

# Greening Richmond Public Libraries

IMPROVING THE HEALTH OF THE JAMES RIVER BY REDUCING STORMWATER POLLUTION

## East End Branch Library

1200 North 25th Street, Richmond, 23223

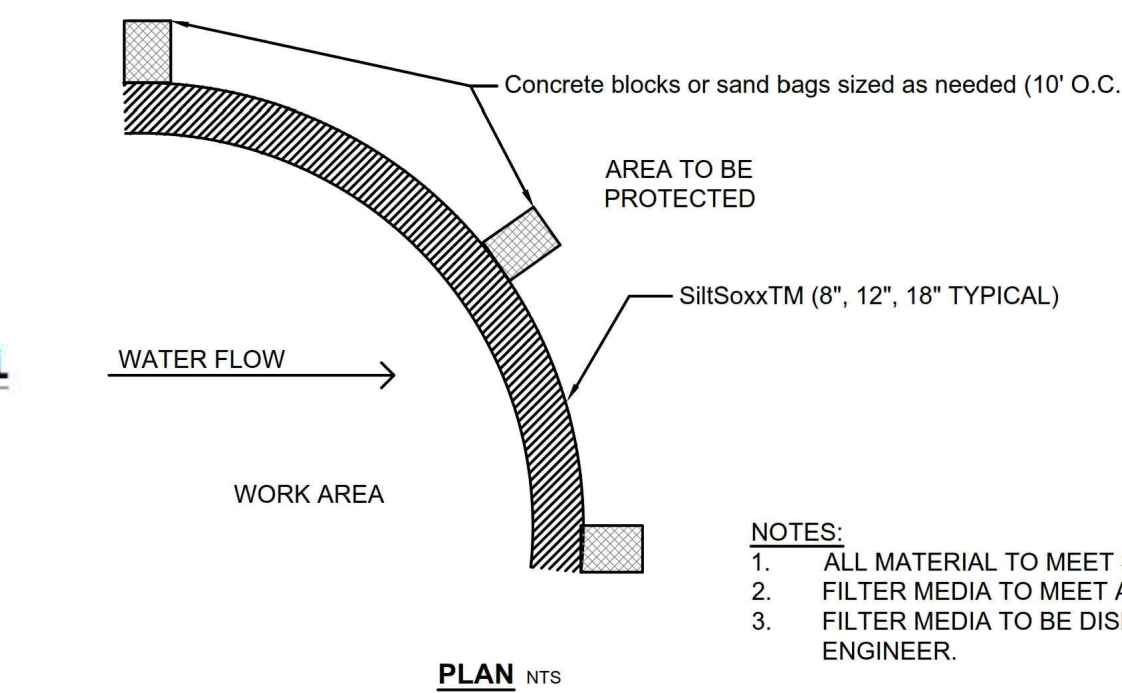
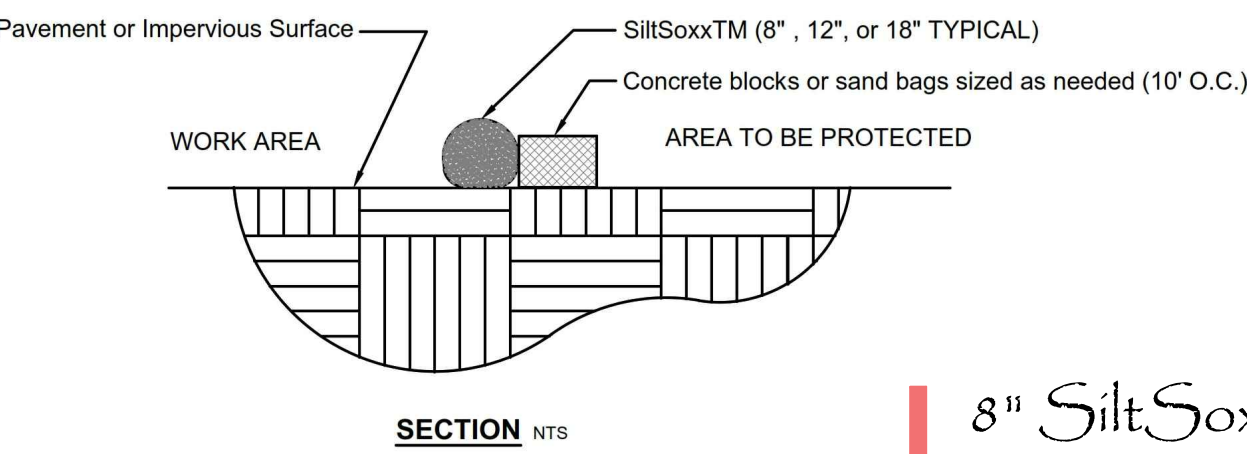
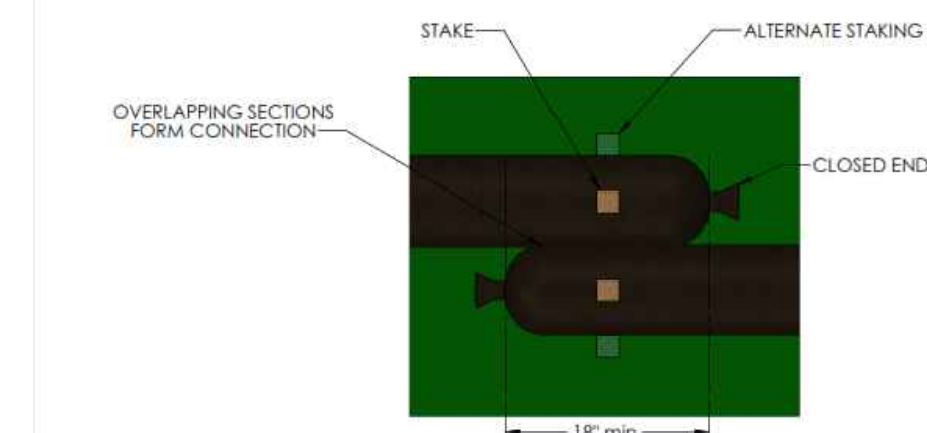
### Legend:

