

# DORSEY BUILDING WATER QUALITY ENHANCEMENT

HOWARD COUNTY, MARYLAND  
STORMWATER MANAGEMENT DIVISION  
CA 08-29

**LEGEND**

- 183 — EXISTING CONTOURS
- 346 — PROPOSED CONTOURS
- ==== PIPE

**GENERAL NOTES:**

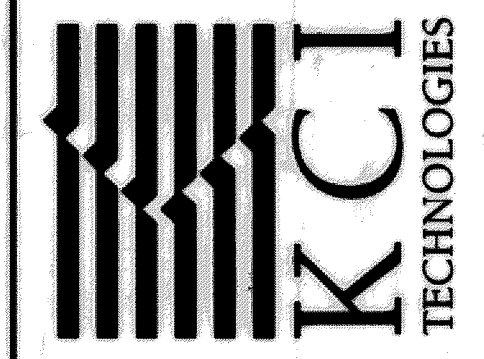
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS OF HOWARD COUNTY AND MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 5 DAYS PRIOR TO ANY EXCAVATION WORK BEING DONE.
3. THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
4. STORMWATER MANAGEMENT IS NOT REQUIRED FOR THIS PROJECT SINCE THE PROJECT IS A WATER QUALITY ENHANCEMENT.
5. EXISTING UTILITIES ARE BASED ON FIELD SURVEYS AND AVAILABLE RECORD DRAWINGS.
6. TOPOGRAPHIC SURVEY OF THE SITE WAS PERFORMED BY AB CONSULTANTS, INC. IN FEBRUARY 2010.
7. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
8. OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND KCI TECHNOLOGIES, INC. DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN. THE CONTRACTOR MUST VERIFY SUCH INFORMATION TO HIS OWN SATISFACTION.
9. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE ENGINEER SHALL BE NOTIFIED TO IMMEDIATELY RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THE CONTRACTOR ASSUMES ALL RESPONSIBILITIES FOR THOSE CHANGES.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY.
11. EXISTING GROUND AND /OR VEGETATION DISTURBED BY THE PROPOSED WORK SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION OR BETTER BY CONCLUSION OF THE PROJECT.
12. THE PROPOSED PROJECT IS LOCATED OFF OF BENDIX ROAD.
13. CONTRACTOR SHALL PROVIDE REDLINE AS-BUILT PLAN THAT INCLUDES BIORETENTION FACILITIES, LOCATION OF RELOCATED CONDUIT, ETC.

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN SHEET
3	PROFILES & DETAIL SHEET
4	DETAIL SHEET
5	EROSION AND SEDIMENT CONTROL PLAN
6	LANDSCAPE PLAN

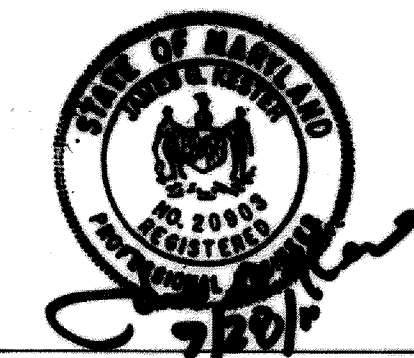
NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD  
SPARKS, MARYLAND 21152  
TELEPHONE: (410) 316-7800  
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DORSEY BUILDING  
WATER QUALITY ENHANCEMENT  
STORMWATER MANAGEMENT DIVISION  
CA 08-29

TITLE SHEET



AS-BUILT CERTIFICATION  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.  
SIGNATURE: James A. Altman PE NO. 20903 DATE: 7/28/11

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

James A. Altman 7/2/10  
DIRECTOR OF PUBLIC WORKS DATE

Howard E. Salthman, Acting 7/1/10  
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE

Howard E. Salthman 7/1/10  
CHIEF, STORMWATER MANAGEMENT DIVISION DATE

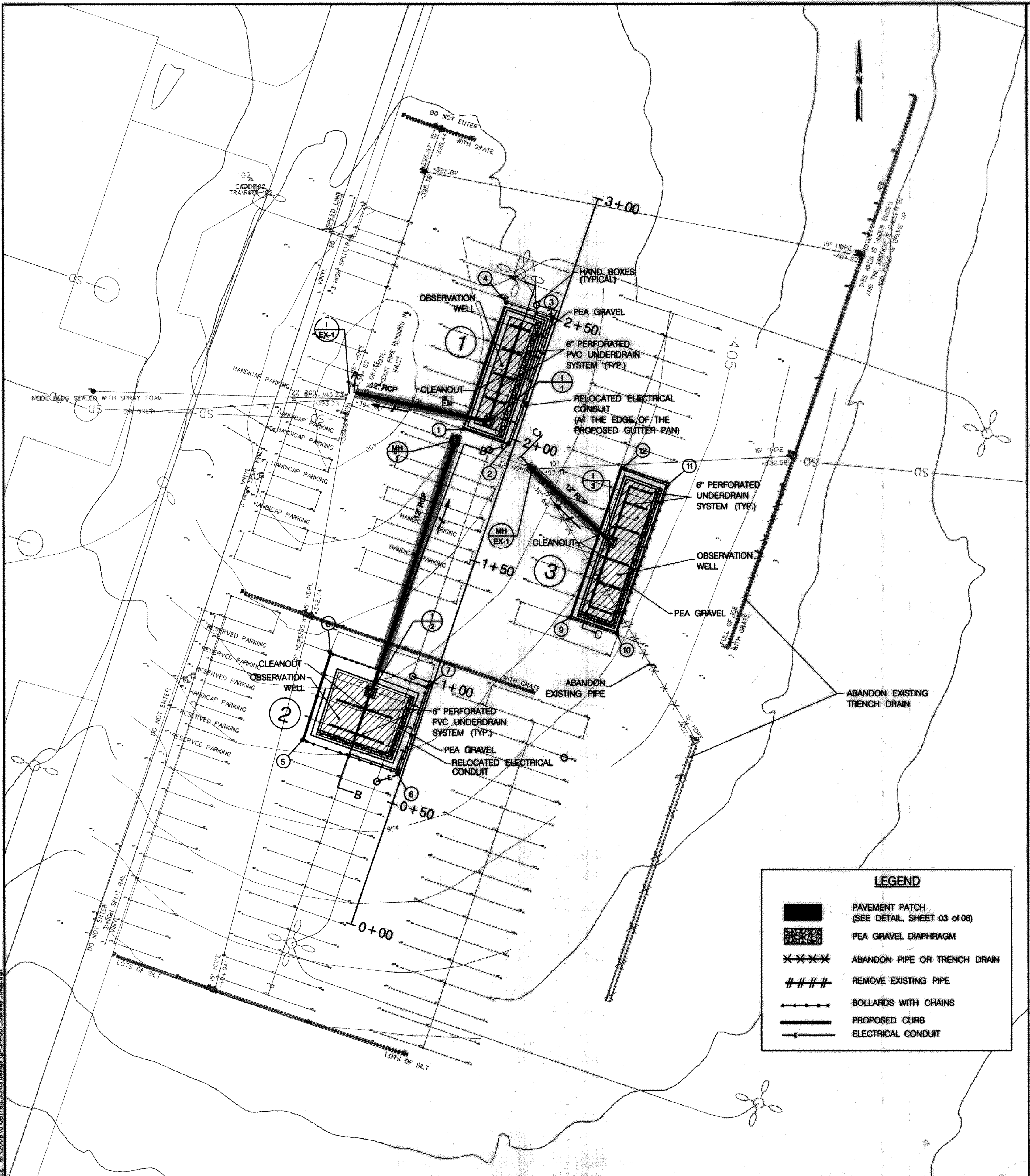


SCALE: N/A  
DATE: JUNE 2010  
KCI JOB NO.: 01-081795.33  
CAPITAL PROJECT NO.: CA 08-29  
PERMIT ISSUE:  
CONSTRUCTION ISSUE:

SHEET NO.: 01 OF 06

PLOTTED: 03:06 PM on Wednesday, June 30, 2010  
BY: Joliana Rice, Division: P003, Water Resources Group  
FILE: W:\2009\081795.33\Drawings\101\Drawings\DWG.dwg





BMP CONTROL COORDINATES				
LOCATION	PT. NO.	STATION	NORTHING	EASTING
BIORETENTION 1	1	1+97.55	571974.3757	1361370.3680
	2	1+97.55	571968.2251	1361387.6366
	3	2+0.15	572017.9387	1361404.8325
	4	2+0.15	572023.7000	1361387.0245
BIORETENTION 2	5	0+61.94	571852.5925	1361307.0294
	6	0+61.94	571839.7862	1361344.2281
	7	0+97.37	571873.2404	1361355.8006
	8	0+97.37	571886.8152	1361317.9984
BIORETENTION 3	9	1+41.36	571900.5644	1361411.8531
	10	1+41.36	571894.1793	1361430.1882
	11	2+03.57	571952.6406	1361450.3391
	12	2+03.57	571958.9414	1361432.2707

BASELINE CONTROL COORDINATES		
STATION	NORTHING	EASTING
0+00.00	571780.5415	1361325.9370
3+00.00	572064.3929	1361423.0370

REMOVE EXISTING PIPE				
FROM STATION	TO STATION	FROM OFFSET (FT)	TO OFFSET (FT)	LENGTH (FT)
1+41.90	1+69.36	69, RT	37, RT	42.0
1+83.73	1+91.50	19, RT	11, RT	12.0

ABANDON EXISTING PIPE				
FROM STATION	TO STATION	FROM OFFSET (FT)	TO OFFSET (FT)	LENGTH (FT)
1+11.87	1+41.90	104 RT	69, RT	47.0
1+69.36	1+83.73	37 RT	19, RT	23.0

ABANDON TRENCH DRAIN				
FROM STATION	TO STATION	FROM OFFSET (FT)	TO OFFSET (FT)	LENGTH (FT)
0+04.00	1+12.00	104, RT	104, RT	108.0
1+50.00	1+89.00	105, RT	105, RT	58.0

**OPERATION AND MAINTENANCE SCHEDULE**

- ROUTINE MAINTENANCE:**
- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE BIORETENTION FACILITIES ARE FUNCTIONING PROPERLY.
  - CHECK OBSERVATION WELLS PERIODICALLY FOR STANDING WATER, WHICH MAY INDICATE REDUCED FACILITY PERFORMANCE.
  - DEBRIS AND LITTER SHALL BE REMOVED.
  - VISIBLE SIGNS OF EROSION IN THE FACILITIES SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
  - INSPECT STRUCTURAL COMPONENTS OF THE FACILITIES SUCH AS THE RISER, THE J-VENT AND THE SCREW TOP CAPS.
- NON-ROUTINE MAINTENANCE:**
- STRUCTURAL COMPONENTS OF THE FACILITIES SUCH AS THE RISER, THE VENT AND SCREW TOP CAPS SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE.
  - SEDIMENT SHALL BE VACUUMED FROM THE FACILITIES VIA THE CLEANOUTS WHEN THE OBSERVATION WELL INDICATES THAT THE BSM, SAND AND STONE LAYERS ARE REMAINING SATURATED FOR MORE THAN 72 HOURS, UPON APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.
  - REPLACE DEAD OR DISEASED PLANT MATERIAL.
  - WHEN WATER PONDS AT THE SURFACE FOR MORE THAN 72 HOURS, REMOVE AND REPLACE 3" OF HARDWOOD MULCH. SEDIMENT SHALL BE REMOVED FROM THE FILTER BED WHEN THE DEPTH EXCEEDS 1 INCH.

