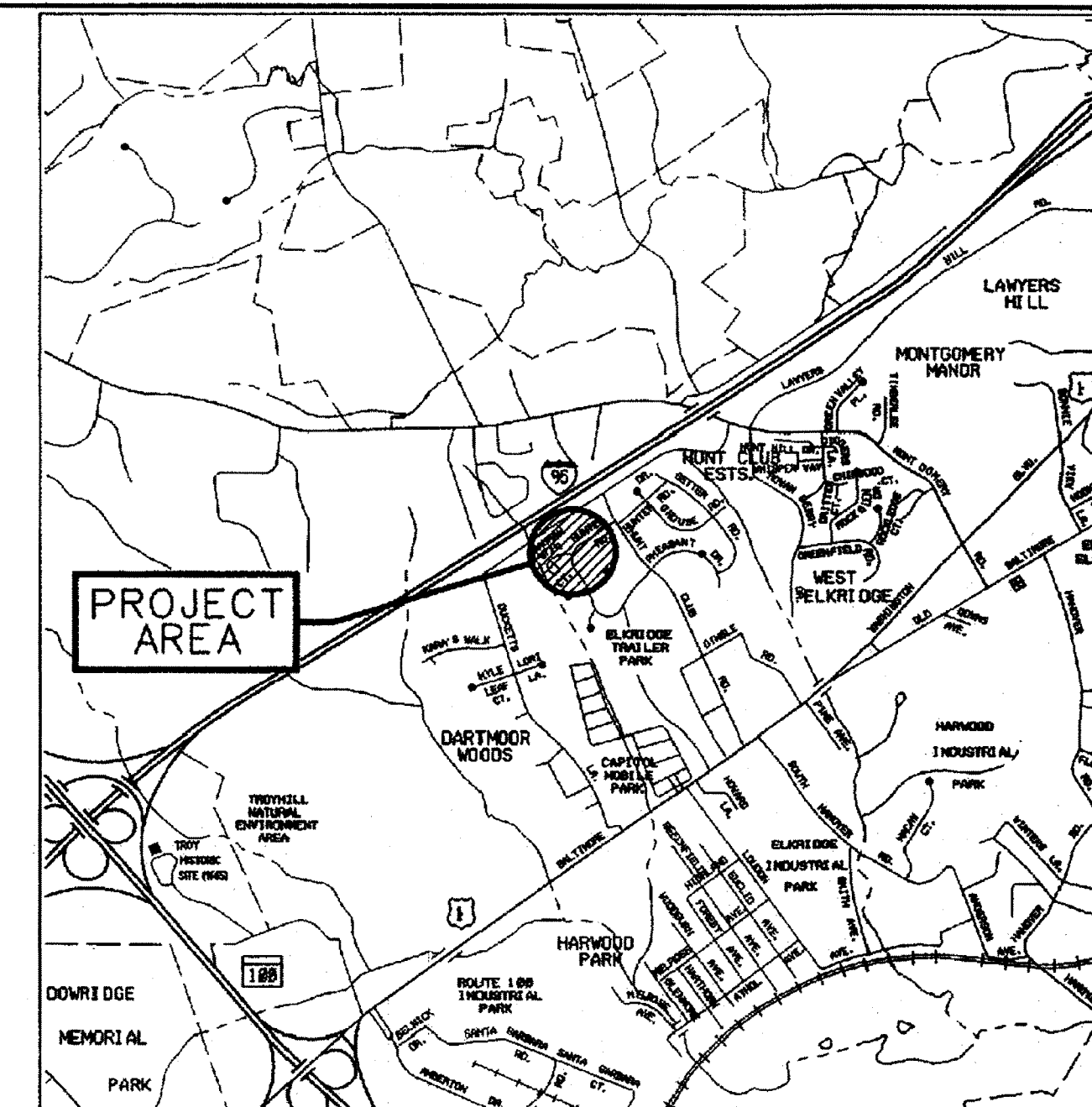


# STIPA COURT DRAINAGE IMPROVEMENTS

## HOWARD COUNTY, MARYLAND STORMWATER MANAGEMENT DIVISION CAPITAL PROJECT D-1118



VICINITY MAP  
SCALE: 1" = 2,000'

### LEGEND

— LOD —	LIMIT OF DISTURBANCE
— OSF —	ORANGE SAFETY FENCE
— SD —	STORM DRAIN PIPE
	SOIL STABILIZATION MATTING
	TREE PROTECTION FENCE
	NON-TIDAL WETLAND
	EXISTING TREE LINE
— S —	EXISTING SEWER LINE
	STABILIZED CONSTRUCTION ENTRANCE
— — —	PROPERTY LINE
— SD —	EXISTING STORM DRAIN
	EX. TREES
— 180 —	EXIST. MAJOR CONTOUR
— 183 —	EXIST. MINOR CONTOUR
— 346 —	PROP. CONTOURS
⊗ PST	PORTABLE SEDIMENT TANK
	STANDARD INLET PROTECTION
— WB —	WETLAND BUFFER
— TEL/ELEC —	EXISTING TELEPHONE/ELECTRIC
— G —	EXISTING GAS
— CATV —	EXISTING CABLE

### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STORM DRAIN PLAN
3	PROFILE & DETAILS
4	EROSION & SEDIMENT CONTROL PLAN SHEET
5	EROSION & SEDIMENT CONTROL NOTES & DETAILS

### SITE ANALYSIS DATA CHART

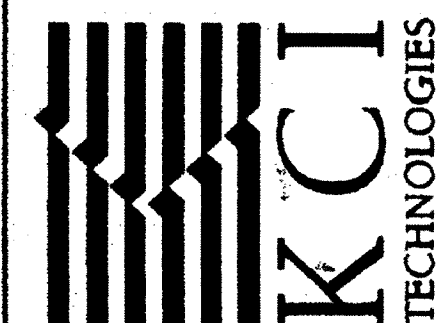
- TOTAL PROJECT AREA: 0.11 ACRES.
- DISTURBED AREA: 0.11 ACRES (4,981 SF).
- PROPOSED USE FOR THE SITE: DRAINAGE IMPROVEMENTS
- APPLICABLE DPZ FILE REFERENCES: F-87-042/PLAT NO. 7749, F-88-183.

### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY AND MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 5 DAYS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. BENCHMARKS SHOWN HEREON WERE PROVIDED BY HOWARD COUNTY SURVEY DIVISION AND AB CONSULTANTS.
- EXISTING UTILITIES ARE BASED ON FIELD SURVEYS AND AVAILABLE RECORD DRAWINGS.
- THE WETLAND DELINEATION FOR THIS PROJECT WAS PERFORMED BY HOWARD COUNTY DPW.
- TOPOGRAPHIC SURVEY OF THE SITE WAS PERFORMED BY AB CONSULTANTS, INC. IN NOVEMBER 2011.
- A JOINT PERMIT HAS BEEN ISSUED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR THIS PROJECT. (12-NT-0119/201260507)
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- 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.
- SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
- 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.
- EXISTING GROUND, FENCE LINE, PLAYGROUND EQUIPMENT, AND/OR VEGETATION DISTURBED BY THE PROPOSED WORK SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION OR BETTER BY CONCLUSION OF THE PROJECT.
- THE PROPOSED PROJECT IS LOCATED OFF OF STIPA COURT AND IS ADJACENT TO HUNTER ROAD.

NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD  
SPARKS, MARYLAND 21152  
TELEPHONE: (410) 316-7800  
FAX: (410) 316-7818  
www.kci.com



STIPA COURT  
DRAINAGE IMPROVEMENTS  
HART CLIP ESTATES  
CAPITAL PROJECT D118  
THE LAMP IN ZONING IS-42 ELECTION DISTRICT 6  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
500 W. COLUMBIA AVENUE  
COLUMBIA, MD 21046

TITLE SHEET

DATE:	APRIL 2012
KCI JOB NO.:	01-081795.70
CAPITAL PROJECT NO.:	D118
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	

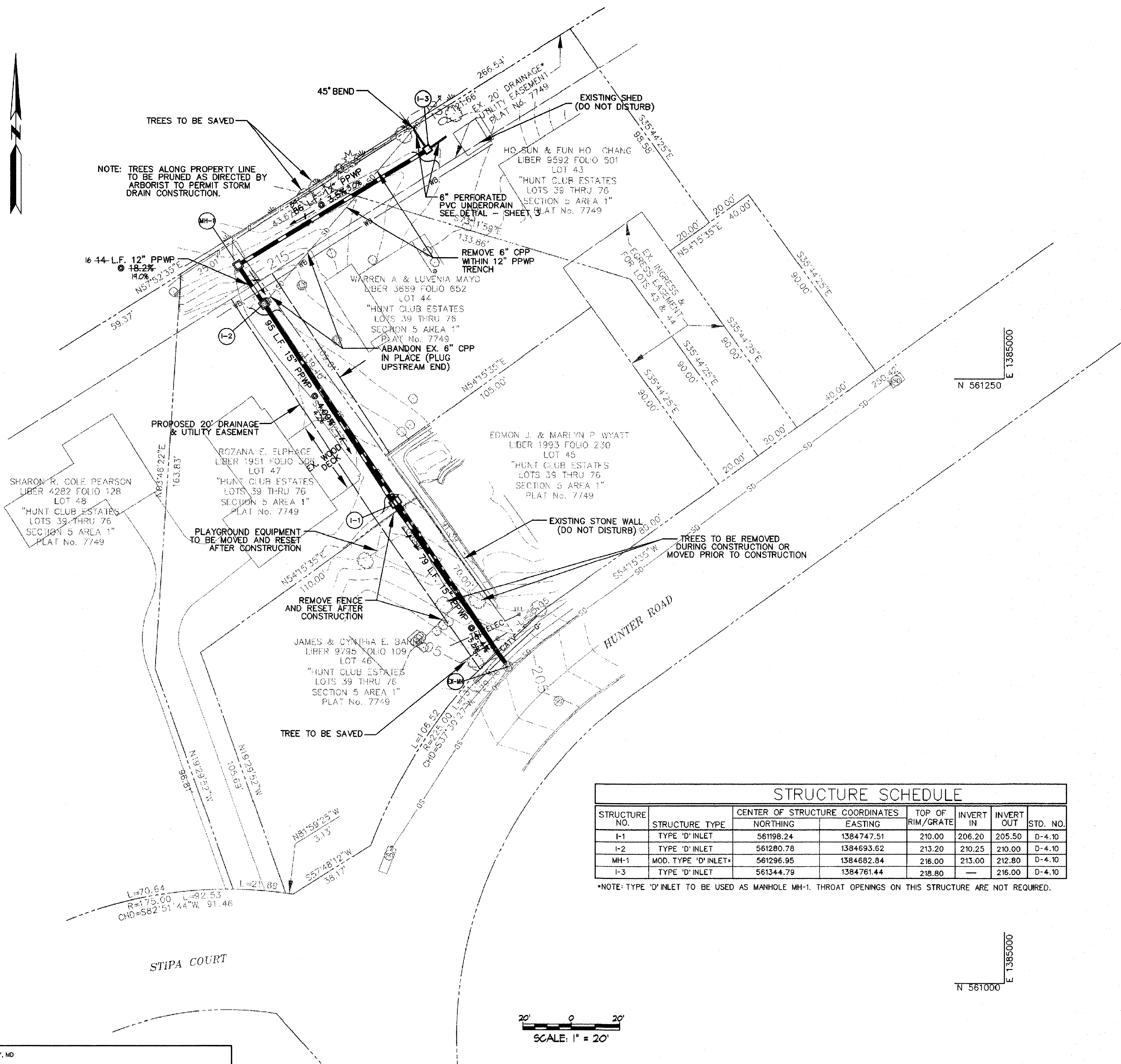
PLOTTED: 10:10 PM on Monday, June 04, 2012  
BY: Arno Eggeny, Division P053, Water Resources GMA Emp  
FILE: \\s208\081795\_70\arango\101-Stipa.dwg



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 20903, EXPIRATION DATE: JULY 18, 2013

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
*John A. Disher* 6/12/12  
 DIRECTOR OF PUBLIC WORKS DATE  
*Elizabeth J. Doherty* 6/12/12  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE  
*Howard E. Saltzman* 6/12/12  
 CHIEF, STORMWATER MANAGEMENT DIVISION DATE

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.  
*John A. Disher*  
 SIGNATURE  
 20903 PE NO.  
 11/7/12 DATE



NOTE: TREES ALONG PROPERTY LINE TO BE PRUNED AS DIRECTED BY ARBORIST TO PERMIT STORM DRAIN CONSTRUCTION.

TIME RESTRICTION NOTES:  
 PUMPING IS NOT PERMITTED BETWEEN THE HOURS OF 7:00PM AND 7:00 AM, MONDAY THROUGH FRIDAY.  
 CONSTRUCTION EQUIPMENT SHALL NOT BE STARTED NOR RUN BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM, MONDAY THROUGH FRIDAY.  
 FOR SATURDAY WORK, THE ABOVE HOURS SHALL BE 5:00 PM TO 9:00 AM, RESPECTIVELY.  
 NO WORK SHALL BE DONE ON SUNDAY.

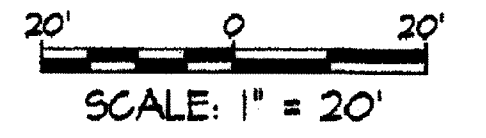
STRUCTURE SCHEDULE							
STRUCTURE NO.	STRUCTURE TYPE	CENTER OF STRUCTURE COORDINATES		TOP OF RIM/GRATE	INVERT IN	INVERT OUT	STD. NO.
		NORTHING	EASTING				
I-1	TYPE 'D' INLET	561198.24	1384747.51	210.00	206.20	205.50	D-4.10
I-2	TYPE 'D' INLET	561280.78	1384693.62	213.20	210.25	210.00	D-4.10
MH-1	MOD. TYPE 'D' INLET*	561296.95	1384682.84	216.00	213.00	212.80	D-4.10
I-3	TYPE 'D' INLET	561344.79	1384761.44	218.80	—	216.00	D-4.10

\*NOTE: TYPE 'D' INLET TO BE USED AS MANHOLE MH-1. THROAT OPENINGS ON THIS STRUCTURE ARE NOT REQUIRED.



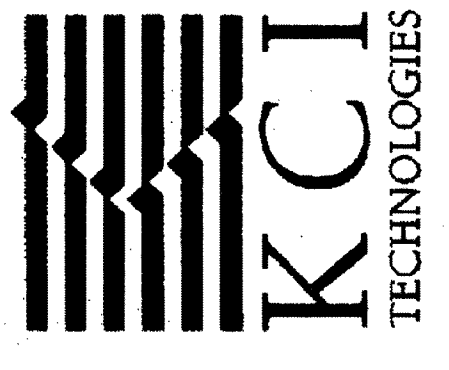
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 20903, EXPIRATION DATE: JULY 18, 2013

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
 Evelyn E. Sand  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES  
 DATE: 6/12/12



NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD  
 SPARKS, MARYLAND 21152  
 TELEPHONE: (410) 316-7800  
 FAX: (410) 316-7818  
 www.kci.com



STIPA COURT  
 DRAINAGE IMPROVEMENTS  
 HUNT CLUB ESTATES  
 CAPITAL PROJECT D1118  
 TYP. MAP 3A ZONING 742, EDMOND DISTRICT 04  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 5167B COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MD 21046