- City Water Sampling Station
- Water Meter
- Gas Meter
- Electric Meter
- Backflow preventer
- City Street Lights
- City Utility Pole
- Hose Bib
- City Electrical Vault
- Gas Vault
- Clean out

- Underground electrical line, abandoned
- Underground electrical line
- Overhead electrical line
- Underground gas line
- Underground sewer line
- Underground water line

LIMITS OF DISTURBANCE:  
3,985 SQUARE FEET

### COMPOST SOCK CONNECTION/ATTACHMENT DETAIL



### SiltSoxxTM for Sediment Control on Pavement

NTS

- NOTES:
1. ALL MATERIAL TO MEET SPECIFICATIONS.
  2. FILTER MEDIA TO MEET APPLICATION REQUIREMENTS.
  3. FILTER MEDIA TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

### NOTES

THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES IS SHOWN ON THIS PLAN. CONTRACTOR TO CONTACT MISS UTILITY AND LOCATE GAS LINE CLOSEST TO PROPOSED IMPROVEMENTS ON R STREET.

CONTRACTOR TO ASSUME ALL RESPONSIBILITY FOR CONSTRUCTION METHODS EMPLOYED AND FIELD VERIFY ALL DIMENSIONS. ISSUES AND CONCERNS SHALL BE REPORTED TO FOUR WINDS.

CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AT ALL TIMES DURING THE DEMOLITION AND BUILDING PROCESS.

NO PUBLIC THOROUGHFARES INCLUDING SIDEWALKS SHALL BE BLOCKED DURING DEMOLITION OR CONSTRUCTION WITHOUT PROPERLY DISPLAYED MUNICIPALITY PERMITS. NO HOLES SHALL BE LEFT OPEN OVERNIGHT WITHOUT SECURING PERIMETER FENCING OR INSTALLING CAUTION TAPE AROUND THE HOLE.

CONTRACTOR TO OBTAIN ALL BUILDING PERMITS, SOIL STUDIES, AND STRUCTURAL DETAILS AS REQUIRED BY THE MUNICIPALITY.

CONTRACTOR AND MASON AND SUBCONTRACTORS IF APPLICABLE TO ATTEND A PRECONSTRUCTION MEETING WITH JRA REPRESENTATIVES AND FOUR WINDS DESIGN.

CONTRACTOR TO DOCUMENT DEPTH OF EXCAVATION IN PROPOSED BIORETENTION AND PVIOUS PAYER AREAS WITH PICTURES THAT SHOW MEASURING TAPE DIMENSIONS IN HOLES. THESE PICTURES SHALL BE EMAILED TO FOUR WINDS AS THEY ARE TAKEN. MINIMUM ONE PICTURE PER HOLE OR VARIED DEPTH APPLICATIONS.

REMOVE ALL SHRUBS IN PLANTER BEDS EXCEPT WHERE SHOWN AS EXISTING TO REMAIN.

IF IT BECOMES NECESSARY TO PUMP RAINWATER OUT OF HOLES, A FILTER BAG SHALL BE USED WITH ADDITIONAL SILT SOXX AREA CREATED SOLELY FOR THIS PURPOSE.

THIS DRAWING SHALL BE PRINTED IN COLOR AND PRINTS TO SCALE ON 24"x36" PAPER. USING SMALLER PRINT SIZES IN THE FIELD IS NOT PERMISSIBLE. A COPY OF THE CITY APPROVED DRAWINGS AND STORMWATER PERMIT SHALL BE KEPT ON SITE AT ALL TIMES.

Remove asphalt, curbing, concrete and sub base to make way for bioretention basins

R Street

Public Alley

Richmond Public Libraries  
East End Branch

22'-8 7/8"

Remove asphalt, sub base, and curb to make way for bioretention basin

Saw cut curbing for new basin at edge of parking stall

Remove several mini ex scoops of soil at (4) locations to be flagged for tree plantings

Remove curbing, concrete; salvage tactile sheet of accessibility ramp for re-use

Salvage this section of granite curbing for re-use

Remove granite curbing to this existing joint

Remove granite curbing to this existing joint

Remove asphalt, curbing, concrete and sub base to make way for bioretention basins

25th Street



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## East End Branch Library

1200 North 25th Street, Richmond, 23223

### Legend:

- City Water Sampling Station
- ⊗

Water Meter
- ⊙

Gas Meter
- ⊞

Electric Meter
- ⊠

Backflow preventer
- City Street Lights
- ⬢

City Utility Pole
- ⊕

Hose Bib
- ⊞

City Electrical Vault
- ⊙

Gas Vault
- ⊕

Clean out
- ⊙

Unknown manhole
- ⊙

Proposed Trash Can, 3
- ▮

Interpretive Sign
- Proposed Bioretention Basins
- ▨

Velocity reducer & trash /salt trap, see detail
- Bee Zone Markers, 10
- ▮

Roll down curbs for ingress/ egress of stormwater
- ⊕

Overflow standpipe, see notes
- ⊗

No Parking sign, 7

Existing Trees & Shrubs To Be Preserved:

NOTES

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THE NO PARKING SIGNS SHALL BE 1" STEEL PIPE OR SIMILAR, SET 24" BELOW GRADE IN 160 LBS OF CONCRETE (THESE ARE BEING USED AS BOLLARDS).