- NOTES:**
- PERFORM FULL DEPTH SAW CUT AROUND PERIMETER OF EACH BIORETENTION FACILITY.
  - ABANDON PIPES AND TRENCH DRAINS AS SPECIFIED ON THIS PLAN WITH FLOWABLE BACKFILL. REMOVE TRENCH DRAIN GRATES AND FILL FLUSH WITH EXISTING PAVEMENT.
  - ELECTRICAL CONDUIT WITHIN BIORETENTION 1 AND 2 TO BE RELOCATED. ELECTRICAL CONDUITS MAY BE PLACED IN ALTERNATE LOCATIONS FROM WHAT IS SHOWN ON THIS PLAN WITH THE APPROVAL OF THE DPW AND THE DORSEY BUILDING REPRESENTATIVE.

NO.	REVISIONS DESCRIPTION	DATE

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DORSEY BUILDING  
 WATER QUALITY ENHANCEMENT  
 STORMWATER MANAGEMENT DIVISION  
 CA 08-29

PLAN SHEET

SCALE: 1" = 20'

DATE: JUNE 2010

PROJECT NO.: 01-081795.33

CAPITAL PROJECT NO.: CA 08-29

PERMIT ISSUE:

CONSTRUCTION ISSUE:

SHEET NO.: 02 OF 06

PLOTTED: 03:40 PM on Tuesday, June 23, 2010  
 FILE: M:\2008\081795.33\Drawings\02.dwg  
 PLOTTER: HP DesignJet 5000



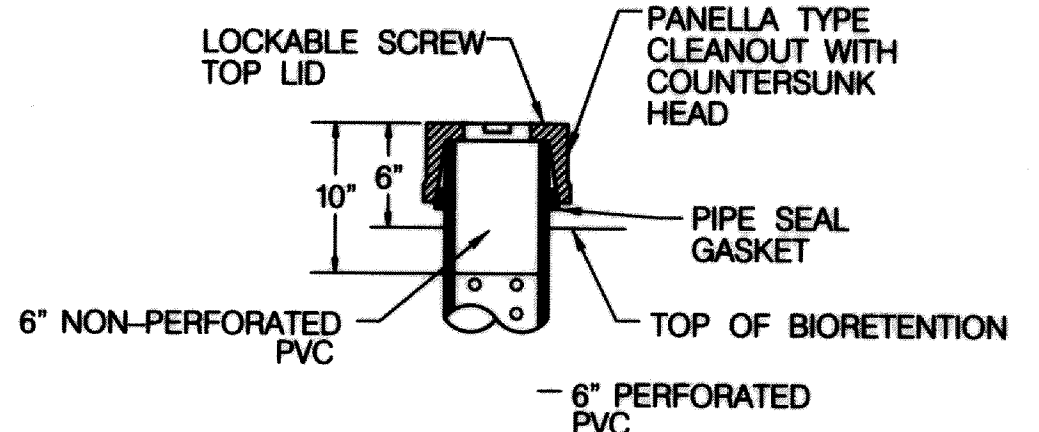
**STORMWATER MANAGEMENT SUMMARY TABLE**

DRAINAGE AREA	DRAINAGE AREA [AC.]	FILTER AREA (A <sub>f</sub> )			REV		CP <sub>v</sub>	
		REQUIRED [SF.]	PROVIDED [SF.]	PERCENT TREATED	REQUIRED [CF.]	PROVIDED [CF.]	REQUIRED [CF.]	PROVIDED [CF.]
BIORETENTION 1	0.20	591	455	77%	48	48	NA	NA
BIORETENTION 2	1.72	3936	684	17%	80	80	NA	NA
BIORETENTION 3	0.83	2453	671	28%	81	81	NA	NA

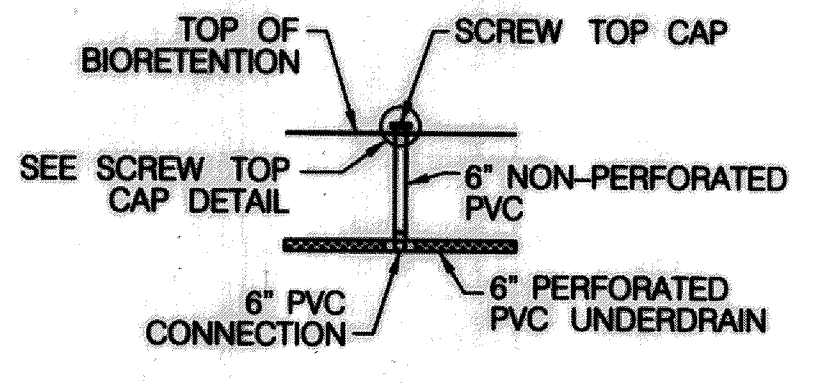
**STRUCTURE SCHEDULE**

NO.	STRUCTURE TYPE	DETAIL NO.	STATION	OFFSET	INV. OUT	TOP ELEV.
I-1	TYPE 'D' INLET (SEE DETAIL SHEET 04)	D-4.10*	2+03.30	13, LT	394.71	401.35
I-2	TYPE 'D' INLET (SEE DETAIL SHEET 04)	D-4.10*	0+88.50	22, LT	396.77	402.71
I-3	TYPE 'D' INLET (SEE DETAIL SHEET 04)	D-4.10*	1+74.50	48, RT	398.08	403.71
MH-1	SHALLOW PRECAST MANHOLE (SEE DETAIL SHEET 04)	G-5.12	1+92.00	21, LT	396.05	401.05

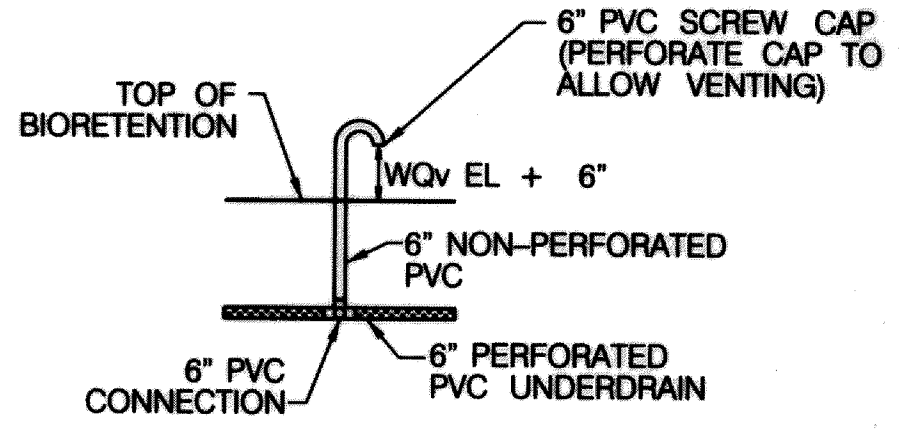
\* NOTE: PROVIDE OPENINGS ON ALL SIDES OF TYPE 'D' INLET



