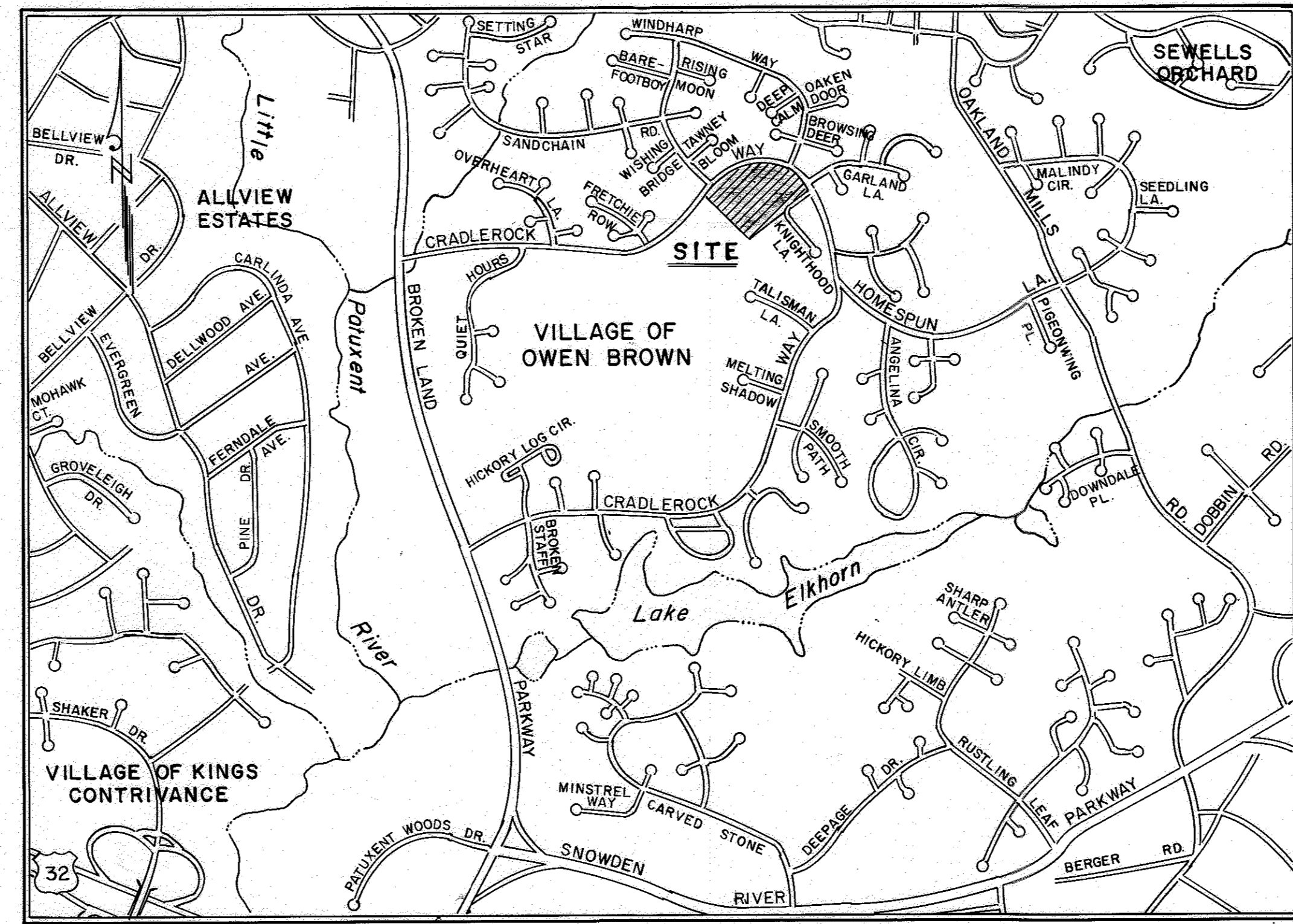




COLUMBIA ASSOCIATION

SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN
DASHER GREEN NEIGHBORHOOD CENTER
PARKING LOT EXPANSION

HOWARD COUNTY, MARYLAND



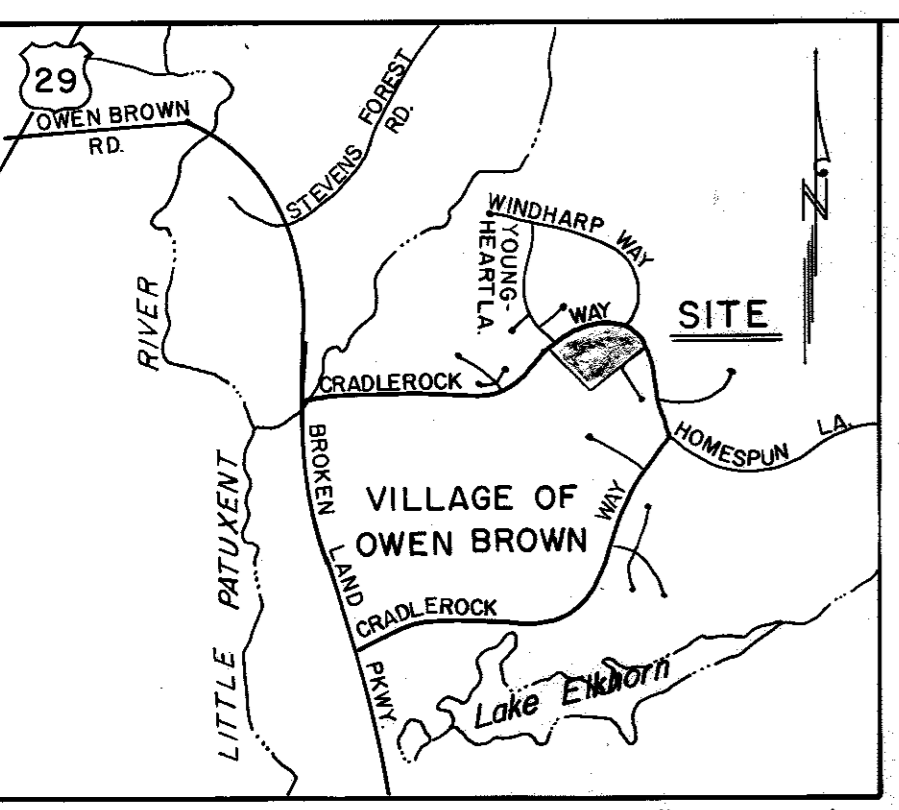
LOCATION MAP
SCALE: 1" = 1,000'