THE BOTTOM OF THE BIORETENTION BASIN SHALL BE SCARIFIED BEFORE INSTALLATION OF MEDIA IF THE BASIN HAS RECEIVED ANY FOOT TRAFFIC OR COMPACTION. MAINTAIN SOIL DEPTH AS NOTED.

THE BIORETENTION SOIL SHALL BE 80% COARSE (MORTAR) SAND, 10% HIGH GRADE TOPSOIL, AND 10% LEAF OR MUSHROOM COMPOST.

SOIL TESTING: CONTRACTOR TO PROVIDE TESTING OF THE BIORETENTION SOIL MIX FOR ACCEPTABLE PHOSPHOROUS LEVELS. THE MIX SHALL HAVE A P-INDEX BETWEEN 10 AND 30 OR BETWEEN 7 AND 21 MG/ KG OF PHOSPHOROUS TOTAL IN THE SOIL MIX.

NON-WOVEN GEOTEXTILE SHALL HAVE A FLOW RATE > 110 GAL/ MIN/ SQ FT (GEOTEX 351 OR EQUIVALENT).

UPON COMPLETION OF DRAINAGE WORK, SOIL INSTALLATION, AND LARGER TREES AS NOTED (SEE PAGE TWO) A VOLUNTEER CREW WILL INSTALL THE PLANTS. AFTER THE VOLUNTEER WORK IS COMPLETE CONTRACTOR SHALL CHECK FINISHED GRADES OF THE BIORETENTION AREA, LOOSEN ANY COMPACTED SOIL, INSTALL MULCH, AND FULLY CLEAN UP THE SITE INCLUDING POWER WASHING MASONRY SURFACES.

BASINS A-C SHALL HAVE AN OVERFLOW STANDPIPE INDEPENDENT OF THE UNDERDRAIN. THE PIPE SHALL BE 8" SCHEDULE 40 PVC WITH A FINISHED ELEVATION 3" ABOVE FINISHED ENGINEERED SOIL HEIGHT. IT SHALL BE FITTED WITH AN 8" DOMED TRASH RACK/ FLOATING DEBRIS GRATE. BASIN A SHALL OVERFLOW INTO BASIN B; BASIN B INTO C; AND OVERFLOW PIPE OF BASIN C SHALL OUTLET INTO THE PROPOSED GUTTER.

THE TRASH CANS SHALL BE TF 1040 BY BELSON OUTDOORS WITH OPTIONAL ASH URN ATTACHMENT (PART TF2090). STANDARD COLOR/ FINISH SELECTED AT AWARD OF PROJECT CONTRACT.

IRRIGATION WILL BE INSTALLED BY RICHMOND IRRIGATION, CONTACT DAN BRADY FOR QUOTE TO INCLUDE IN CONTRACTORS PROPOSAL. SEE PLANTING PLAN FOR LAYOUT NARRATIVE FOR CONSIDERATION IN CONCRETE WORK.

#### Bioretention Basin Sizes and Media Depths

Basin	Basin Footprint	Engineered Soil Depth	Gravel Layer Depth	Underdrain	Overflow
A	223 square feet	24"	none	6" perf PVC	standpipe to Basin B
B	224 square feet	24"	none	6" perf PVC	standpipe to Basin C
C	198 square feet	24"	none	6" perf PVC	back into street
1	67 square feet	30"	12"	6" perf PVC	back into street
2	86 square feet	30"	12"	6" perf PVC	back into street
3	67 square feet	30"	12"	6" perf PVC	back into street
4	246 square feet	30"	6"	6" perf PVC	back into street

#### NOTES, cont

AFTER INSTALLATION OF ALL ELEMENTS DESCRIBED HEREIN, A VOLUNTEER CREW SHALL INSTALL THE PLANTS, SOIL AMENDMENTS, AND MULCH. CONTRACTOR TO RETURN TO SITE FOR FINAL CLEAN-UP AFTER VOLUNTEER WORK DAYS.

CONTRACTOR TO PROVIDE TRANSPORTATION AND OFFLOADING OF REMOVED GRANITE CURB SECTIONS TO ANOTHER (2) LIBRARY LOCATIONS.

Pour new curb and gutter to layout shown, see detail

Overflow standpipe, outlet back into street tis cell only

Public Alley

## Richmond Public Libraries East End Branch

Asphalt Parking Lot

Cut to length & install salvaged granite curbing section

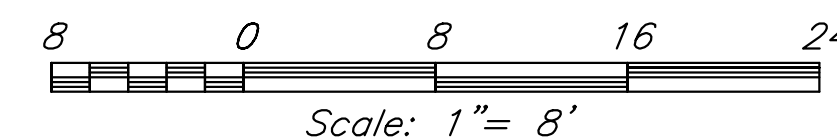
25th Street

Pour new curb and gutter to layout shown flowing existing grade, see detail



FOUR WINDS  
DESIGN, LC

Site Plan  
For construction



Date:  
1-31-23

Sheet:  
2 of 5  
DPU2



# Greening Richmond Public Libraries

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#### VESCH GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS 9VAC25-840.
- ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