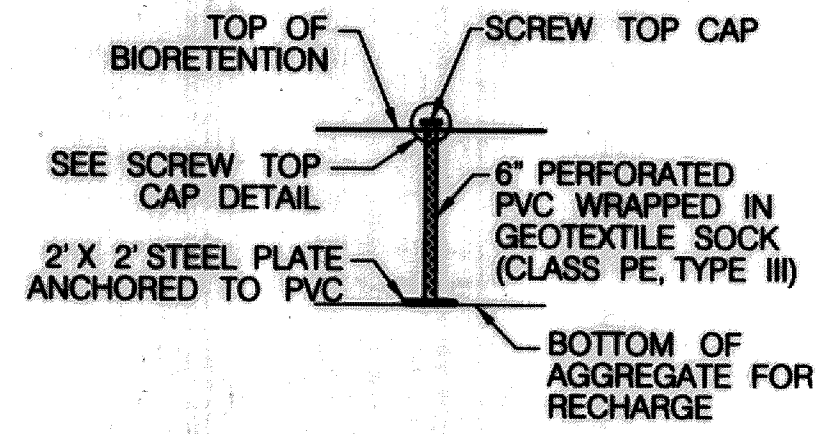
**SCREW TOP CAP**  
NOT TO SCALE



**CLEANOUT DETAIL**  
NOT TO SCALE



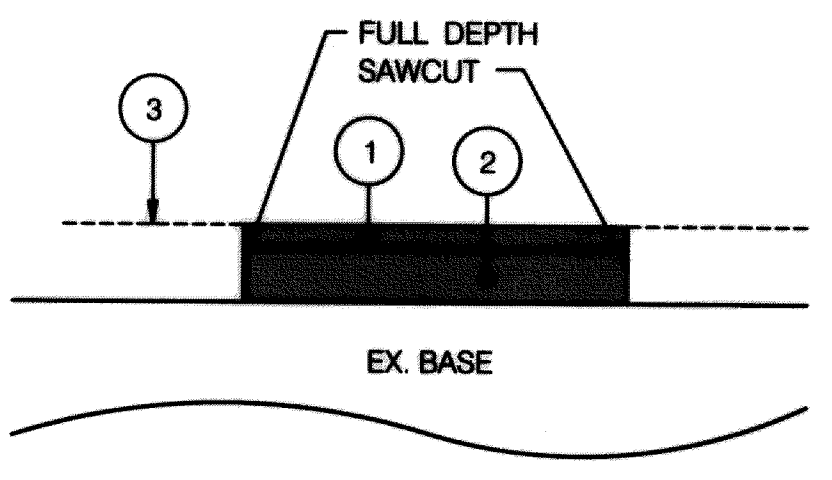
**V-VENT DETAIL**  
NOT TO SCALE



**OBSERVATION WELL DETAIL**  
NOT TO SCALE

**NOTES:**

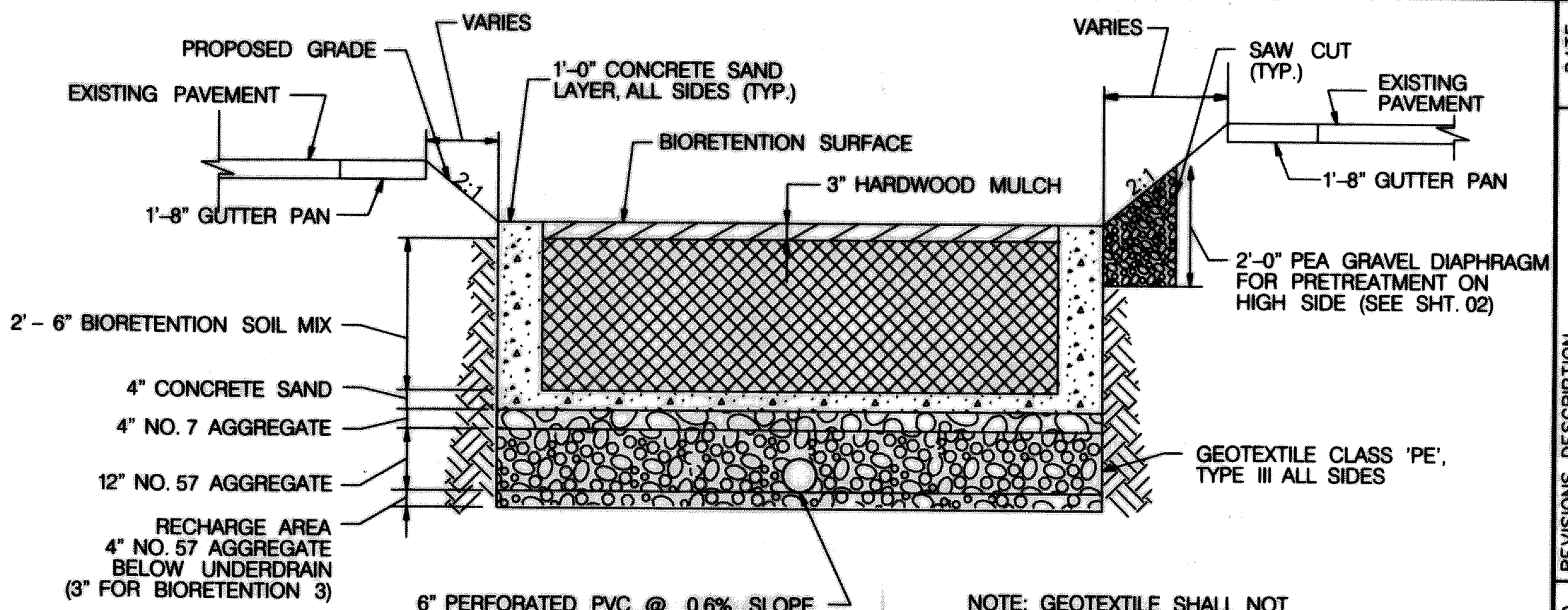
- FOR OBSERVATION WELL/CLEANOUT, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, AT LEAST THREE FEET LONG WITH AN INSIDE DIAMETER OF AT LEAST 6 INCHES.
- THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW TOP LID. THE SCREW TOP LID SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.
- ALL VISIBLE PVC FEATURES ABOVE THE GROUND SURFACE SHALL BE BLACK IN COLOR.
- PLACE CLEANOUTS AS SHOWN ON THE 6" PVC UNDERDRAIN LAYOUT ON THIS SHEET.



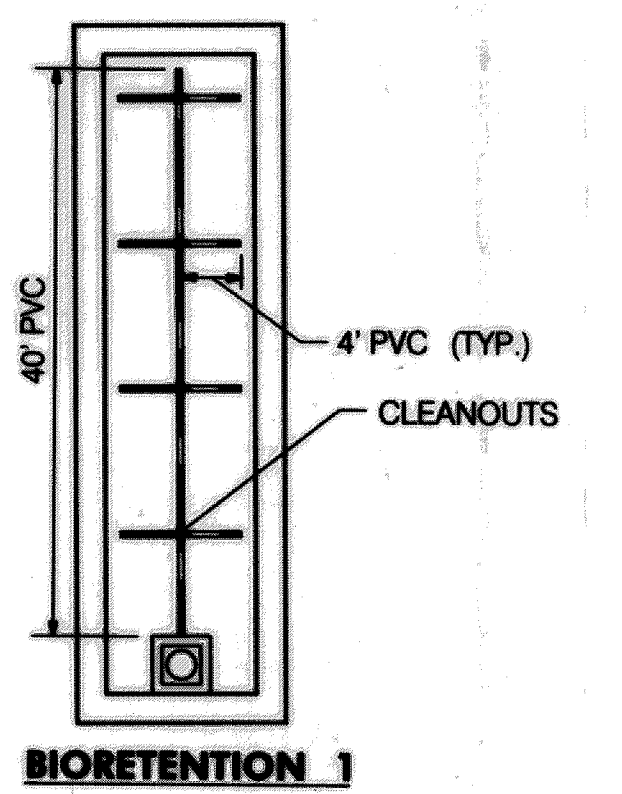
**PAVEMENT PATCHING DETAIL**

**PAVEMENT LEGEND**

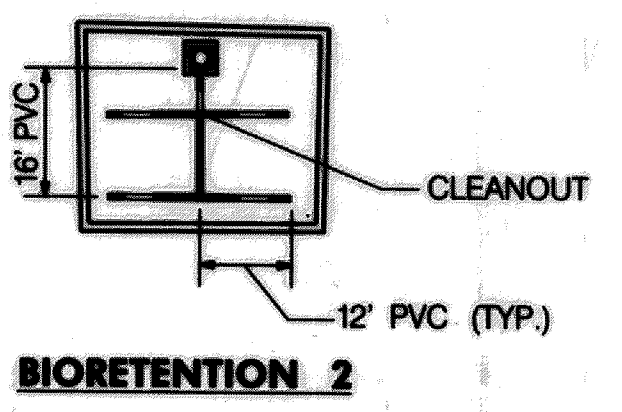
- ① 2.0" HOT-MIX ASPHALT SUPERPAVE 9.5mm FOR SURFACE
- ② VARIABLE HOT-MIX ASPHALT SUPERPAVE 19.0mm FOR PARTIAL-DEPTH/FULL-DEPTH PATCHING. DEPTH
- ③ TOP OF EXISTING PAVEMENT SURFACE