DEVELOPER: COLUMBIA PARK AND RECREATION ASSOCIATION
10221 WINCOPIN CIRCLE
COLUMBIA, MARYLAND 21044

The RBA Group ENGINEERS • ARCHITECTS • PLANNERS
5560 STERRETT PLACE, SUITE 300, COLUMBIA, MD 21044 (410) 730-7950

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
James J. Shaw 10/26/94
DIRECTOR DATE
10/25/94
CHIEF BUREAU OF ENGINEERING DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
James J. Shaw 11/7/94
DIRECTOR DATE
11/4/94
CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER DATE

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 7-14-94



VICINITY MAP SCALE: 1" = 2,000'

GENERAL NOTES

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
2. TOPO TAKEN FROM A SURVEY BY THE RBA GROUP, DATED NOVEMBER, 1991. CONTOUR INTERVAL IS (1) ONE FOOT.
3. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
4. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORMWATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORMWATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENT, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
5. DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE CIVIL ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.
6. PRIOR TO START OF ANY CONSTRUCTION, CONTRACTOR SHALL STAKE OUT ALL CONSTRUCTION AND VERIFY ALL OFFSETS, SETBACKS, EXISTING UTILITY LOCATIONS (HORIZONTAL AND VERTICAL) AND DIMENSIONS.
7. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL USE DIMENSIONS SHOWN. SCALING OF THESE PLANS IS DISCOURAGED UNLESS DIRECTED BY CIVIL ENGINEER.
9. ADJUSTMENTS TO THE SEQUENCE OF CONSTRUCTION SHALL BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS PRIOR TO SUCH ADJUSTMENT.
10. APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE.
11. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES, WHERE DIRECTED BY THE ENGINEER, A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS. NOTIFY ENGINEER IMMEDIATELY IF CONFLICTS ARISE.
12. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
13. CONTRACTOR TO ALSO COMPLY WITH SEDIMENT CONTROL NOTES.
14. THERE MAY BE ADDITIONAL UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND NOTIFY THE ENGINEER.
15. CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST 48 HOURS BEFORE STARTING WORK ON THESE DRAWINGS:
"MISS UTILITY" 1-(800) 257-7777
BALTIMORE GAS & ELECTRIC COMPANY (410) 234-5691
C & P TELEPHONE COMPANY (410) 393-3648
16. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
17. THE DEVELOPER MUST REQUEST THAT THE DEPARTMENT OF INSPECTIONS AND PERMITS APPROVE WORK COMPLETED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE GRADING OR BUILDING PERMIT, AND THE ORDINANCE.

- 18. ON ALL SITE WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE DEPARTMENT OF INSPECTIONS AND PERMITS SHALL BE REQUIRED ON 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 THE INITIAL APPROVAL BY THE DEPARTMENT OF INSPECTIONS AND PERMITS IS GIVEN.
19. APPROVAL SHALL BE REQUESTED ON FINAL STABILIZATION OF ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES BEFORE REMOVAL OF CONTROLS.
20. ALL FILL SHALL BE ROLLED TO A MINIMUM DEGREE OF COMPACTION OF 95% OF THE DRY UNIT WEIGHT AS DETERMINED BY ASTM D-698.
21. ALL CONCRETE FOR SITE WORK SHALL BE CLASS 2 CONCRETE AND SHALL BE IN ACCORDANCE WITH THE MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATION AS AMENDED TO DATE.
22. STRUCTURES NOTED FOR REMOVAL SHALL BE REMOVED ENTIRELY AND COMPLETELY. REMOVAL OF UTILITIES OR MATERIALS THAT ARE BELOW GRADE SHALL HAVE THE SURFACE ABOVE RESTORED TO MATCH ADJACENT GRADES.
23. ALL DISTURBED AREAS SHALL BE STABILIZED WITH PERMANENT SEED AND MULCH IN ACCORDANCE WITH PLANS APPROVED BY THE HOWARD COUNTY CONSERVATION DISTRICT.
24. FOR DETAILS OF UPRIGHT SIGNS AND AREAS FOR HANDICAPPED, SEE THE CODE OF MARYLAND REGULATIONS 05-01-07 MARYLAND BUILDING CODE FOR THE HANDICAPPED.
25. PAVED AREAS AS PER DETAILS SHOWN ON THESE APPROVED DRAWINGS.
26. THE CONTRACTOR SHALL OBTAIN THE NECESSARY BUILDING PERMITS FOR CONSTRUCTION.
27. ALL UTILITIES ARE TO BE RETAINED UNLESS MARKED OTHERWISE AND APPURTENANCES ARE TO BE ADJUSTED TO FINISHED GRADE.
28. THE CONTRACTOR SHALL REPAIR AND MAINTAIN EXISTING SEDIMENT CONTROL DEVICES UNTIL ALL AREAS WITHIN THE LIMIT OF CONSTRUCTION ARE STABILIZED. AT THAT POINT, ALL SEDIMENT CONTROL DEVICES SHALL BE REMOVED AND AREAS RESTORED AND STABILIZED.
29. THE MEASURES REQUIRED IN THE APPROVED SEDIMENT CONTROL PLAN SHALL APPLY AS IF SHOWN ON THIS PLAN.
30. THE CONTRACTOR SHALL CONTACT THE DEPARTMENT OF PUBLIC WORKS/DIVISION OF CONSTRUCTION INSPECTION AT (410) 313-1880 AT LEAST (5) FIVE WORKING DAYS PRIOR TO THE START OF WORK.
31. BENCHMARK IS FIRST FLOOR OF COMMUNITY CENTER BUILDING. ELEVATION= 379.34.

