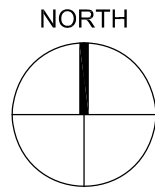




MALDEN RIVER WORKS

356 COMMERCIAL STREET
MALDEN, MA 02148



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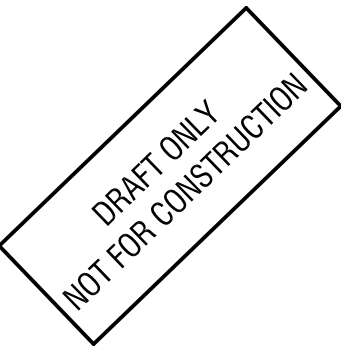
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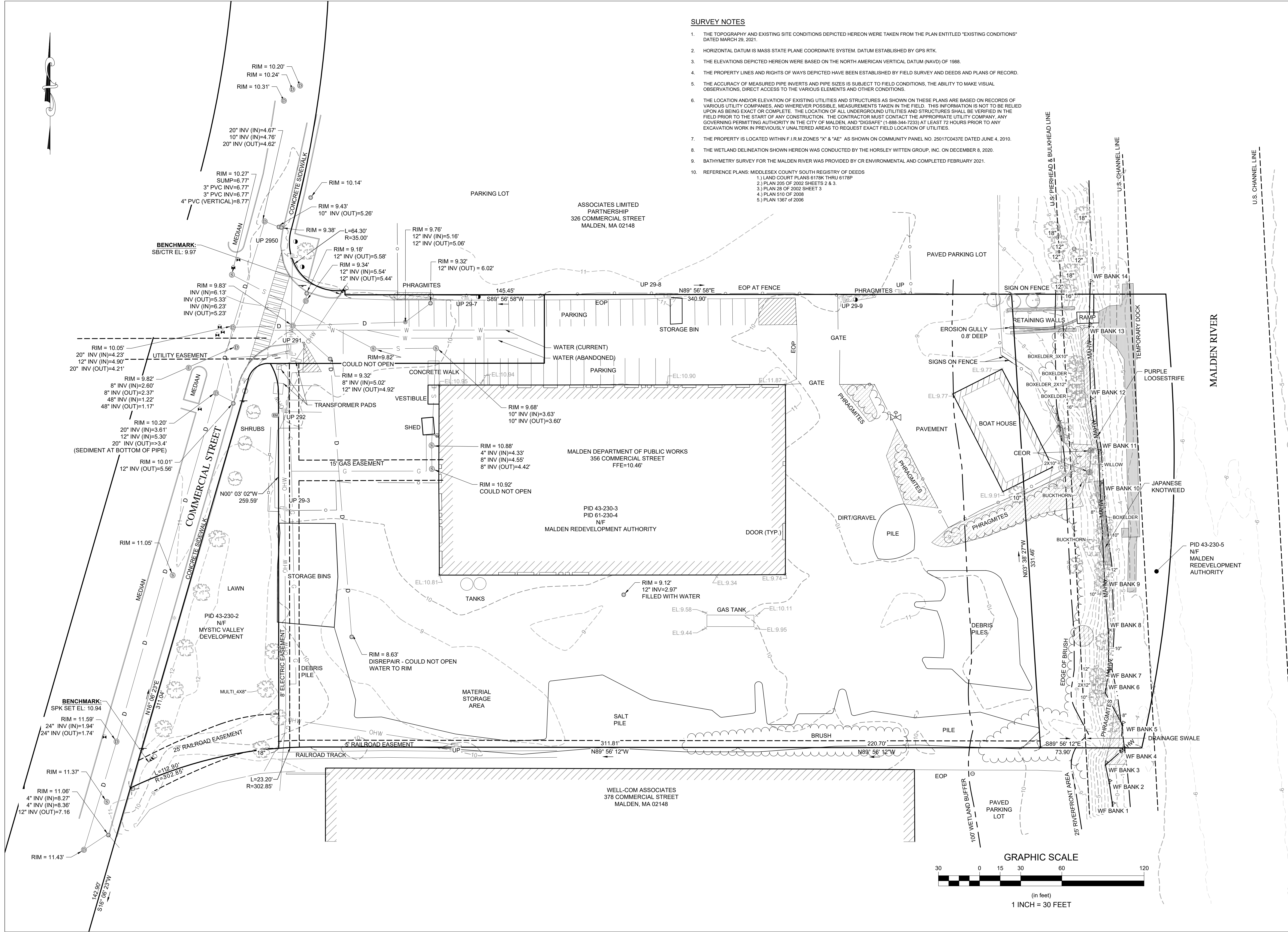
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COVER SHEET	MALDEN RIVER WORKS 356 COMMERCIAL STREET MALDEN, MA 02148

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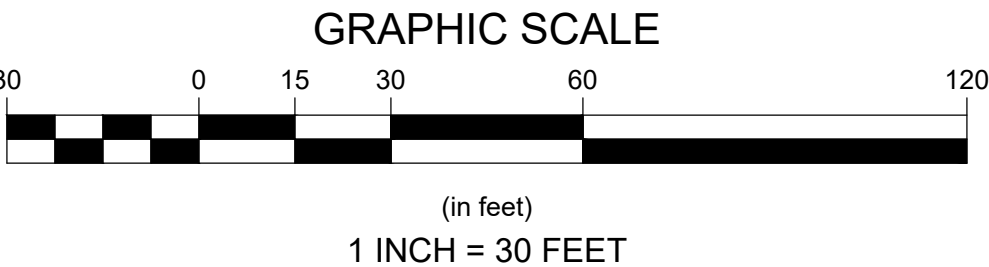
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SHEET
CV



- SURVEY NOTES**
1. THE TOPOGRAPHY AND EXISTING SITE CONDITIONS DEPICTED HEREON WERE TAKEN FROM THE PLAN ENTITLED "EXISTING CONDITIONS" DATED MARCH 29, 2021.
 2. HORIZONTAL DATUM IS MASS STATE PLANE COORDINATE SYSTEM. DATUM ESTABLISHED BY GPS RTK.
 3. THE ELEVATIONS DEPICTED HEREON WERE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
 4. THE PROPERTY LINES AND RIGHTS OF WAYS DEPICTED HAVE BEEN ESTABLISHED BY FIELD SURVEY AND DEEDS AND PLANS OF RECORD.
 5. THE ACCURACY OF MEASURED PIPE INVERTS AND PIPE SIZES IS SUBJECT TO FIELD CONDITIONS, THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS AND OTHER CONDITIONS.
 6. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES, AND WHEREVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY IN THE CITY OF MALDEN, AND "DIGSAFE" (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
 7. THE PROPERTY IS LOCATED WITHIN F.I.R.M ZONES "X" & "AE" AS SHOWN ON COMMUNITY PANEL NO. 25017C0437E DATED JUNE 4, 2010.
 8. THE WETLAND DELINEATION SHOWN HEREON WAS CONDUCTED BY THE HORSLEY WITTEN GROUP, INC. ON DECEMBER 8, 2020.
 9. BATHYMETRY SURVEY FOR THE MALDEN RIVER WAS PROVIDED BY CR ENVIRONMENTAL AND COMPLETED FEBRUARY 2021.
 10. REFERENCE PLANS: MIDDLESEX COUNTY SOUTH REGISTRY OF DEEDS
 - 1.) LAND COURT PLANS 6178K THRU 6178P
 - 2.) PLAN 205 OF 2002 SHEETS 2 & 3.
 - 3.) PLAN 28 OF 2002 SHEET 3
 - 4.) PLAN 510 OF 2008
 - 5.) PLAN 1367 OF 2006



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EXISTING CONDITIONS PLAN

PROJECT

**MALDEN RIVER WORKS
356 COMMERCIAL STREET, MALDEN, MA
02148**

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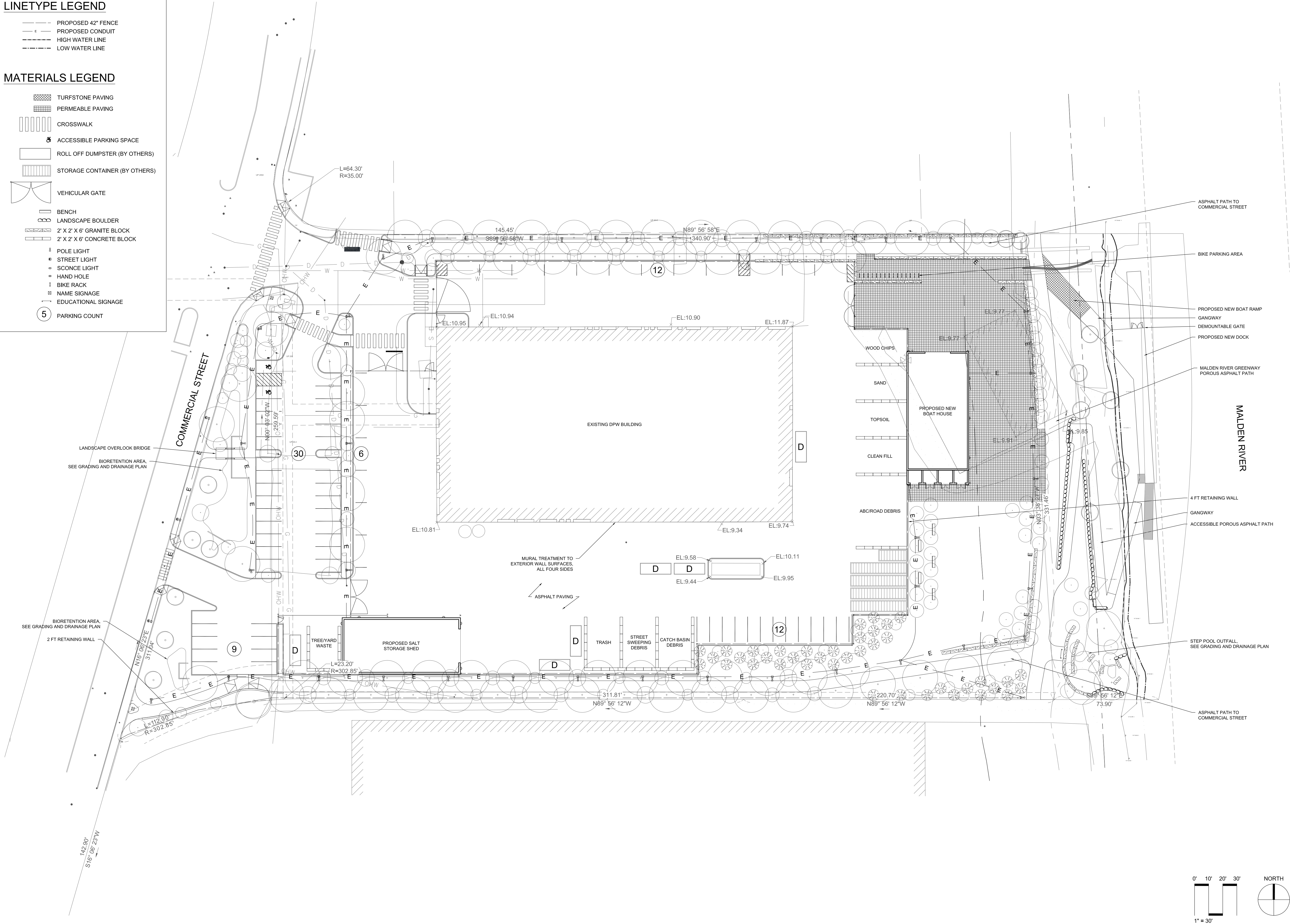
E-1

LINETYPE LEGEND

- PROPOSED 42" FENCE
PROPOSED CONDUIT
HIGH WATER LINE
LOW WATER LINE

MATERIALS LEGEND

- TURFSTONE PAVING
PERMEABLE PAVING
CROSSWALK
ACCESSIBLE PARKING SPACE
ROLL OFF DUMPSTER (BY OTHERS)
STORAGE CONTAINER (BY OTHERS)
VEHICULAR GATE
BENCH
LANDSCAPE BOULDER
2' X 2' X 6' GRANITE BLOCK
2' X 2' X 6' CONCRETE BLOCK
POLE LIGHT
STREET LIGHT
SCONCE LIGHT
HAND HOLE
BIKE RACK
NAME SIGNAGE
EDUCATIONAL SIGNAGE
PARKING COUNT



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PROJECT

SITE PLAN

MALDEN RIVER WORKS
356 COMMERCIAL STREET
MALDEN, MA 02148

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S-1

GENERAL DEMOLITION NOTES:

- THIS PLAN SET DOES NOT INCLUDE DETAILS & SPECIFICATIONS FOR ALL DEMOLITION WORK REQUIRED WITHIN THE PROPOSED CONSTRUCTION LIMITS.
1. THE CONTRACTOR IS RESPONSIBLE FOR THE RELOCATION, DEMOLITION, REMOVAL AND DISPOSAL, IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL EXISTING SITE ELEMENTS AND STRUCTURES INCLUDING, BUT NOT LIMITED TO, BUILDINGS, ROADWAYS, PARKING AREAS, PARKING ISLANDS, BITUMINOUS CONCRETE, CEMENT CONCRETE, GRAVEL, CURBS, WALKWAYS, SIDEWALKS, BERMS, FENCES, BOLLARDS, POSTS, PLANTING BEDS, TREES, SHRUBS, UTILITIES, DRAINAGE STRUCTURES AND ALL OTHER STRUCTURES SHOWN AND NOT SHOWN WITHIN CONSTRUCTION LIMITS, AND WHERE NEEDED, TO ALLOW FOR NEW CONSTRUCTION. ALL FACILITIES TO BE REMOVED ARE TO BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER SPECIFICATIONS.
 2. REMOVE ALL DEBRIS FROM THE SITE AND DISPOSE OF THE DEBRIS IN A PROPER AND LEGAL MANNER.
 3. OBTAIN ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
 4. COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. COORDINATE WITH THE UTILITY COMPANIES CONCERNING PORTIONS OF THE WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
 5. PROVIDE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL UTILITY LINES, AS REQUIRED, BEFORE PROCEEDING WITH THE WORK.
 6. MAINTAIN CONTINUOUS ACCESS AND OPERATION FOR SURROUNDING FACILITIES, AS DEEMED BY THE OWNER, AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.
 7. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.

GENERAL GRADING AND DRAINAGE NOTES:

1. ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
2. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
3. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
4. ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
5. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
6. UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR DETAIL, A MINIMUM CONCRETE FOUNDATION REVEAL OF 8" TO BE PROVIDED AT ALL BUILDING CORNERS. NOTIFY THE ENGINEER AND ARCHITECT IF ANY DEVIATION OR ALTERATION OF FOUNDATION REVEAL IS REQUIRED.
7. PROPOSED ELEVATIONS ARE SHOWN TO FINISH PAVEMENT OR GRADE UNLESS NOTED OTHERWISE.
8. ALL EARTHWORK AND SITE PREPARATION MUST BE DONE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF ANY SUBSURFACE INVESTIGATION OR GEOTECHNICAL REPORTS AND SOIL MANAGEMENT PLAN PREPARED FOR THIS SITE.

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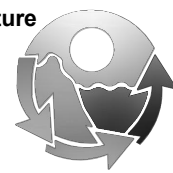
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GRADING & DRAINAGE PLAN

MALDEN RIVER WORKS
356 COMMERCIAL STREET
MALDEN, MA 02148

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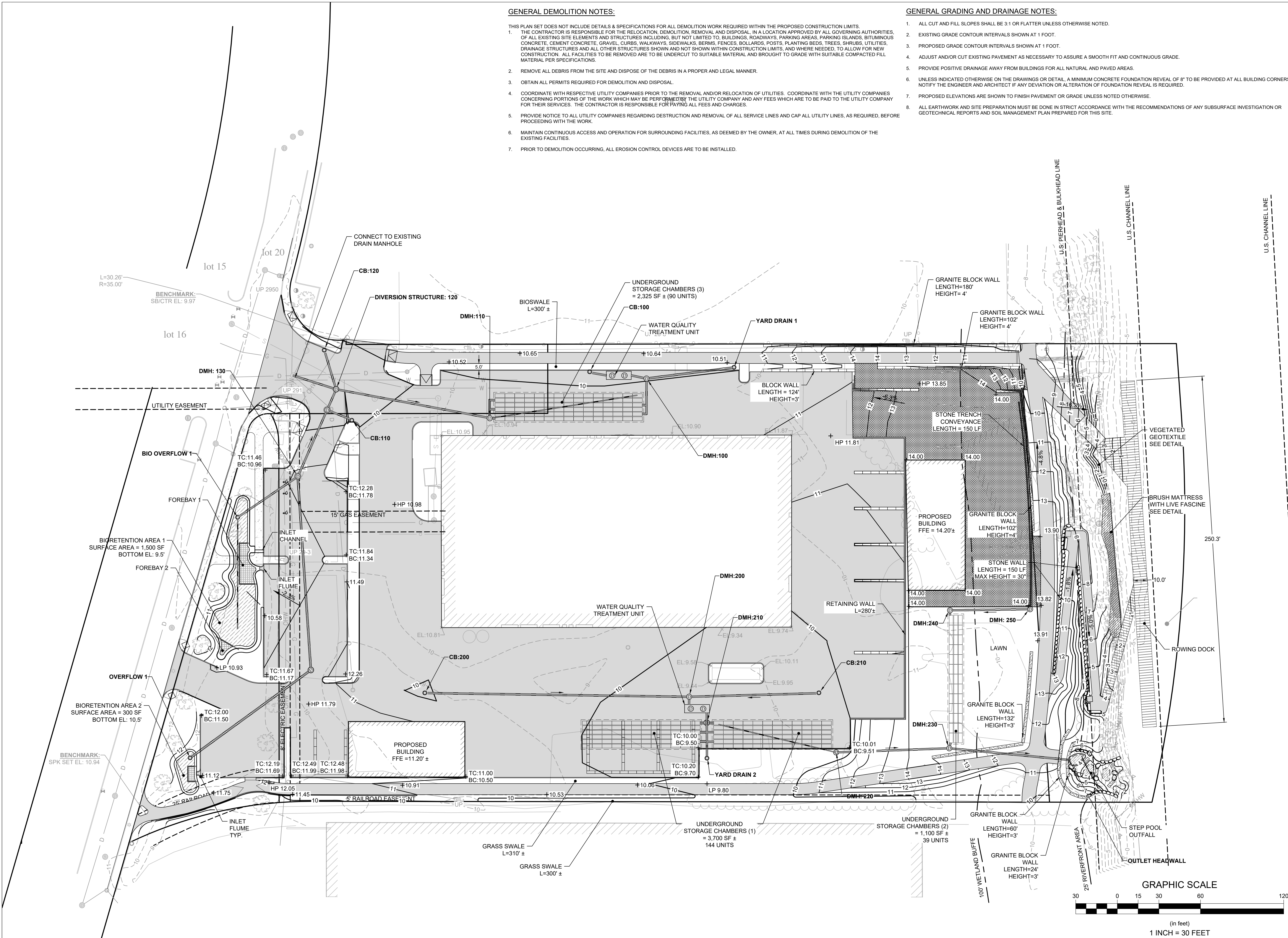
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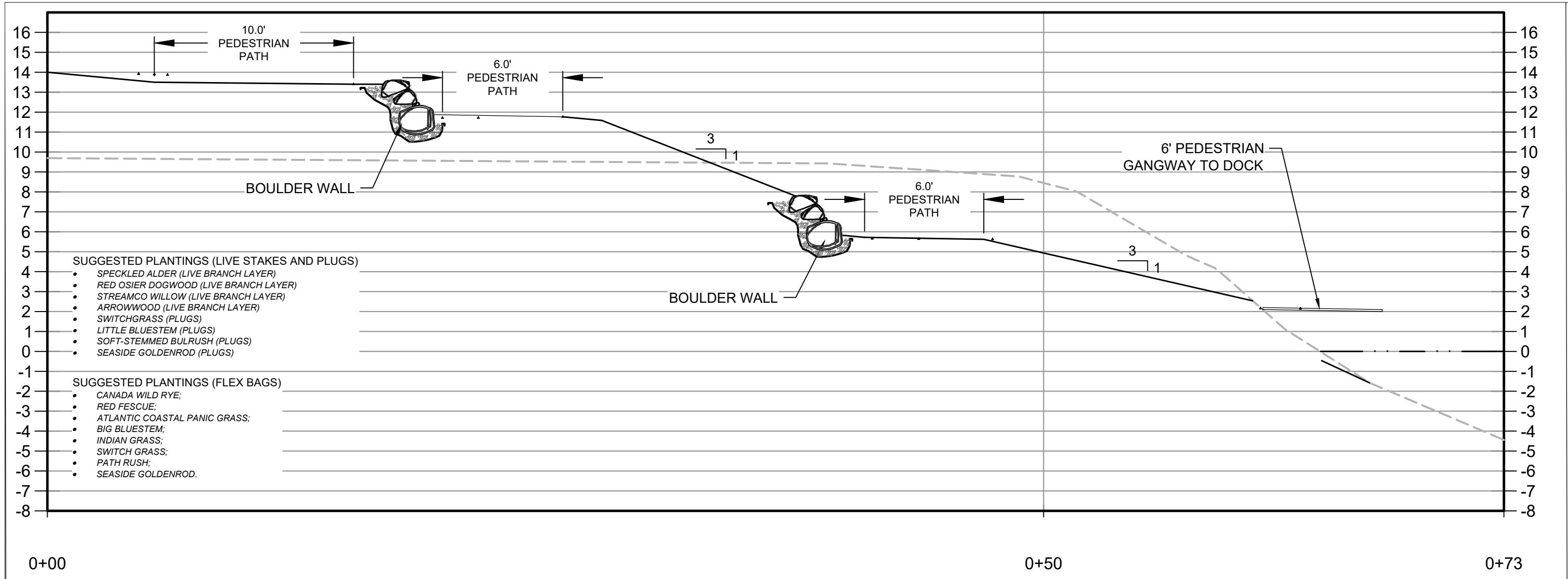
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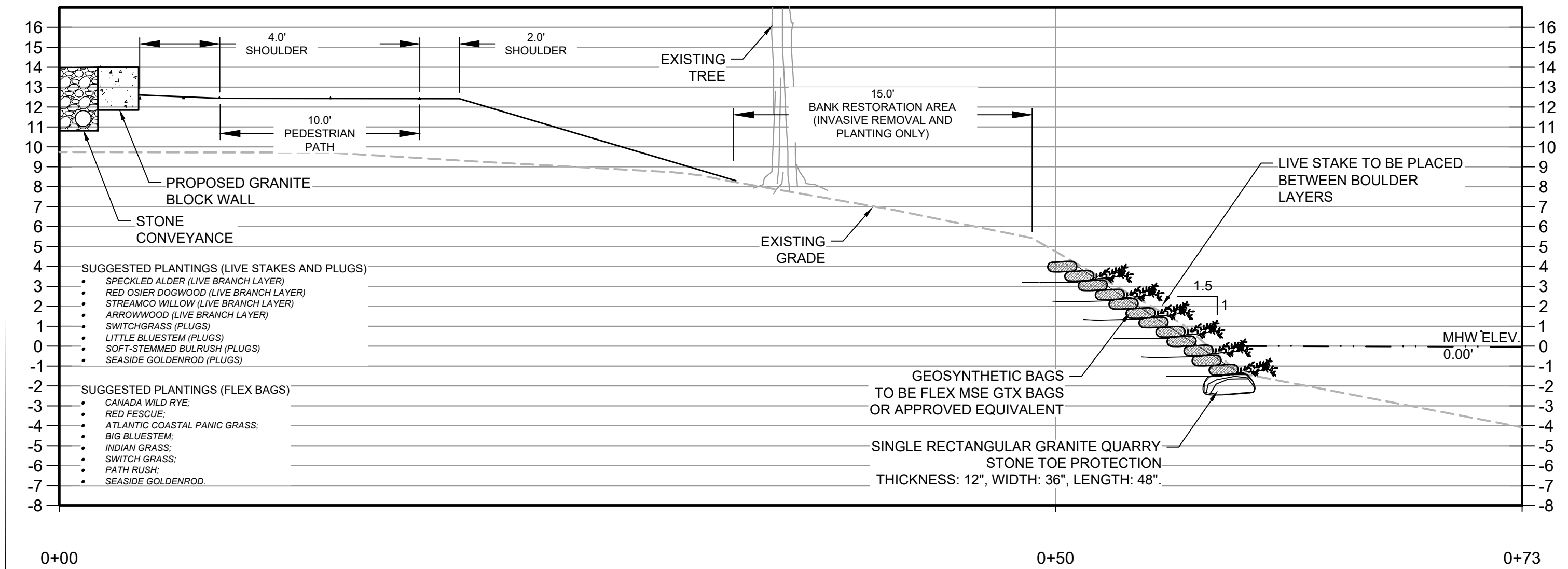
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C-1