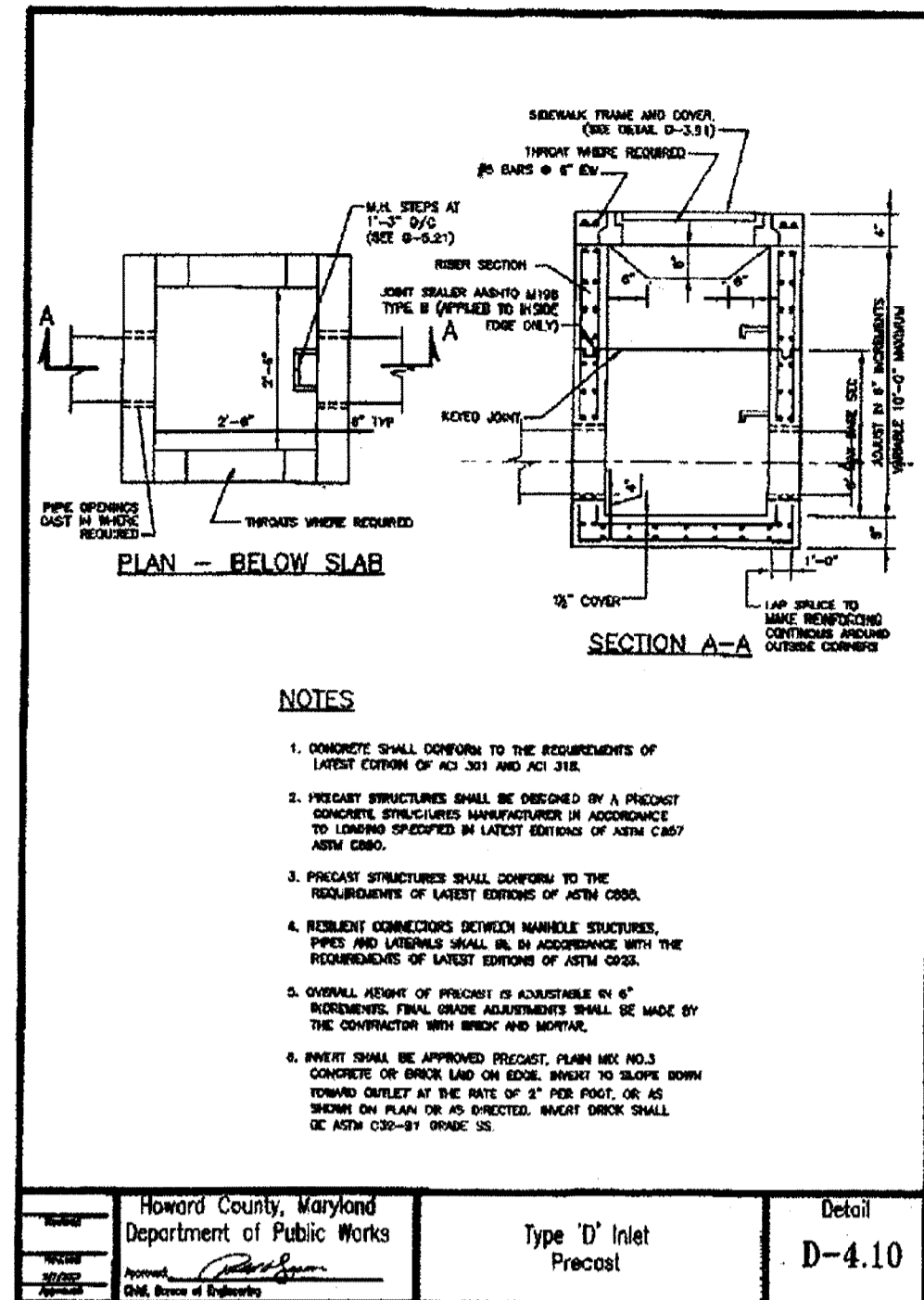
STORM DRAIN PLAN

SCALE:	1" = 20'
DATE:	APRIL 2012
KCI JOB NO.:	01-081795.70
CAPITAL PROJECT NO.:	D1118
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	

AS-BUILT 11/7/12

PLOTTED: 11:20 AM on Monday, June 04, 2012  
 BY: Anna Eppley, Division: PWS, Water Resources GMA Eng  
 FILE: M:\2008\081795.70\Drawings\pws\p01\_Sfpo\_Court.dgn

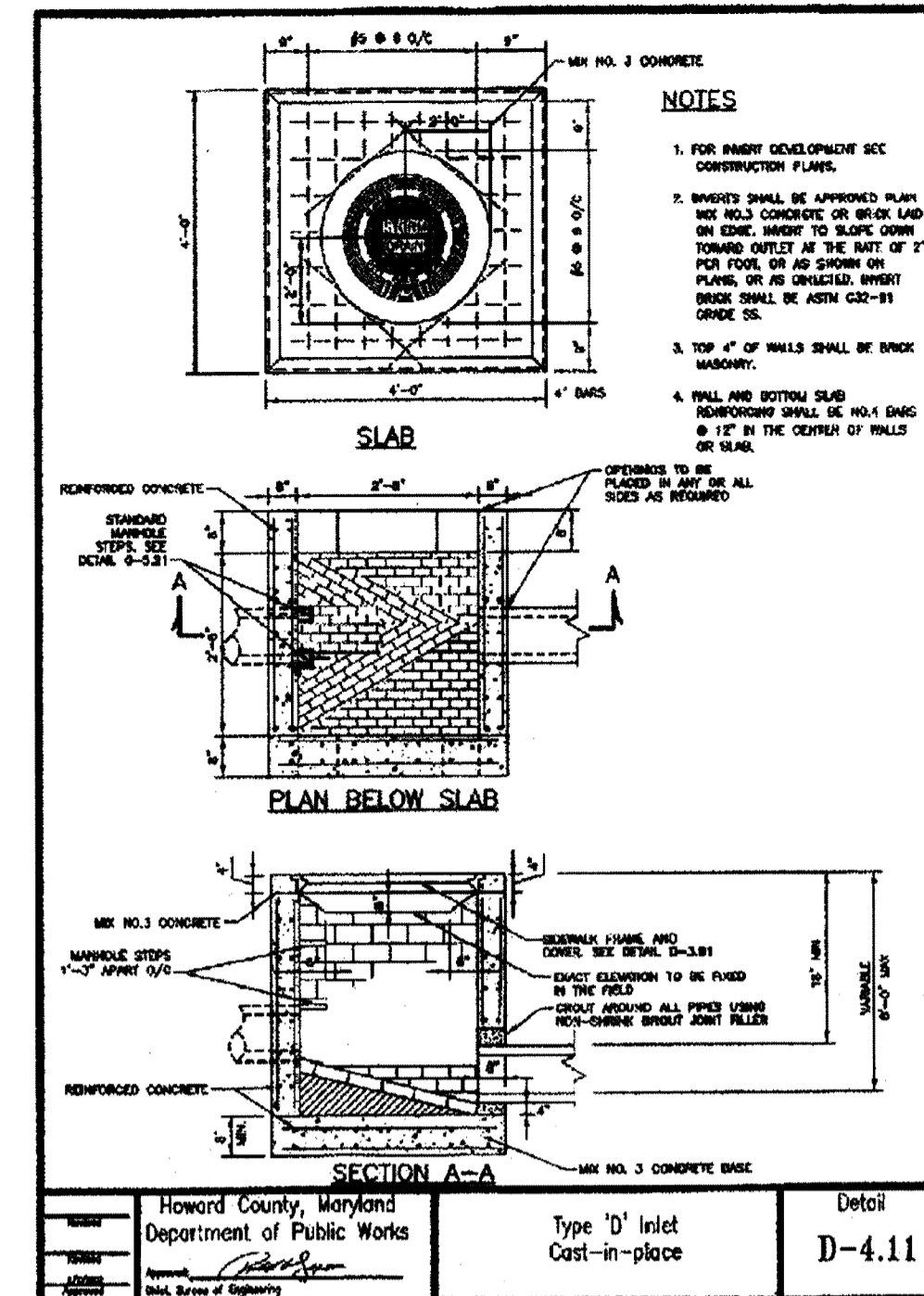




**NOTES**

1. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF LATEST EDITION OF ACI 301 AND ACI 318.
2. PRECAST STRUCTURES SHALL BE CONSTRUCTED BY A PRECAST CONCRETE STRUCTURES MANUFACTURER IN ACCORDANCE TO LISTING SPECIFIED IN LATEST EDITION OF ASTM C870 AND C910.
3. PRECAST STRUCTURES SHALL CONFORM TO THE REQUIREMENTS OF LATEST EDITION OF ASTM C870.
4. JOIST CONNECTORS BETWEEN MANHOLE STRUCTURES PIPES AND UTILITY LINES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LATEST EDITION OF ASTM C910.
5. GENERAL METHOD OF PRECAST IS AVAILABLE IN 17\"/>