#### RICHMOND STANDARD E&S NOTES

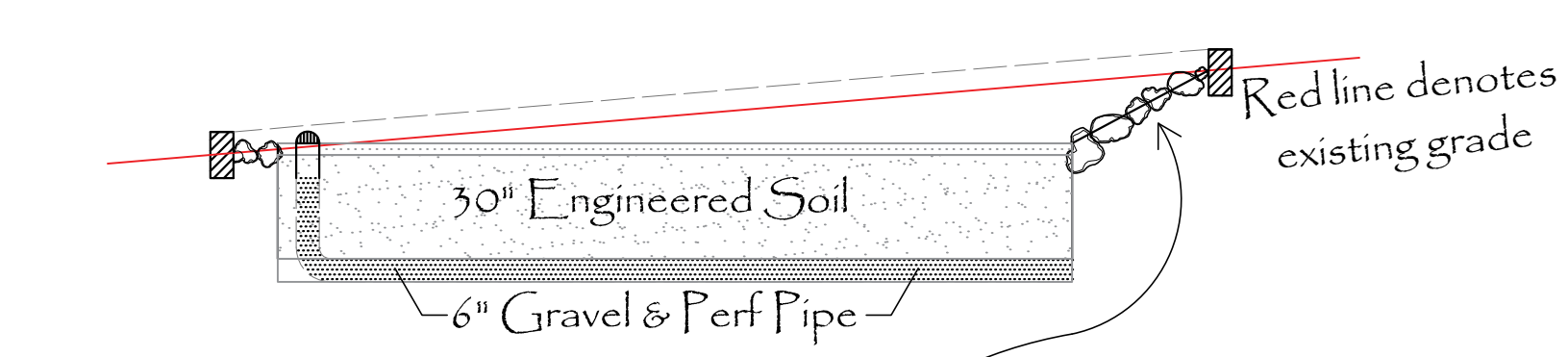
- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN, DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- EXCESS EXCAVATION DISPOSED OF OFF THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP OF THE LAND DISTURBING ACTIVITY.
- EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED SO THAT THE SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES.
- EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL THE DISTURBED AREA IS STABILIZED.
- PROPERTIES ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD OR SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF.
- THE DISPOSAL OF WASTE MATERIALS REMOVED FROM EROSION AND SEDIMENT CONTROL FACILITIES AND THE DISPOSAL OF THESE FACILITIES SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

#### 19 MINIMUM STANDARDS

A VESCP MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA, TECHNIQUES AND METHODS:

- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
  - THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
  - SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
- CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
- CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
- STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

- WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
- ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
- WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
- WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
- ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
- THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
  - NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
  - EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
  - EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
  - MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
  - RESTALLIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
  - APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.
- WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS.



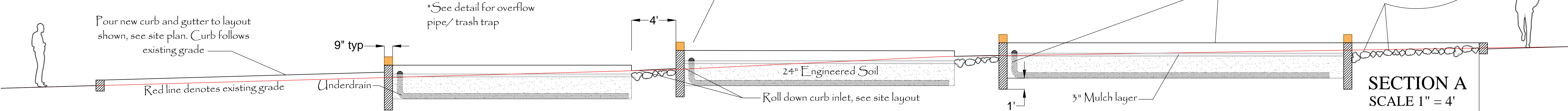
SECTION B  
SCALE 1" = 4'

Velocity reduced and trash/ salt trap: mix 3-5" and 2-3" tan riverstone sizes at 75/ 25%. Place larger stones over fabric and carefully fill gaps with mortar, apply smaller stones. No mortar shall be visible. This application is intended to be semi-pervious to capture road salt. Contractor to provide mock-up for approval

Bioretention basin walls: 3500 psi concrete with ½" rebar 18" OC horizontally and vertically. Treat exposed faces with artex to remove any form marks or striations. Tooled top corners. Waterproof interior of walls, contractor to submit product cut sheet.