SITE TABULATIONS

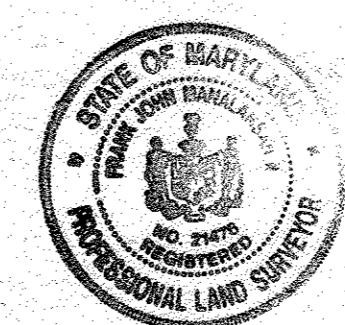
- 1. AREA OF PARCEL: 5.176 AC +/- (225,466.56 SQ. FT.)
2. TOTAL PROPOSED LIMIT OF DISTURBANCE: 0.58 AC +/- (25,047 SQ. FT.)
3. PROPOSED ADDITIONAL BITUMINOUS PAVEMENT: 0.22AC +/- (9,441 SQ. FT.)
4. PROPOSED ADDITIONAL CONCRETE SIDEWALK: 1,008 SQ. FT. (168 L.F.)

SHEET INDEX

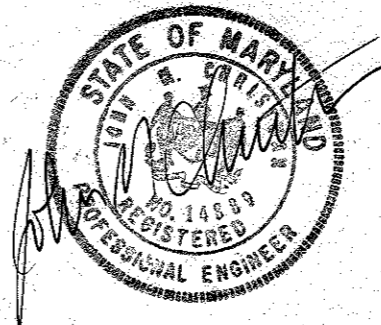
- 1. COVER SHEET
2. SITE LAYOUT PLAN
3. LANDSCAPING AND GRADING PLAN
4. SITE DETAILS
5. STORM DRAIN PROFILES
6. SEDIMENT CONTROL PLAN
7. SEDIMENT CONTROL DETAILS
8. SITE IMPROVEMENT PLAN AND SEDIMENT/EROSION CONTROL PLAN
9. STORM DRAIN PROFILES AND SEDIMENT CONTROL NOTES & DETAILS

SITE ANALYSIS

- 1. AREA OF PARCEL: 5.176 AC +/- (225,466.56 SQ. FT.)
TOTAL PROPOSED LIMIT OF DISTURBANCE: 0.58AC +/- (25,047 SQ. FT.)
2. PRESENT ZONING: NEW TOWN-OPEN SPACE
FDP NO. 127 A-VI, SDP NO. 87-72 AND 74-77C
3. EXISTING USE: NEIGHBORHOOD CENTER
SCOPE OF PROPOSED WORK: PARKING LOT EXPANSION
4. EXISTING PARKING PROVIDED: 45. REQUIRED PARKING: 43 SPACES (300 persons + 7)
REGULAR SPACES: 43. 0 SPACE PER 7 PERSONS PERMITTED IN POOL
BARRIER FREE SPACES: 2
5. PROPOSED PARKING: 67 (45 EXISTING PLUS 22 PROPOSED)
REGULAR SPACES: 64
BARRIER FREE SPACES: 3
BARRIER FREE PARKING TO BE CONSTRUCTED IN ACCORDANCE WITH "DESIGN OF BARRIER FREE FACILITIES" AND "THE MARYLAND BUILDING CODE FOR THE HANDICAPPED AND AGED."
6. EXISTING BUILDING COVERAGE: 0.16 AC +/-; 3% OF GROSS AREA
7. PROPOSED TOTAL OF PARKING LOT AND PAVED AREA: 1.31 AC +/-; 25% OF GROSS AREA
8. TOTAL OF AREA WITHOUT BUILDINGS, PARKING OR PAVED AREAS: 3.71 AC +/-; 72% OF GROSS AREA



PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL SUPERVISOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: JULY 14, 2017.
Frank John Mavalavan II 10/3/16
DATE



NOTE: THE PURPOSE OF THIS REDLINE IS TO ADD STORM DRAINAGE FROM EXISTING UNDERGROUND SUMPS TO A NEARBY DRAINAGE LINE. THIS IS SHOWN ON SHEETS 8 AND 9.

