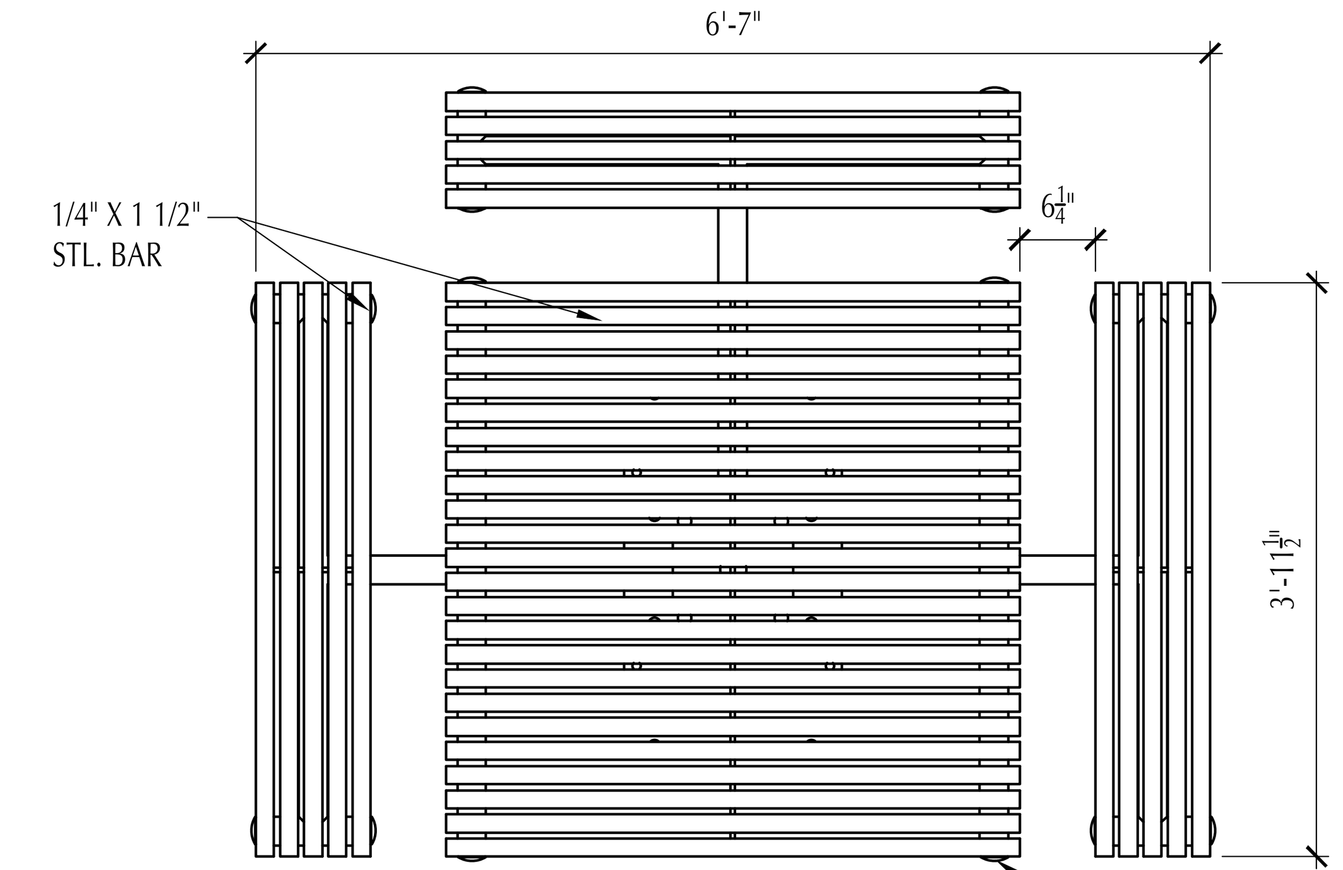