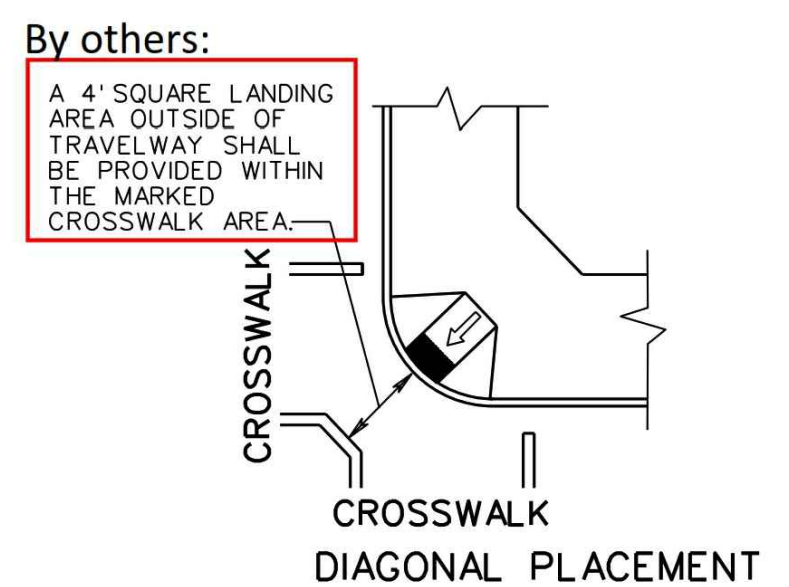
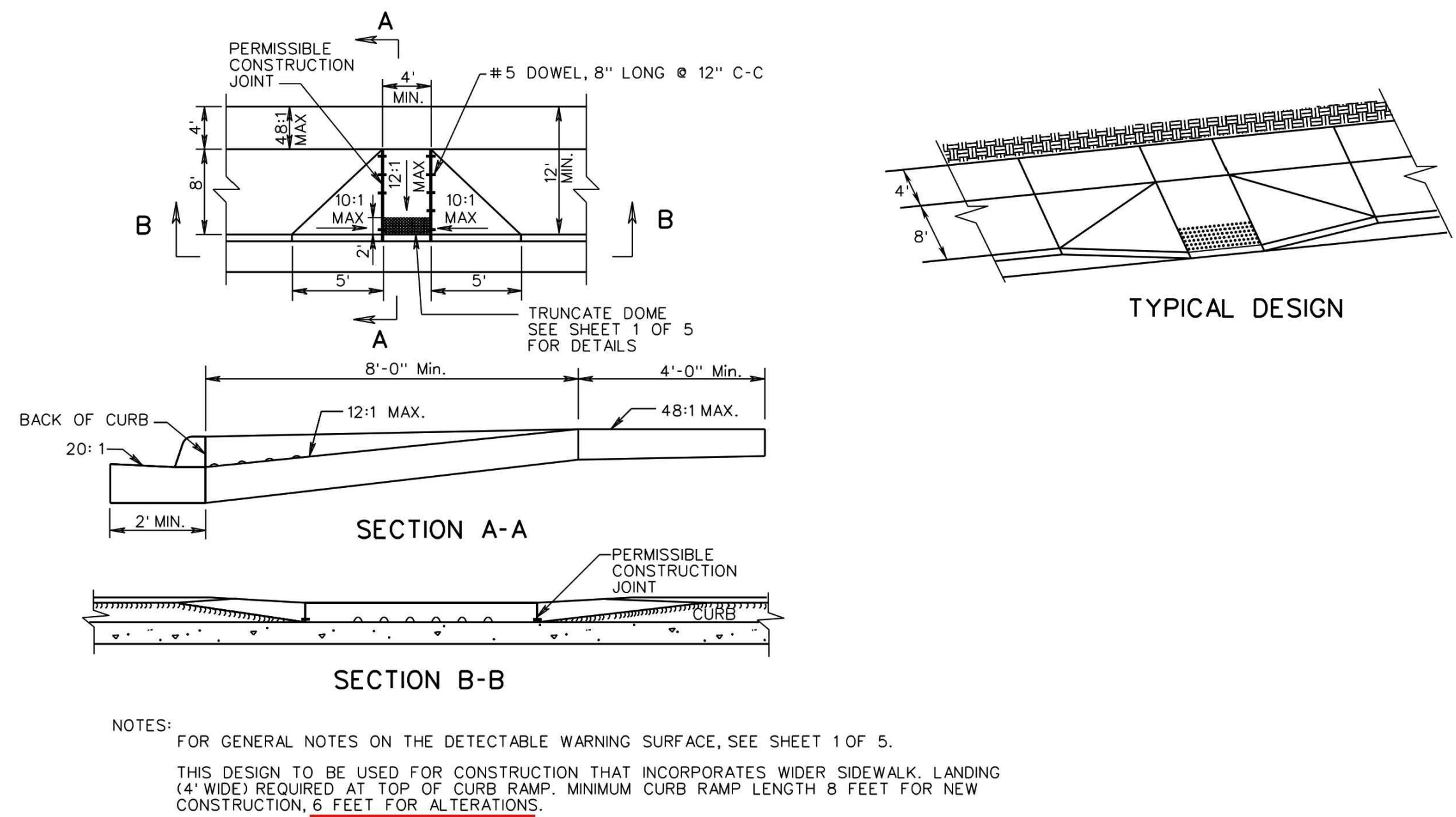
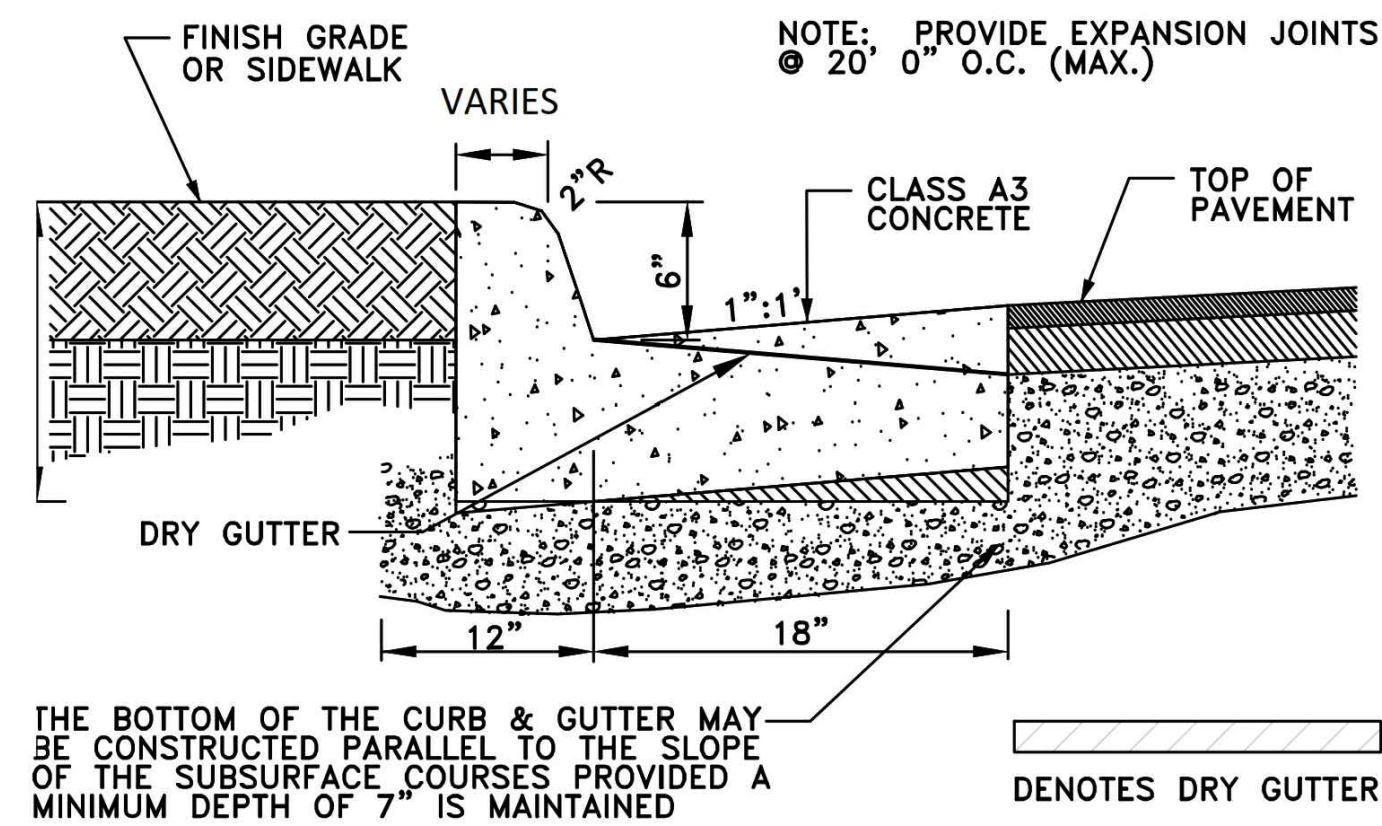