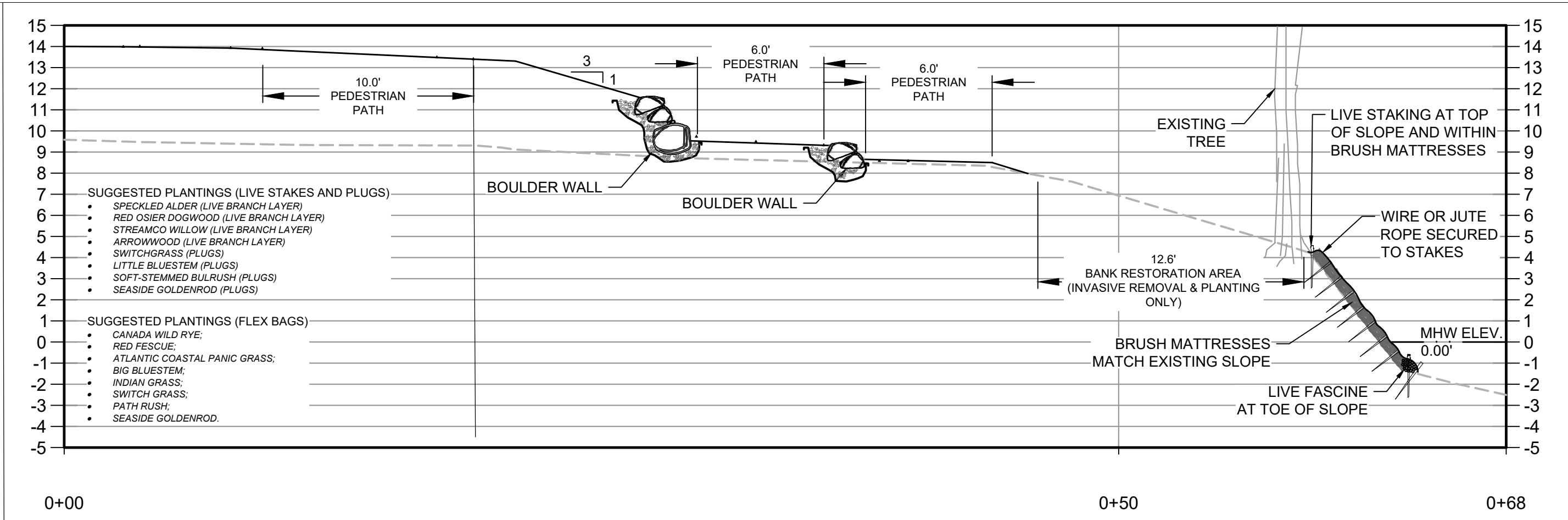




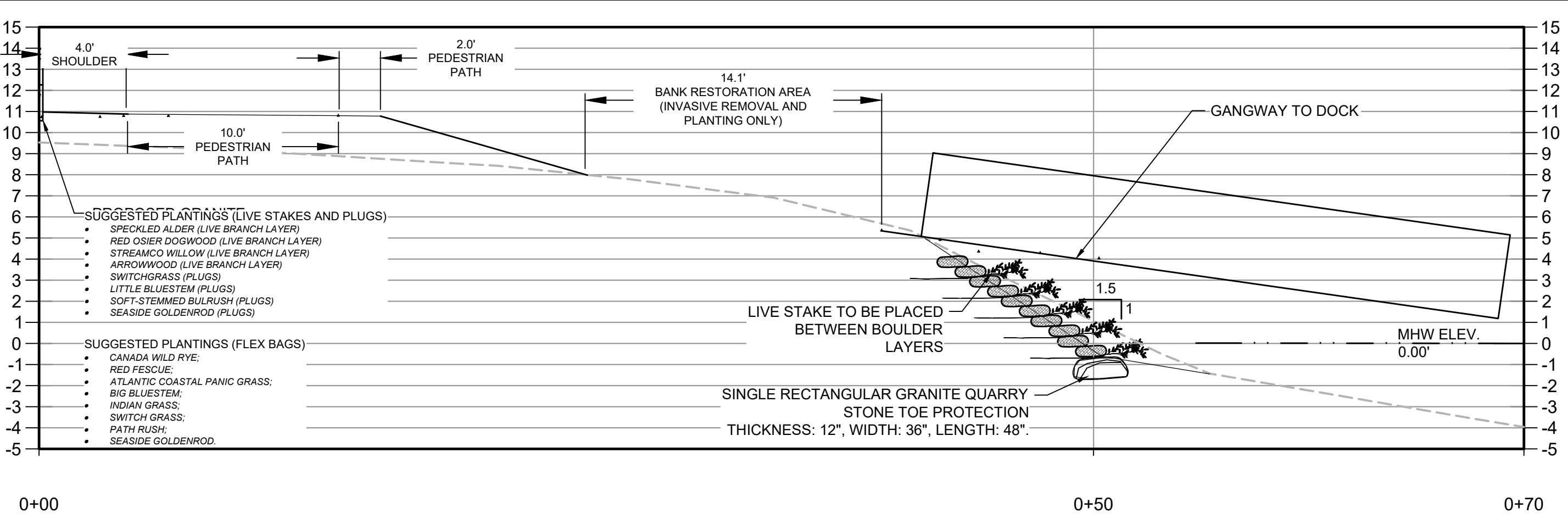
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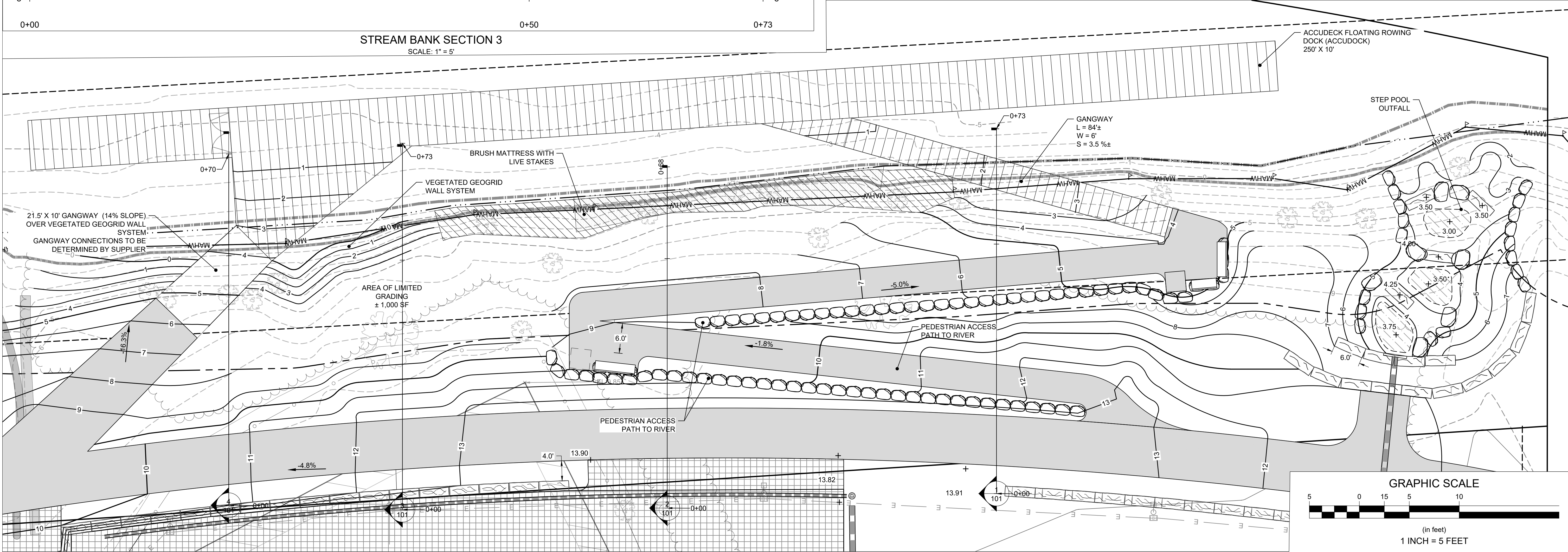
STREAM BANK SECTION 3
SCALE: 1" = 5'



STREAM BANK SECTION 2
SCALE: 1" = 5'



STREAM BANK SECTION 4
SCALE: 1" = 5'