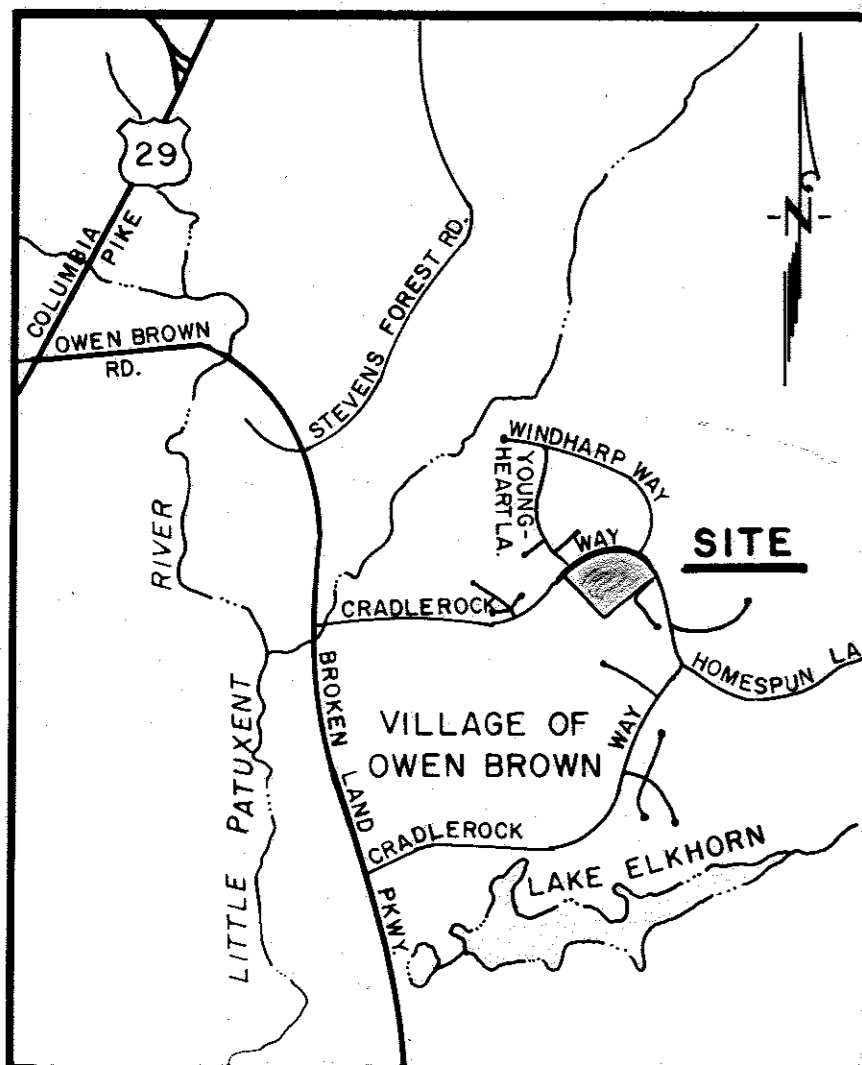
OWNER/DEVELOPER: COLUMBIA ASSOCIATION, 10221 WINCOPIN CIRCLE, COLUMBIA, MD 21044
ADDRESS CHART: BUILDING, STREET ADDRESS, LOT 64, 6600 CRADLEROCK WAY
SUBDIVISION NAME: VILLAGE OF OWEN BROWN, SECTION/AREA: 1/2, LOT/PARCEL: 64
PLAT: P.B. 27 F. 45, 15, 16, BLOCK/ZONE: OS, TAX /ZONE MAP/ELEC. DIST: 36, 6, CENSUS TR: 6067.02
WATER CODE: 1, SHEET: 2 OF 2

REVISION TABLE: 1. REVISION SHEET INDEX & REVISION SHEET NUMBER, 2/30/16, DATE









VICINITY MAP  
SCALE: 1" = 2,000'