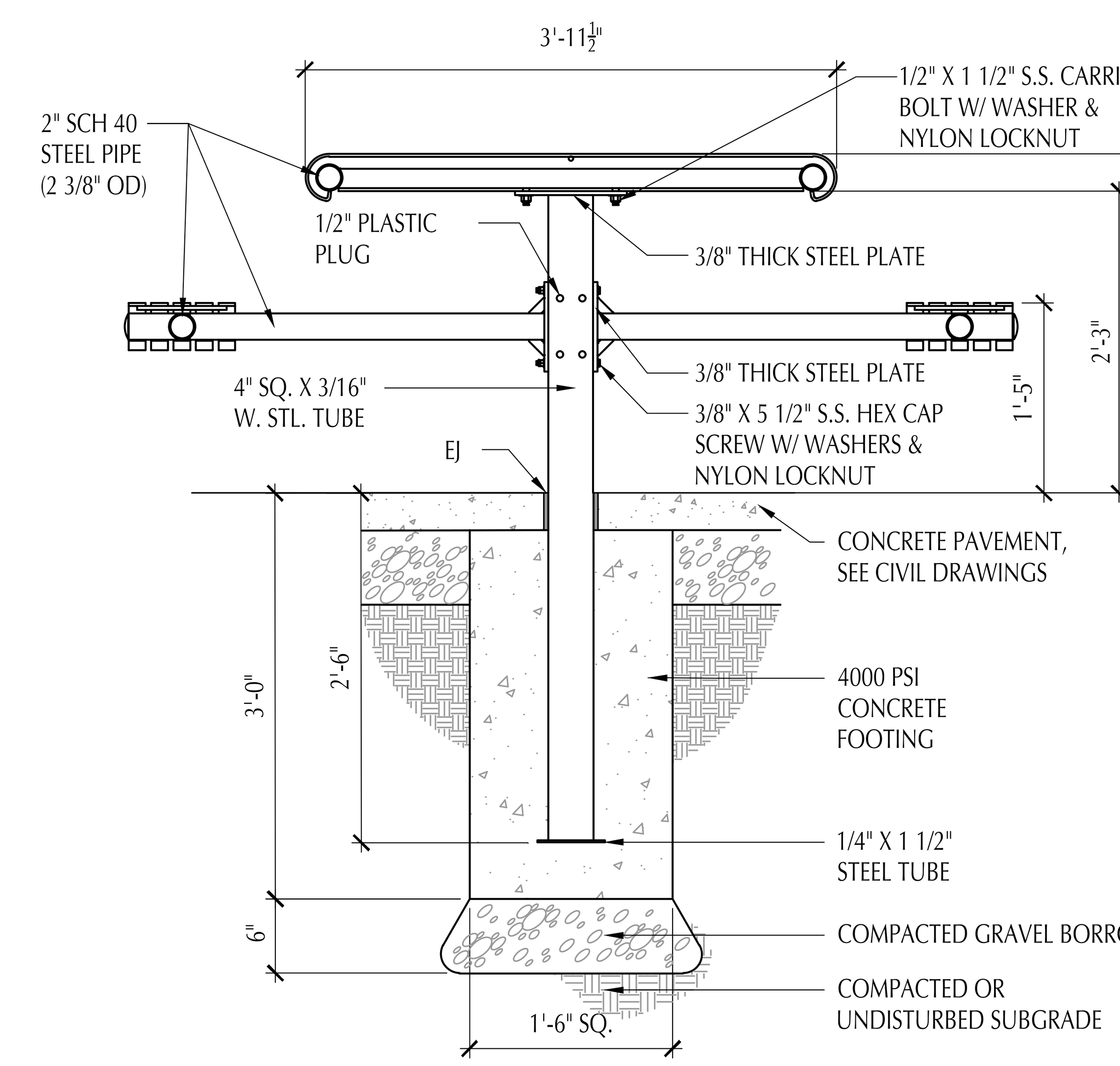