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SHORELINE AND SECTIONS

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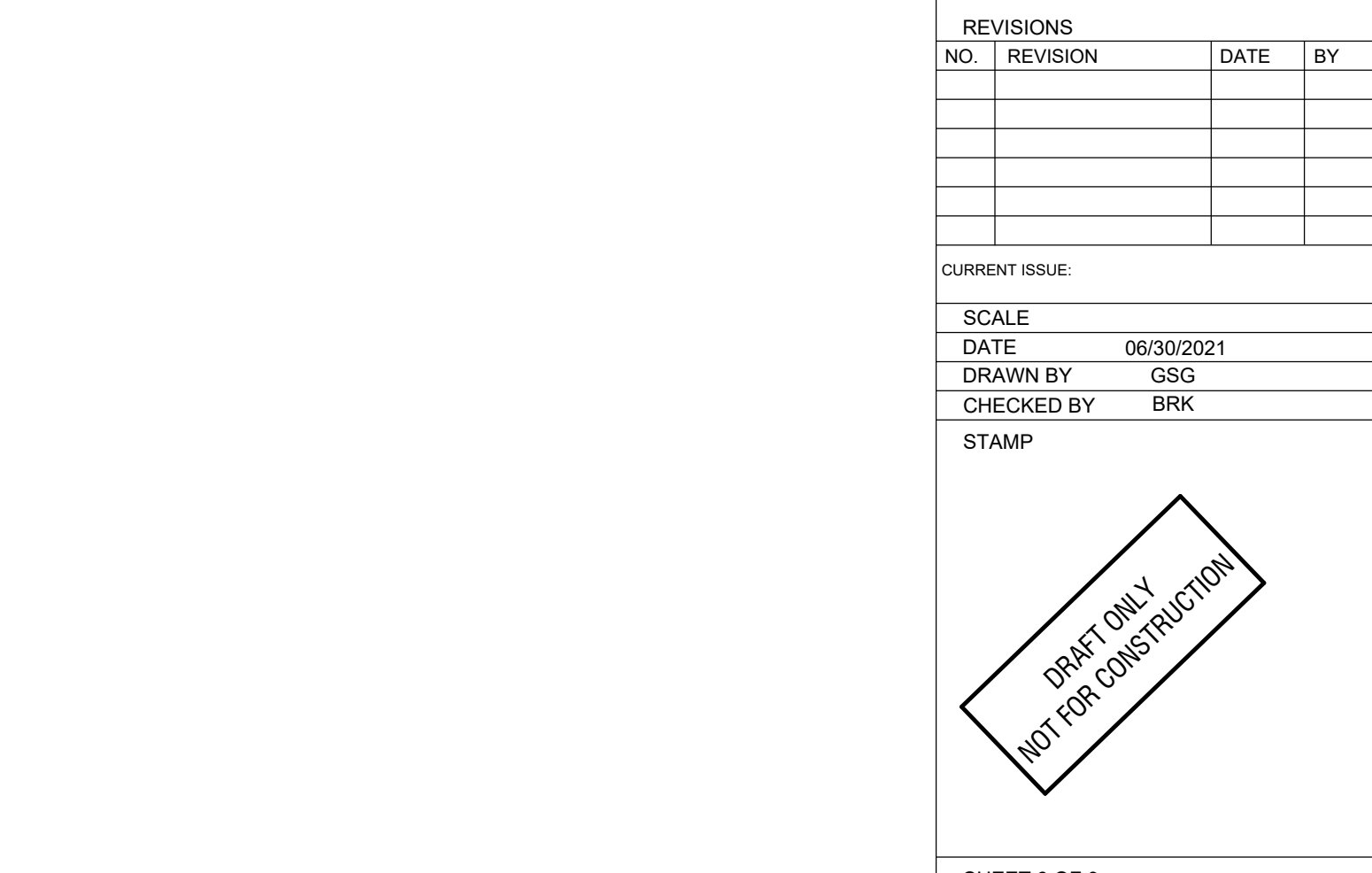
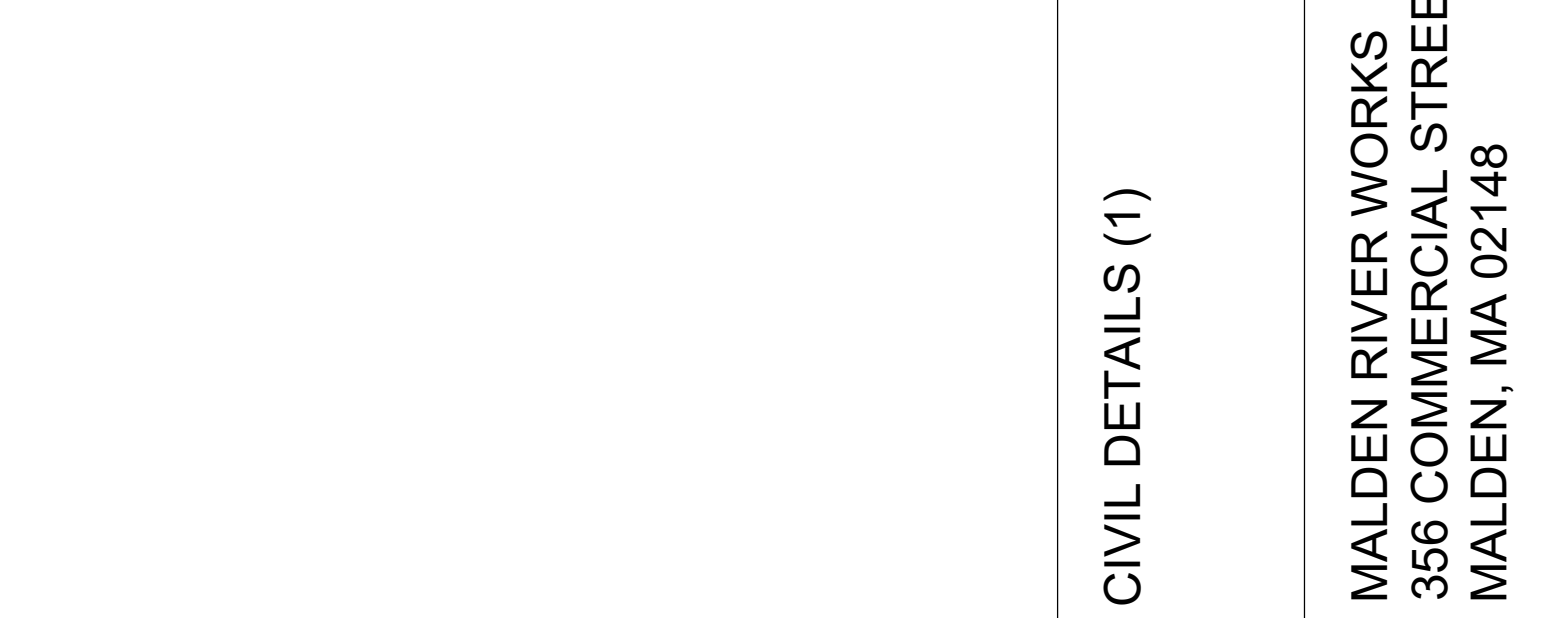
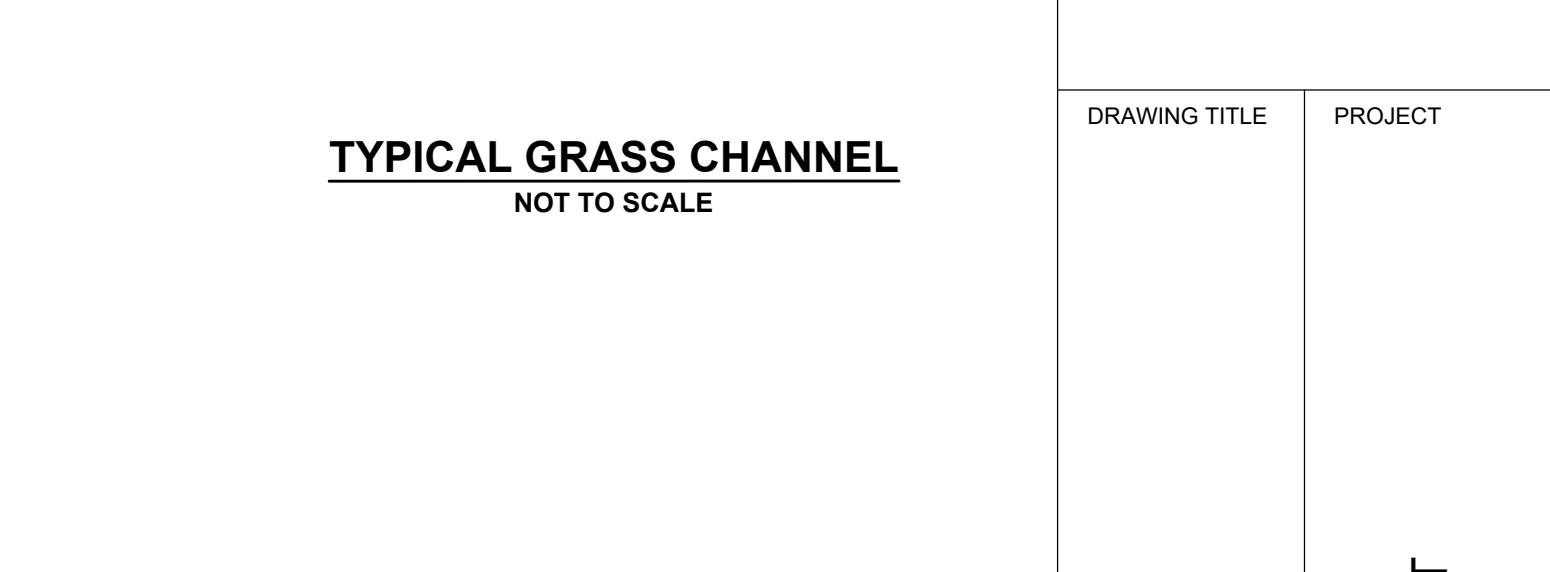
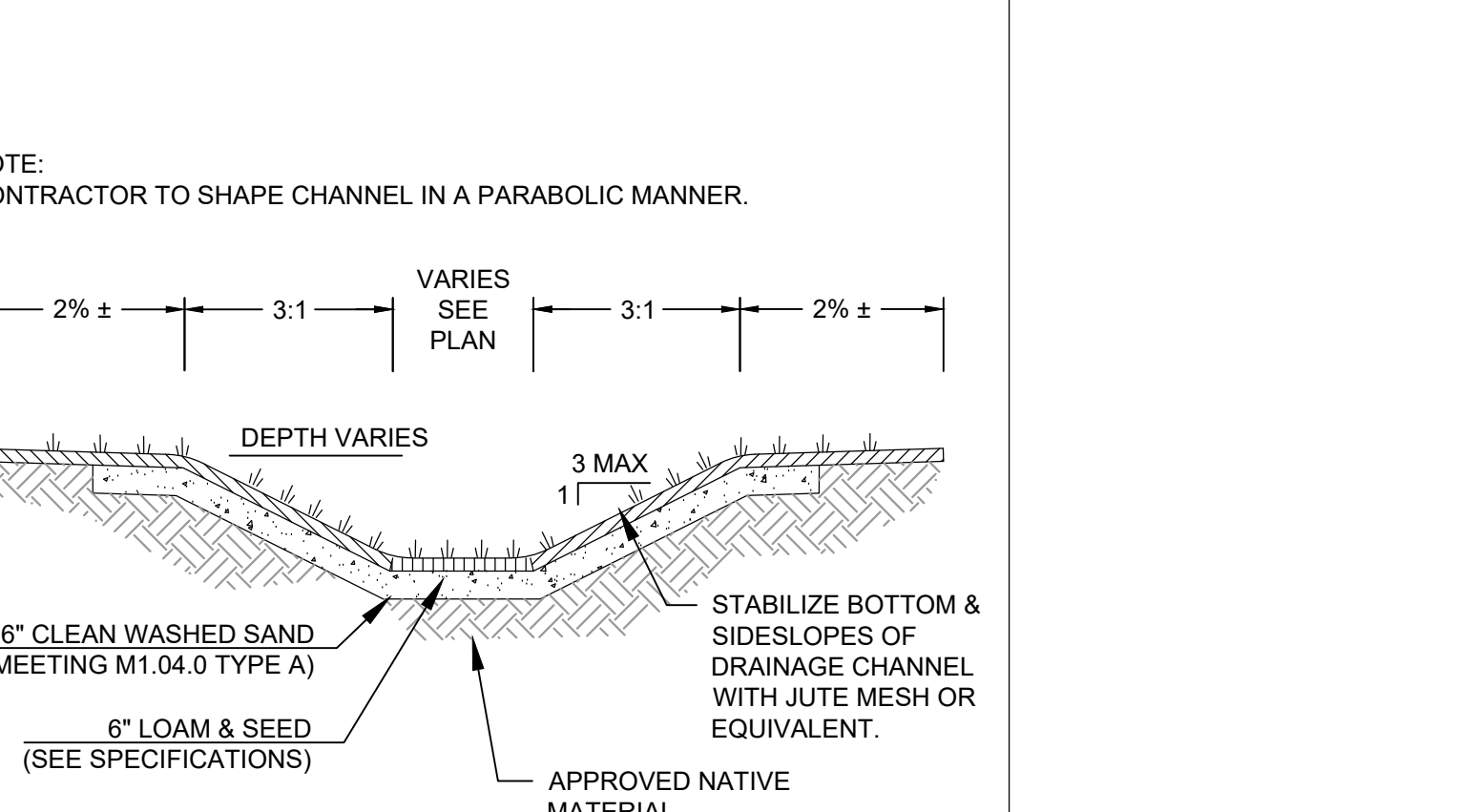
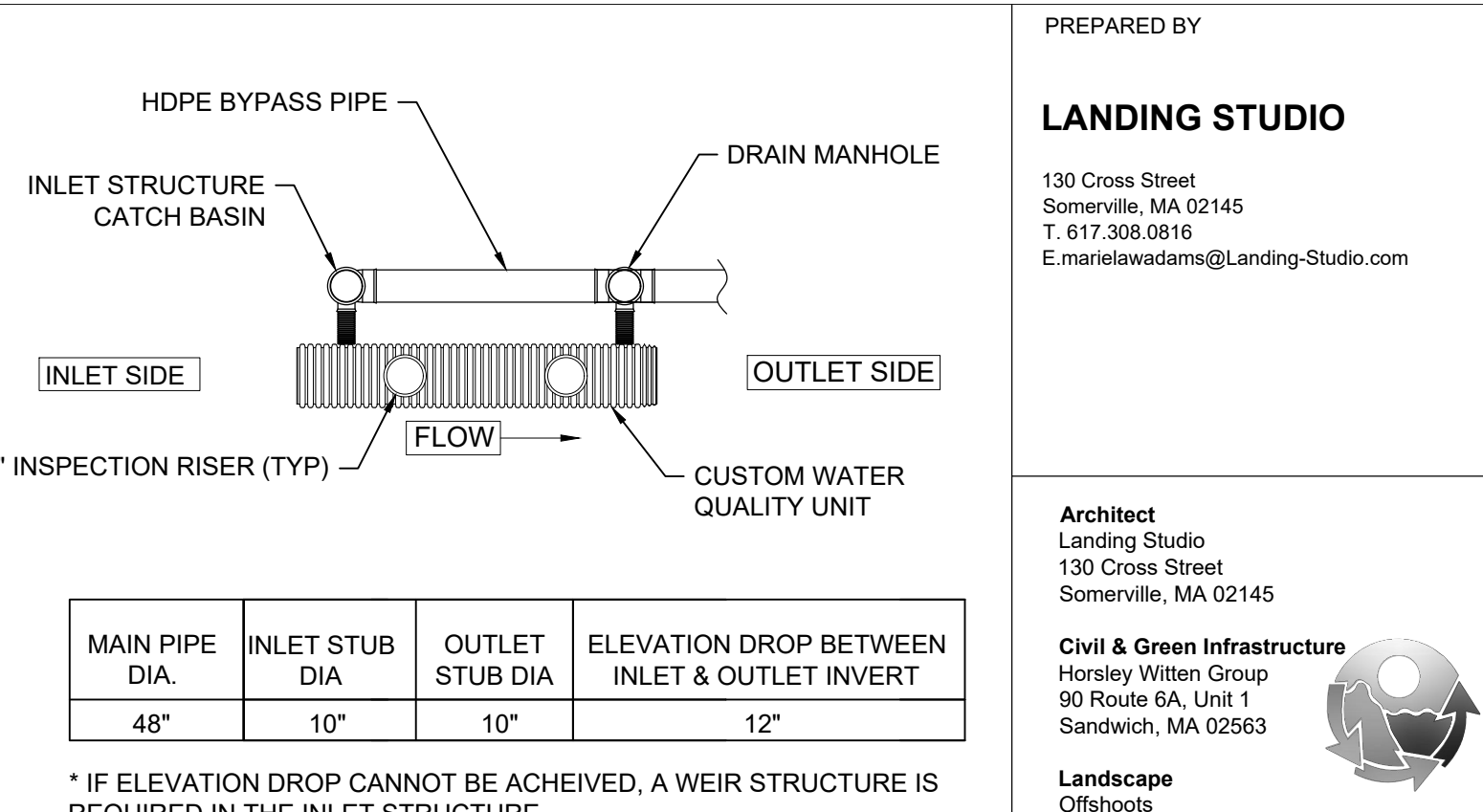
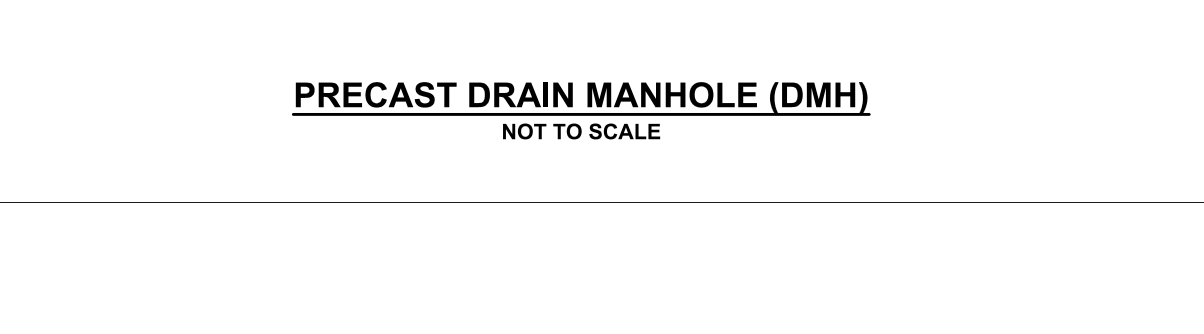
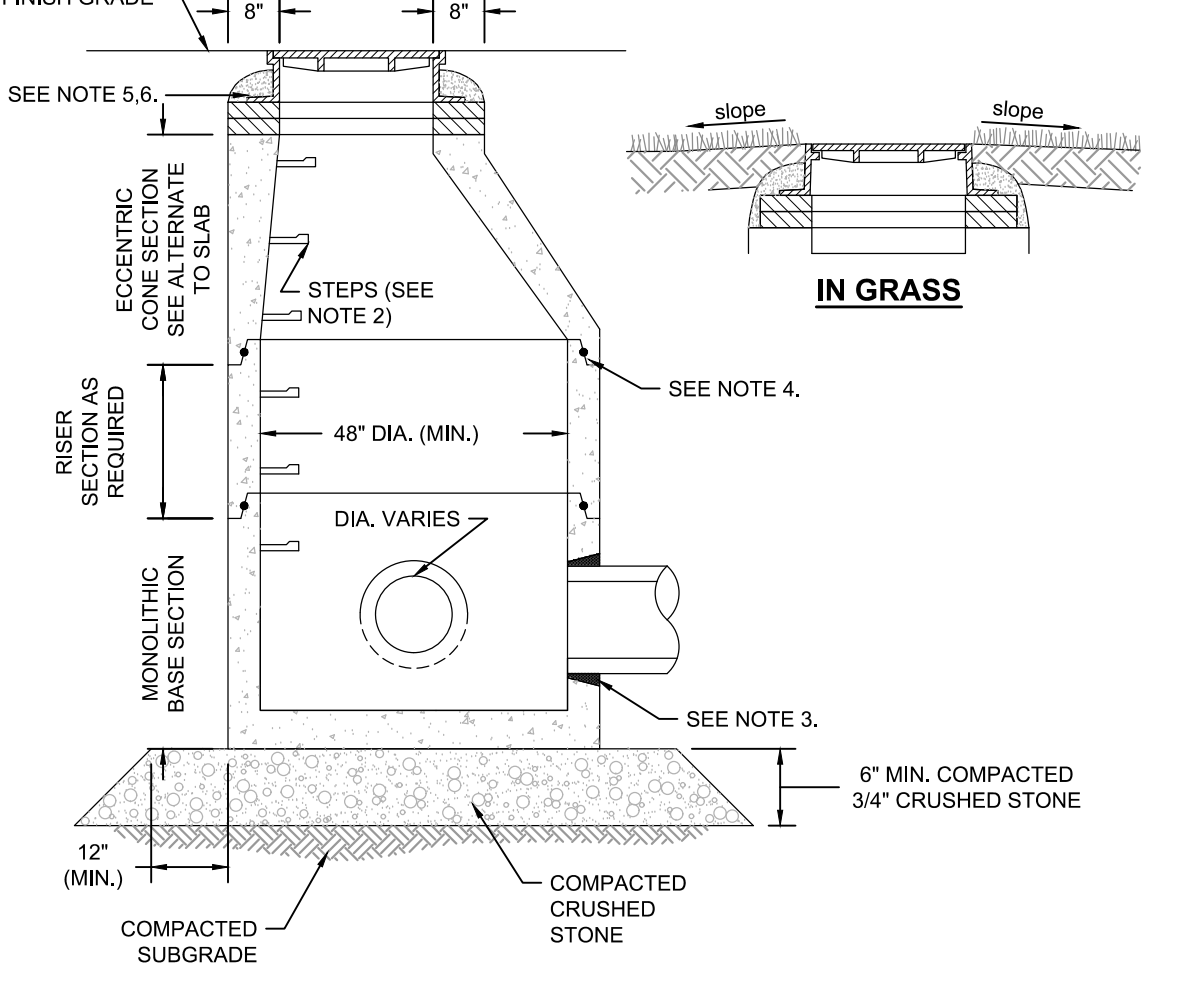
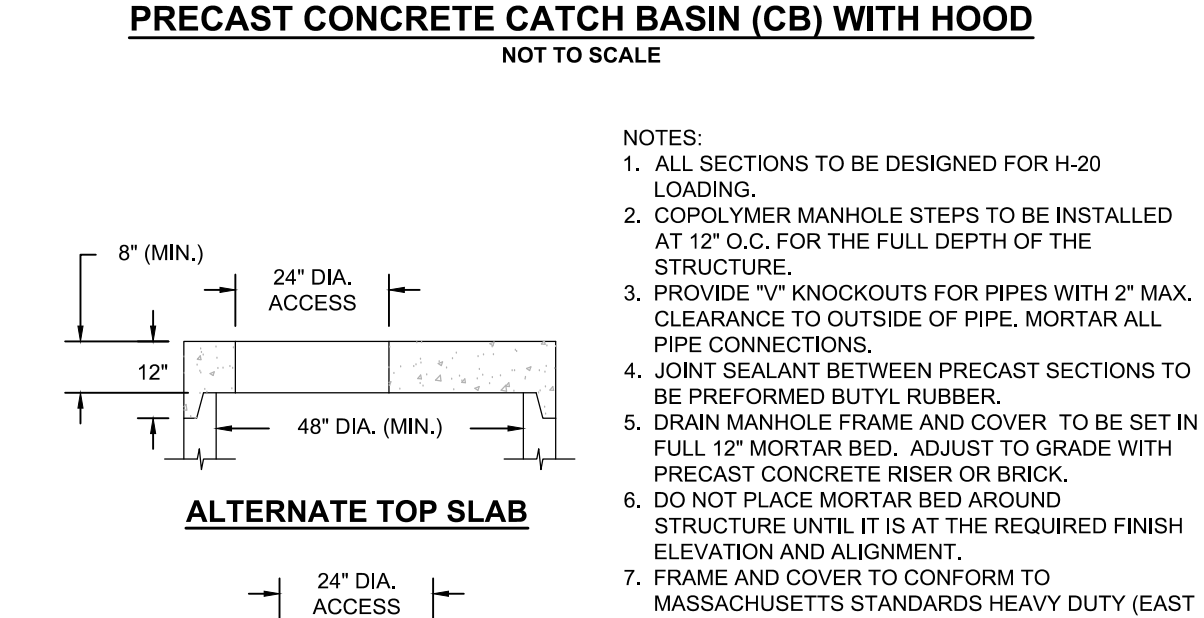
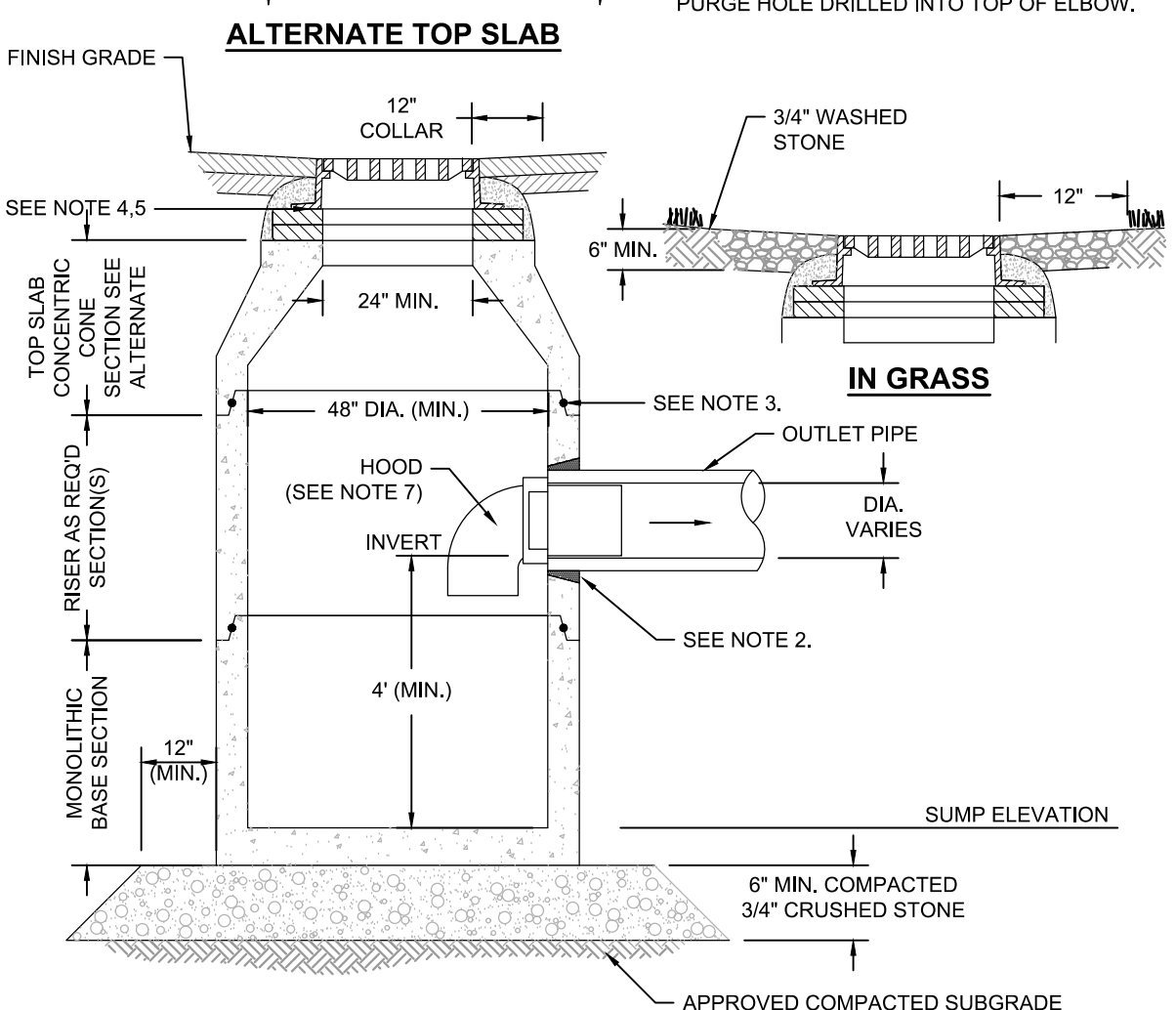
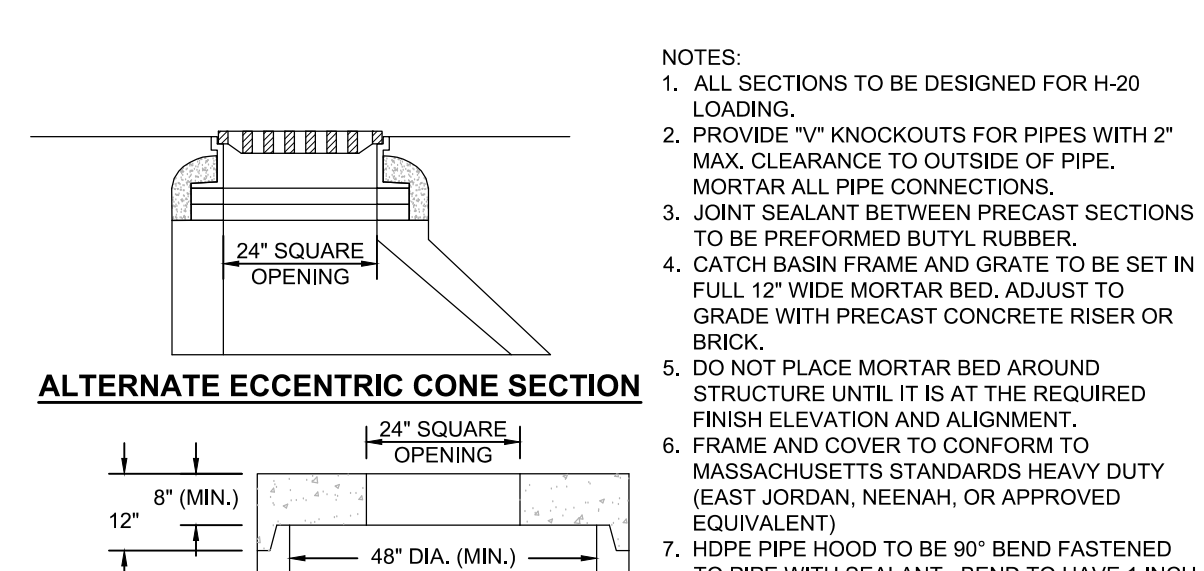
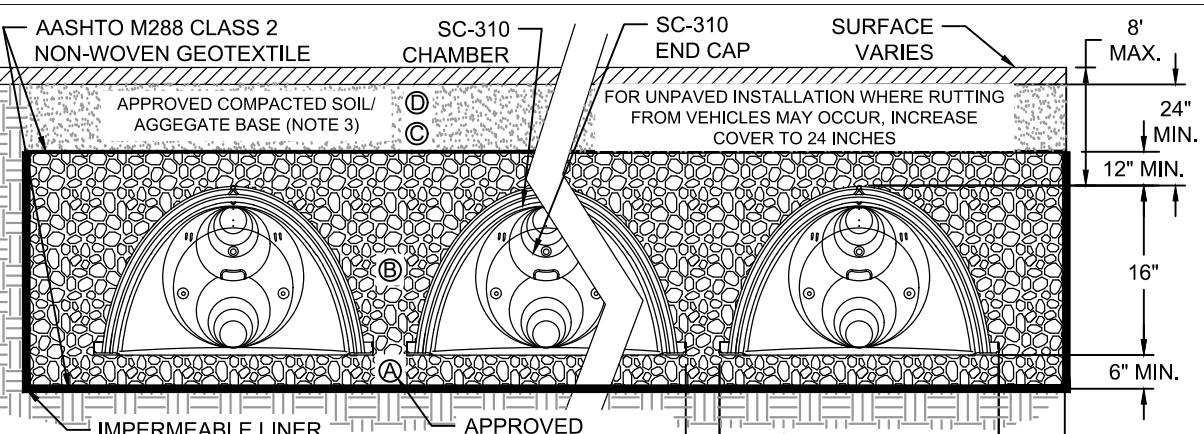
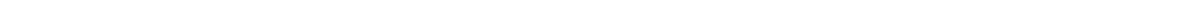