Bee Zone Markers: 3500 psi concrete, set as second pour on top of walls with (3) pcs ½" rebar in wall pour for connection. Treat face with Artex to remove any form marks or striations. Use project standard color admixture, tooled top corners.





**1200 North 25th Street, Richmond, 23223**



Stormwater Management Facility Type	Stormwater Management Description	Stormwater Management Facility Structure Number	Location		Acres Treated By Facility			Pollutant Removal, lbs			Per VRRM		HUC (6th order) Of Location Of Facility	Impaired Water Segment To Which Facility Discharges	Ownership Of Facility (Public/Private)
			Latitude	Longitude	Impervious Acres	Pervious Acres	Total Acres	TP	TN	TSS	Treatment Volume (cubic feet)	Runoff captured (acre-feet)			
Bioretention	Urban Bioretention	A	37.53957d N	77.41146d W	0.0309	0.0032	0.0341	0.04	0.30	n/a	103.00	0.0009	JL101	James River - Almond Creek	Public
Bioretention	Urban Bioretention	B	37.53961d N	77.41152d W	0.0586	0.0017	0.0603	0.07	0.58	n/a	202.00	0.0019	JL101	James River - Almond Creek	Public
Bioretention	Urban Bioretention	C	37.53968d N	77.41161d W	0.0127	0.0006	0.0133	0.02	0.13	n/a	44.00	0.0004	JL101	James River - Almond Creek	Public
Bioretention	Urban Bioretention	1	37.53957d N	77.41131d W	0.0171	0.0000	0.0171	0.02	0.17	n/a	59.00	0.0006	JL101	James River - Almond Creek	Public
Bioretention	Urban Bioretention	2	37.53970d N	77.41118d W	0.0492	0.0000	0.0492	0.06	0.49	n/a	170.00	0.0016	JL101	James River - Almond Creek	Public
Bioretention	Urban Bioretention	3	37.53983d N	77.41108d W	0.0309	0.0000	0.0309	0.04	0.31	n/a	107.00	0.0010	JL101	James River - Almond Creek	Public
Bioretention	Urban Bioretention	4	37.54003d N	77.41145d W	0.0797	0.0097	0.0894	0.10	0.86	n/a	299.00	0.0028	JL101	James River - Almond Creek	Public



# Greening Richmond Public Libraries

IMPROVING THE HEALTH OF THE JAMES RIVER BY REDUCING STORMWATER POLLUTION

## East End Branch Library

1200 North 25th Street, Richmond, 23223

### Legend:

- City Water Sampling Station
- Water Meter
- Gas Meter
- Electric Meter
- Backflow preventer
- City Street Lights
- City Utility Pole
- Hose Bib
- City Electrical Vault
- Gas Vault
- Clean out
- Proposed Trash Can, 3
- Interpretive Sign
- Proposed Bioretention Basins
- Velocity reducer & trash / salt trap, see detail
- Bee Zone Markers, 10
- Bioretention basin inspection port, connect to underdrain, see notes

Existing Trees & Shrubs To Be Preserved:

#### NOTES

THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES IS SHOWN ON THIS PLAN, CONTRACTOR TO CONTACT MISS UTILITY AND LOCATE GAS LINE CLOSEST TO PROPOSED IMPROVEMENTS ON R STREET.