4 BICYCLE PARKING

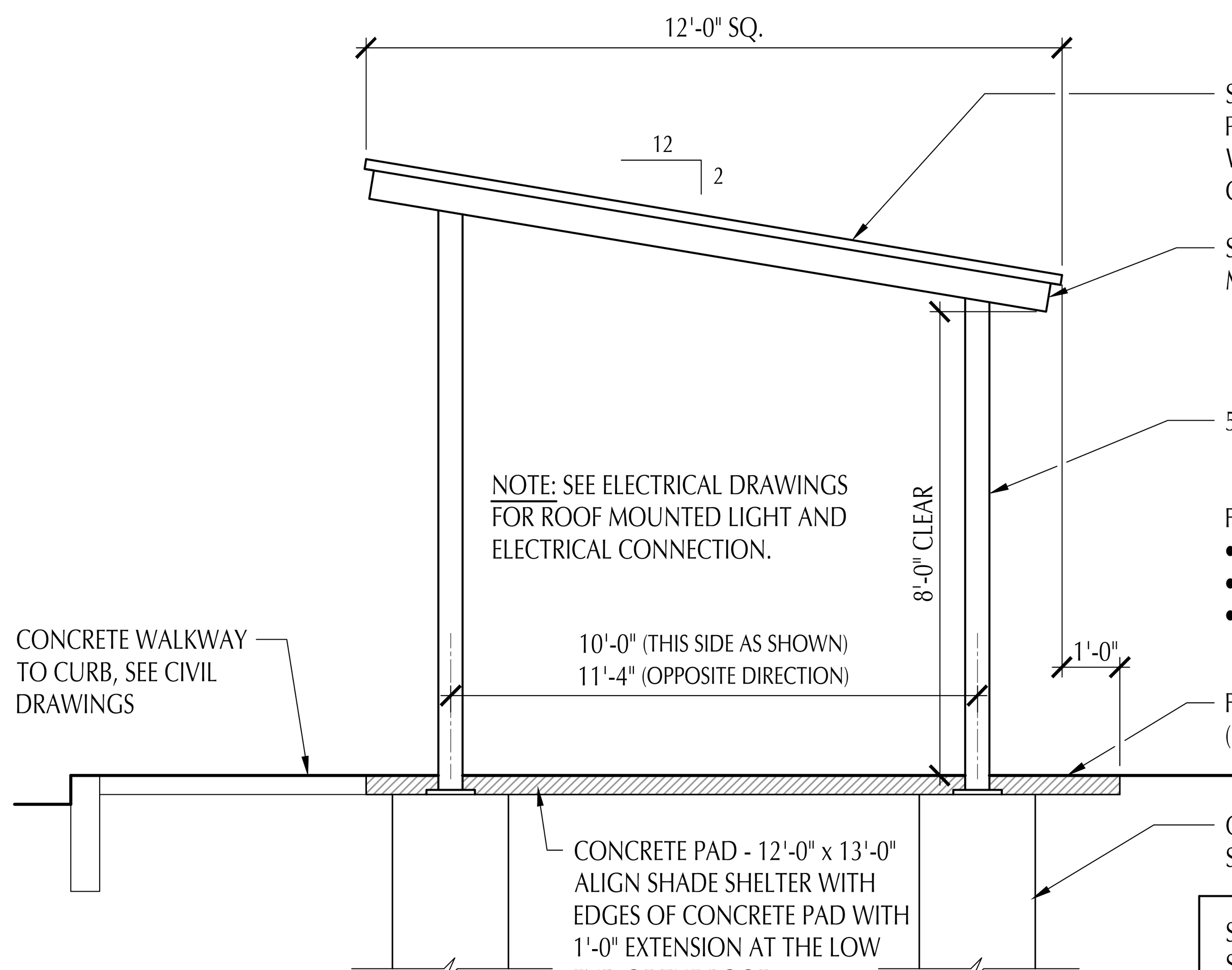
SCALE: 3/4"=1'-0"