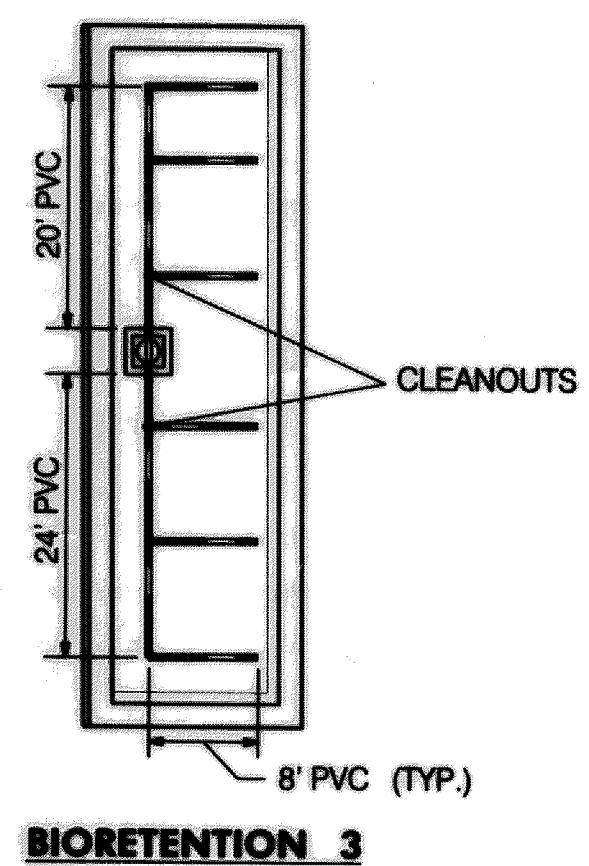
**BIORETENTION AREA TYPICAL SECTION**  
SCALE: NOT TO SCALE



**BIORETENTION 1**

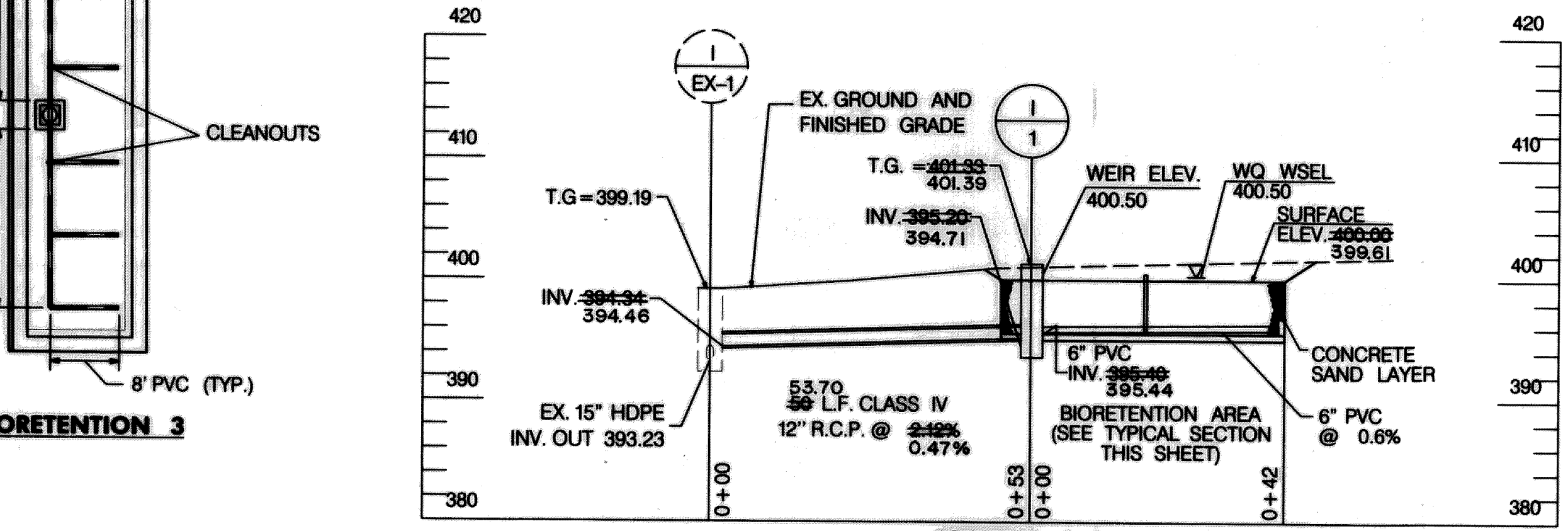


**BIORETENTION 2**

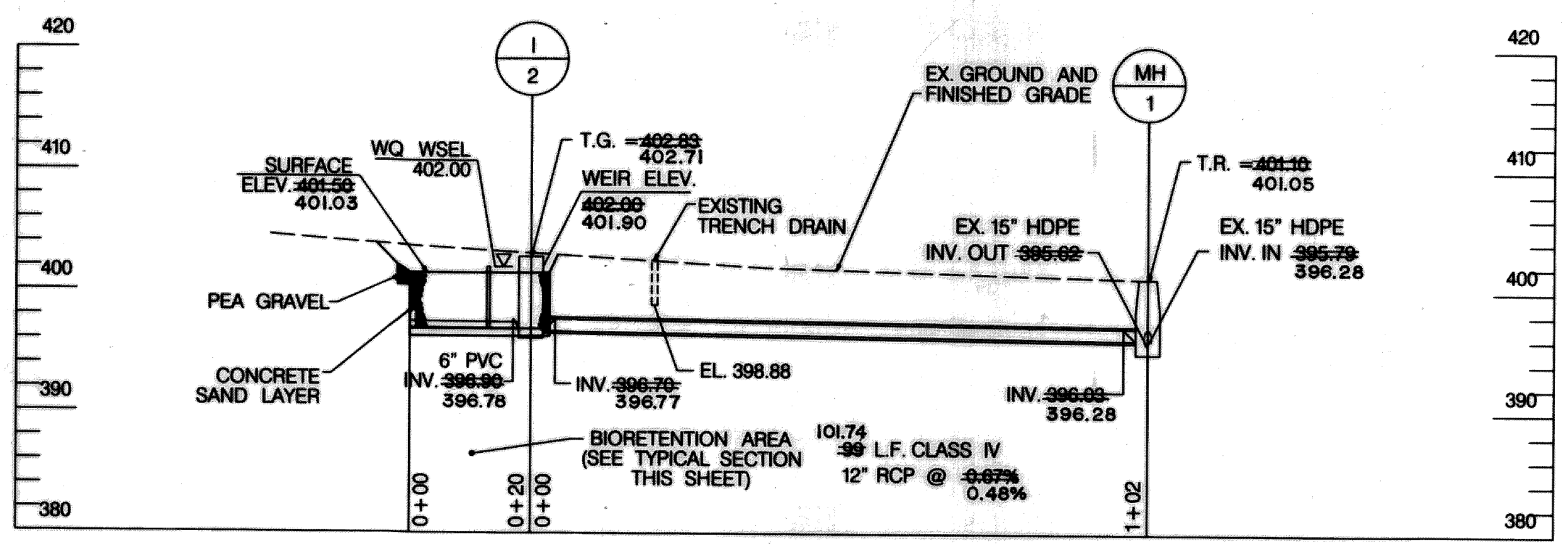


**BIORETENTION 3**

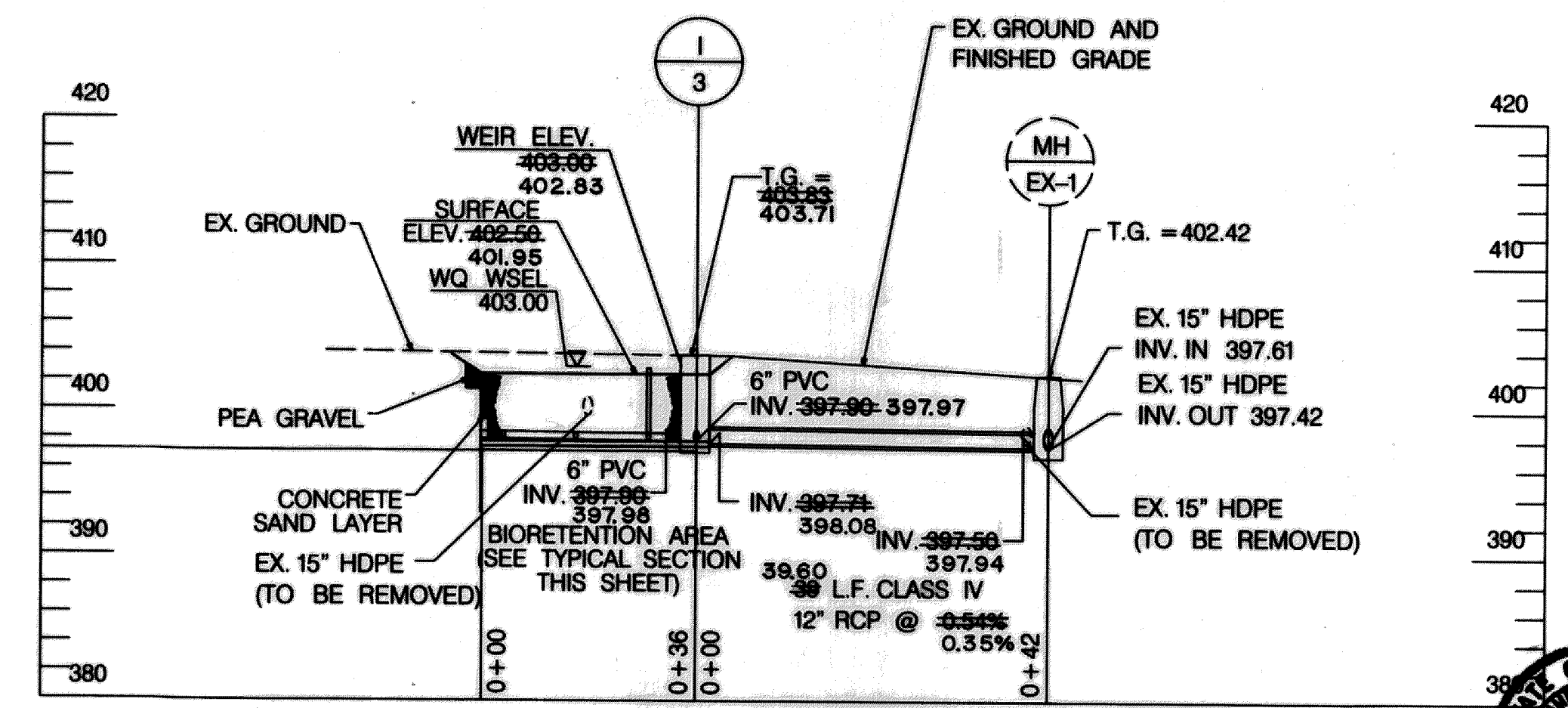
**6" PVC UNDERDRAIN LAYOUT**  
NOT TO SCALE



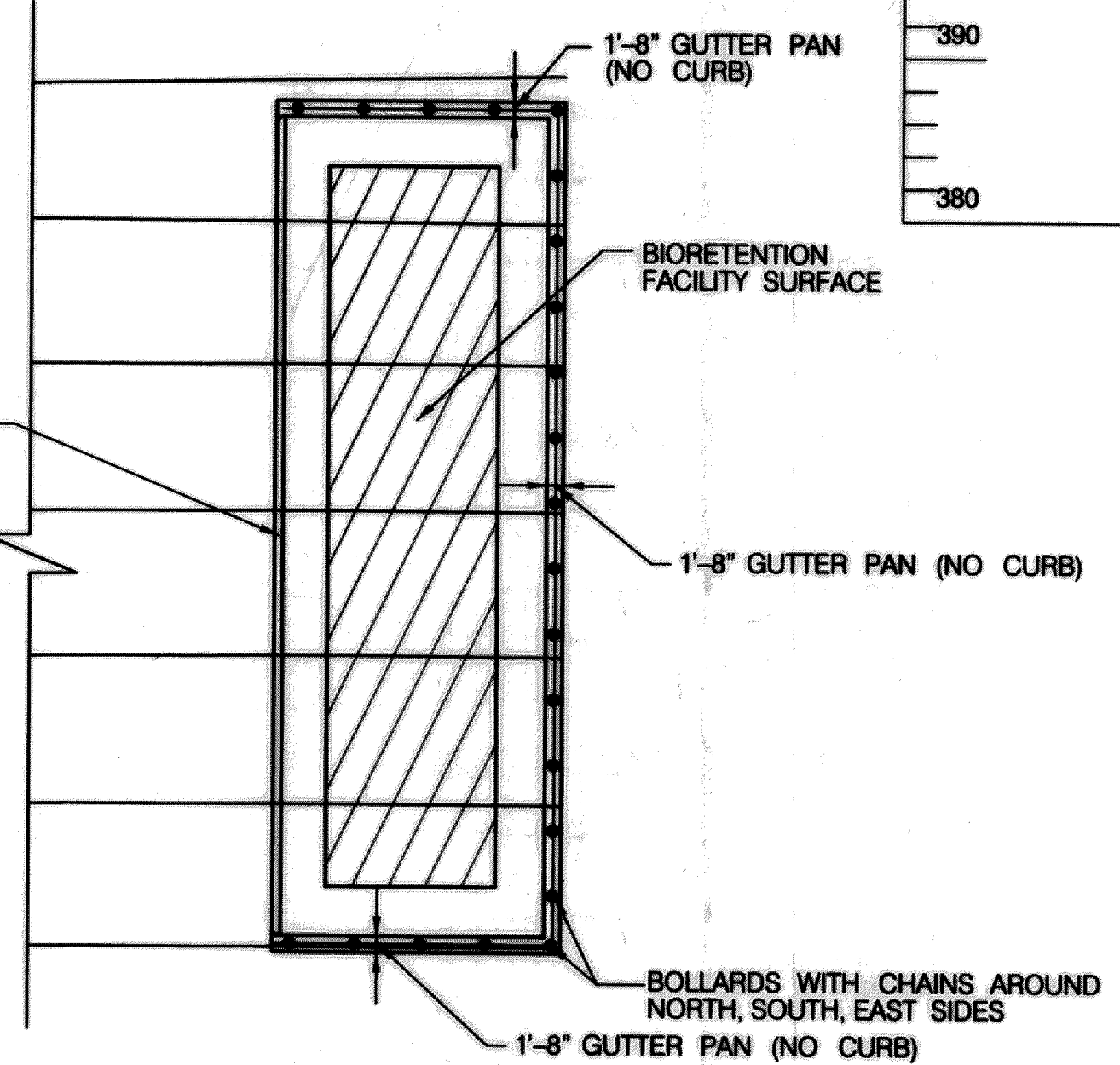
**SECTION A-A BIORETENTION 1**  
SCALE: HORIZONTAL 1" = 20'  
VERTICAL 1" = 10'