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS	DETAIL Type 'D' Inlet Precast	D-4.10
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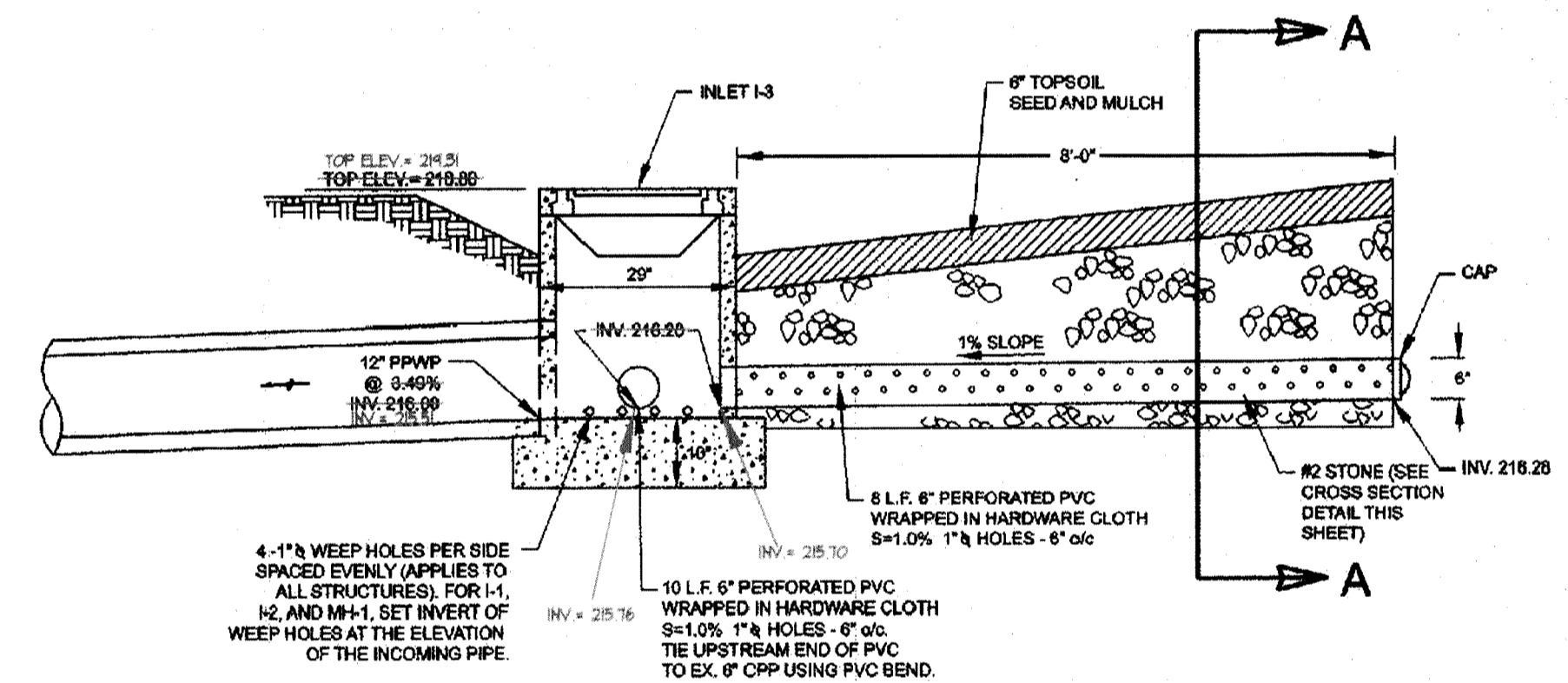
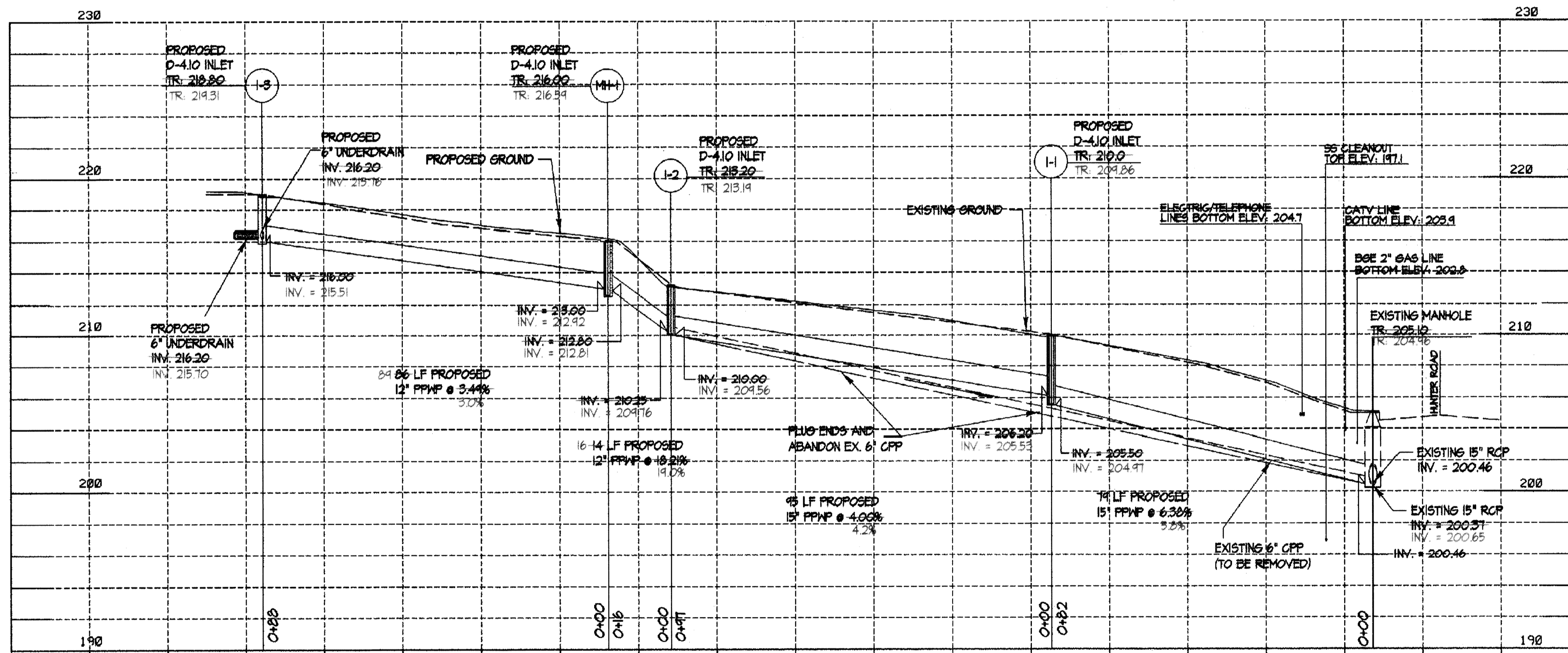


**NOTES**

1. FOR PRECAST DEVELOPMENT SEE CONSTRUCTION PLANS.
2. REINFORCING SHALL BE APPROVED PER PERMITS. ALL REINFORCING SHALL BE PLACED TO THE OUTSIDE SURFACE OF THE SLAB.
3. TOP OF WALLS SHALL BE BRICK BONDOUT.
4. WALL AND BOTTOM SLAB REINFORCING SHALL BE NO. 4 BARS @ 18\"/>

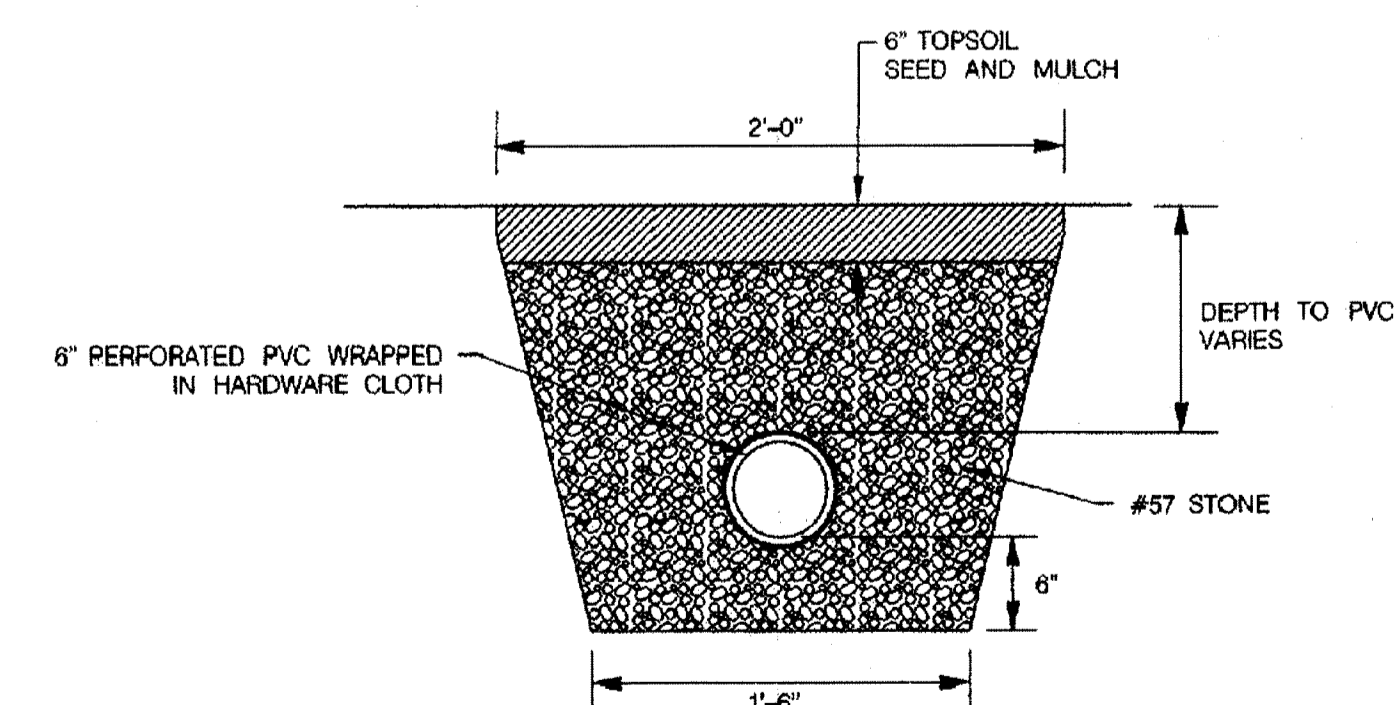
HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS	DETAIL Type 'D' Inlet Cast-in-place	D-4.11
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NOTE: PLACE 4 - 1\"/>