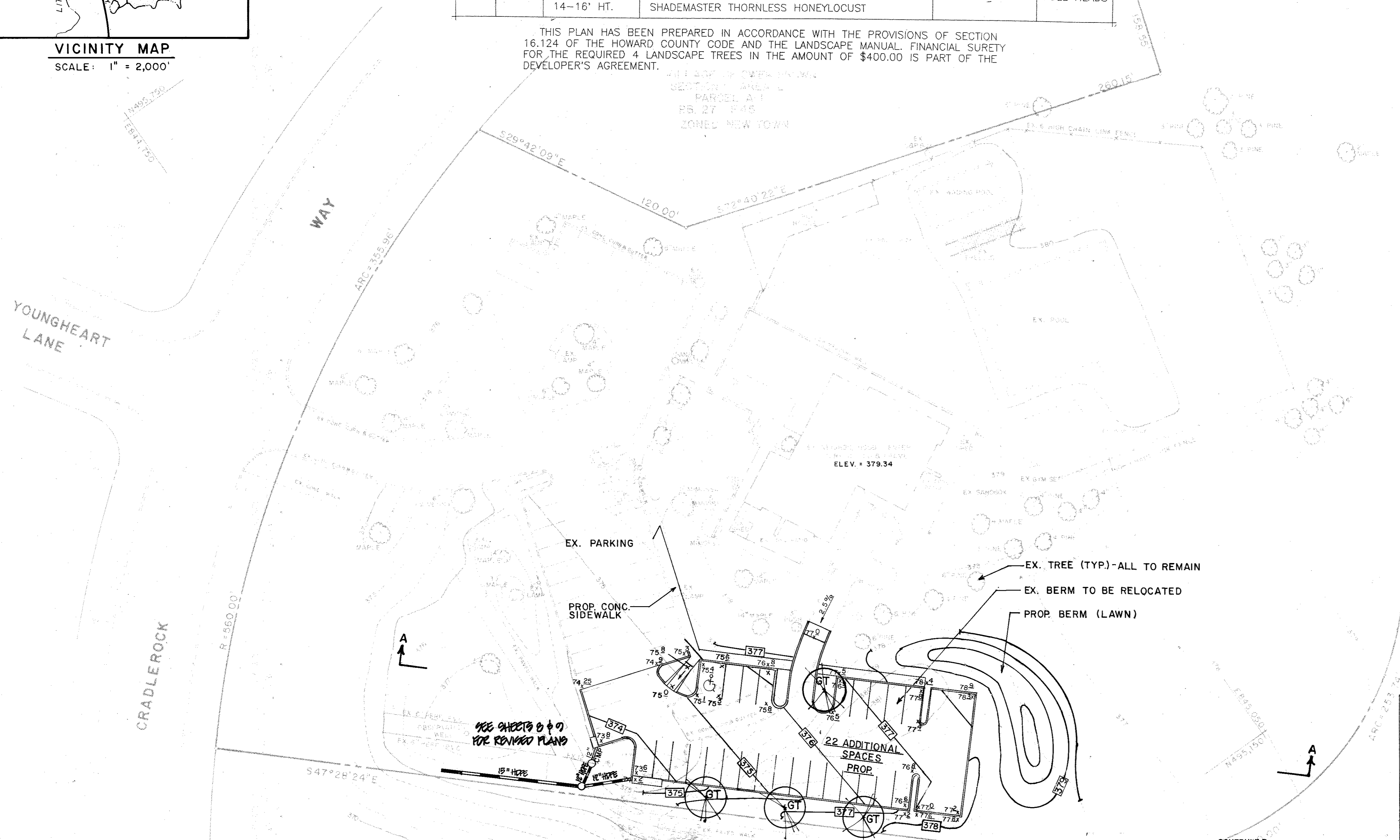
PLANTING NOTES

1. ALL PLANT MATERIAL TO MEET A.A.N. STANDARDS.
2. CONTRACTOR SHALL VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO THE INSTALLATION OF ANY PLANT-MATERIALS.
3. NO SUBSTITUTIONS SHALL BE MADE WITHOUT THE CONSENT OF THE LANDSCAPE ARCHITECT OR OWNER.
4. REFER TO THE ENGINEER'S DRAWINGS FOR OTHER PERTINENT INFORMATION.

PLANT LIST

KEY	QUAN	SIZE	PLANT NAME	ROOT	REMARKS
GT	4	2 1/2-3" CAL. 14-16' HT.	GLEDITISIA TRICANTHOS INERMIS 'SHADEMASTER' SHADEMASTER THORNLESS HONEYLOCUST	B&B	FULL HEADS

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 4 LANDSCAPE TREES IN THE AMOUNT OF \$400.00 IS PART OF THE DEVELOPER'S AGREEMENT.



PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21473, EXPIRATION DATE: JULY 14, 2017.

Frank John Manalantan II, L.C.  
10/31/16 DATE

Number of Parking Spaces	22 Additional*
Number of Trees Required	1
Number of Trees Provided	1
Shade Trees	
Other Trees (2:1 substitution)	

\*45 Existing

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

James J. Lee 10/26/04  
DIRECTOR DATE

Charles J. Brown 10/25/04  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Joseph J. Smith 11/7/94  
DIRECTOR DATE