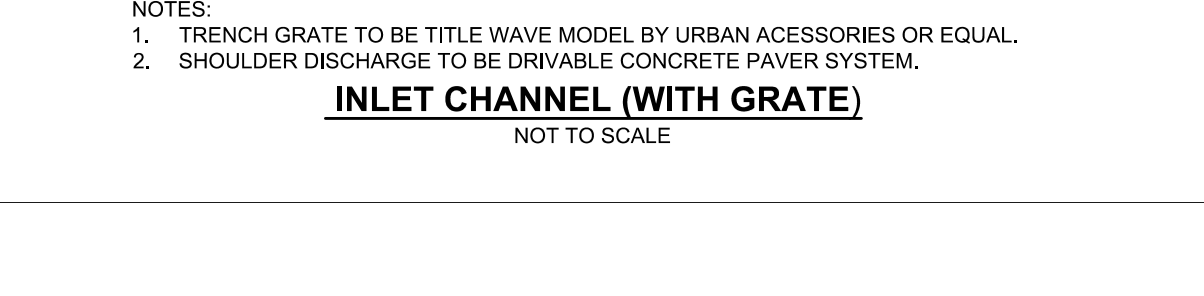
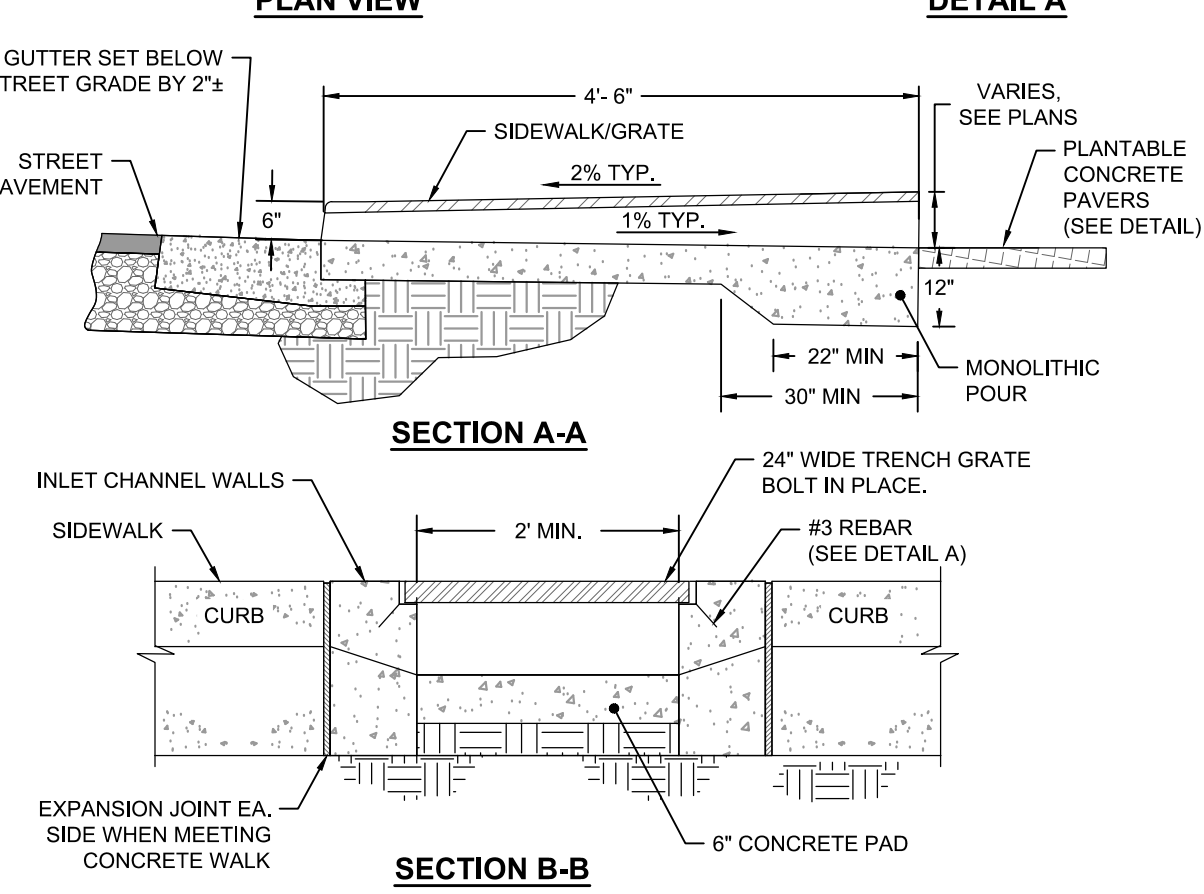
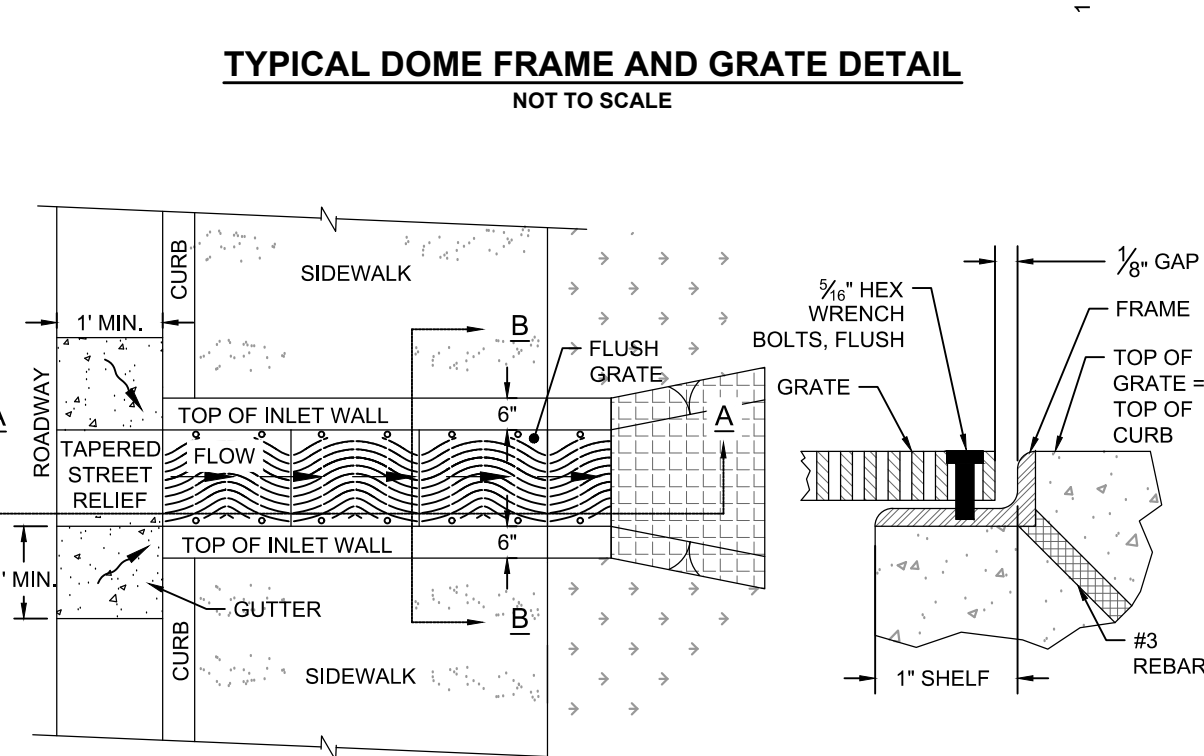
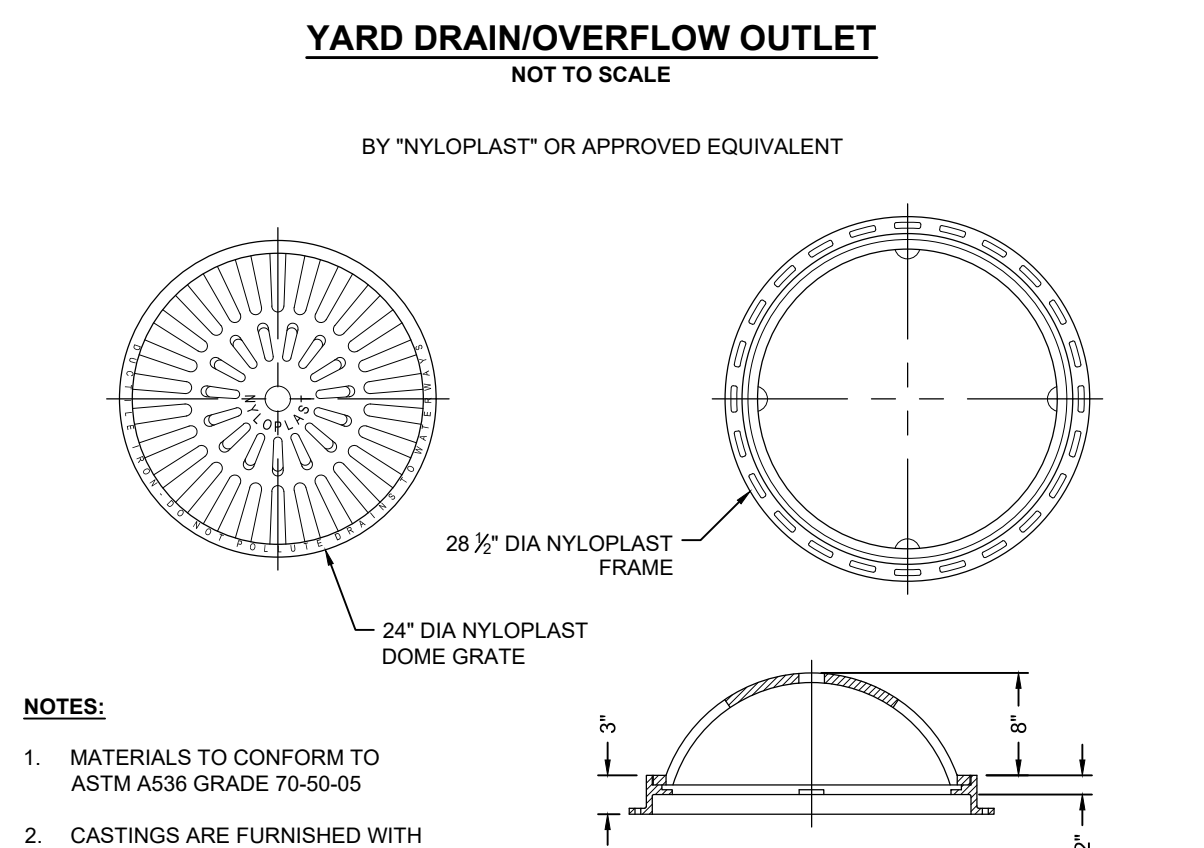
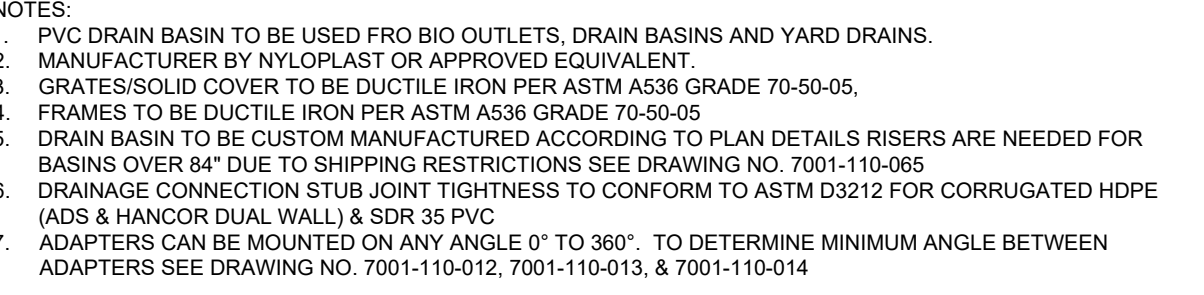
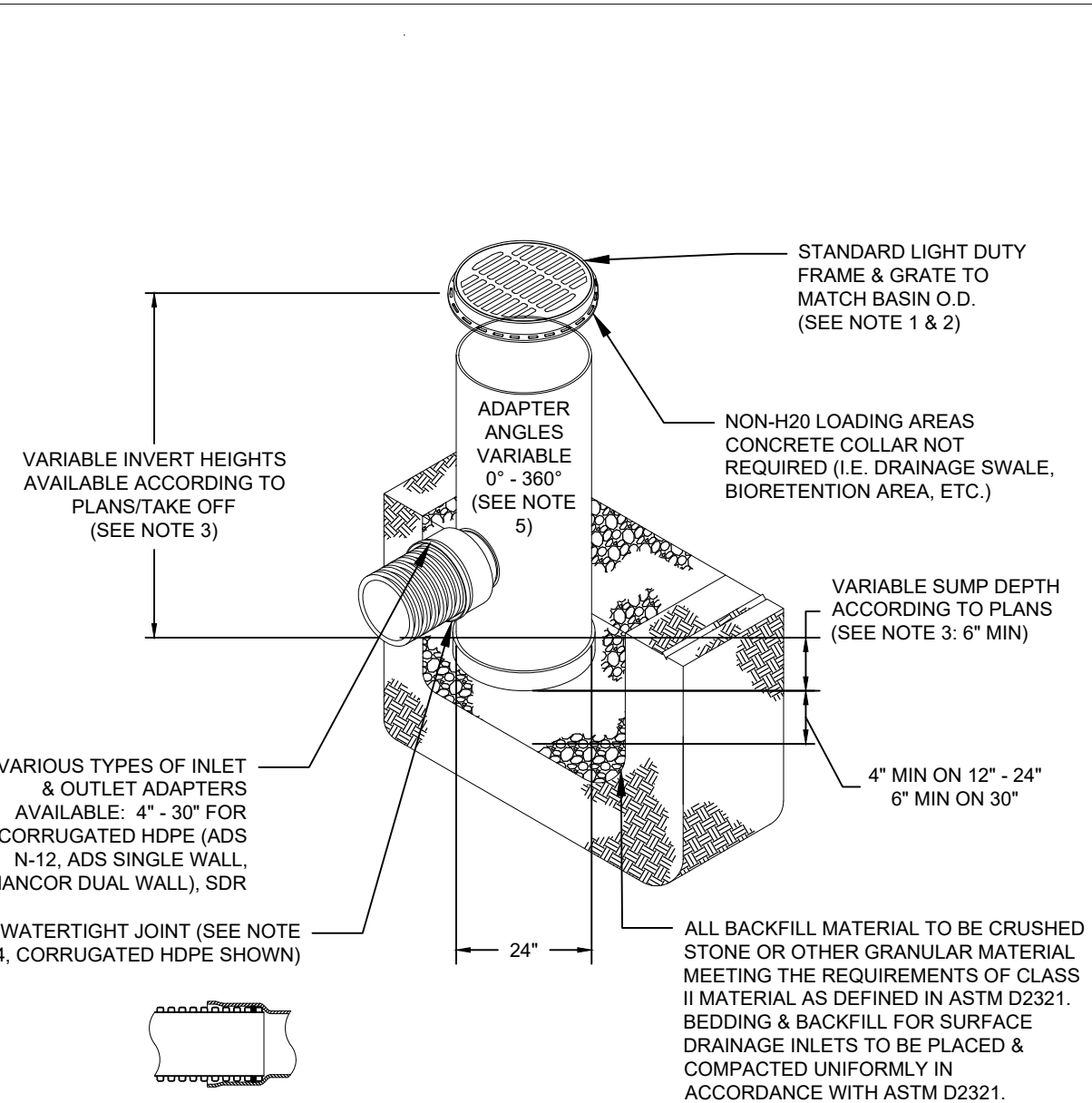
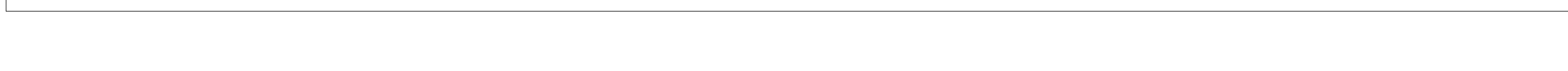
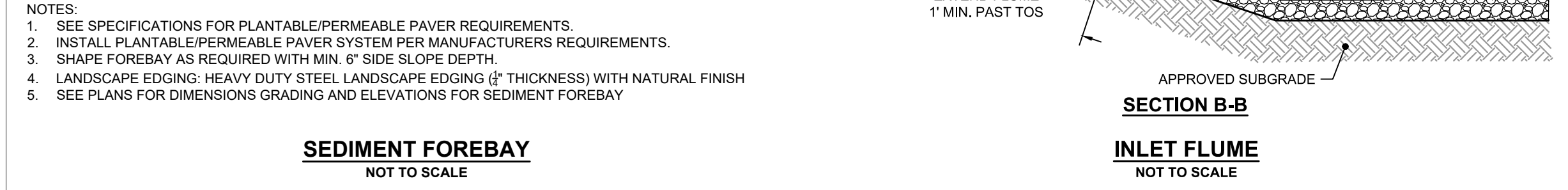
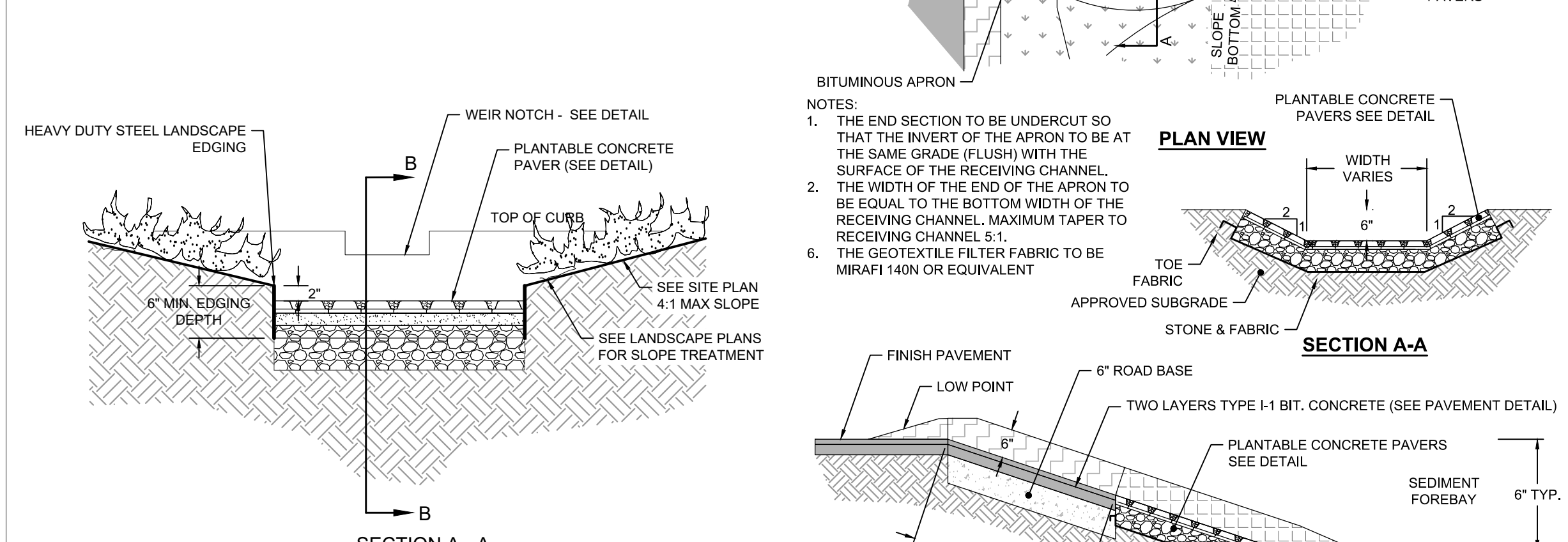
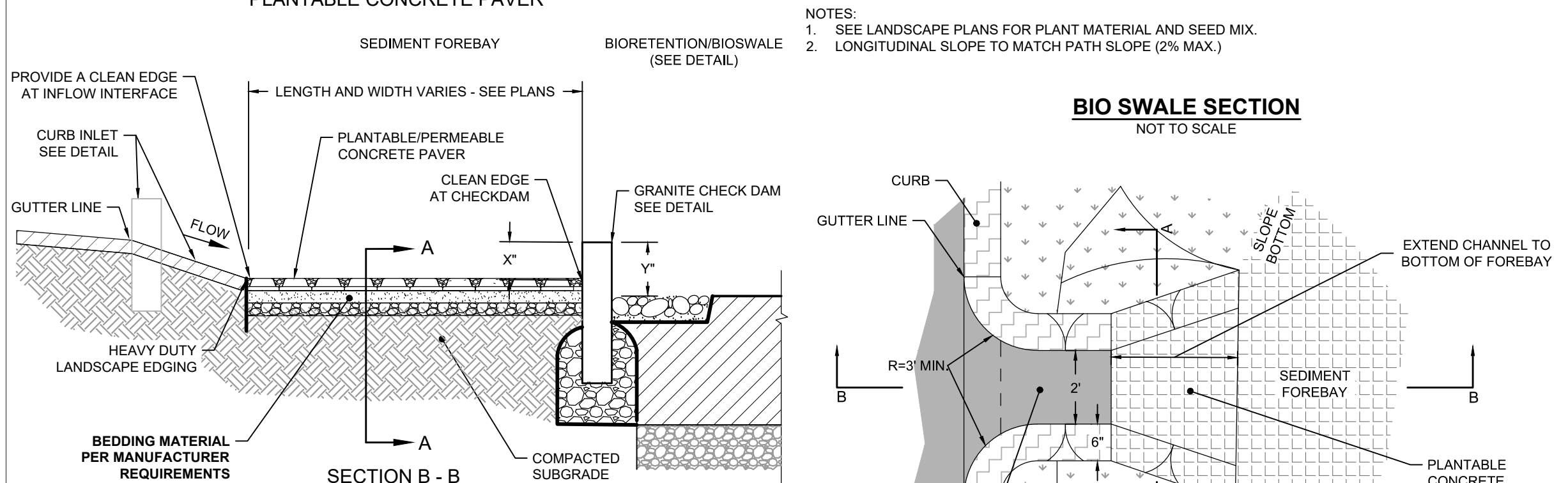
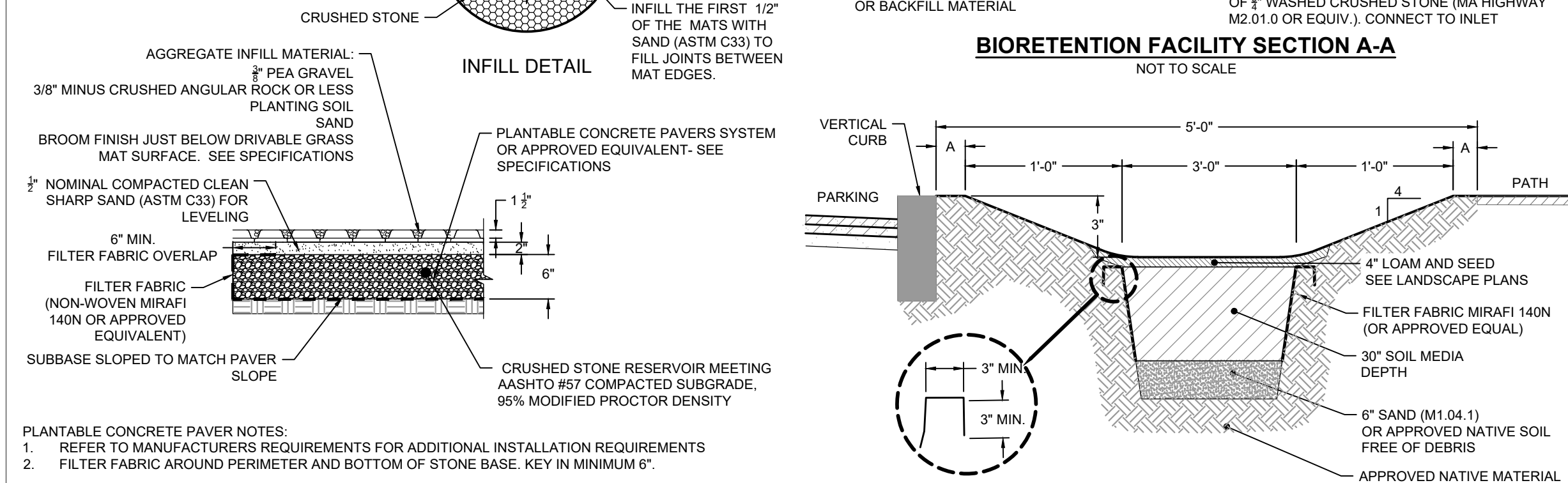
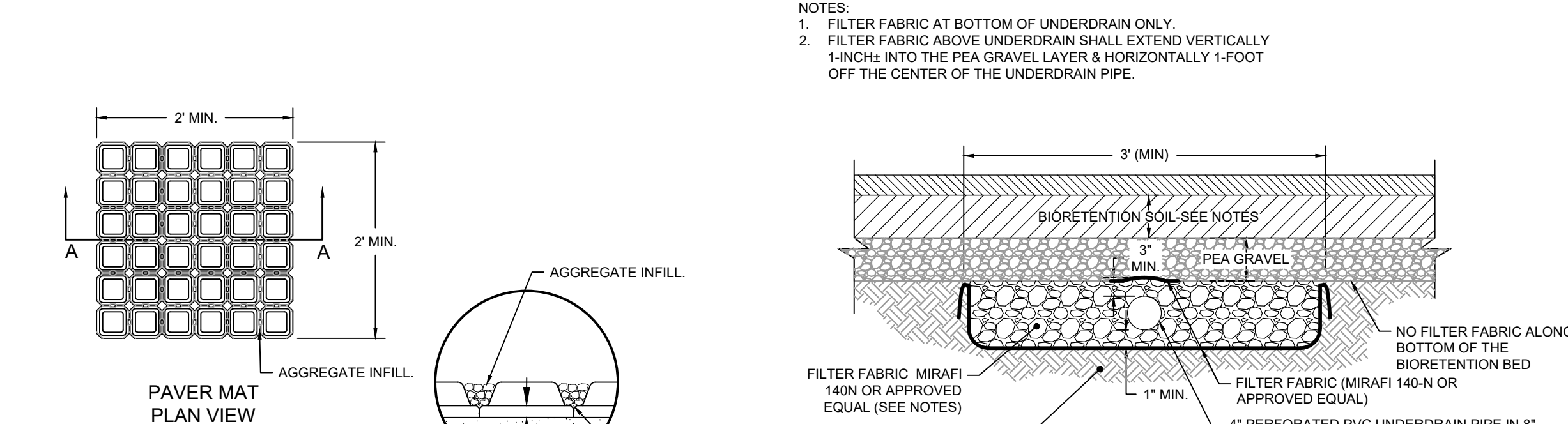
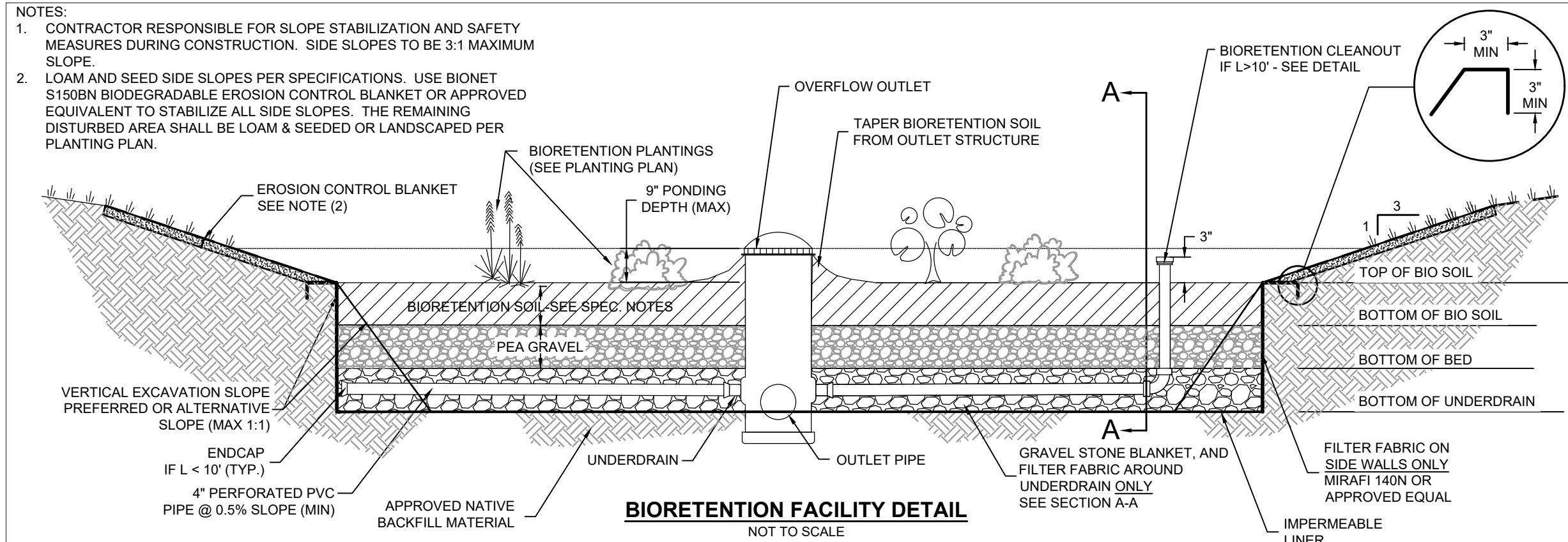
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CIVIL DETAILS (1)