**ELEVATION**

SCALE: 1\"/>

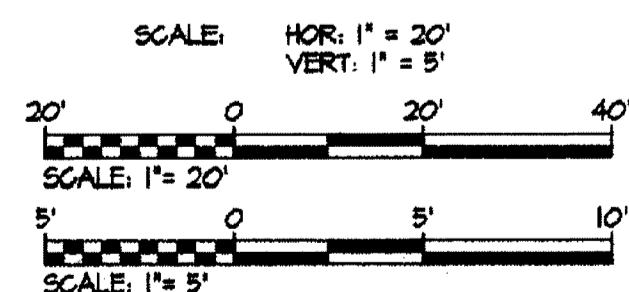


**SECTION A-A**

NT8

**UNDERDRAIN DETAIL**

**PIPE PROFILE**



**NOTES:**

1. TIE IN ROOF LEADERS FROM WYATT PROPERTY TO 15\"/>
- 2. TWO 6\"/>
- 3. USE CAUTION WHEN EXCAVATING IN VICINITY OF EXISTING UNDERGROUND UTILITIES.

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

*Evelyn E. Jones*  
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

6/12/12  
DATE



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 20903, EXPIRATION DATE: JULY 18, 2013

NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD  
SPARKS, MARYLAND 21152  
TELEPHONE: (410) 316-7800  
FAX: (410) 316-7818  
www.kci.com



STIPA COURT  
DRAINAGE IMPROVEMENTS  
PLANNING & ESTIMATING  
SECTION & DETAILS  
CAPITAL PROJECT DIVISION  
1300 NEW YORK AVE., 12TH FLOOR  
COLUMBIA, MD 21046  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
STORAGE/WATER MANAGEMENT DIVISION  
8700 COLUMBIA PIKE, SUITE 200  
COLUMBIA, MD 21046

**PROFILE & DETAILS**

SCALE:	AS SHOWN
DATE:	APRIL 2012
KCI JOB NO.:	01-081795.70
CAPITAL PROJECT NO.:	D1118
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	

AS-BUILT 11/7/2012

PLOTTED: 11:19 AM on Monday, June 04, 2012  
 FILE: M:\2008\01081795.70\Drawings\DES-P001-Stipa Court.dgn



PROFESSIONAL CERTIFICATION. I HEREBY  
 CERTIFY THAT THESE DOCUMENTS WERE  
 PREPARED OR APPROVED BY ME, AND THAT  
 I AM A DULY LICENSED PROFESSIONAL  
 ENGINEER UNDER THE LAWS OF THE STATE  
 OF MARYLAND, LICENSE NO. 20903,  
 EXPIRATION DATE: JULY 18, 2013

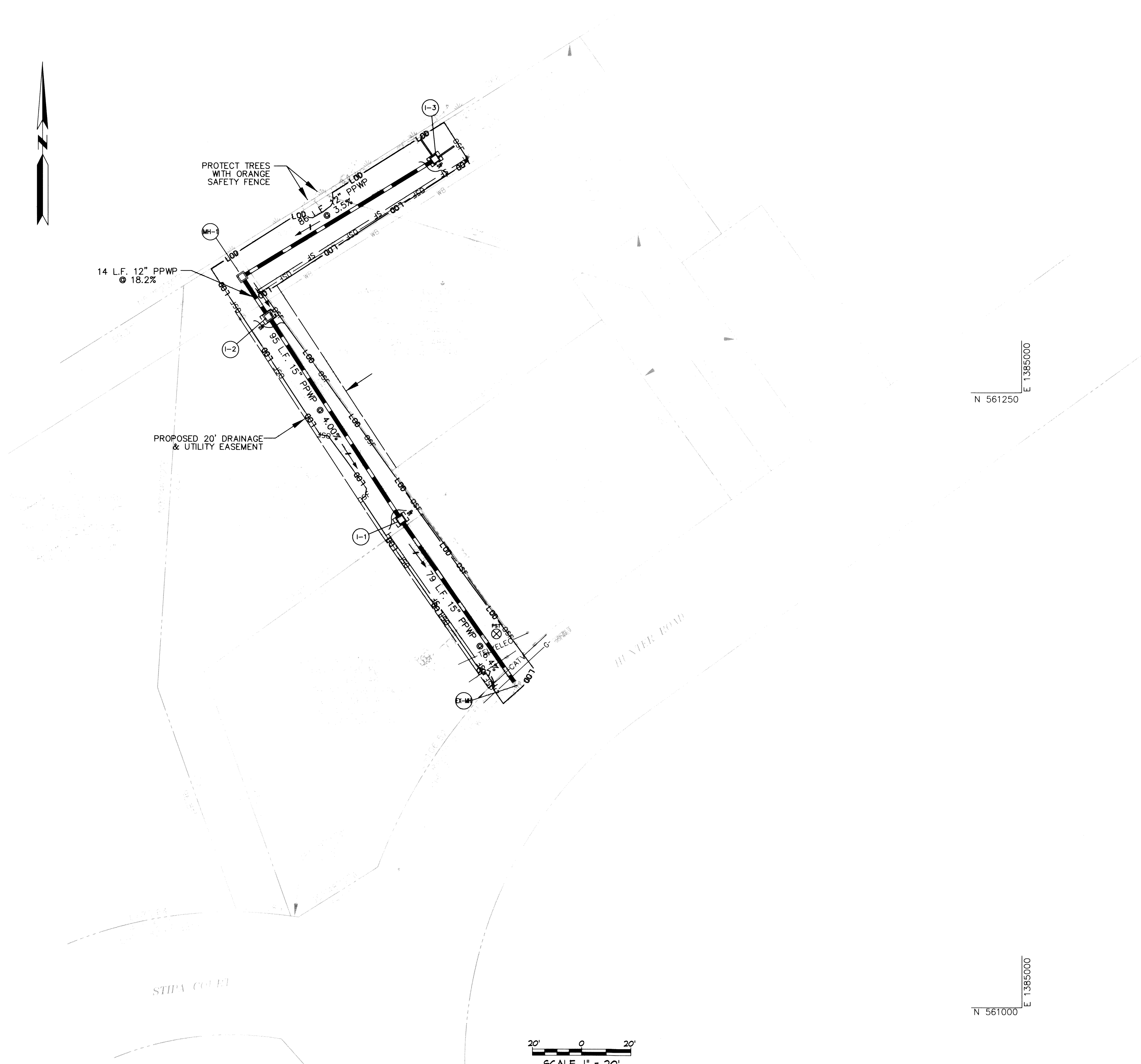
DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
 Chief, Bureau of Environmental Services  
 DATE: 6/12/12

**SEQUENCE OF CONSTRUCTION**  
GENERAL

1. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777.
2. CONTRACTOR SHALL COORDINATE AN ON-SITE PRE-CONSTRUCTION MEETING THAT SHALL INCLUDE COUNTY PROJECT MANAGER, THE CONTRACTOR, AND THE ENGINEER.
3. MARK LOD PRIOR TO PRE-CONSTRUCTION MEETING.
4. CONTRACTOR SHALL MINIMIZE THE IMPACT ON EXISTING UTILITIES AND OTHER EXISTING FEATURES, SPECIFICALLY EXISTING LANDSCAPE FEATURES ON THE WYATT PROPERTY AND THE ELPHAGE PROPERTY DECK.
5. CONTRACTOR SHALL CAUTION THE EQUIPMENT OPERATORS TO TAKE EXTRA CARE WHILE DRIVING WITHIN THE PROJECT AREA.
6. WORK AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY TO MINIMIZE SEDIMENT-LADEN RUNOFF TO EXISTING STORM DRAIN SYSTEM.
7. IF EXCAVATION FOR PIPES REQUIRES THE REMOVAL OF STANDING WATER, IT SHALL BE PUMPED TO A PST OR OTHER SUITABLE DEVICE PRIOR TO DISCHARGE INTO THE EXISTING STORM DRAIN SYSTEM.
8. AT PROJECT COMPLETION, REPLACE PLAYGROUND EQUIPMENT AND FENCE AND REMOVE ANY REMAINING SEDIMENT AND/OR DEBRIS FROM THE WORK AREA.