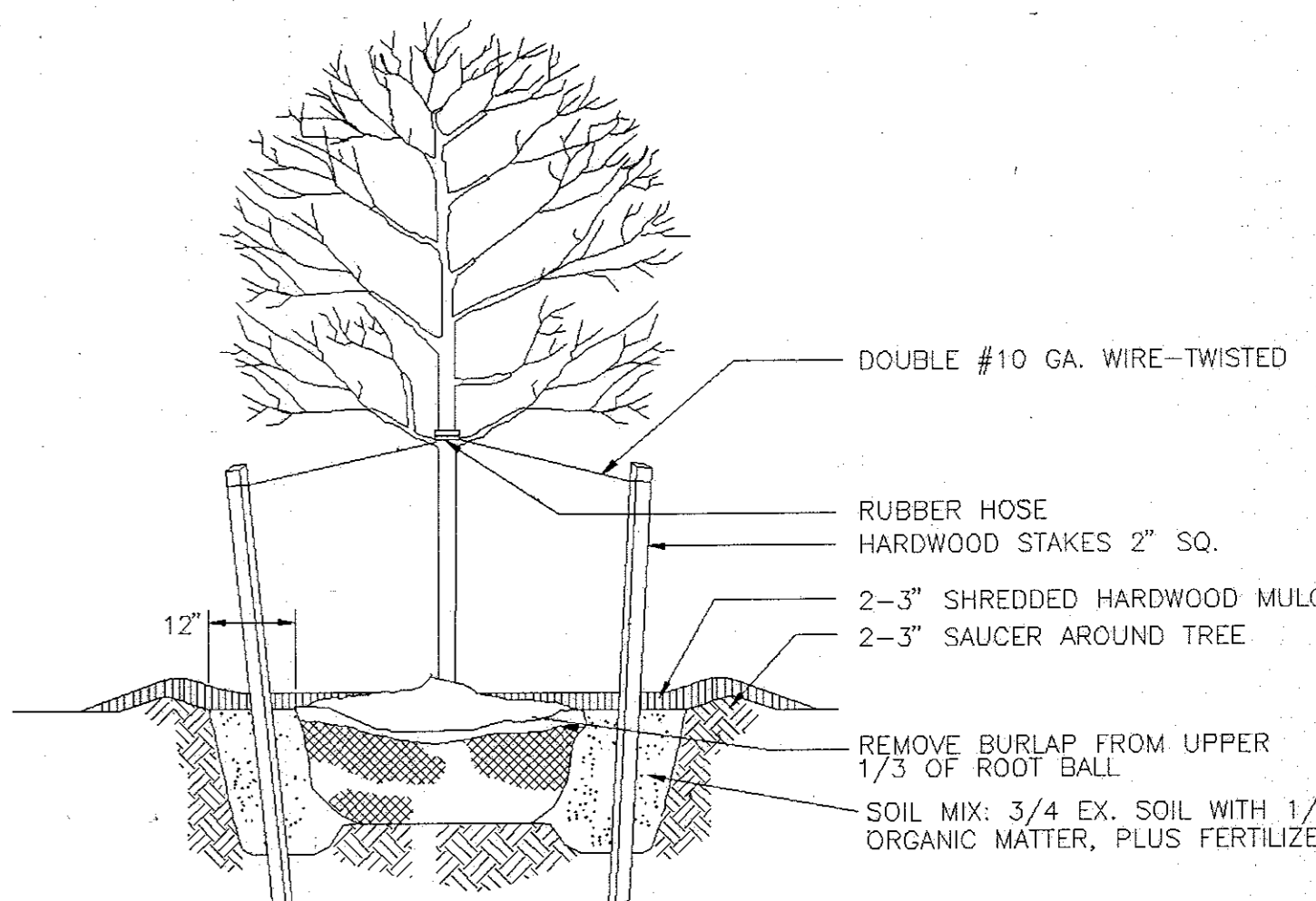
Gina J. Jaramany 11/4/94  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.  
HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER DATE

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY

DATE 4.14.94



1. THIN BRANCHES BY 1/3, RETAINING NORMAL TREE SHAPE.
2. NEVER CUT CENTRAL LEADER.
3. SET TREE WITH 1/8 ROOT BALL ABOVE GRADE.
4. STAKES, WIRES & HOSES SHALL BE REMOVED AFTER ONE YEAR.
5. SCARIFY SUBSOIL TO A MIN. 4" DEPTH.
6. PLACE STAKES PARALLEL TO WALKS.

TYPICAL DECIDUOUS TREE PLANTING DETAIL

SCHEDULE A  
PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type		A
Linear Feet of Roadway Frontage/Perimeter		180
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)		
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)		
Number of Plants Required		3
Shade Trees		
Evergreen Trees		
Shrubs		
Number of Plants Provided		3
Shade Trees		
Evergreen Trees		
Shrubs (1:1 substitution)		
Other Trees (2:1 substitution)		
(Describe plant substitution credits below if needed)		

OWNER/DEVELOPER  
COLUMBIA ASSOCIATION  
10221 WINCOPIN CIRCLE  
COLUMBIA, MD 21044

ADDRESS CHART

BUILDING	STREET ADDRESS
LOT 64	6800 CRADLEROCK WAY

SUBDIVISION NAME  
VILLAGE OF OWEN BROWN

SECTION/AREA	LOT/PARCEL
1/2	64

PLAT BLOCK ZONE TAX ZONE MAP/ELEC DIST CENSUS TR  
PB 27F.45 15,16 OS 36 6 606702

WATER CODE SEWER CODE

1 ADDED STORM DRAIN & REVISED SHEET NUMBER 0/30/16  
2 REVISION DATE

RESPONSIBLE PERSONNEL CERTIFICATION  
"I HEREBY CERTIFY THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."

SIGNATURE OF DEVELOPER DATE

CERTIFICATION BY THE ENGINEER  
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER DATE  
JOHN M. CHRISTMAN, P.E.

CERTIFICATION BY THE DEVELOPER  
"I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY."

SIGNATURE OF DEVELOPER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD S.C.D. DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

APPROVED: U.S. SOIL CONSERVATION SERVICE DATE

revisions

no.	description	date

prepared by  
RBA GROUP ENGINEERS • ARCHITECTS • PLANNERS  
5560 STERRETT PLACE, SUITE 300  
COLUMBIA, MARYLAND 21044  
301 / 730-7950 621-6050

LANDSCAPE AND GRADING PLAN

VILLAGE OF OWEN BROWN  
DASHER GREEN NEIGHBORHOOD CENTER  
PARKING LOT EXPANSION

COLUMBIA HOWARD COUNTY, MARYLAND

SCALE 1" = 30'

DRAWN	CHECKED
J.M.M.	J.M.C.
PROJ. NO.	DATE
3	9

SHEET OF



APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS,  
STORM DRAINAGE SYSTEMS AND PUBLIC WORKS.  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR: *James J. Shum* 10/26/94  
DATE: 10/26/94