MALDEN RIVER WORKS
356 COMMERCIAL STREET
MALDEN, MA 02148

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C-3

NOTES:

1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR TO EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.

2. BEDDING, HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL TO CONSIST OF CLEAN, HARD, PARTICLES OF GRAVEL MEETING THE FOLLOWING:

SIEVE SIZE	% PASSING
3/8"	85-95
NO. 4	5-15
NO. 8	0-2

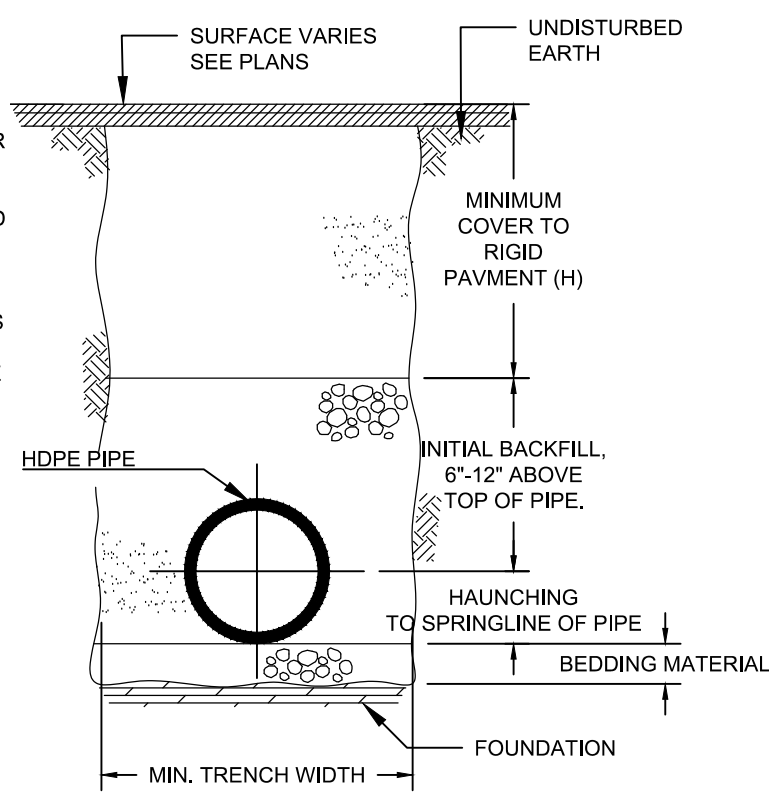
MATERIAL TO BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

MINIMUM BEDDING THICKNESS TO BE 4" (100mm) FOR 4"-24" (100-600mm) AND 42"-48" (1050-1200mm) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150mm) FOR 30"-36" (750-900mm) CPEP.

3. MINIMUM TRENCH WIDTHS TO BE AS FOLLOWS:

NOMINAL Ø in (mm)	MIN. TRENCH WIDTH, in (mm)	RECOMMENDED TRENCH WIDTH, in (mm)
8 (200)	25 (630)	25 (630)
10 (250)	28 (710)	28 (710)
12 (300)	31 (790)	31 (790)
15 (375)	34 (860)	34 (860)
18 (450)	39 (990)	39 (990)

4. MINIMUM COVER: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

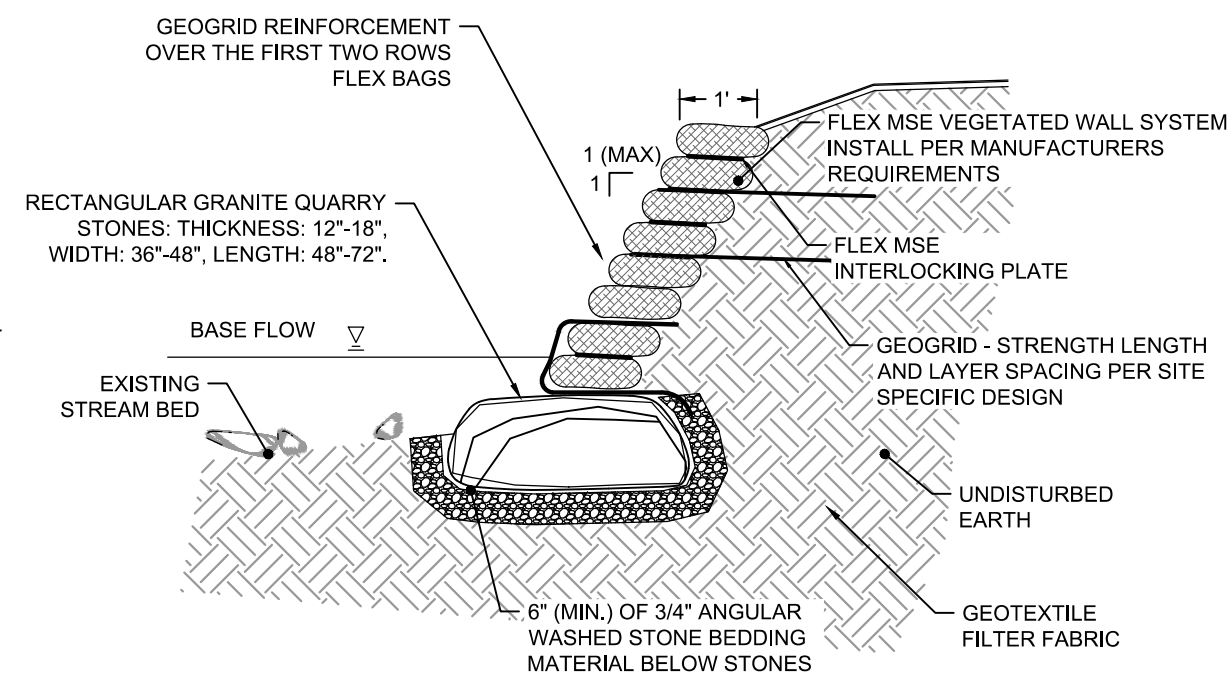


DETAIL PROVIDED BY ADVANCED DRAINAGE SYSTEMS, INC.

SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300)
H25 (RIGID PAVEMENT) E80	12 (300)
RAILWAY HEAVY CONSTRUCTION	24 (610)
	48 (1220)

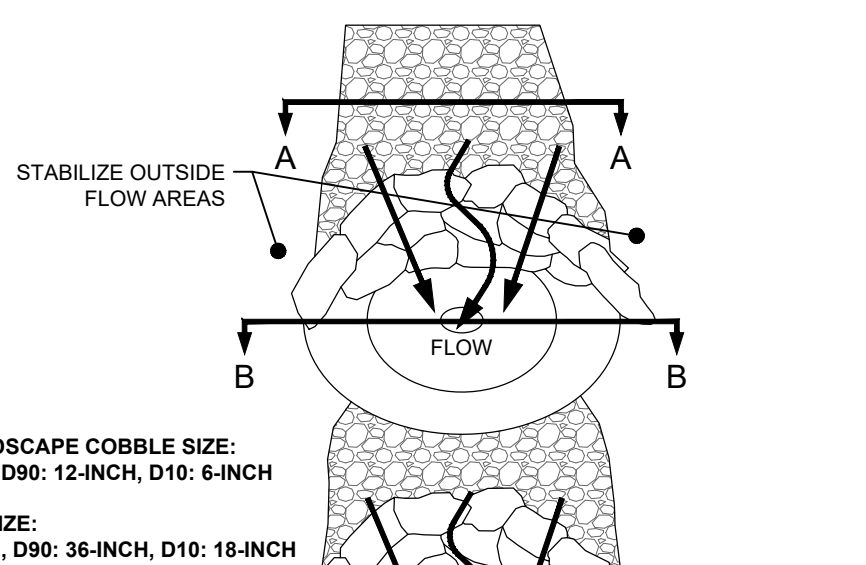
* TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT

THE MINIMUM COVER FOR A HDPE PIPE IS 1'-0" FOR H-20 TRAFFIC LOADS IF INSTALLED IN ACCORDANCE WITH AASHTO SECTION 30. THIS IS BASED ON EMPIRICAL CALCULATION OF LOAD RESPONSE, MANUFACTURER'S TESTING AND FIELD EXPERIENCE WITH THE PIPE. AASHTO SPECIFICATIONS SECTION 18.4.1.5 DEFINES THE MINIMUM COVER AS "IDB BUT NOT LESS THAN 12 INCHES". THIS COVER IS MEASURED FROM THE PIPE OD TO THE TOP OF A RIGID (CONCRETE) PAVEMENT OR THE BOTTOM OF A FLEXIBLE (BITUMINOUS) PAVEMENT. BOTH AASHTO AND ASTM, AS WELL AS MOST MANUFACTURERS, REQUIRE ADDITIONAL (TEMPORARY) COVER, MOUNDED OVER THE PIPE AND REMOVED FOR FINAL GRADING AND PAVING, IS SUFFICIENT FOR LARGE CONSTRUCTION VEHICLE LOADS.



- NOTES:
- ALL STONES TO BE LARGE, FLAT STACKABLE GRANITE STONES WITH A TYPICAL WEIGHT OF 700 - 1200 LBS (SEE SPECIFICATIONS).
 - STONE MATERIAL AND SIZES TO BE APPROVED BY THE ENGINEER.
 - FLEX MSE BAGS WITHIN HIGHEST OBSERVABLE TIDE ELEVATION SHALL BE PROTECTED BY GEOGRID REINFORCEMENT MIRAFI BXG110 OR APPROVED EQUIVALENT.

VEGETATED GEOGRID
NOT TO SCALE

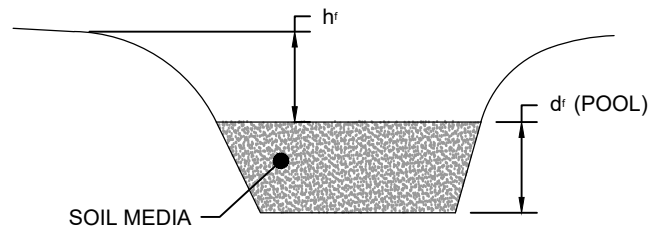


NOTES:

STONE LANDSCAPE COBBLE SIZE:
D50: 9-INCH, D90: 12-INCH, D10: 6-INCH

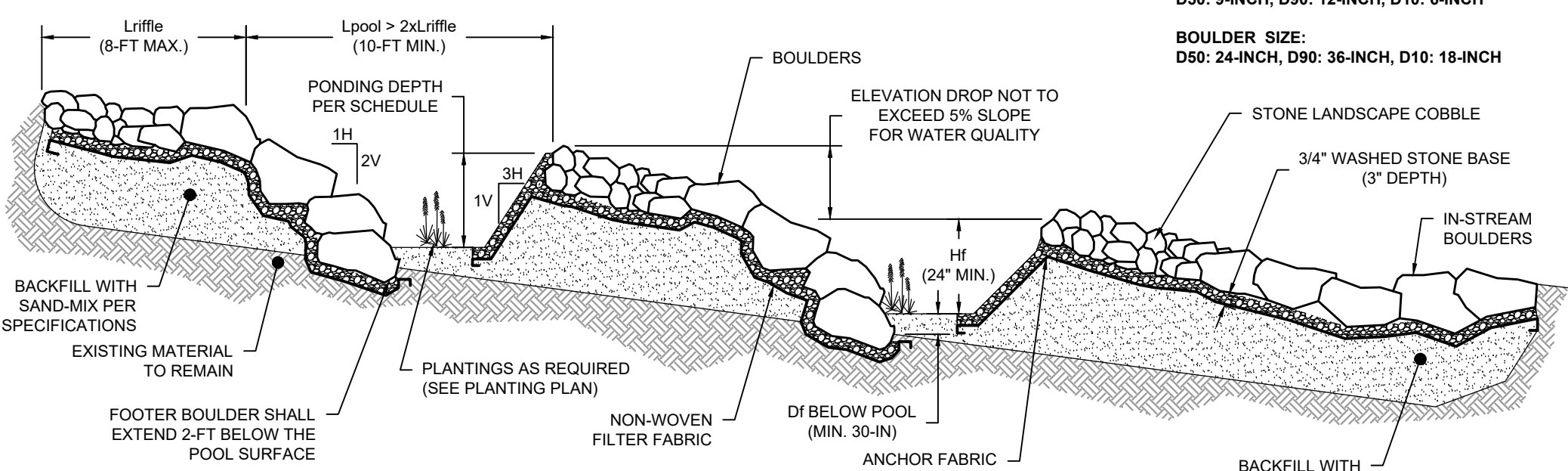
BOULDER SIZE:
D50: 24-INCH, D90: 36-INCH, D10: 18-INCH