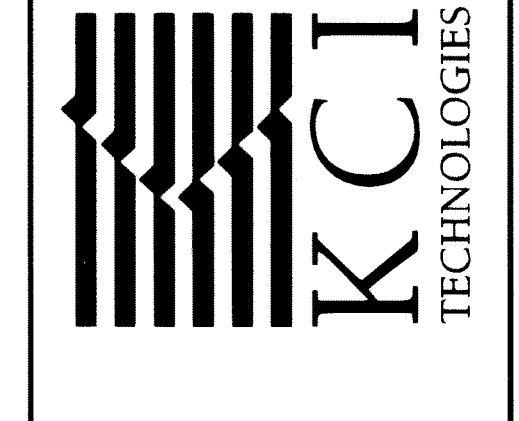
**STORM DRAIN SYSTEM**

1. PLACE ORANGE CONSTRUCTION FENCE ALONG LOD. PLACE SILT FENCE AS SHOWN.
2. EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF PIPE EXCAVATION TRENCH. CONNECT TO EX-MH AT HUNTER ROAD DURING A DRY WEATHER FORECAST. STABILIZE DISTURBED AREAS ADJACENT TO PIPE TRENCH AT THE END OF EACH WORK DAY.
3. DEWATER PIPE TRENCHES, AS REQUIRED, BY PUMPING STANDING WATER TO PST PRIOR TO DISCHARGING TO EX-MH AT HUNTER ROAD.
4. ONCE AN INLET IS CONSTRUCTED, PLACE INLET PROTECTION AT THE INLET.
5. PROVIDE PERMANENT STABILIZATION WITHIN WORK AREA. CONSTRUCT CONCRETE SIDE WALK PAVEMENT PATCH.
6. WHEN THE PROJECT AREA IS FULLY STABILIZED, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY AREAS DISTURBED BY THIS PROCESS.



NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD  
 SPARKS, MARYLAND 21152  
 TELEPHONE: (410) 316-7800  
 FAX: (410) 316-7818  
 WWW.KCI.COM