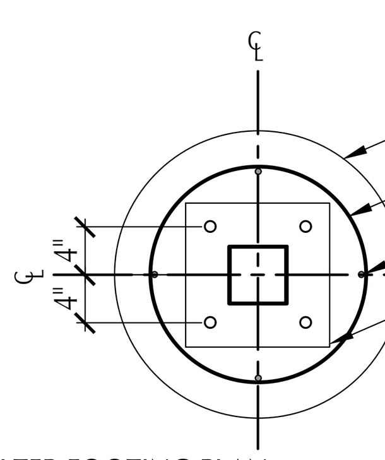


2 ADA TABLE

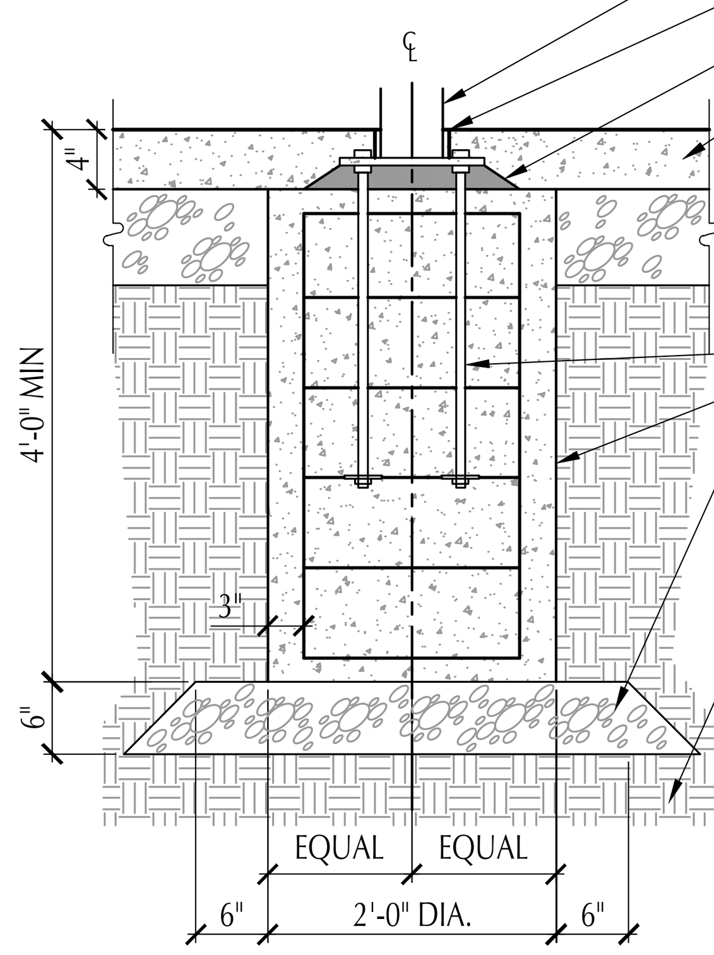
SCALE: 3/4"=1'-0"



SHADE SHELTER ELEVATION
SCALE: 3/8" = 1'-0"



SHADE SHELTER FOOTING PLAN
SCALE: 3/4" = 1'-0"



SHADE SHELTER FOOTING SECTION
SCALE: 3/4" = 1'-0"

PROVIDE SHOP DRAWINGS STAMPED BY MASSACHUSETTS PROFESSIONAL ENGINEER

5 SHADE SHELTER

SCALE: AS NOTED

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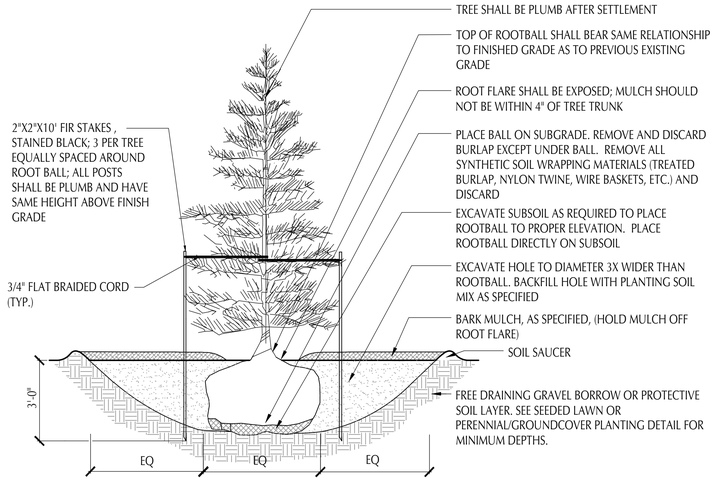
LANDSCAPE DETAILS 1

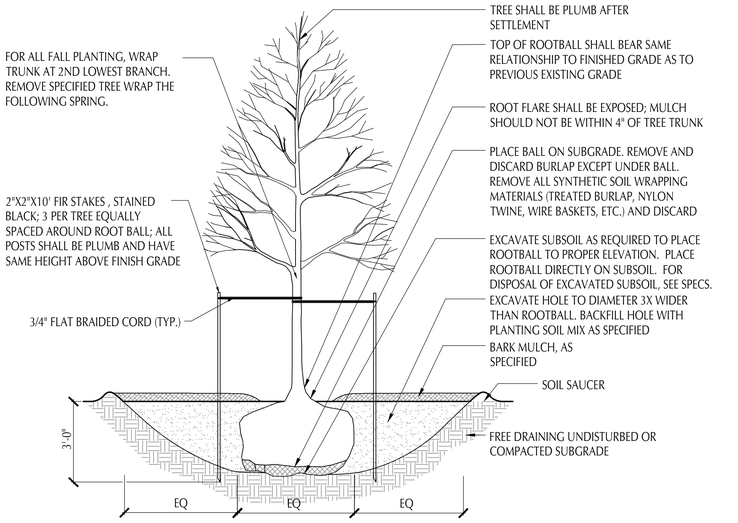
DRAWING NO.:
L 2.1

SHEET NO. 2 OF 3



4 EVERGREEN TREE PLANTING

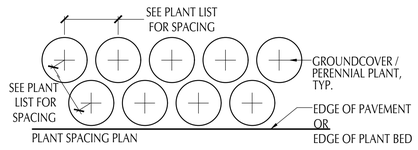
SCALE: 3/8"=1'-0"