SECTION A-A RIFFLE WEIR CROSS SECTION THROUGH COBBLE

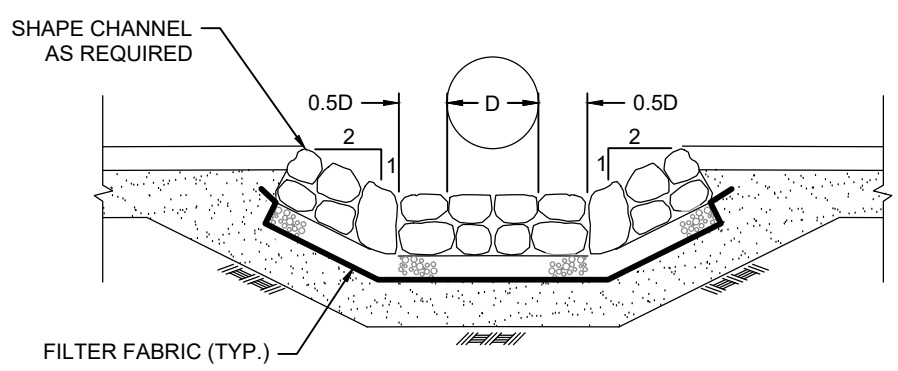


SECTION B-B POOL CROSS SECTION

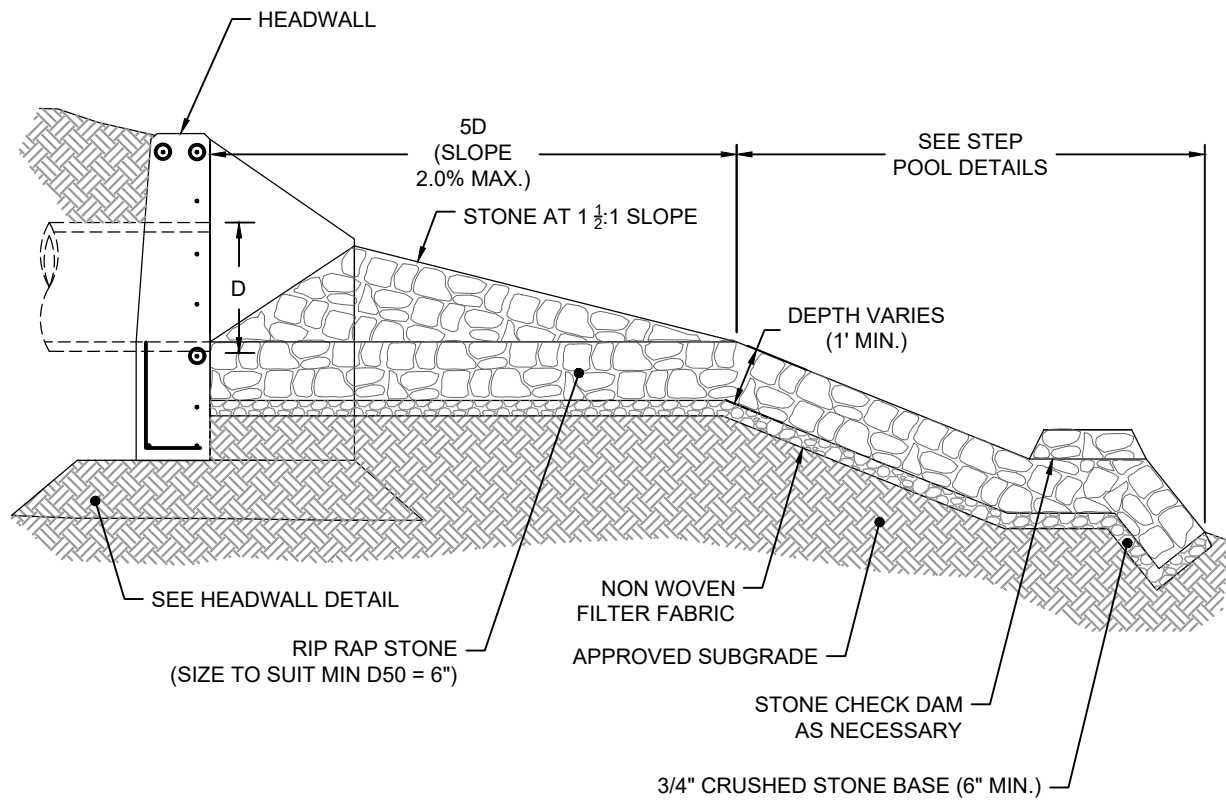
TYPICAL STEP POOL STORM CONVEYANCE
NOT TO SCALE



TYPICAL STEP POOL CROSS SECTION DETAIL
NOT TO SCALE



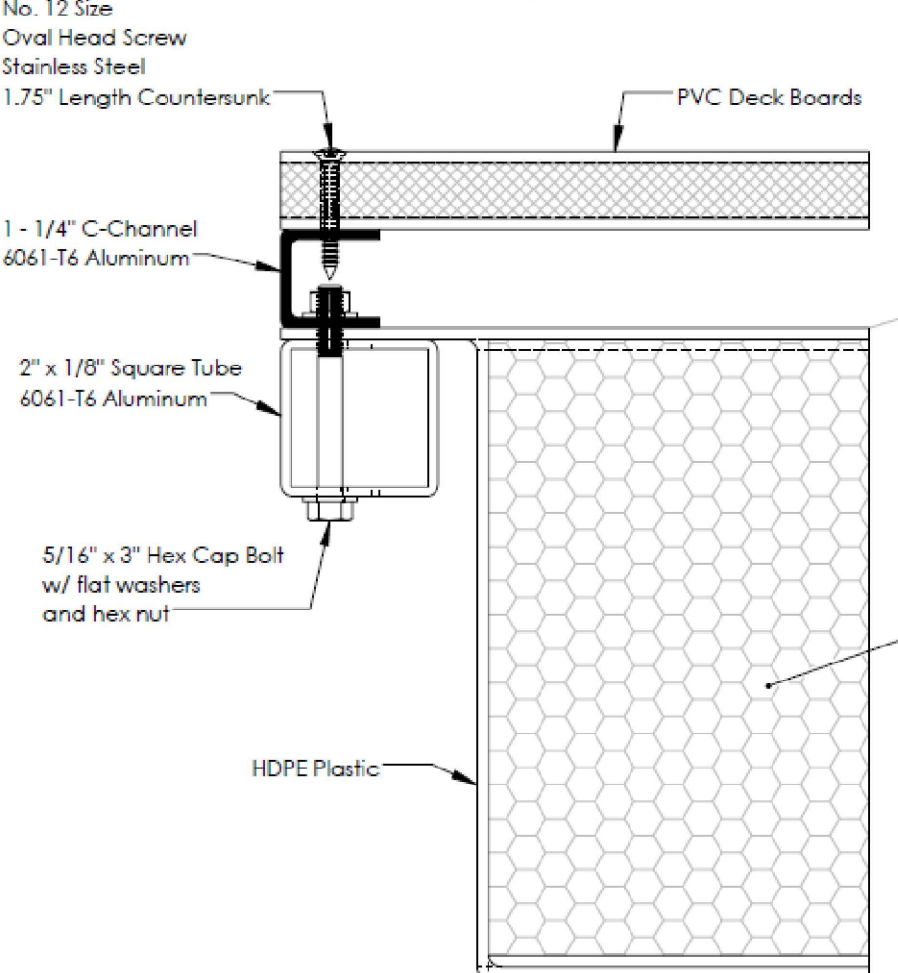
SECTION



PROFILE

OUTLET HEADWALL (TYPICAL)
NOT TO SCALE

Section View

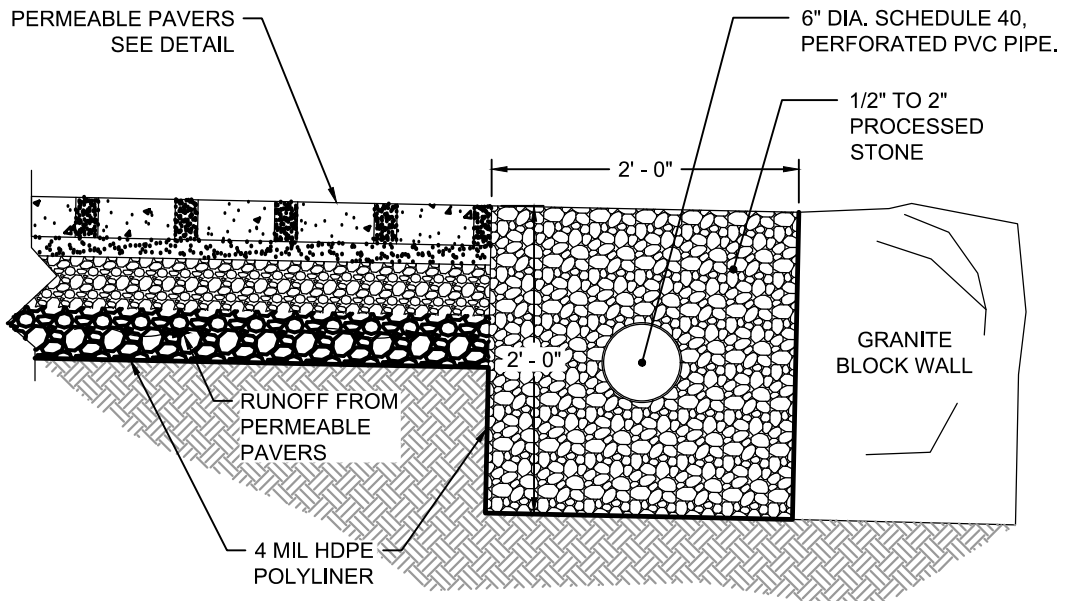


TYPICAL FLOATING DOCK
NOT TO SCALE

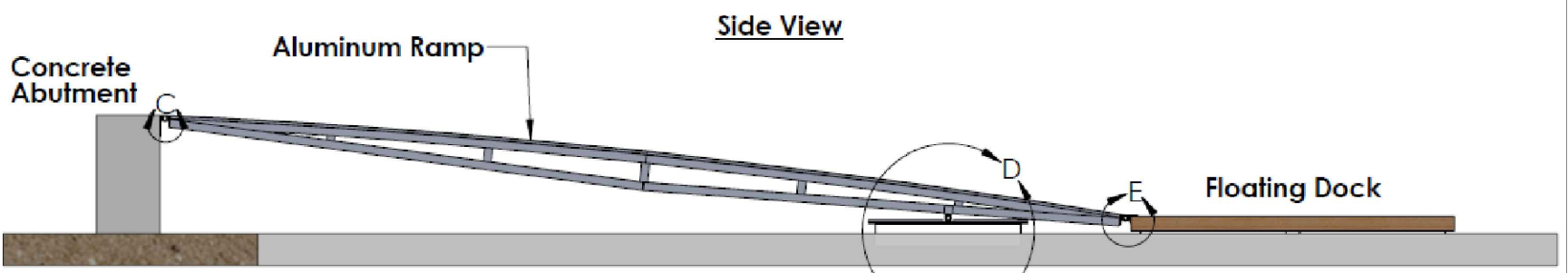
NOTES:

STONE LANDSCAPE COBBLE SIZE:
D50: 9-INCH, D90: 12-INCH, D10: 6-INCH

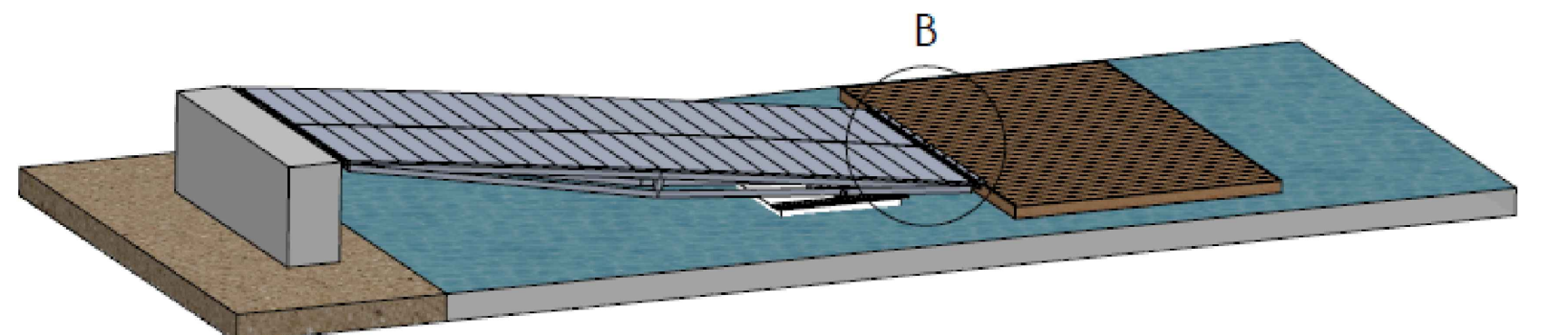
BOULDER SIZE:
D50: 24-INCH, D90: 36-INCH, D10: 18-INCH



STONE TRENCH TYPICAL SECTION
NOT TO SCALE

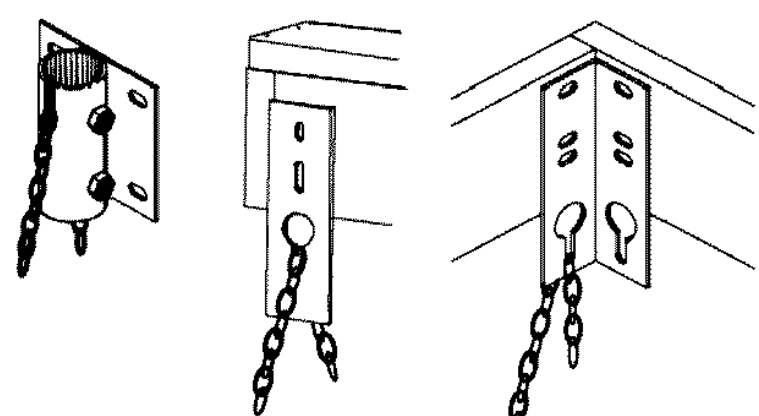
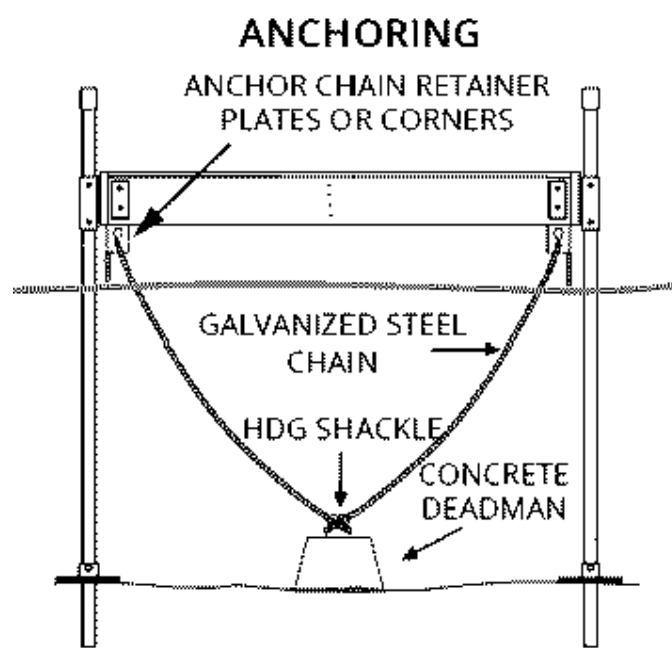


SECTION VIEW

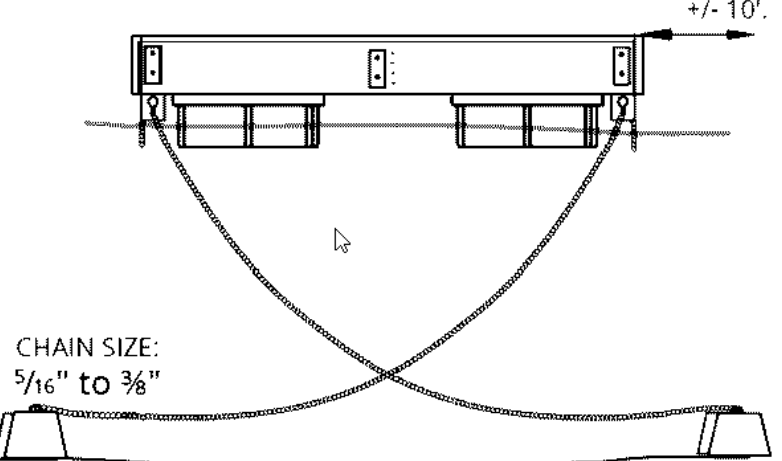


ISOMETRIC VIEW

TYPICAL FLOATING DOCK GANGWAY
NOT TO SCALE

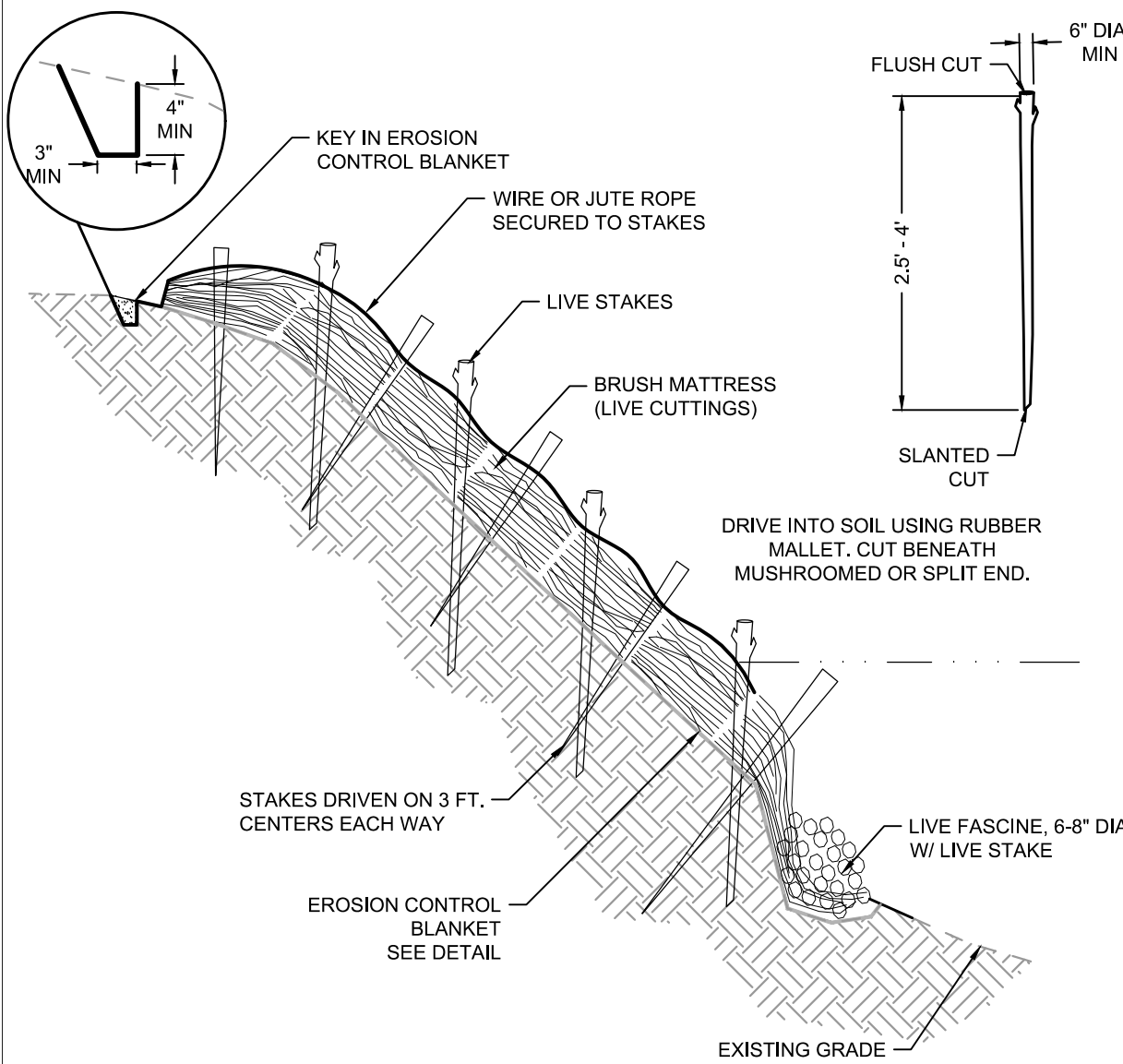


CHAINS AND DEADMEN
4' of water or more



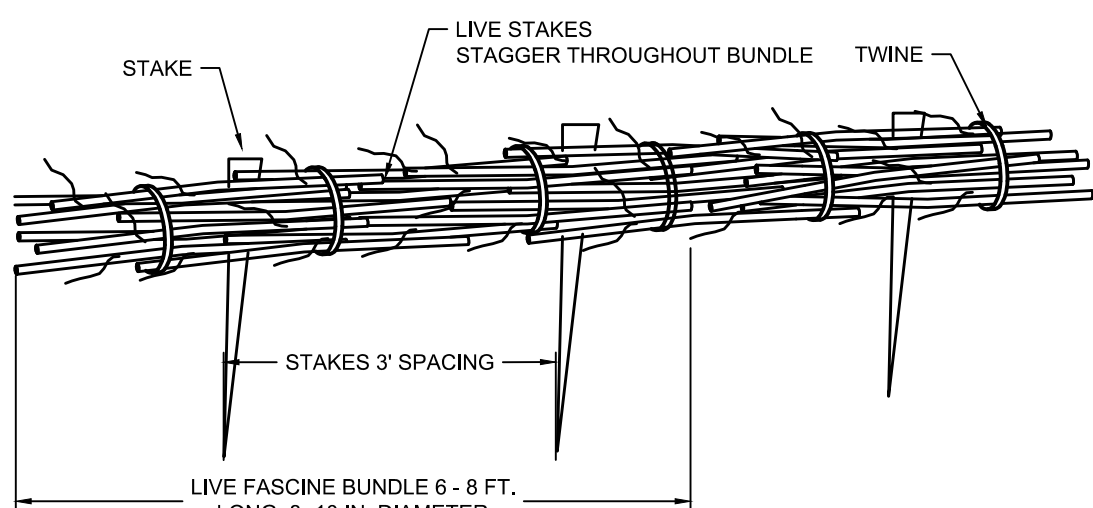
CONCRETE DEADMEN:
Plan 500 lbs to 1500 lbs or more depending on water plan conditions, mooring needs and water depth.

TYPICAL FLOATING DOCK ANCHORING
NOT TO SCALE



- NOTES:
- EXISTING GRADE NOT TO BE DISTURBED UNLESS DIRECTED BY THE ENGINEER.
 - LIGHT RAKING OF WOODY DEBRIS IS ACCEPTABLE TO CLEAR ANY FALLEN BRANCHES AND SMOOTHING OUT IRREGULAR SURFACE TO ENSURE A UNIFORM CONTACT SURFACE WITH EROSION BLANKET.
 - SEE PLANTING PLAN FOR LIVE STAKE SPECIES.
 - COCONUT EROSION CONTROL BLANKET SHALL BE 'GEOCOIR 700' OR APPROVED EQUAL.
 - EROSION CONTROL BLANKET TO BE KEPT IN AT THE TOP OF BANK AS SHOWN IN THE DETAIL.
 - STAKES USED TO SECURE THE LIVE FASCINES SHOULD BE 2 FEET LONG, UNTREATED, 2X4 LUMBER, CUT DIAGONALLY. STAKES SHALL BE DRIVEN IN AT REQUIRED CONTOUR INTERVAL.

BRUSH MATTRESS WITH LIVE FASCINE
NOT TO SCALE



- NOTES:
- FASCINES WILL CONTAIN DORMANT LIVE WOODY MATERIAL 1/2 TO 2 INCHES IN DIAMETER FORMING BUNDLES THAT ARE 8\"/>
 - FASCINE BUNDLES SHALL BE TIED WITH UNTREATED TWINE EVERY 1 TO 2 FEET.

LIVE FASCINE
NOT TO SCALE

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DRAWING TITLE

PROJECT

CIVIL DETAILS (2)

MALDEN RIVER WORKS
356 COMMERCIAL STREET
MALDEN, MA 02148

REVISIONS

NO.	REVISION	DATE	BY

CURRENT ISSUE:

SCALE	
DATE	06/30/2021
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SHEET 7 OF 10

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C-4

PLANTING SCHEDULE - TREES AND SHRUBS:

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	DESIGN NOTES
LARGE TREE - 25' CANOPY						
AR	70	ACER RUBRUM	RED MAPLE			
PD		POPULOUS DELTOIDES	COTTONWOOD SAPLINGS			
QB		QUERCUS BICOLOR	SWAMP WHITE OAK			
SMALL TREE - 12' CANOPY						
AC	27	AMELANCHIER CANADENSIS	SERVICEBERRY			
SMALL TREE - 10" CANOPY						
BN	85	BETULA NIGRA	RIVER BIRCH			
BP		BETULA POPULIFOLIA	GREY BIRCH			
SMALL TREE - 8' CANOPY						
AI	43	ALNUS INCANA	SPECKLED ALDER			
NS		NYSSA SYLVATICA	BLACK TUPELO			
PG		POPULUS GRANDIDENTATA	BIG TOOTH ASPEN			
PS		POPULUS SPP.	HYBRID POPLAR			
PT		POPULUS TREMULOIDES	QUAKING ASPEN			
RT		RHUS TYPHINA	STAGHORN SUMAC			
SP		SALIX SPP.	WILLOW			
SA		SASSAFRAS ALBIDUM	SASSAFRAS			

PLANTING SCHEDULE - PERENNIALS AND GROUNDCOVERS:

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	DESIGN NOTES
STREETSCAPE BIOSWALE		Square Footage of groudcover area: 1,920 SF	100% of area (1,902 SF) to be covered by 1 GAL plants and plugs	(554) 1 GAL plants and (2217) plugs to be provided in a mix of the species as incitated	100% Area to be overseeded	
ai	554 1-GAL & 2227 PLUGS	ASCLEPIAS INCARNATA	SWAMP MILKWEED	1 GAL, PLUGS	24 OC, 12" OC	
ca		CAREX APPALACHICA	APPALACHIAN SEDGE	1 GAL, PLUGS	24 OC, 12" OC	
cp		CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	1 GAL, PLUGS	24 OC, 12" OC	
cm		CAREX MUSKINGUMENSIS	PALM SEDGE	1 GAL, PLUGS	24 OC, 12" OC	
cv		CAREX VULPINOIDEA	FOX SEDGE	1 GAL, PLUGS	24 OC, 12" OC	
ed		EUPATORIUM DUBIUM	LITTLE JOE PYE WEED	1 GAL, PLUGS	24 OC, 12" OC	
iv		IRIS VERSICOLOR	BLUE FLAG IRIS	1 GAL, PLUGS	24 OC, 12" OC	
je		JUNCUS EFFUSES	COMMON RUSH	1 GAL, PLUGS	24 OC, 12" OC	
ss		SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	1 GAL, PLUGS	24 OC, 12" OC	
sh		SPOROBOLUS HETEROLEPIS	PRAIRIE DROPOSEED	1 GAL, PLUGS	24 OC, 12" OC	
BULBS						
	3000	CAMASSIA ESCULENTA	CAMAS LILY	BULB		
		CAMASSIA LEICHTLINII VAR. CAERULEA	GREAT CAMAS	BULB		
		CHIONODOXA SARDENSIS	LESSER GLORY-OF-THE-SNOW	BULB		
		HYACINTHOIDES HISPANICA (BLUE)	SPANISH BLUEBELL	BULB		
		IRIS RETICULATA 'HARMONY'	HARMONY RETICULATED IRIS	BULB		
		MUSCARI AMERICANCUM	GRAPE HYACINTH	BULB		
		MUSCARI ATLANTICUM	COMPACT GRAPE HYACINTH	BULB		
		SCILLA SIBERICA	SIBERIAN SQUILL	BULB		
ENTRY ECO ZONE		Square Footage of groudcover area: 7,810 SF	(3,050 SF) of groundcover are mowed. 100% of area (7,810 SF) to be covered by plugs	(9018) plugs to be provided in a mix of the species as incitated below	100% Area to be overseeded	
ca	9018	CAREX APPALACHICA	APPALACHIAN SEDGE	PLUGS	12" OC	
cp		CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	PLUGS	12" OC	
fr		FESTUCA RUBRA	RED FESCUE	PLUGS/SEED	12" OC	
tp		TRIFOLIUM PRATENSE	RED CLOVER	SEED		
tr		TRIFOLIUM REPENS	WHITE CLOVER	SEED		
PARKING LOT BUFFER		Square Footage of groudcover area: 1,400 SF				
ls	259	LONICERA SEMPERVIRENS	TRUMPET HONEYSUCKLE	3 GAL	30" OC	
pq	59	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	1 GAL	36" OC	