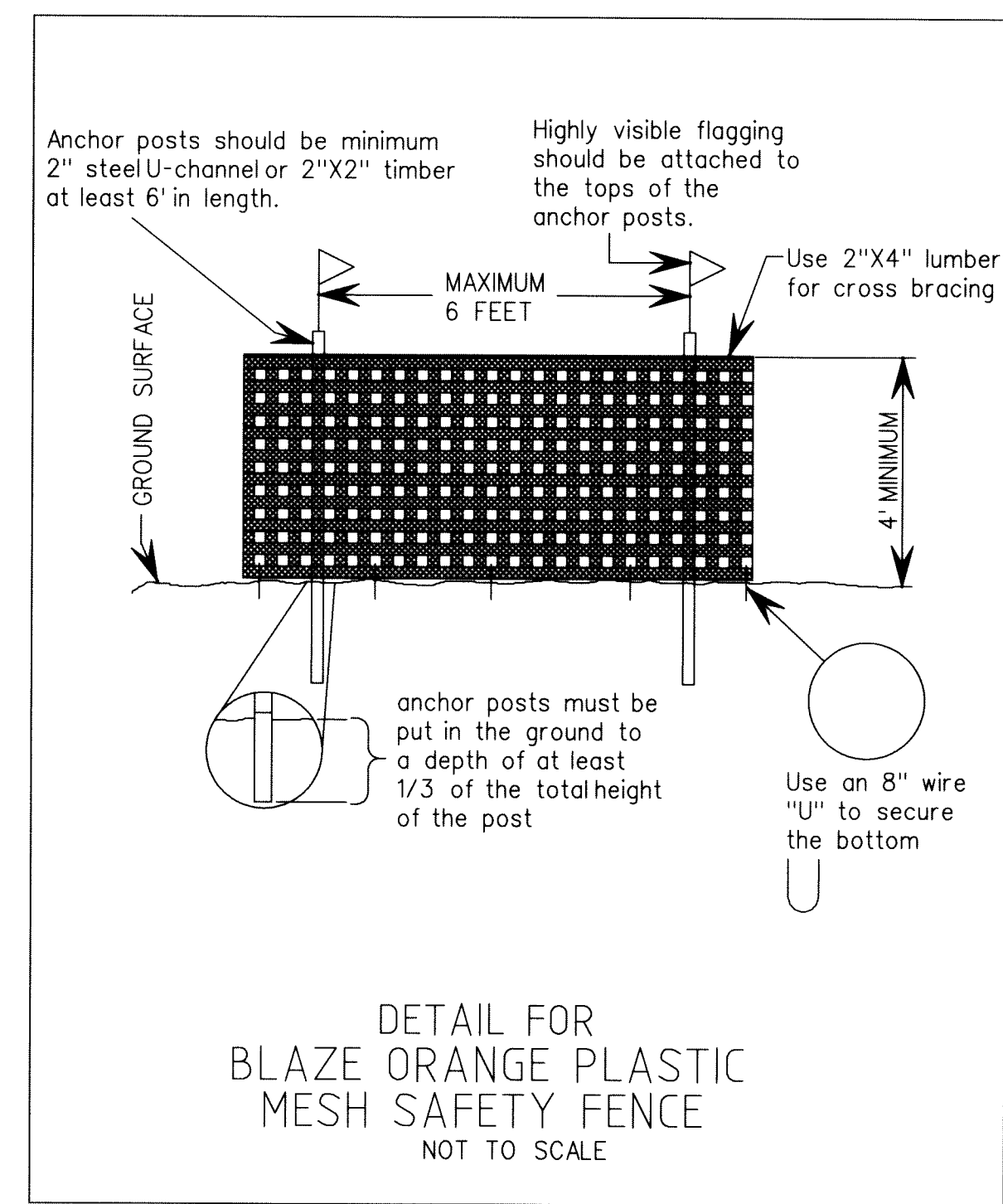
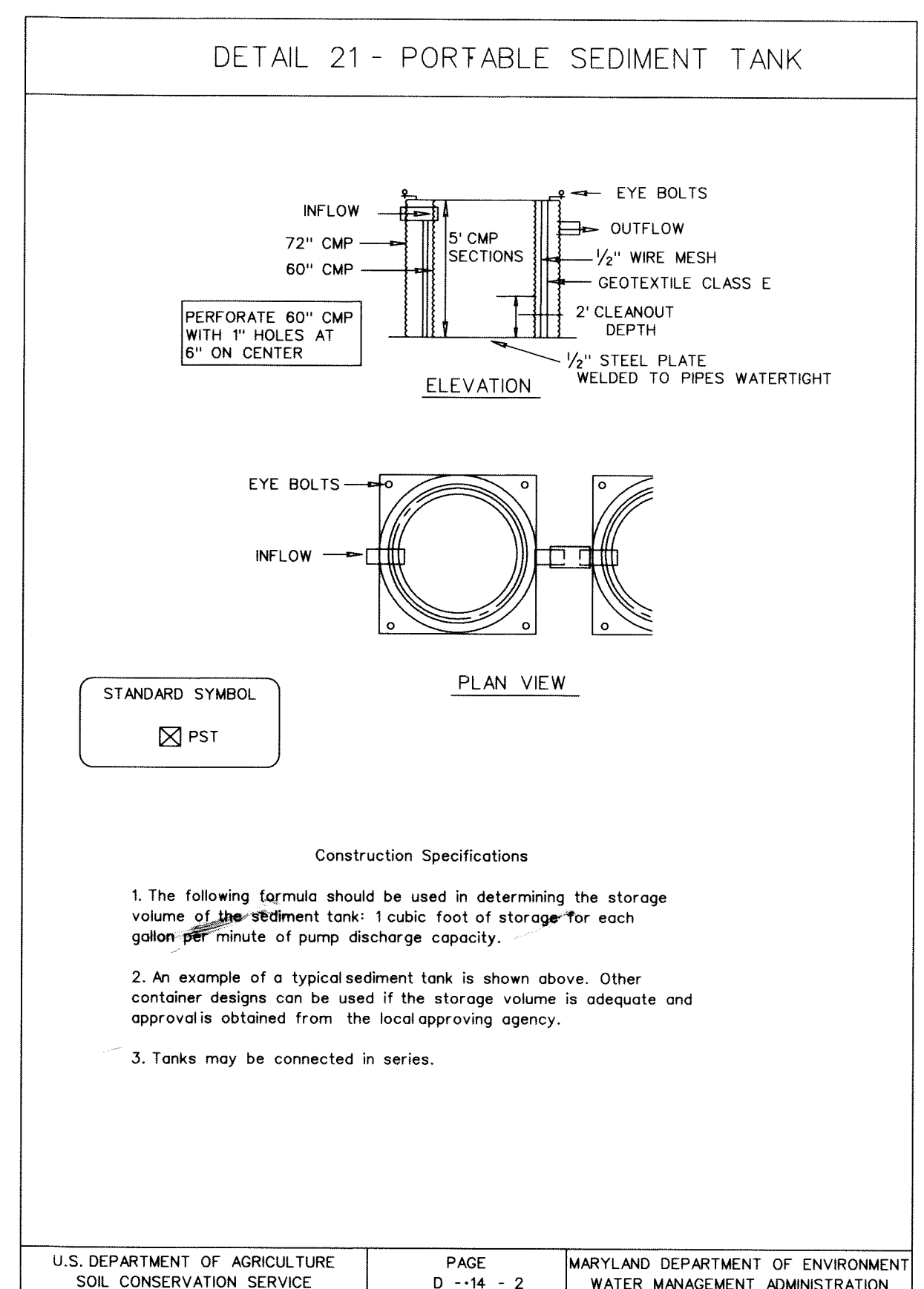
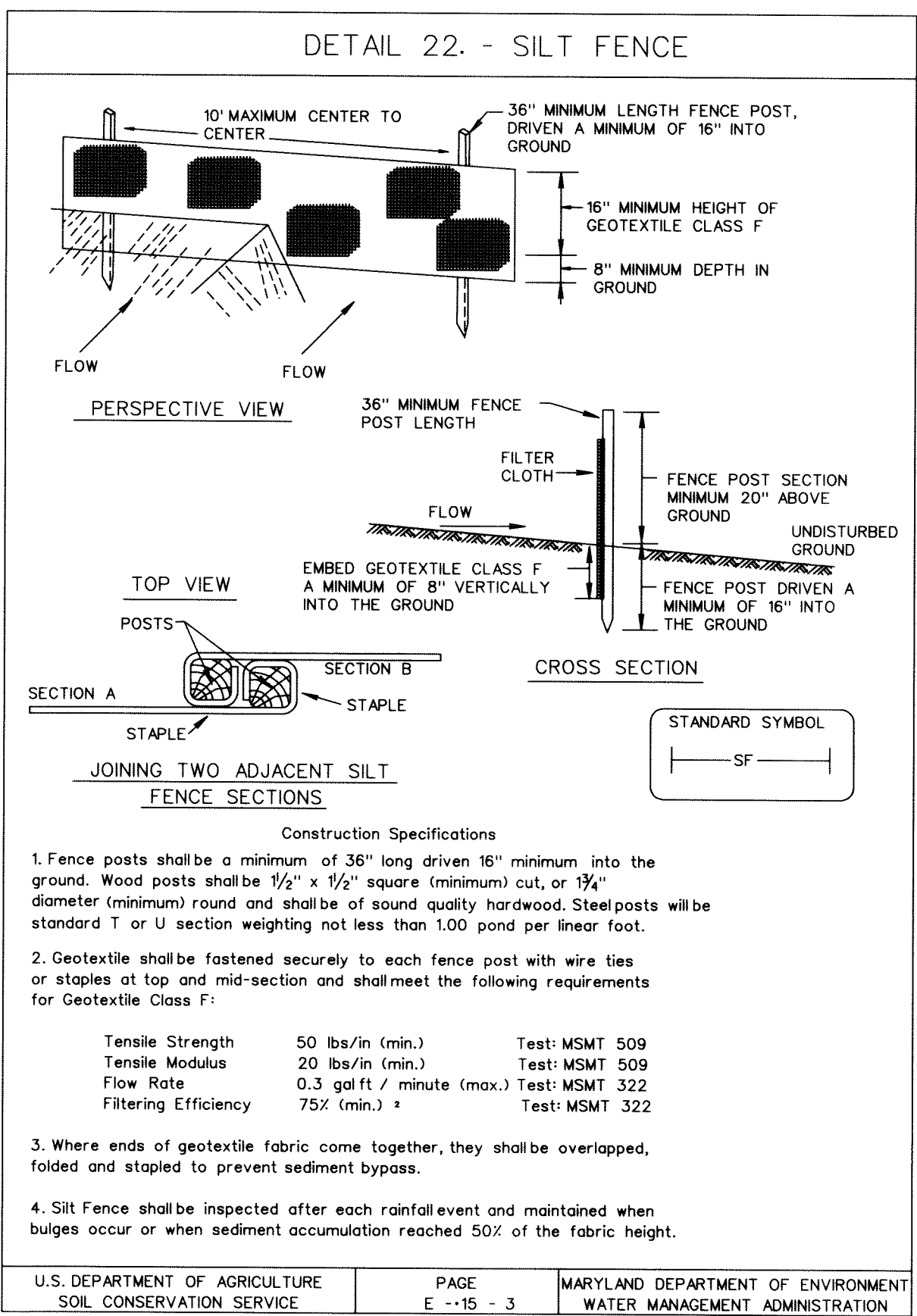
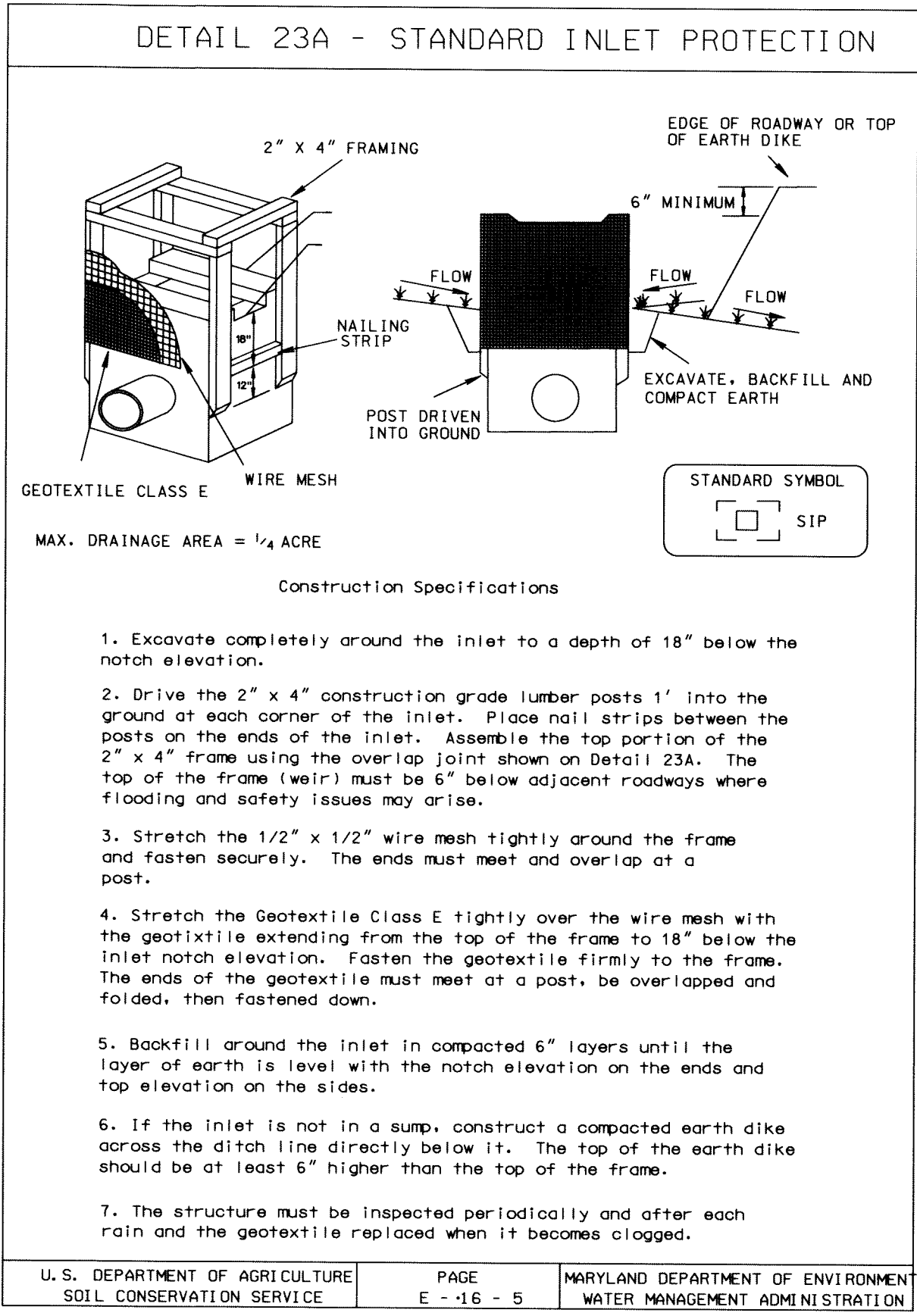
**STIPA COURT  
DRAINAGE IMPROVEMENTS**  
HUNT CLUB ESTATES  
SECTION 5, AREA 1, 2  
CLAYTON PLACE  
TAX MAP 20, BLOCK 10, SECTION 02  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
STORMWATER MANAGEMENT DIVISION  
8751 COLUMBIA RD. # 2146