CHIEF, BUREAU OF ENGINEERING: *Paul R. Brown* 10/25/94  
DATE: 10/25/94

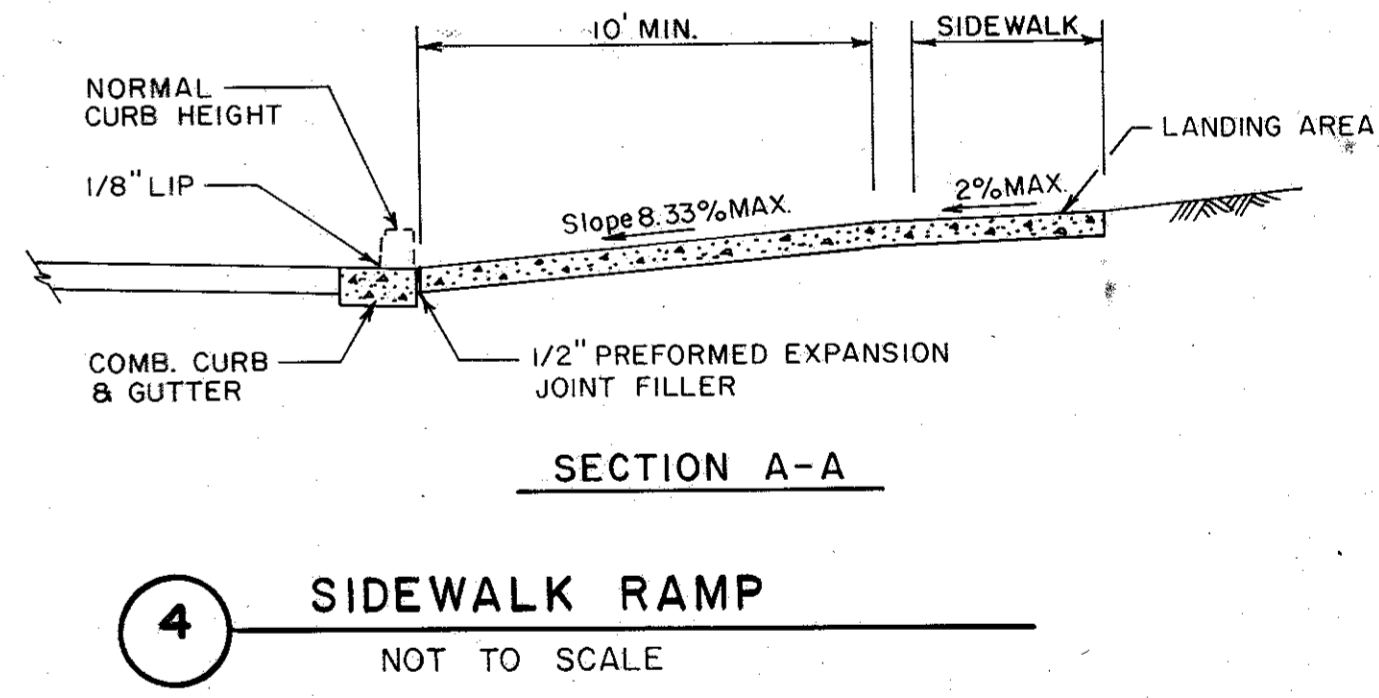