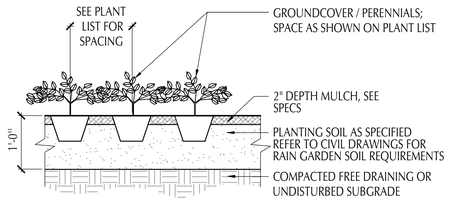


1 DECIDUOUS TREE PLANTING

SCALE: 3/8"=1'-0"

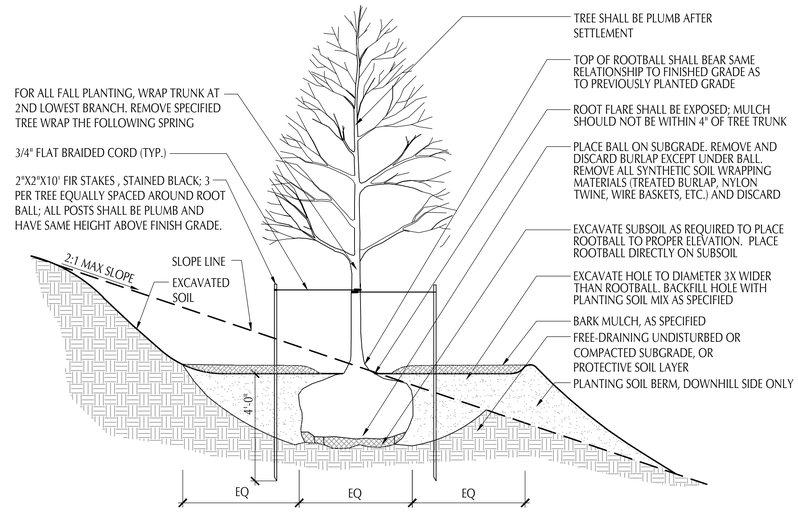
NOTE: DO NOT INSTALL BARK MULCH AT RAIN GARDEN PLANTING.





5 PERENNIAL, ORNAMENTAL GRASS & GROUNDCOVER PLANTING

SCALE: 3/4"=1'-0"

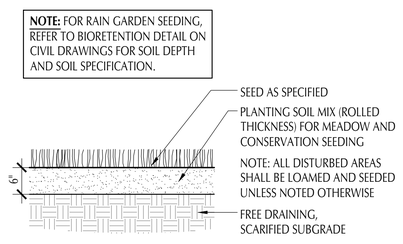


2 DECIDUOUS TREE PLANTING ON SLOPE

SCALE: 3/8"=1'-0"

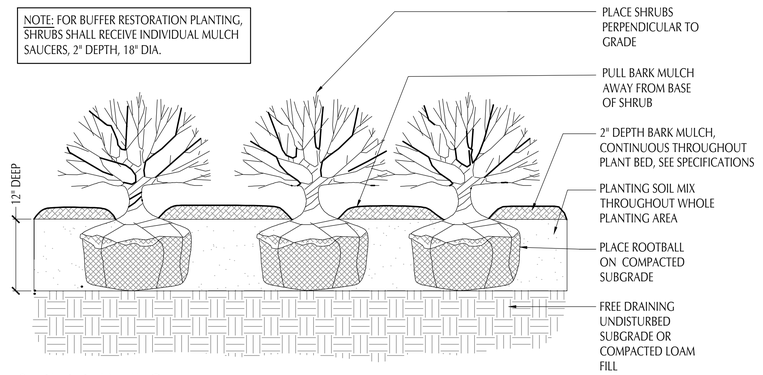
NOTE: DO NOT INSTALL BARK MULCH AT RAIN GARDEN PLANTING.

NOTE: FOR RAIN GARDEN SEEDING, REFER TO BIORETENTION DETAIL ON CIVIL DRAWINGS FOR SOIL DEPTH AND SOIL SPECIFICATION.



6 MEADOW, CONSERVATION & RAIN GARDEN SEEDING

SCALE: 3/4"=1'-0"



3 SHRUB PLANTING

SCALE: 1"=1'-0"

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LANDSCAPE DETAILS 2

DRAWING NO.:
L 2.2

SHEET NO. 3 OF 3