CONTRACTOR TO ASSUME ALL RESPONSIBILITY FOR CONSTRUCTION METHODS EMPLOYED AND FIELD VERIFY ALL DIMENSIONS. ISSUES AND CONCERNS SHALL BE REPORTED TO FOUR WINDS.

CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AT ALL TIMES DURING THE DEMOLITION AND BUILDING PROCESS.

NO PUBLIC THOROUGHFARES INCLUDING SIDEWALKS SHALL BE BLOCKED DURING DEMOLITION OR CONSTRUCTION WITHOUT PROPERLY DISPLAYED MUNICIPALITY PERMITS. NO HOLES SHALL BE LEFT OPEN OVERNIGHT WITHOUT SECURING PERIMETER FENCING OR INSTALLING CAUTION TAPE AROUND THE HOLE.

CONTRACTOR TO OBTAIN ALL BUILDING PERMITS, SOIL STUDIES, AND STRUCTURAL DETAILS AS REQUIRED BY THE MUNICIPALITY.

CONTRACTOR AND MASON AND SUBCONTRACTORS IF APPLICABLE TO ATTEND A PRECONSTRUCTION MEETING WITH JRA REPRESENTATIVES AND FOUR WINDS DESIGN.

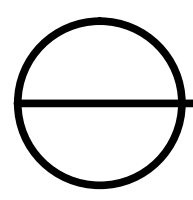
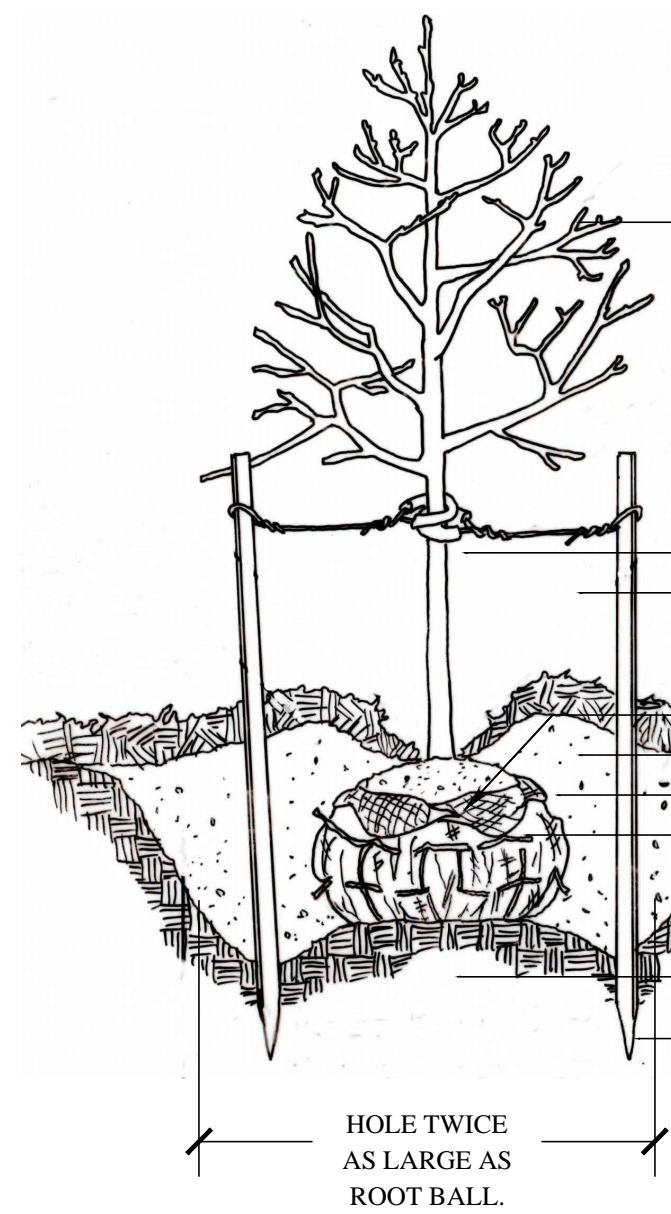
CONTRACTOR TO DOCUMENT DEPTH OF EXCAVATION IN PROPOSED BIORETENTION AND PERVIOUS PAVEMENT AREAS WITH PICTURES THAT SHOW MEASURING TAPE DIMENSIONS IN HOLES. THESE PICTURES SHALL BE EMAILED TO FOUR WINDS AS THEY ARE TAKEN. MINIMUM ONE PICTURE PER HOLE OR VARIED DEPTH APPLICATIONS.

THIS DRAWING SHALL BE PRINTED IN COLOR AND PRINTS TO SCALE ON 24"x36" PAPER. USING SMALLER PRINT SIZES IN THE FIELD IS NOT PERMISSIBLE. A COPY OF THE CITY APPROVED DRAWINGS AND STORMWATER PERMIT SHALL BE KEPT ON SITE AT ALL TIMES.

IRRIGATION WILL BE INSTALLED BY RICHMOND IRRIGATION, CONTACT DAN BRADY FOR QUOTE TO INCLUDE IN CONTRACTORS PROPOSAL. SEE PLANTING PLAN FOR LAYOUT NARRATIVE FOR CONSIDERATION IN CONCRETE WORK.