PLANTING SCHEDULE - PERENNIALS AND GROUNDCOVERS (CONTINUED):

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	DESIGN NOTES
URBAN HEDGEROW		Square Footage of groudcover area: 13,630 SF				
ac	2518	ANEMONE CANADENSIS	WINDFLOWER	1 GAL	18" OC	
wf		WALDSTEINIA FRAGARIOIDES	BARREN STRAWBERRIES	4" POTS	12" OC	
cr		CAMP SIS RADICANS	TRUMPET VINE	3 GAL	30" OC	
ra		RHUS AROMATICA	FRAGRANT SUMAC	3 GAL	30" OC	
pq	656	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	1 GAL	36" OC	
	40	LARGE SHRUB	LARGE SHRUB	4' to 5' HT	96" OC	
LIVING FENCE		Square Footage of groudcover area: 2,840 SF				
cs	525	CORNUS SERICEA	RED TWIG DOGWOOD	1 to 3 GAL	30" OC	
cf		CORNUS SERICEA 'FLAVIRAMEA'	YELLOW TWIG DOGWOOD	1 to 3 GAL	30" OC	
dp		DENNSTAEDTIA PUNCTILOBULA	HAY-SCENTED FERN	1 GAL	18" OC	
ri		RUBUS SPP.	DEWBERRY	1 to 3 GAL	30" OC	
ro		RUBUS ODORATUS	FLOWERING RASPBERRY	1 to 3 GAL	30" OC	
SODDED LAWN		Square Footage of groudcover area: 11,330 SF				
			SODDED LAWN	SOD		
MEADOW AND SHRUB WITH SAPLING TREES		Square Footage of groudcover area: 7,350 SF			100% Area to be overseeded	
ig	943	ILEX GLABRA	INKBERRY HOLLY	3 GAL	36" OC	
pv		PANICUM VIRGATUM	SWITCHGRASS	PLUGS	18" OC	
ss		SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	1 GAL	36" OC	
sc		SOLIDAGO CANADENSIS	CANADIAN GOLDENROD	1 GAL	36" OC	
vd		VIBURNUM DENTATUM	ARROWTOOTH VIBURNUM	3 GAL	36" OC	
	49		SAPLINGS	MIXED SIZES	EVERY 150 SF	
LIVING SHORELINE		Square Footage of groudcover area: 1,650 SF			100% Area to be overseeded	
cs	847	CORNUS SERICEA	RED TWIG DOGWOOD	LIVE STAKES	18" OC	
ss		SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	PLUGS	18" OC	
st		SCHOENO PLECTUS TABERNAEMONTANI	SOFT-STEMMED BULRUSH	PLUGS	18" OC	
so		SOLIDAGO SEMPERVIRENS	SEASIDE GOLDENROD	PLUGS	18" OC	
sp		SALIX PURPUREA	STREAMCO WILLOW	LIVE STAKES	18" OC	
vd		VIBURNUM DENTATUM	ARROWTOOTH VIBURNUM	LIVE STAKES	18" OC	
BRUSH MATTRESS LIVING SHORELINE		Square Footage of groudcover area: 550 SF			100% Area to be overseeded	
sp	282	SALIX PURPUREA	STREAMCO WILLOW	LIVE STAKES	18" OC	
RIVERFRONT BIOSWALE		Square Footage of groudcover area: 150 SF			100% Area to be overseeded	
cu	43 1-GAL & 173 PLUGS	CALTHA PALUSTRIS	MARSH MARIGOLD	1 GAL, PLUGS	24 OC, 12" OC	
os		ONOCLEA SENSIBILIS	SENSITIVE FERN	1 GAL, PLUGS	24 OC, 12" OC	
pa		PACKERA AUREA	GOLDEN RAGWORT	1 GAL, PLUGS	24 OC, 12" OC	
ss		SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	1 GAL, PLUGS	24 OC, 12" OC	
sc		SOLIDAGO CANADENSIS	CANADIAN GOLDENROD	1 GAL, PLUGS	24 OC, 12" OC	
vh		VERBENA HASTATA	BLUE VERVAIN	1 GAL, PLUGS	24 OC, 12" OC	

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DRAWING TITLE

PROJECT

PLANTING SCHEDULE

MALDEN RIVER WORKS
356 COMMERCIAL STREET, MALDEN, MA
02148

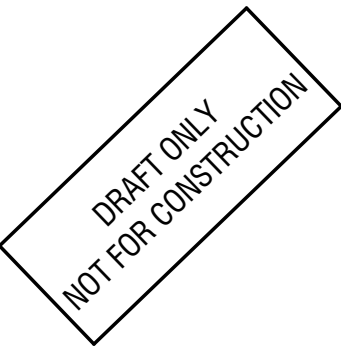
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DATE	06/29/2021
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SHEET

PLANTING LEGEND

EXISTING TREE

LARGE TREE
- 25' CANOPY

SMALL TREE
- 12' CANOPY

SMALL TREE
- 10' CANOPY

SMALL TREE
- 8' CANOPY

LARGE SHRUB

SODDED LAWN

STREETSCAPE BIOSWALE

ENTRY ECO ZONE

URBAN HEDGEROW

PARKING LOT BUFFER

LIVING FENCE

MEADOW AND SHRUB WITH SAPLING TREES

LIVING SHORELINE

RIVERFRONT BIOSWALE

BRUSH MATTRESS LIVING SHORELINE

PLANTING NOTES

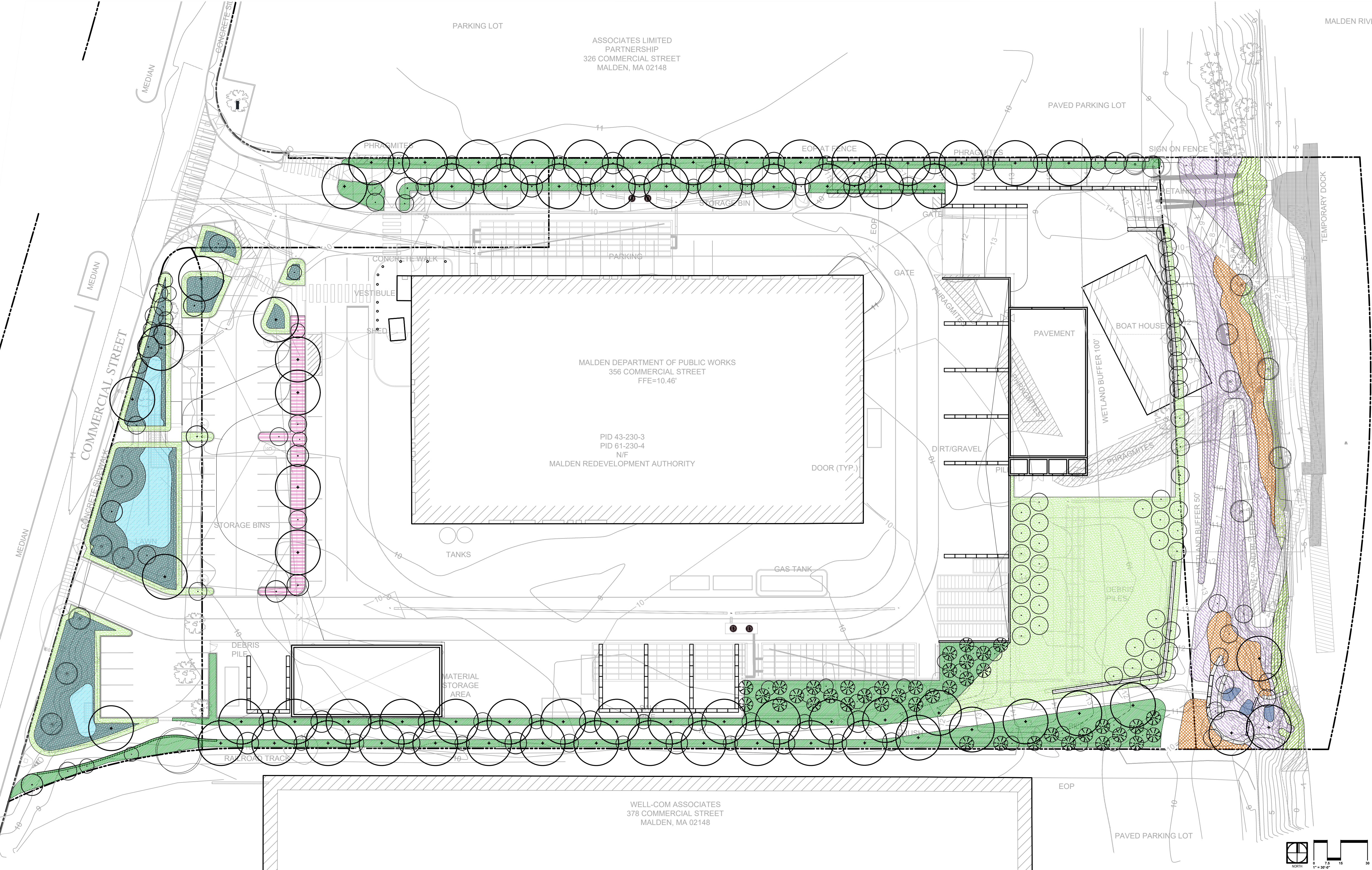
1. SEE L-1 FOR PLANTING SCHEDULES WHICH INDICATE TOTAL PLANT QUANTITIES ON ENTIRE PROJECT.
2. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE AND AGAIN AT SITE PRIOR TO PLANTING. NO SUBSTITUTIONS OF PLANT SPECIES OR VARIETIES WITHOUT LANDSCAPE ARCHITECT'S WRITTEN APPROVAL.
3. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT, AND CULTURE ONLY AS APPROVED BY THE LANDSCAPE ARCHITECT.
5. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
6. IN THE EVENT THAT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR BETWEEN THE PLANT MATERIALS LIST AND THE DRAWINGS, THE HIGHER NUMBER OF PLANTS SHALL GOVERN. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
7. THE CONTRACTOR SHALL STAKE OR LAYOUT THE LOCATIONS OF ALL PROPOSED PLANTING FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING.
8. LOCATE AND VERIFY UTILITY LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO OWNER'S REPRESENTATIVE.
9. STAKE OUT PLANTS IN THE APPROXIMATE LOCATION. ADJUST LOCATIONS OF STAKES AS DIRECTED BY OWNER'S REPRESENTATIVE. NO PLANT INSTALLATION SHALL TAKE PLACE PRIOR TO LAYOUT APPROVAL BY OWNER'S REPRESENTATIVE.
10. INSTALL ALL PLANT MATERIAL, PER SPECIFICATIONS.
11. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS. RAISE AND REPLANT ANY PLANTS THAT SETTLE AFTER PLANTING AND WATERING.
12. INCLUDE A THREE YEAR LANDSCAPE MAINTENANCE AND WARRANTY IN CONTRACT TO ENSURE PLANT ESTABLISHMENT, SEE SPECIFICATIONS.
13. CONTRACTOR TO REPAIR ANY DAMAGE TO ADJACENT AREAS DUE TO OPERATIONS INSIDE AND/OR OUTSIDE OF LIMIT OF WORK TO PRE-EXISTING CONDITIONS OR BETTER.
14. REFER TO SPECIFICATIONS FOR SOILS REQUIREMENTS.

IRRIGATION NOTES

1. PROVIDE A DESIGN BUILD IRRIGATION SYSTEM FOR ALL PLANT BEDS. ALL TREES AND SHRUBS SHALL BE WATERED WITH A DRIP IRRIGATION SYSTEM AND ALL LAWNS SHALL BE WATERED WITH SPRAY IRRIGATION. INCLUDE DESIGN AND CONSTRUCTION OF THE IRRIGATION SYSTEM IN CONTRACT. SEPARATE IRRIGATION ZONES MUST BE PROVIDED FOR PLANTING AREAS WITH DIFFERENT COMMUNITIES OR SOLAR EXPOSURE. MOISTURE AND RAIN SENSORS SHALL BE REQUIRED IN EACH ZONE AND SYSTEM CONTROLLER SHALL BE WIFI ENABLED WITH SOFTWARE FOR ADJUSTING THE SYSTEM REMOTELY.
2. CONTRACTOR RESPONSIBLE FOR TEMPORARY IRRIGATION AND/OR HAND WATERING ALL AT RIVERBANK PLANT BEDS FOR THE DURATION OF THE WARRANTY PERIOD. INCLUDE IRRIGATION MAIN LINES AND YARD HYDRANTS AS NEEDED THROUGHOUT THE LANDSCAPE SO THAT WATER IS AVAILABLE THROUGHOUT THE SITE FOR TEMPORARY WATERING OF ALL AREAS.
3. PROVIDE 'TREE GATOR' OR SIMILAR WATER RESERVOIR BAGS FOR ALL TREES NOT ON A PERMANENT IRRIGATION SYSTEM. CONTRACTOR RESPONSIBLE FOR ENSURING BAGS ARE FULL AT ALL TIMES DURING THE GROWING SEASON FOR THE DURATION OF THE WARRANTY PERIOD.
4. INCLUDE WATERING, MONITORING, AND FULL IRRIGATION SYSTEM MAINTENANCE FOR DURATION OF WARRANTY PERIOD.

SITE DETAIL / KEYNOTES: DETAIL/SHEET

1.0	PLANTING	
1.1	SODDED LAWN	1/L-3
1.2	GROUND COVER PLANTING	2/L-3
1.3	BULBS	3/L-3
1.4	PLUGS	4/L-3
1.5	PERENNIALS	5/L-3
1.6	SHRUBS	6/L-3
1.7	TUBELINGS	7/L-3
1.8	SAPLINGS	8/L-3
1.9	DECIDUOUS TREE	9/L-3
1.10	EVERGREEN TREE	10/L-3



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offshoots

PRODUCTIVE LANDSCAPES

DRAWING TITLE

PROJECT

PLANTING PLAN

MALDEN RIVER WORKS
356 COMMERCIAL STREET, MALDEN, MA
02148

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SCALE 1" = 30'

DATE 06/29/2021

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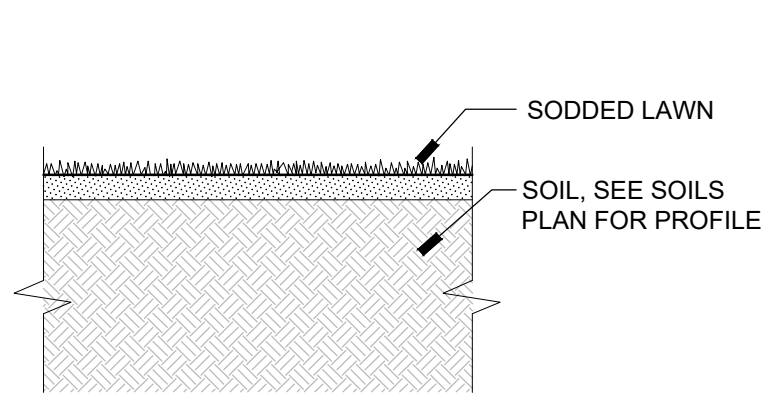
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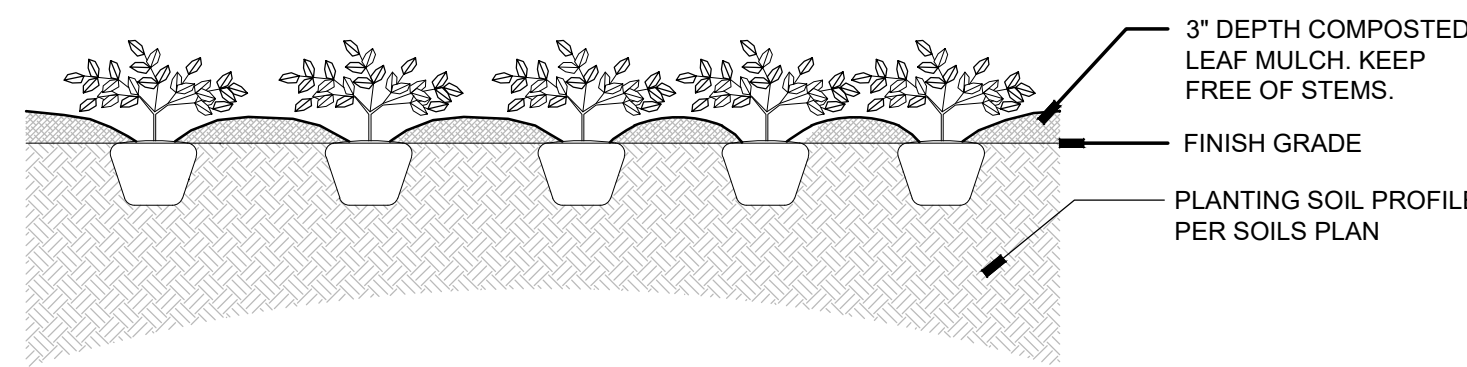
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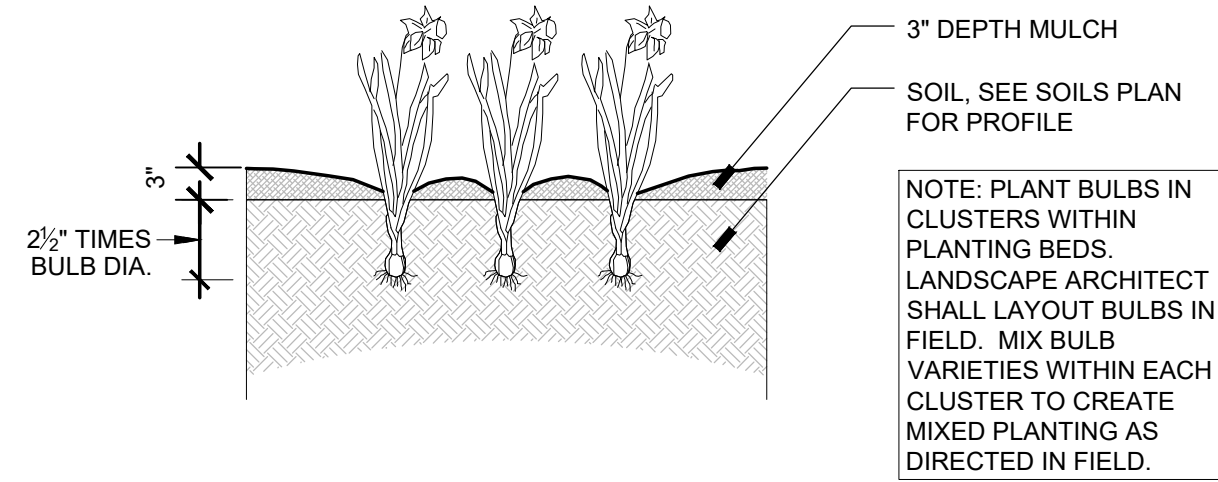
L - 2