**SECTION B-B BIORETENTION 2**  
SCALE: HORIZONTAL 1" = 20'  
VERTICAL 1" = 10'



**SECTION C-C BIORETENTION 3**  
SCALE: HORIZONTAL 1" = 20'  
VERTICAL 1" = 10'

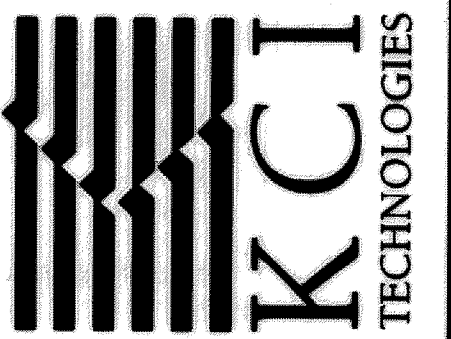


**TYPICAL BARRIER PLAN**  
NOT TO SCALE

- NOTES:**
- USE FOR BIORETENTION 1, 2 AND 3.
  - SEE 7" CURB AND GUTTER DETAIL ON SHEET 4.
  - BOLLARDS MAY BE RELOCATED IN THE FIELD WITH THE APPROVAL OF THE DPW AND DORSEY BUILDING REPRESENTATIVE.

NO.	REVISIONS DESCRIPTION	DATE

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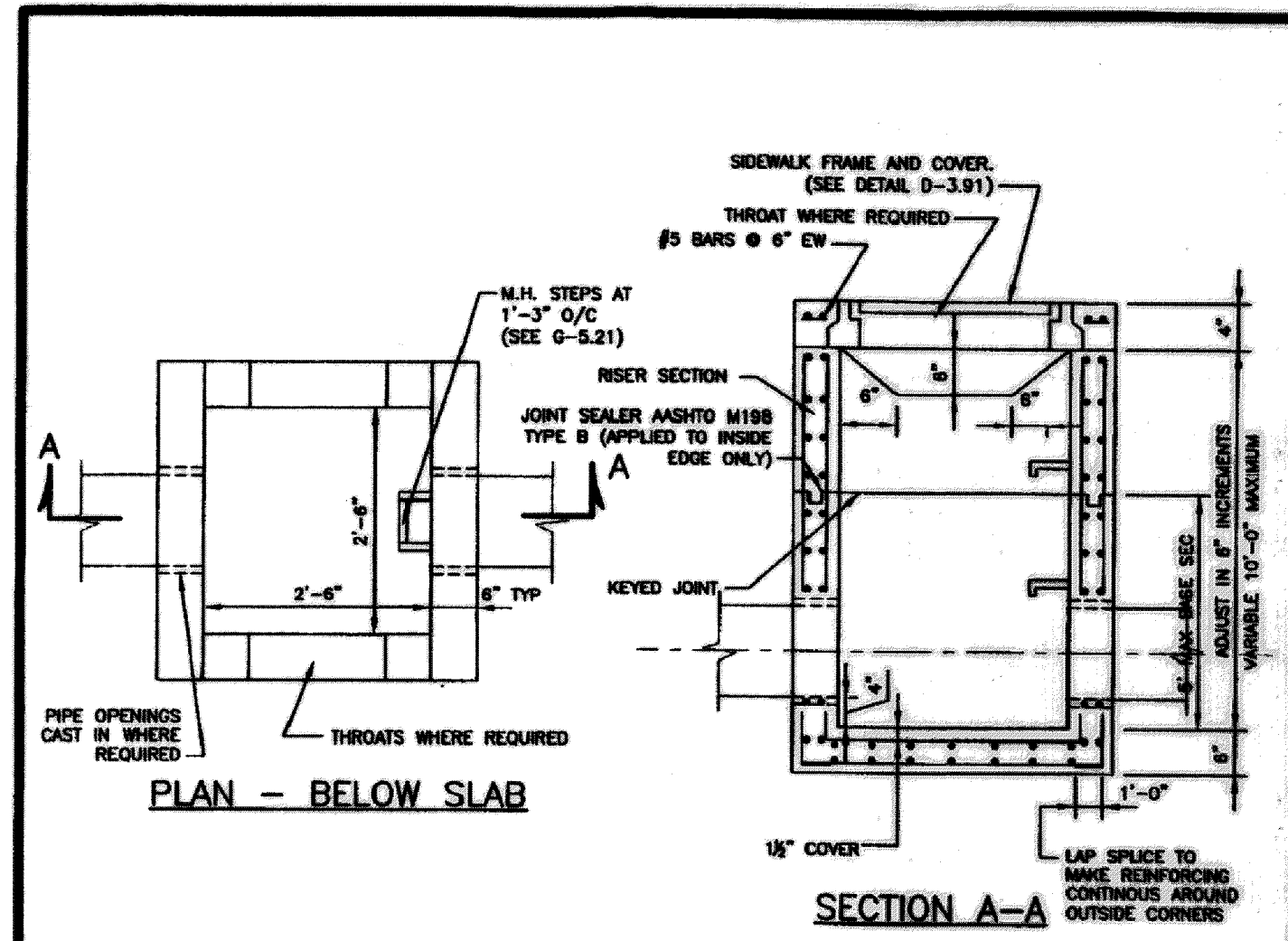
DORSEY BUILDING  
WATER QUALITY ENHANCEMENT  
STORMWATER MANAGEMENT DIVISION  
CA 08-29

PROFILE & DETAIL SHEET

SCALE:	DATE: JUNE 2010
KCI JOB NO.: 01-081795.33	CAPITAL PROJECT NO.: CA 08-29
PERMIT ISSUE:	CONSTRUCTION ISSUE:



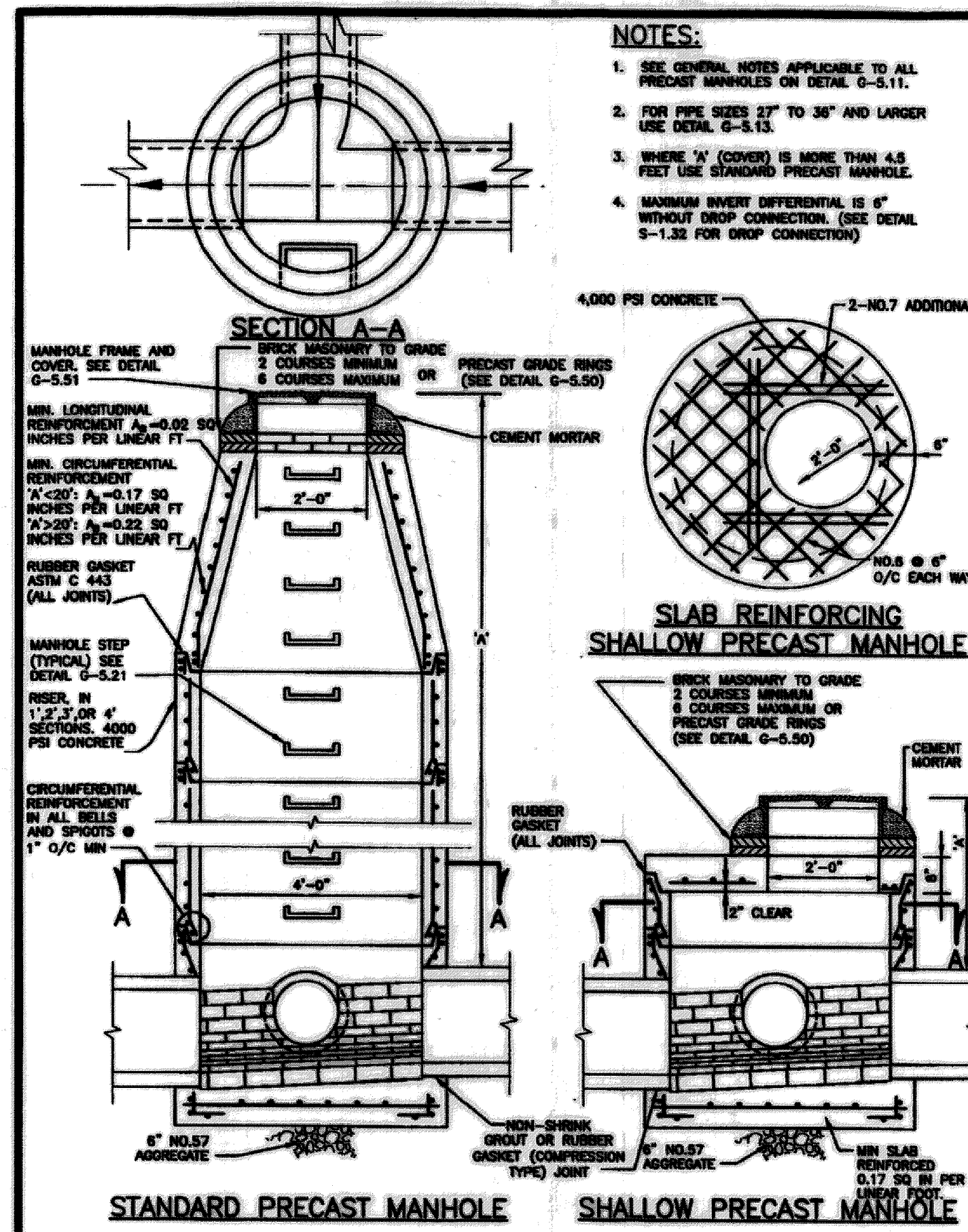




**NOTES**

1. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF LATEST EDITION OF ACI 301 AND ACI 318.
2. PRECAST STRUCTURES SHALL BE DESIGNED BY A PRECAST CONCRETE STRUCTURES MANUFACTURER IN ACCORDANCE TO LOADINGS SPECIFIED IN LATEST EDITIONS OF ASTM C897 AND C890.
3. PRECAST STRUCTURES SHALL CONFORM TO THE REQUIREMENTS OF LATEST EDITIONS OF ASTM C898.
4. RESILIENT CONNECTORS BETWEEN MANHOLE STRUCTURES, PIPES AND LATERALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LATEST EDITIONS OF ASTM C823.
5. OVERALL HEIGHT OF PRECAST IS ADJUSTABLE IN 6" INCREMENTS. FINAL GRADE ADJUSTMENTS SHALL BE MADE BY THE CONTRACTOR WITH BRICK AND MORTAR.
6. INVERT SHALL BE APPROVED PRECAST, PLAIN MIX NO.3 CONCRETE OR BRICK LAID ON EDGE. INVERT TO SLOPE DOWN TOWARD OUTLET AT THE RATE OF 2" PER FOOT, OR AS SHOWN ON PLAN OR AS DIRECTED. INVERT BRICK SHALL BE ASTM C32-91 GRADE SS.

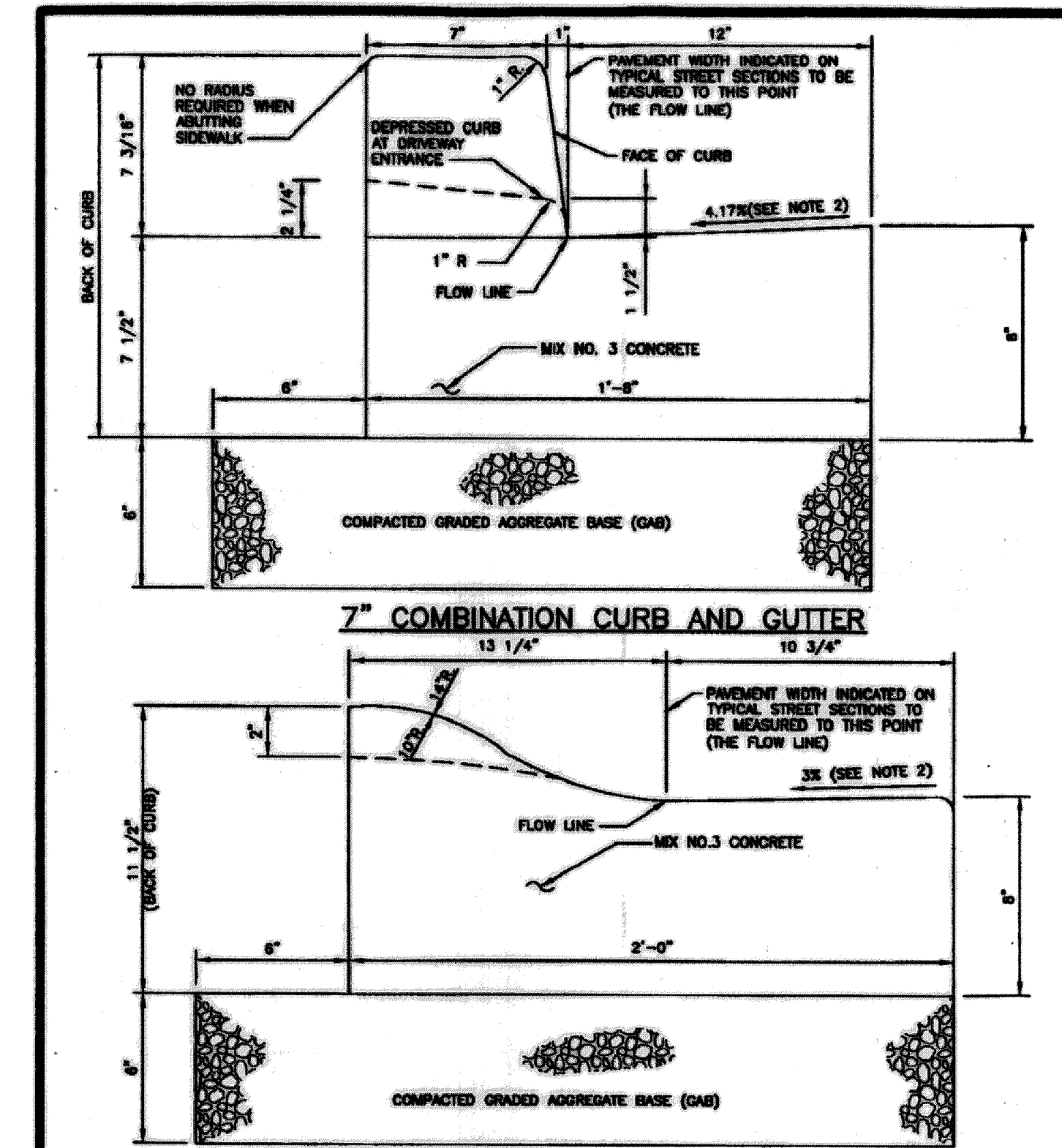
NO. 1	Howard County, Maryland Department of Public Works	Type 'D' Inlet Precast	Detail D-4.10
NO. 2	Approved: <i>[Signature]</i> Chief, Bureau of Engineering		



**NOTES**

1. SEE GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES ON DETAIL G-5.11.
2. FOR PIPE SIZES 24" TO 36" AND LARGER USE DETAIL G-5.13.
3. WHERE 1" COVER IS MORE THAN 4.5 FEET USE STANDARD PRECAST MANHOLE.
4. MAXIMUM INVERT DIFFERENTIAL IS 6" WITHOUT DROP CONNECTION. (SEE DETAIL S-1.32 FOR DROP CONNECTION)

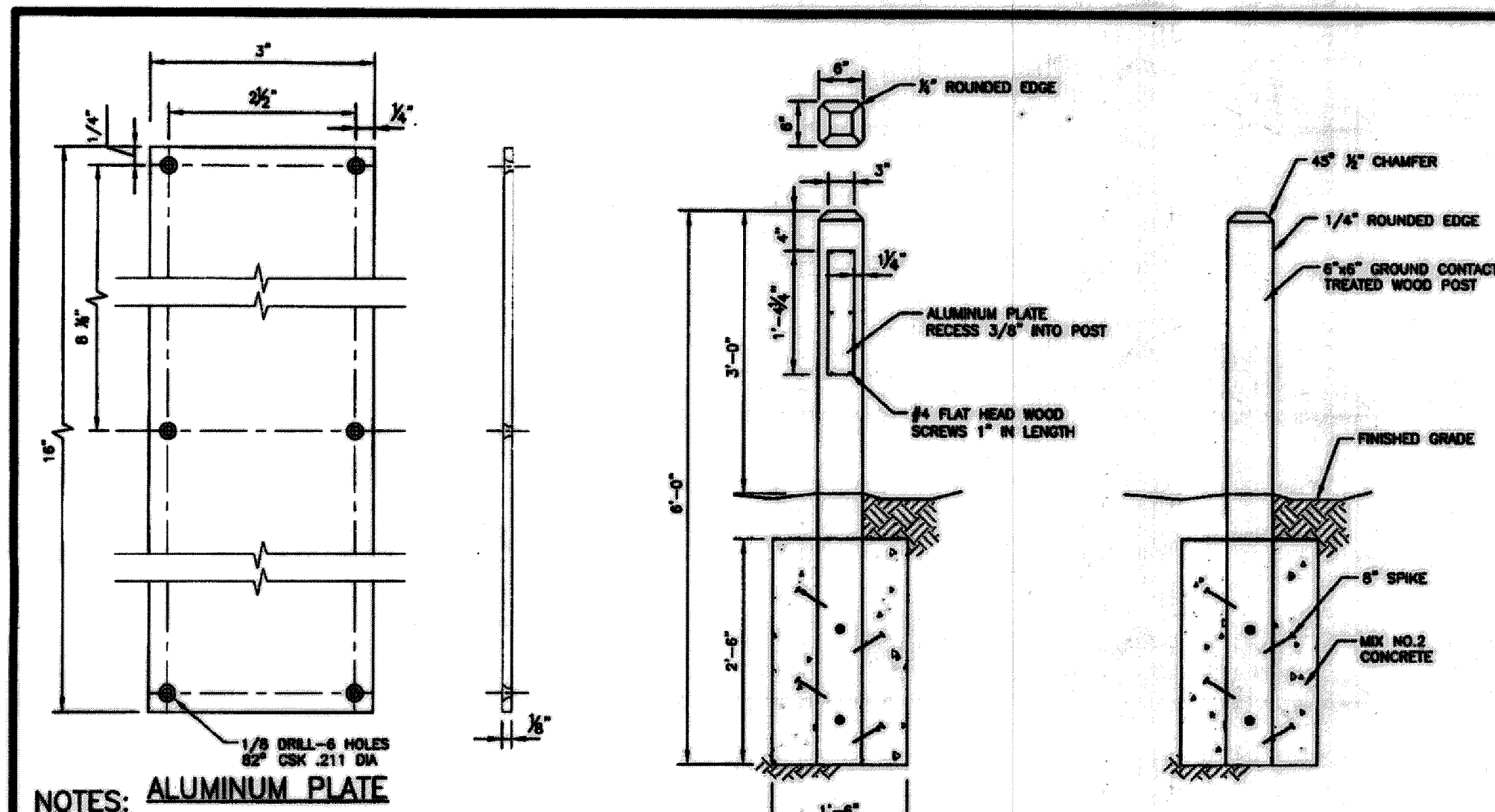
NO. 1	Howard County, Maryland Department of Public Works	PRECAST MANHOLE Standard and Shallow 4'-0" for 24" Pipe and smaller	Detail G-5.12
NO. 2	Approved: <i>[Signature]</i> Chief, Bureau of Engineering		