**EROSION & SEDIMENT CONTROL PLAN**

SCALE: 1" = 20'  
 DATE: APRIL 2012  
 KCI JOB NO.: 01-081795.70  
 CAPITAL PROJECT NO.: D1118  
 PERMIT ISSUE:  
 CONSTRUCTION ISSUE:

SHEET NO.: 4 OF 5





#### TEMPORARY VEGETATIVE STABILIZATION

A) SEEDING PREPARATION: LOOSEN UPPER THREE INCHES BY DISCING, RAKING OR OTHER ACCEPTABLE MEANS.

B) SOIL AMENDMENTS: APPLY 600 LBS PER ACRE OF 10-10-10 FERTILIZER AND TWO TONS PER ACRE OF LIME.

C) SEEDING: FOR PERIODS OF MARCH 1 TO APRIL 30 AND AUGUST 15 TO NOVEMBER 15, SEED WITH 2.5 LBS PER ACRE OF CEREAL RYE PLUS 30 LBS PER ACRE OF TALL FESCUE OR 5 LBS PER ACRE OF REDTOP OR 20 LBS PER ACRE OF PERENNIAL RYEGRASS.

FOR PERIOD OF MAY 15 TO AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEDING LOVEGRASS OR 40 LBS PER ACRE OF JAPANESE OR FOXTAIL MILLET.

D) MULCHING SPECIFICATIONS: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. APPLY 2 TONS PER ACRE OF STRAW OVER ALL SEEDED AREAS. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHALL BE INCREASED 100% TONS PER ACRES.

MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND AND WATER. THE TYPE OF MULCH ANCHORING USED MUST COMPLY WITH THE 1994 MARYLAND STANDARD AND SPECIFICATIONS, CHAPTER 20, TABLE 23.

\* IF OTHER SEED MIXTURES ARE TO BE SUBSTITUTED, THEY MUST COMPLY WITH THE 1994 MARYLAND STANDARD AND SPECIFICATIONS, CHAPTER 20, TABLE 23.

\*\* IF A DIFFERENT TYPE OF MULCH IS TO BE USED, IT MUST COMPLY WITH THE 1994 MARYLAND STANDARD AND SPECIFICATIONS, CHAPTER 20.

#### PERMANENT VEGETATIVE STABILIZATION

ALL DISTURBED AREAS, WHICH ARE NOT TO BE PAVED, SHALL BE PERMANENTLY STABILIZED AS FOLLOWS:

A) SEEDING PREPARATION: LOOSEN UPPER THREE INCHES BY RAKING, DISCING, OR OTHER ACCEPTABLE MEANS AFTER SPREADING FOUR INCHES OF TOPSOIL.

B) SOIL AMENDMENTS: APPLY 600 LBS PER ACRE OF 10-10-10 FERTILIZER AND TWO TONS PER ACRE OF LIME.

C) SEEDING: FOR PERIODS OF MARCH 1 TO MAY 15 AND AUGUST 15 TO OCTOBER 15, SEED WITH 125 LBS PER ACRE OF TALL FESCUE, 15 LBS PER ACRE OF PERENNIAL RYEGRASS, AND 10 LBS OF KENTUCKY BLUEGRASS.

FOR PERIOD OF MAY 15 TO AUGUST 14, SEED WITH 110 LBS PER ACRE OF TALL FESCUE AND 3 LBS PER ACRE OF WEEDING LOVEGRASS.

FOR PERIOD OF OCTOBER 16 TO FEBRUARY 28, PROTECT SITE BY: OPTIONS - 1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. 2) USE SOD OR 3) SEED WITH 60 LBS PER ACRE OF TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

NOTE: FOR QUICK COVER WITH TALL FESCUE, ADD 2 LBS OF SMALL GRAIN PER 1,000 SQ. FT.

D) MULCHING SPECIFICATIONS: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. APPLY 2 TONS PER ACRE OF STRAW OVER ALL SEEDED AREAS. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHALL BE INCREASED 100% TONS PER ACRES.

MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND AND WATER. THE TYPE OF MULCH ANCHORING USED MUST COMPLY WITH THE 1994 MARYLAND STANDARD AND SPECIFICATIONS, CHAPTER 20, TABLE 23.

\* IF OTHER SEED MIXTURES ARE TO BE SUBSTITUTED, THEY MUST COMPLY WITH THE 1994 MARYLAND STANDARD AND SPECIFICATIONS, CHAPTER 20, TABLE 23.

\*\* IF A DIFFERENT TYPE OF MULCH IS TO BE USED, IT MUST COMPLY WITH THE 1994 MARYLAND STANDARD AND SPECIFICATIONS, CHAPTER 20.

#### HOWARD COUNTY CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (11-1855).
- 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 SPECIFICATIONS 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 5:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGN POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS 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 PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 

TOTAL AREA OF SITE	0.11 ACRES
AREA DISTURBED	0.11 ACRES
AREA TO BE ROOVED OR PAVED	0 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.11 ACRES
TOTAL CUT	96 CU. YARDS
TOTAL FILL	96 CU. YARDS
OFFSITE WASTE/BORROW AREA LOCATION	TO BE DETERMINED*
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORK DAY, WHICH EVER IS SHORTER.

\*OFFSITE WASTE/BORROW SITE SHALL HAVE AN APPROVED SEDIMENT CONTROL PLAN.

#### 2.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

**DEFINITION:** PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

**PURPOSE:** TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

**CONDITIONS WHERE PRACTICE APPLIES**

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
  - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
  - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
  - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
  - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- FOR THE PURPOSE OF THESE STANDARD SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

**CONSTRUCTION AND MATERIAL SPECIFICATIONS**

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
  - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
  - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTURBED CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
  - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 2.0.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
  - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
    - PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
    - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
    - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
    - NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME AS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
  - NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
  - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 2.0.0 VEGETATIVE STABILIZATION - SECTION I.
  - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOILING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE WATER POCKETS.
  - TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MIDDY CONDITION WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR

REGISTERED: 11/20/09, M.D. on 11/20/09, June 04, 2012. I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20903. EXPIRATION DATE: JULY 18, 2013.

STATE OF MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
REGISTERED PROFESSIONAL ENGINEER

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

*Evelyn E. Jank*  
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

6/24/12  
DATE

PERMANENT SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 6B ) FROM TABLE 25	FERTILIZER RATE (10-20-20)			LIME
	N	P205	K20	
1 TALL FESCUE (85%) PERENNIAL RYEGRASS (10%) KENTUCKY BLUEGRASS (5%)	125 15 10	3/1-5/15 8/15-10/15	1-2 INCH	90 LB/AC (2.0 LB/ 1000 SF)
2 KENTUCKY BLUEGRASS (50%) HARD FESCUE (40%) RED TOP (10%)	150	3/1-5/15 8/15-10/15	1-2 INCH	175 lb/ac (4.0 LB/ 1000 SF)

TEMPORARY SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 6B ) FROM TABLE 26	FERTILIZER RATE (10-10-10)			LIME RATE
	N	P205	K20	
1 RYE	140	3/1-4/30 8/15-11/15	1-2 INCH	600 LB/AC (15 LB/1000 SF)
2 RYE PLUS FOXTAIL MILLET	150	3/1-4/30 5/1-8/14 8/15-11/15	1 INCH	2 tons/ac (100 LB/ 1000 SF)

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20903. EXPIRATION DATE: JULY 18, 2013.

NO. REVISIONS DESCRIPTION DATE

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HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
STORMWATER MANAGEMENT DIVISION  
6700 COLUMBIA, MD

EROSION & SEDIMENT CONTROL NOTES & DETAILS

SCALE:

DATE: APRIL 2012

KCI JOB NO.: 01-081795.70

CAPITAL PROJECT NO.: D1118

PERMIT ISSUE:

CONSTRUCTION ISSUE:

SHEET NO.: 5 OF 5

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