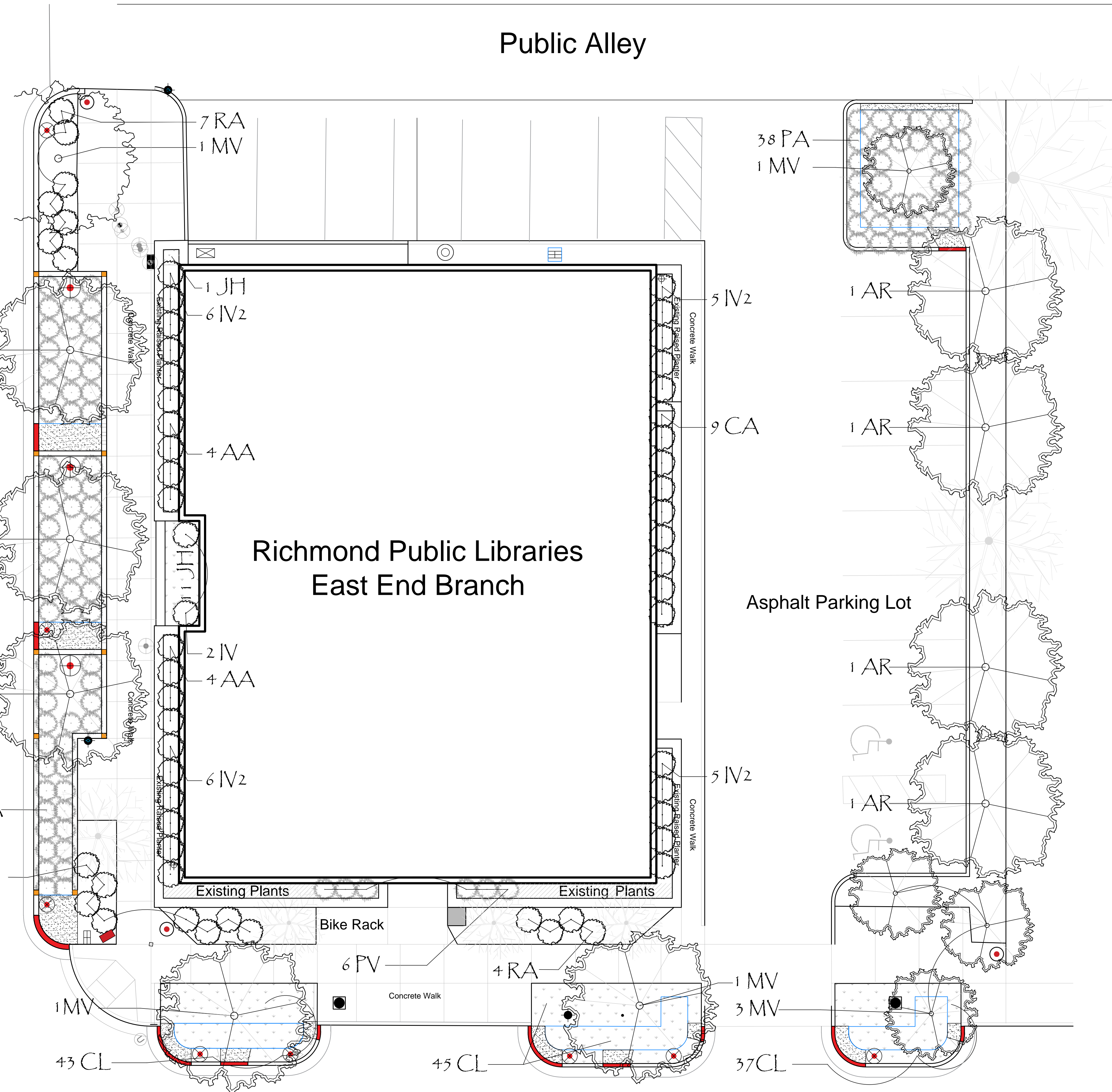
IN ADDITION TO THE PLANTINGS SHOWN, 11 MV SHALL BE INSTALLED AS STREET TREES ALONG R STREET. LOCATIONS FLAGGED IN THE FIELD AT TIME OF INSTALL.

Plant Schedule				
Code	Botanical Name	Common Name	Quantity	Size
AR	Acer rubrum 'Brandywine'	Red Maple	4	2.5" Cal
AA	Aronia arbutifolia 'Low Scape'	Red Chokeberry	8	3 Gal
CL	Chasmanthium latifolium	Sea Oats	125	1 Gal
CA	Clethra alnifolia 'Hummingbird'	Dwarf Clethra	9	3 Gal
IT	Itea virginica 'Henry's Garnet'	Sweetspire	2	7 Gal
IT	Itea virginica 'Little Henry'	Sweetspire	22	3 Gal
JH	Juniperus horizontalis 'Bar Harbor'	Creeping Juniper	12	1 Gal
MV	Magnolia virginiana	Sweetbay Magnolia	21	7-8"
PA	Panicum amarum 'Dewey Blue'	Atlantic Coastal Panic Grass	103	3 Gal
PV	Panicum virgatum 'Shenandoah'	Switch Grass	6	3 Gal
RA	Rhus aromatica 'Low Grow'	Fragrant Sumac	19	3 Gal

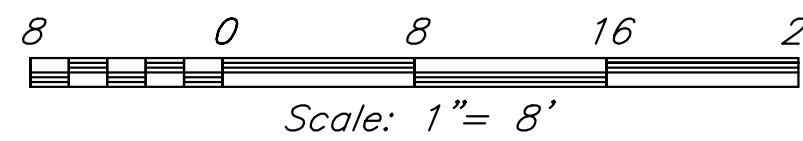


Tree Planting

Scale: none



Planting & Irrigation Plan  
Not for construction



Date: 1-31-23

Sheet: 5 of 5