**NOTE: MODIFIED COMBINATION CURB AND GUTTER**

1. A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE, AND SHALL NOT BE USED WHERE THIS DRAINAGE CREATES A HICKOROCK CONDITION.
2. GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB & GUTTER.
3. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EARTH, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

NO. 1	Howard County, Maryland Department of Public Works	CURB AND GUTTER 7" & Modified	Detail R-3.01
NO. 2	Approved: <i>[Signature]</i> Chief, Bureau of Engineering		



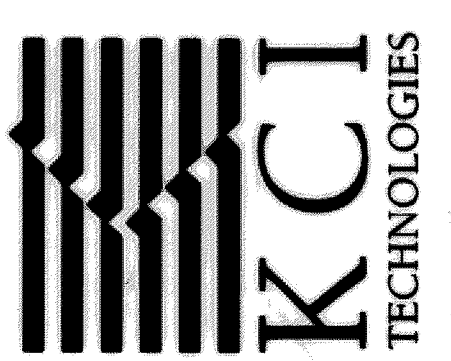
**NOTES: ALUMINUM PLATE**

1. PLATE TO BE SCREWED & GULLED IN PLACE. SCREWS ARE TO BE COUNTERSUNK.
2. BOLLARDS WILL BE PLACED AT THE FOUR CORNERS OF THE OPEN SPACE ACCESS STRIP.
3. THE ALUMINUM PLATE WILL ONLY BE REQUIRED ON THE FRONT RIGHT BOLLARD DIRECTLY FACING THE ROAD.

NO. 1	Howard County, Maryland Department of Public Works	Open Space Bollard	Detail G-7.41
NO. 2	Approved: <i>[Signature]</i> Chief, Bureau of Engineering		

NO.	REVISIONS DESCRIPTION	DATE

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DETAIL SHEET

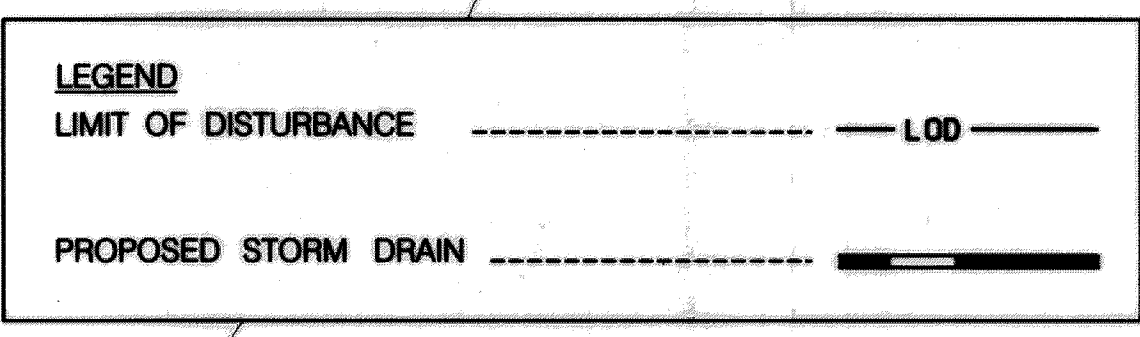
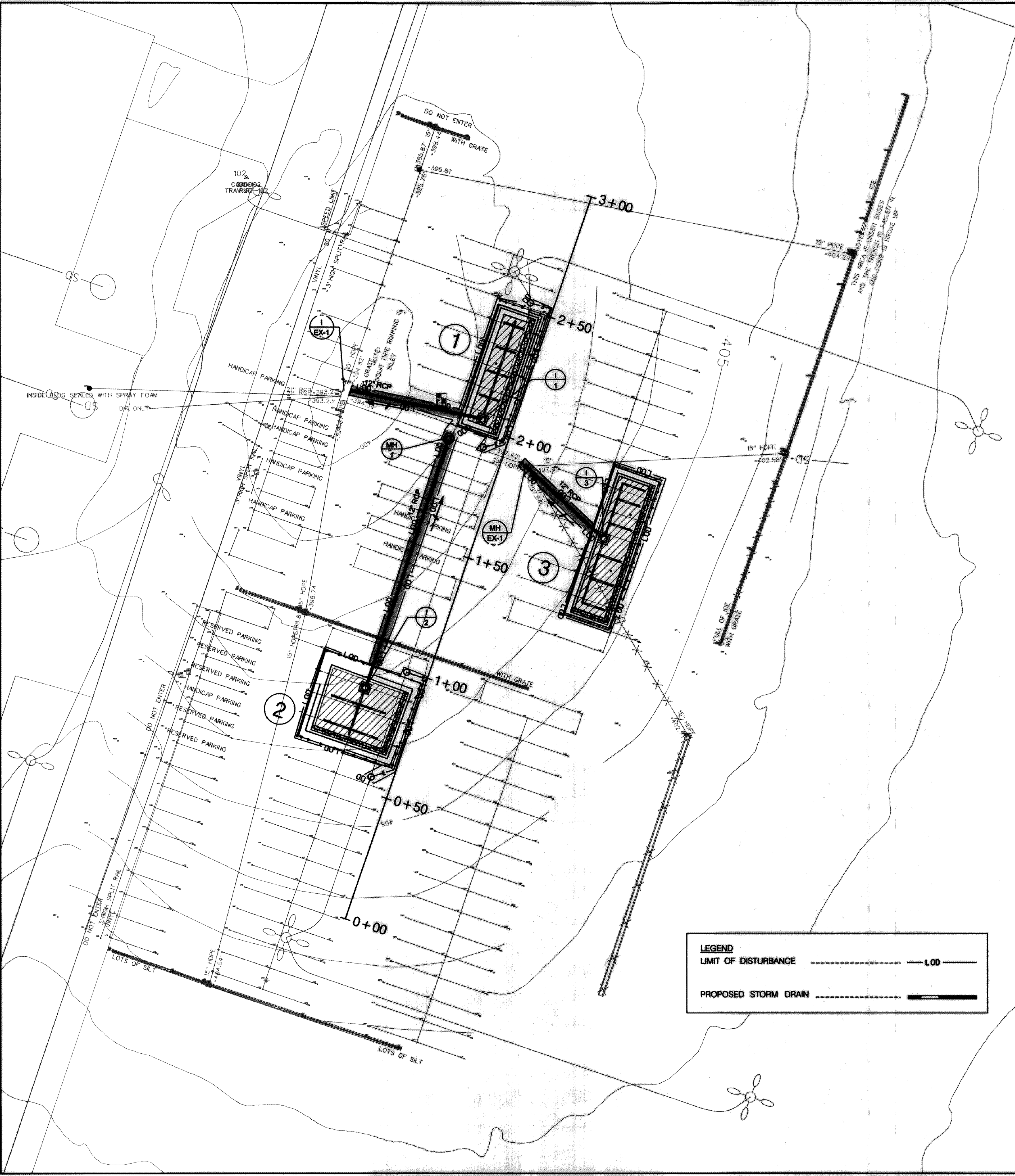
SCALE:	1" = 20'
DATE:	JUNE 2010
KCI JOB NO.:	01-081795.33
CAPITAL PROJECT NO.:	CA 08-29
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	



PLOTTED: 03:43 PM on Tuesday, June 29, 2010  
 BY: jchinn, Raco, Wintrom, R033, Water Resources, GMA, Eng.  
 FILE: H:\33303\01081795.33\CA08-29\CA08-29.dwg



PLOTTED: 03:44 PM on Tuesday, June 29, 2010  
 BY: Joliana Rice Division: P023 Water Resources OMA Emp  
 FILE: M:\2008\01081795.33\Drawings\SES-POOL\_Dorsey\_Bldg.dwg



- STANDARD SEDIMENT CONTROL NOTES**
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
  - Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
  - All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
  - All sediment control structures are to remain in place and are to be maintained in operative condition until removal.
  - Site Analysis:
 

Total Area of Site	0.116 Acres
Area Disturbed	0.116 Acres
Area to be roofed or paved	NA
Area to be vegetatively stabilized	0.045 Acres
Total Cut	261 cu. ft.
Total Fill	7115 cu. ft.
Offsite wasteborrow area location	To Be Determined*

\*Offsite wasteborrow site shall have an approved sediment control plan.

**SEQUENCE OF CONSTRUCTION**

- GENERAL**
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777.
  - CONTRACTOR SHALL COORDINATE AN ON-SITE PRE-CONSTRUCTION MEETING THAT SHALL INCLUDE COUNTY PROJECT MANAGER AND DORSEY BUILDING MAINTENANCE PERSONNEL.
  - MARK LOD PRIOR TO PRE-CONSTRUCTION MEETING.
  - CONTRACTOR SHALL MINIMIZE THE IMPACT ON EXISTING UTILITIES AND OTHER EXISTING FEATURES.
  - CONTRACTOR SHALL CAUTION THE EQUIPMENT OPERATORS TO TAKE EXTRA PRECAUTION WHILE DRIVING WITHIN THE DORSEY BUILDING PARKING LOT.
  - PARKING LOT SHALL BE SWEEPED CLEAN AT THE END OF EACH WORK DAY TO MINIMIZE SEDIMENT-LADEN RUNOFF TO INLET EX-1 AND EXISTING TRENCH DRAINS.
  - IF BIORETENTION EXCAVATION REQUIRES THE REMOVAL OF STANDING WATER, IT SHALL BE PUMPED TO A DEWATERING BAG, PST OR OTHER SUITABLE DEVICE PRIOR TO DISCHARGE INTO THE EXISTING STORM DRAIN.
  - FOLLOWING BIORETENTION FACILITY CONSTRUCTION, PLACE PLANTINGS ACCORDING TO LANDSCAPE PLAN.
  - AT PROJECT COMPLETION, RESTRIPE PARKING SPACES, AS REQUIRED, AND REMOVE ANY REMAINING SEDIMENT AND/OR DEBRIS FROM THE PARKING LOT.