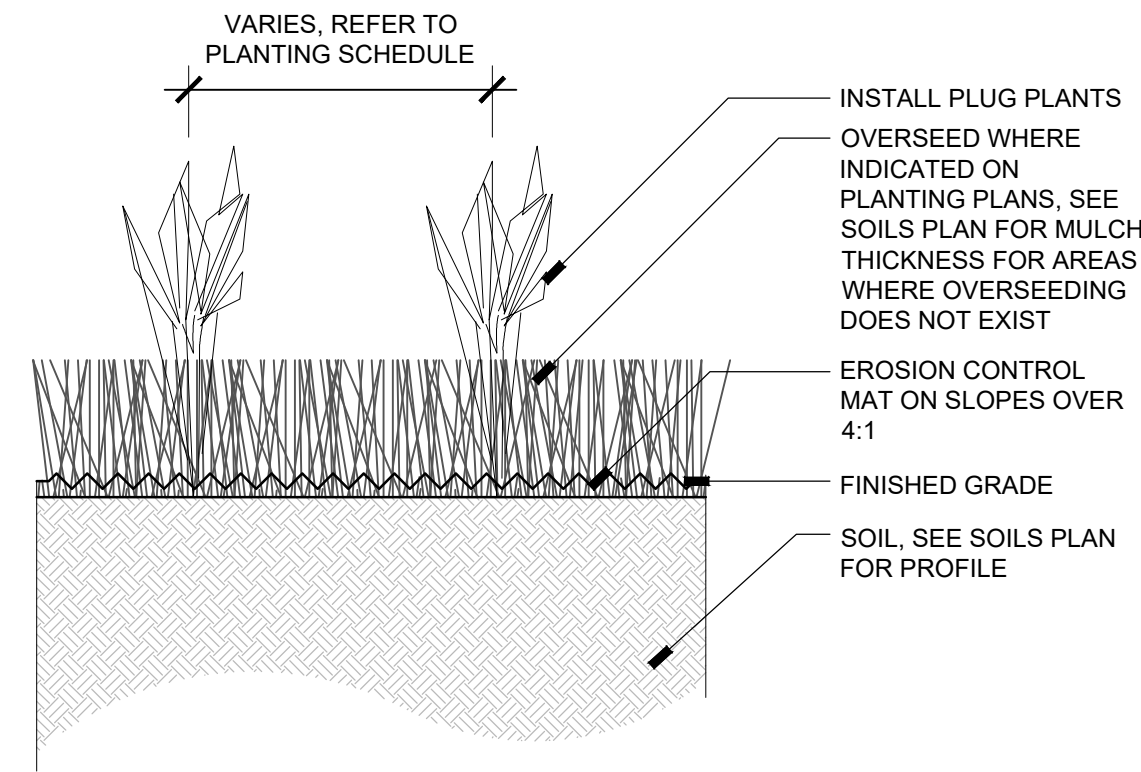
1 SODDED LAWN 1.1 NTS



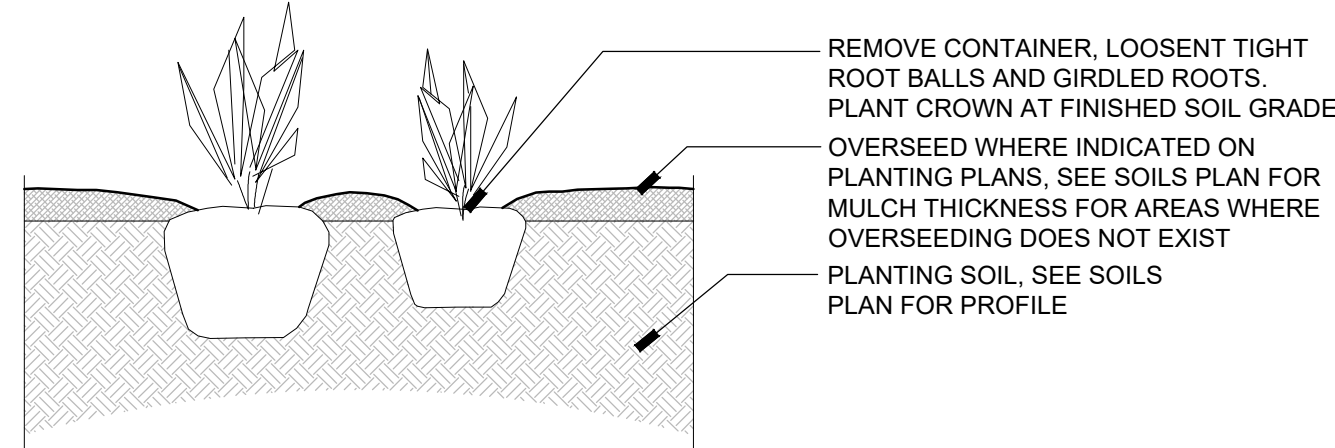
2 GROUNDCOVER PLANTING 1.2 NTS



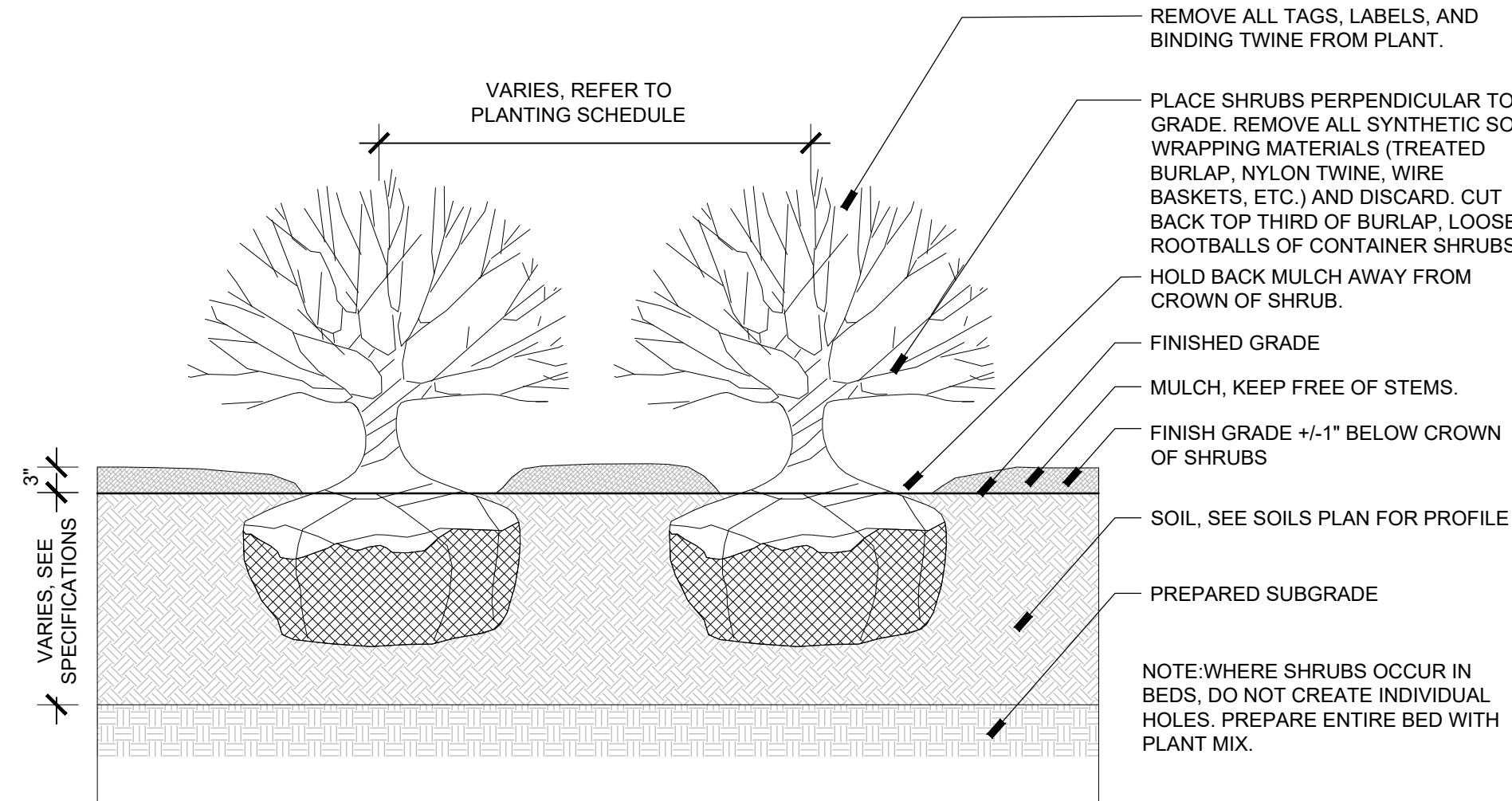
3 BULBS 1.3 NTS



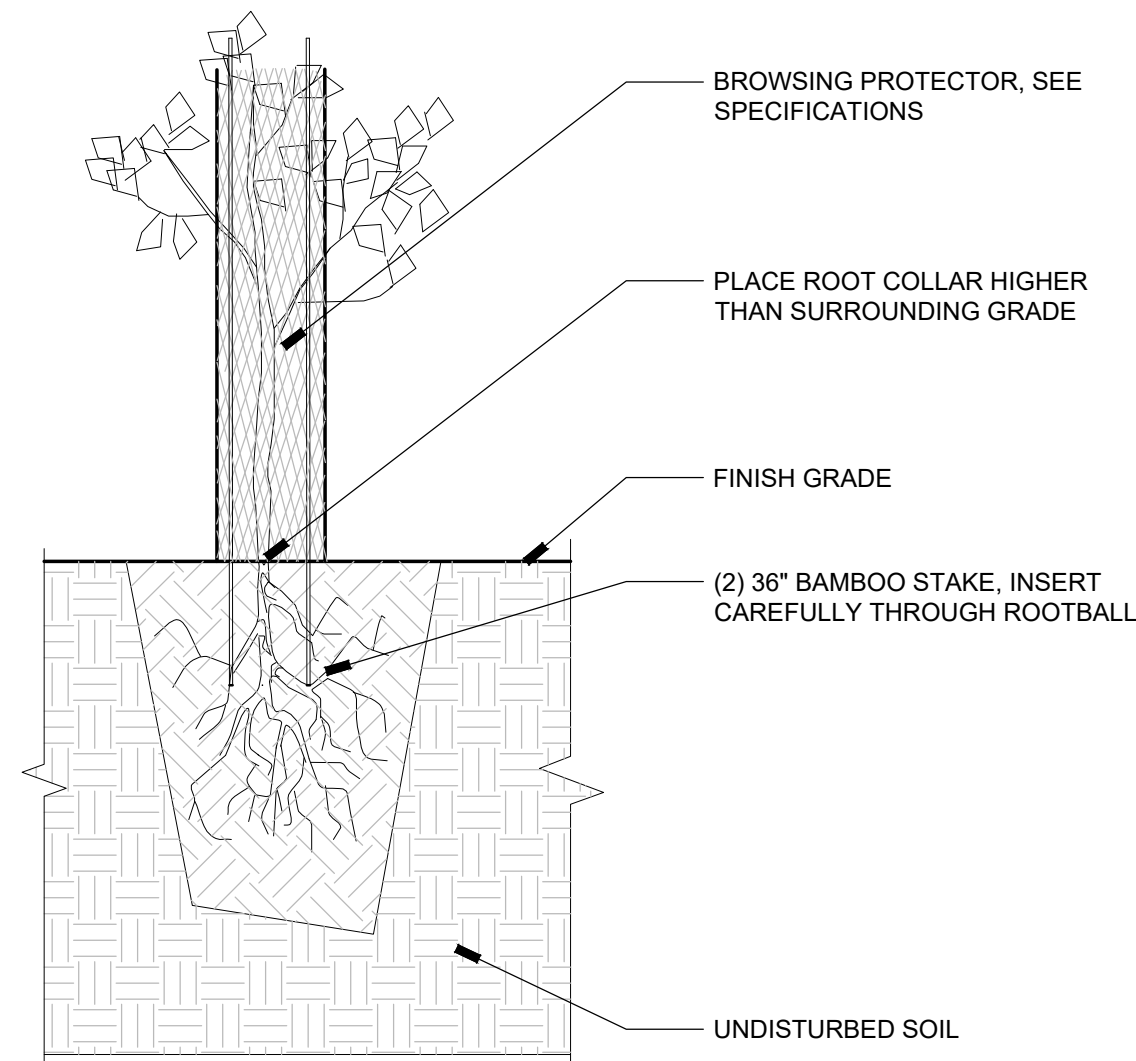
4 PLUGS 1.4 NTS



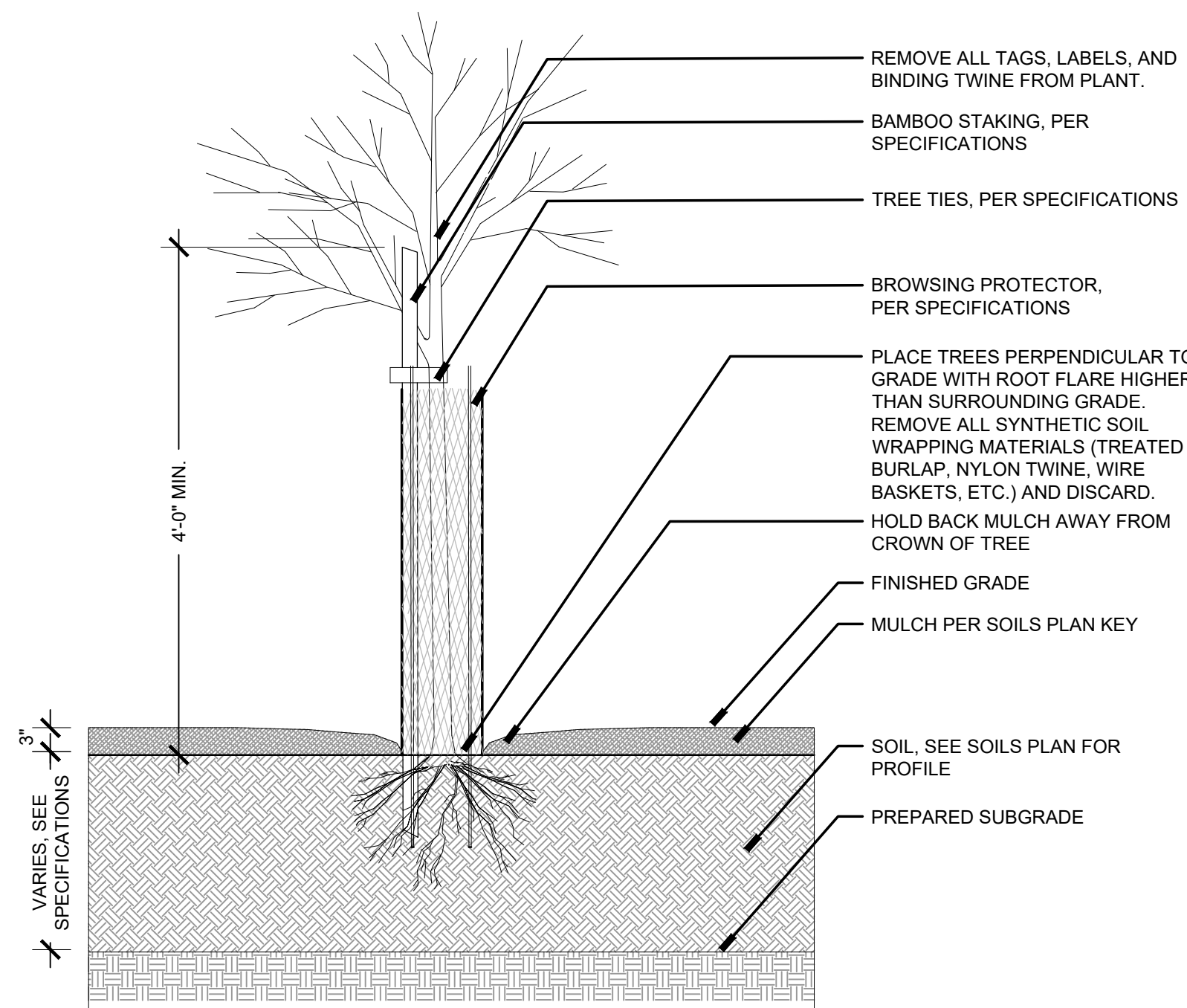
5 PERENNIALS 1.5 NTS



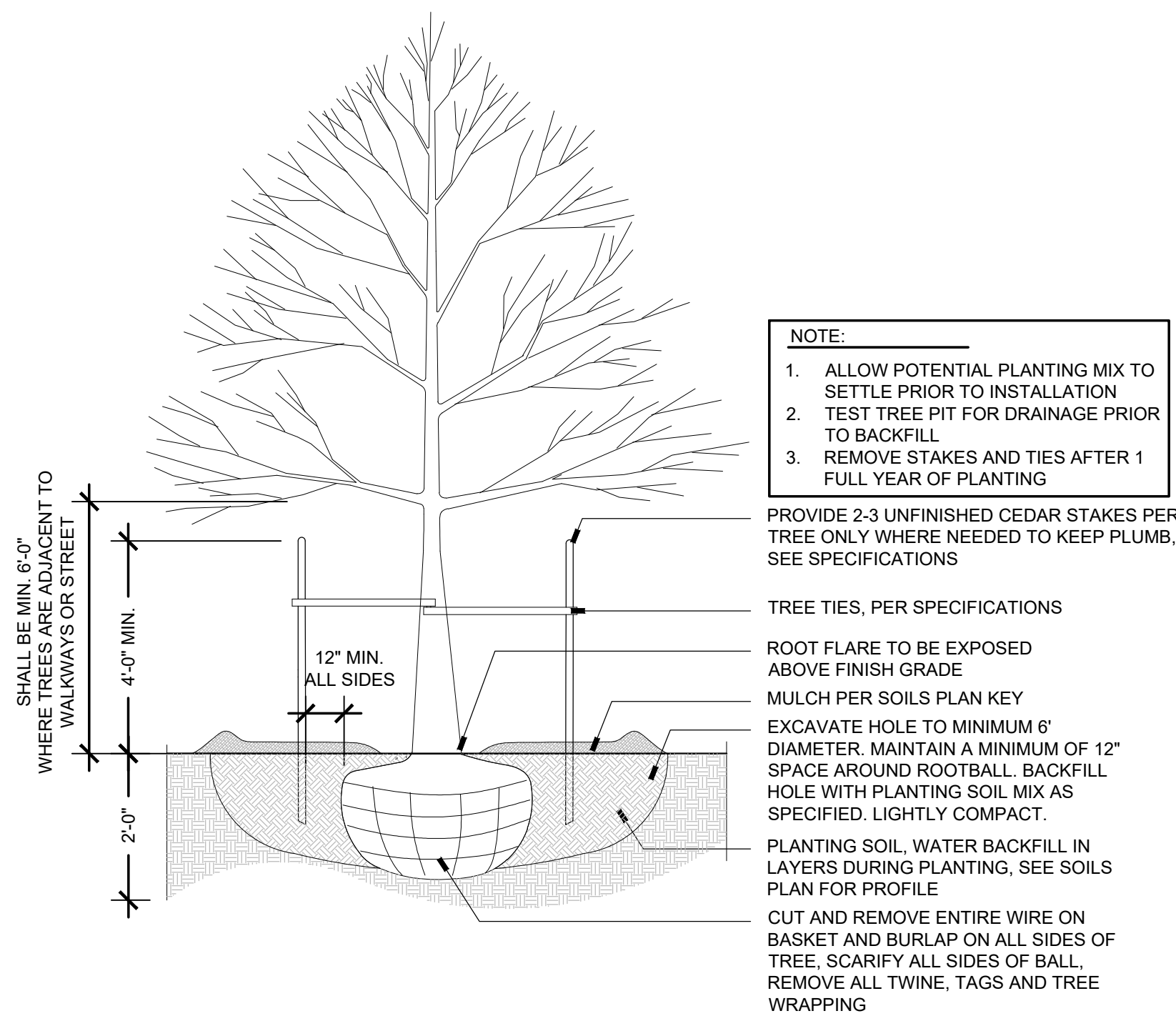
6 SHRUBS 1.6 NTS



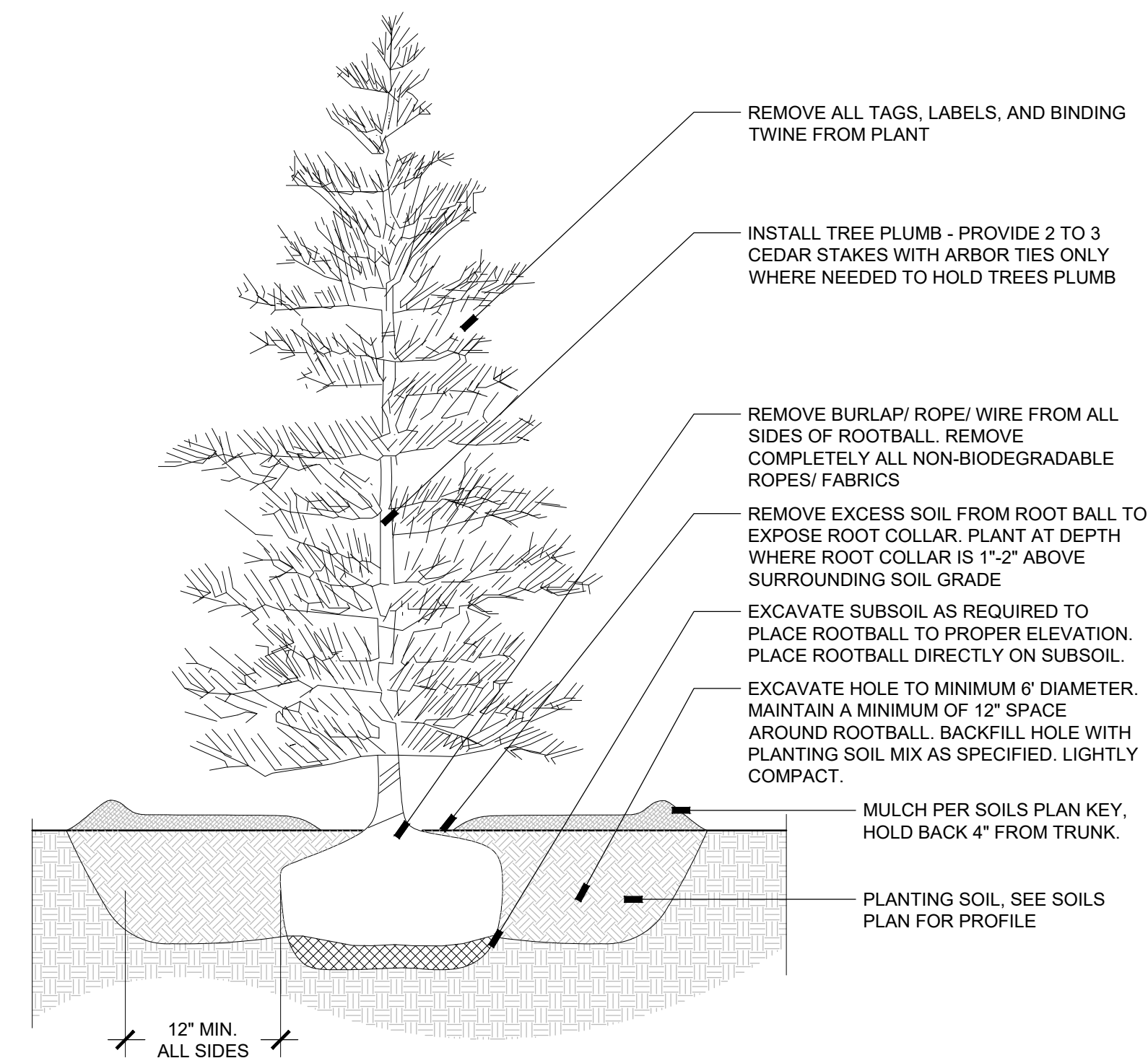
7 TUBELINGS AND LIVE STAKES 1.7 NTS



8 SAPLINGS 1.8 NTS



9 TREES - DECIDUOUS 1.9 NTS



10 TREES - EVERGREEN 1.10 NTS

SITE DETAIL / KEYNOTES: DETAIL/SHEET

1.0	PLANTING	
1.1	SODDED LAWN	1/L-3
1.2	GROUNDCOVER PLANTING	2/L-3
1.3	BULBS	3/L-3
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1.5	PERENNIALS	5/L-3
1.6	SHRUBS	6/L-3
1.7	TUBELINGS	7/L-3
1.8	SAPLINGS	8/L-3
1.9	DECIDUOUS TREE	9/L-3
1.10	EVERGREEN TREE	10/L-3

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offshoots
PRODUCTIVE LANDSCAPES

DRAWING TITLE PROJECT

PLANTING DETAILS

MALDEN RIVER WORKS
356 COMMERCIAL STREET, MALDEN, MA
02148

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