**BIORETENTION 1**

- CONSTRUCT STORM DRAIN SYSTEM FROM INLET EX-1 TO I-1, AS SHOWN ON THE PLANS. CONNECT TO I-1 DURING A DRY WEATHER FORECAST.
- CONSTRUCT PAVEMENT PATCH, AS SHOWN ON THE PLANS.
- CONSTRUCT BIORETENTION 1.
- PROCEED TO CONSTRUCTION OF BIORETENTION 2.

**BIORETENTION 2**

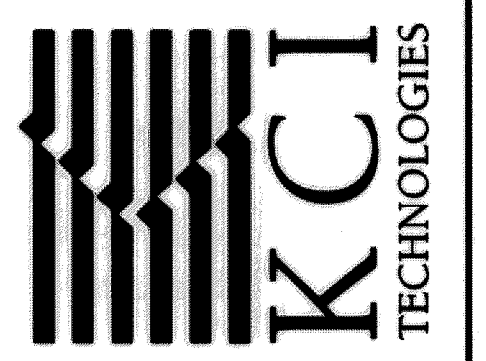
- CONSTRUCT STORM DRAIN SYSTEM FROM I-2 TO MH-1, AS SHOWN ON THE PLANS. CONSTRUCT MH-1 DURING A DRY WEATHER FORECAST.
- CONSTRUCT PAVEMENT PATCH, AS SHOWN ON THE PLANS.
- CONSTRUCT BIORETENTION 2.
- PROCEED TO CONSTRUCTION OF BIORETENTION 3.

**BIORETENTION 3**

- CONSTRUCT STORM DRAIN SYSTEM FROM I-3 TO MH EX-1, AS SHOWN ON THE PLANS. CONNECT TO MH EX-1 DURING A DRY WEATHER FORECAST.
- CONSTRUCT PAVEMENT PATCH, AS SHOWN ON THE PLANS.
- CONSTRUCT BIORETENTION 3.

NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD  
 SPARKS, MARYLAND 21152  
 TELEPHONE: (410) 316-7800  
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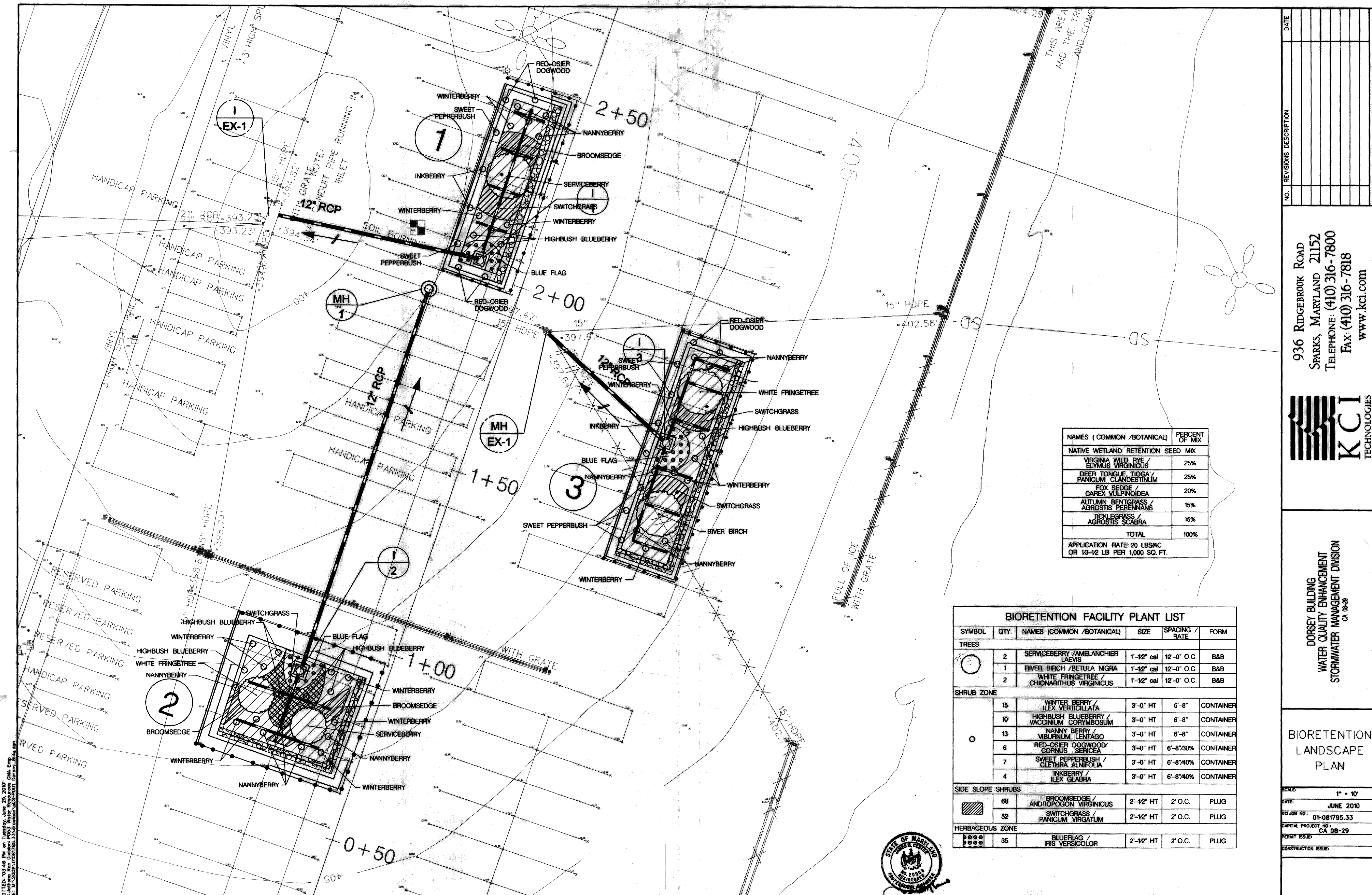
DORSEY BUILDING  
 WATER QUALITY ENHANCEMENT  
 STORMWATER MANAGEMENT DIVISION  
 CA 08-29

**EROSION AND SEDIMENT CONTROL PLAN**

SCALE: 1" = 20'  
 DATE: JUNE 2010  
 PROJ JOB NO.: 01-081795.33  
 CAPITAL PROJECT NO.: CA 08-29  
 PERMIT ISSUE:  
 CONSTRUCTION ISSUE:





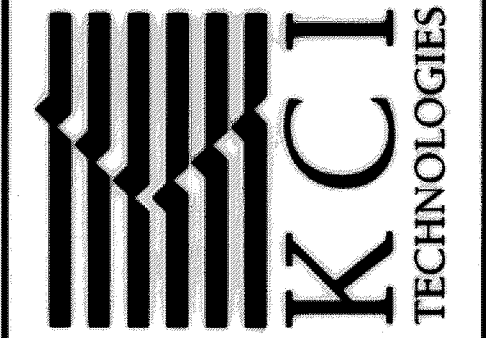


NAMES (COMMON /BOTANICAL)	PERCENT OF MIX
<b>NATIVE WETLAND RETENTION SEED MIX</b>	
VIRGINIA WILD RYE / ELYMUS VIRGINICUS	25%
DEER TONGUE /TIOGA/ PANICUM CLANDESTINUM	25%
FOX SEDGE / CAREX VULPINOIDEA	20%
AUTUMN BENTGRASS / AGROSTIS PERENNANS	15%
TICKLEGRASS / AGROSTIS SCABRA	15%
<b>TOTAL</b>	<b>100%</b>
APPLICATION RATE: 20 LBSAC OR 13-12 LB PER 1,000 SQ. FT.	

BIORETENTION FACILITY PLANT LIST					
SYMBOL	QTY.	NAMES (COMMON /BOTANICAL)	SIZE	SPACING / RATE	FORM
<b>TREES</b>					
○	2	SERVICEBERRY /AMELANCHIER LAEVIS	1'-1/2" cal	12'-0" O.C.	B&B
○	1	RIVER BIRCH /BETULA NIGRA	1'-1/2" cal	12'-0" O.C.	B&B
○	2	WHITE FRINGETREE / CHIONARITHUS VIRGINICUS	1'-1/2" cal	12'-0" O.C.	B&B
<b>SHRUB ZONE</b>					
○	15	WINTER BERRY / ILEX VERTICILLATA	3'-0" HT	6'-8"	CONTAINER
○	10	HIGHBUSH BLUEBERRY / VACCINIUM CORYMBOSUM	3'-0" HT	6'-8"	CONTAINER
○	13	NANNY BERRY / VIBURNUM LENTAGO	3'-0" HT	6'-8"	CONTAINER
○	6	RED-OSIER DOGWOOD/ CORNUS SERICEA	3'-0" HT	6'-8"/30%	CONTAINER
○	7	SWEET PEPPERBUSH / CLETHRA ALNIFOLJA	3'-0" HT	6'-8"/40%	CONTAINER
○	4	INKBERRY / ILEX GLABRA	3'-0" HT	6'-8"/40%	CONTAINER
<b>SIDE SLOPE SHRUBS</b>					
▨	68	BROOMSEDEGE / ANDROPOGON VIRGINICUS	2'-1/2" HT	2' O.C.	PLUG
▨	52	SWITCHGRASS / PANICUM VIRGATUM	2'-1/2" HT	2' O.C.	PLUG
<b>HERBACEOUS ZONE</b>					
●●●●	35	BLUEFLAG / IRIS VERSICOLOR	2'-1/2" HT	2' O.C.	PLUG

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DORSEY BUILDING  
 WATER QUALITY ENHANCEMENT  
 STORMWATER MANAGEMENT DIVISION  
 CA 08-29

BIORETENTION  
 LANDSCAPE  
 PLAN

SCALE: 1" = 10'  
 DATE: JUNE 2010  
 KCI JOB NO.: 01-081795.33  
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 CONSTRUCTION ISSUE:

PLOTTED: 03:46 PM on Tuesday, June 29, 2010  
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 PLOTTER: HP DesignJet 2400