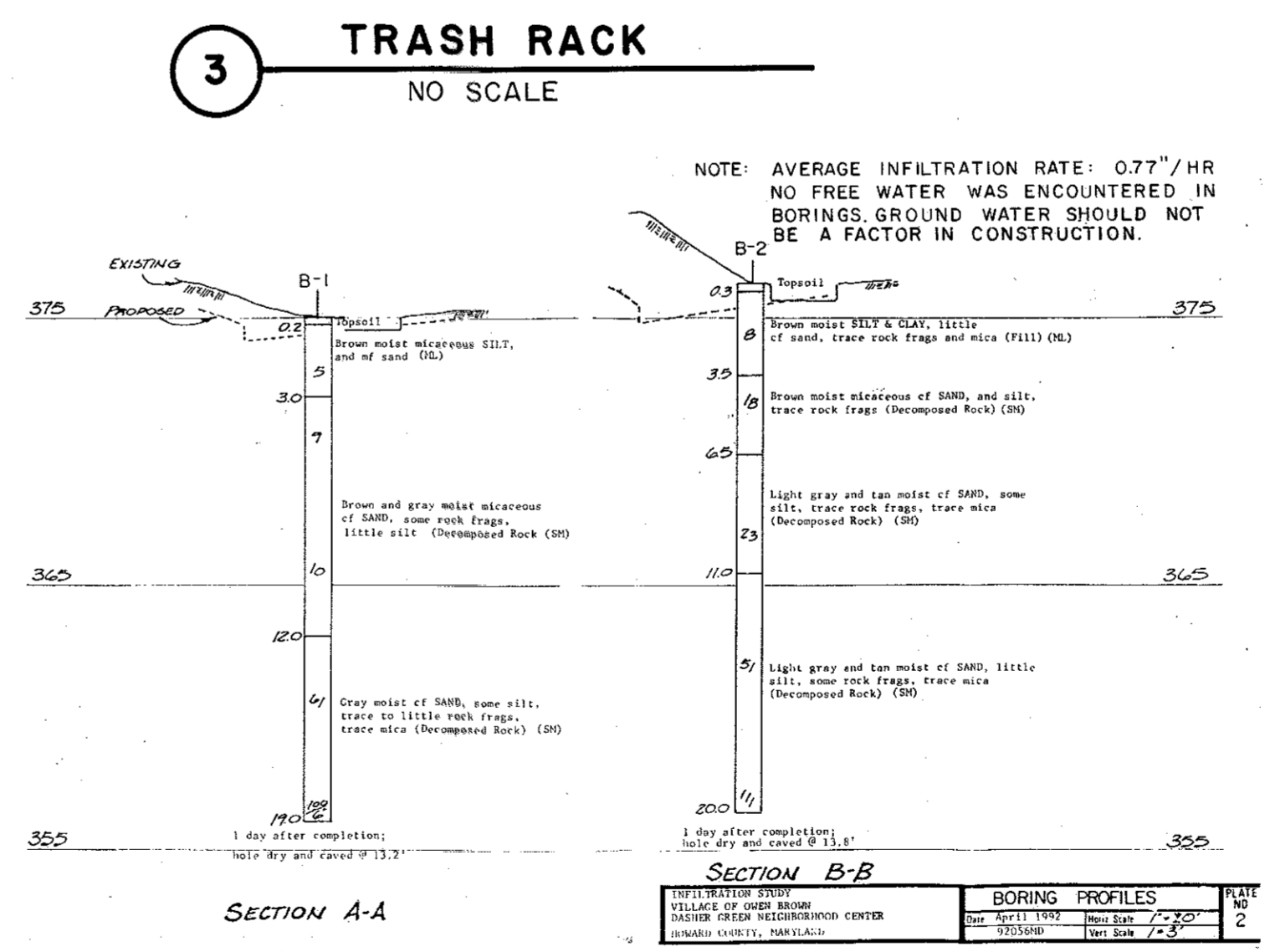
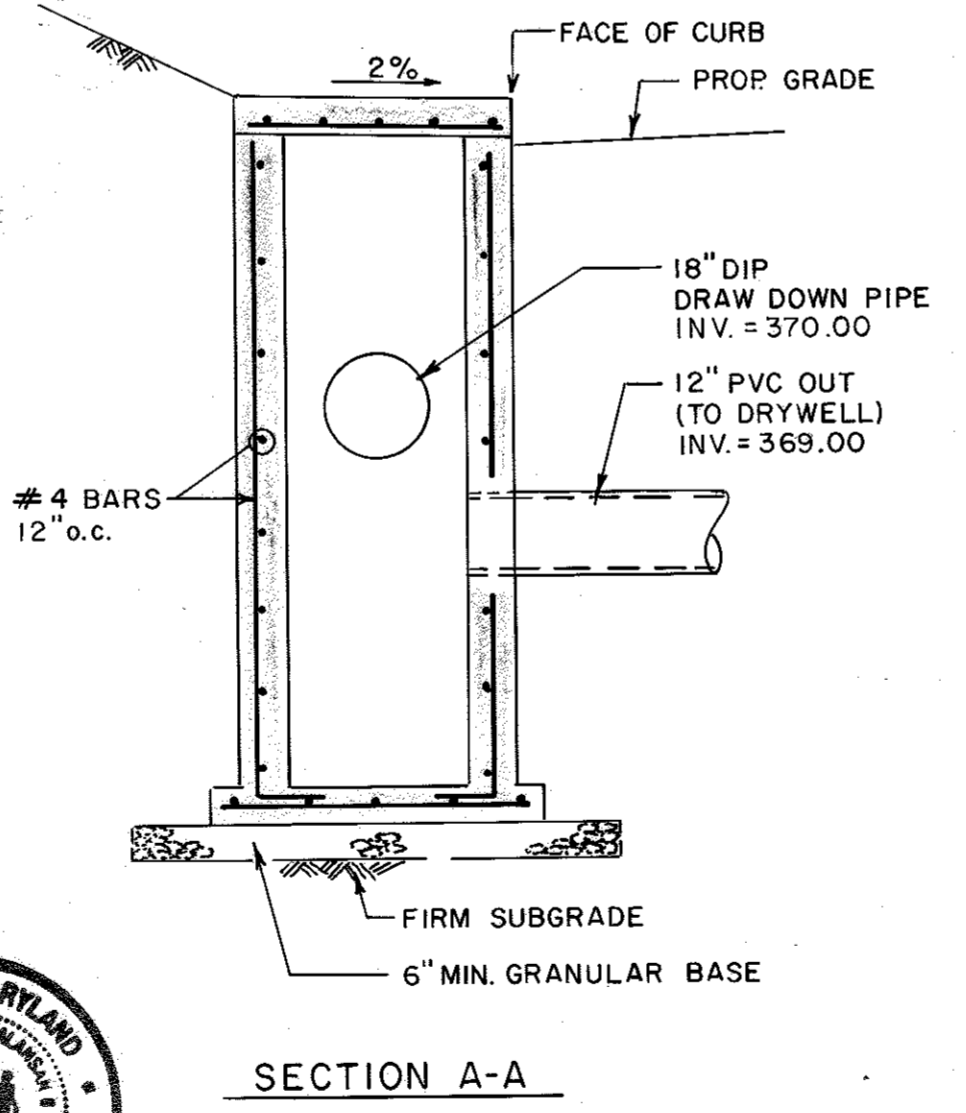
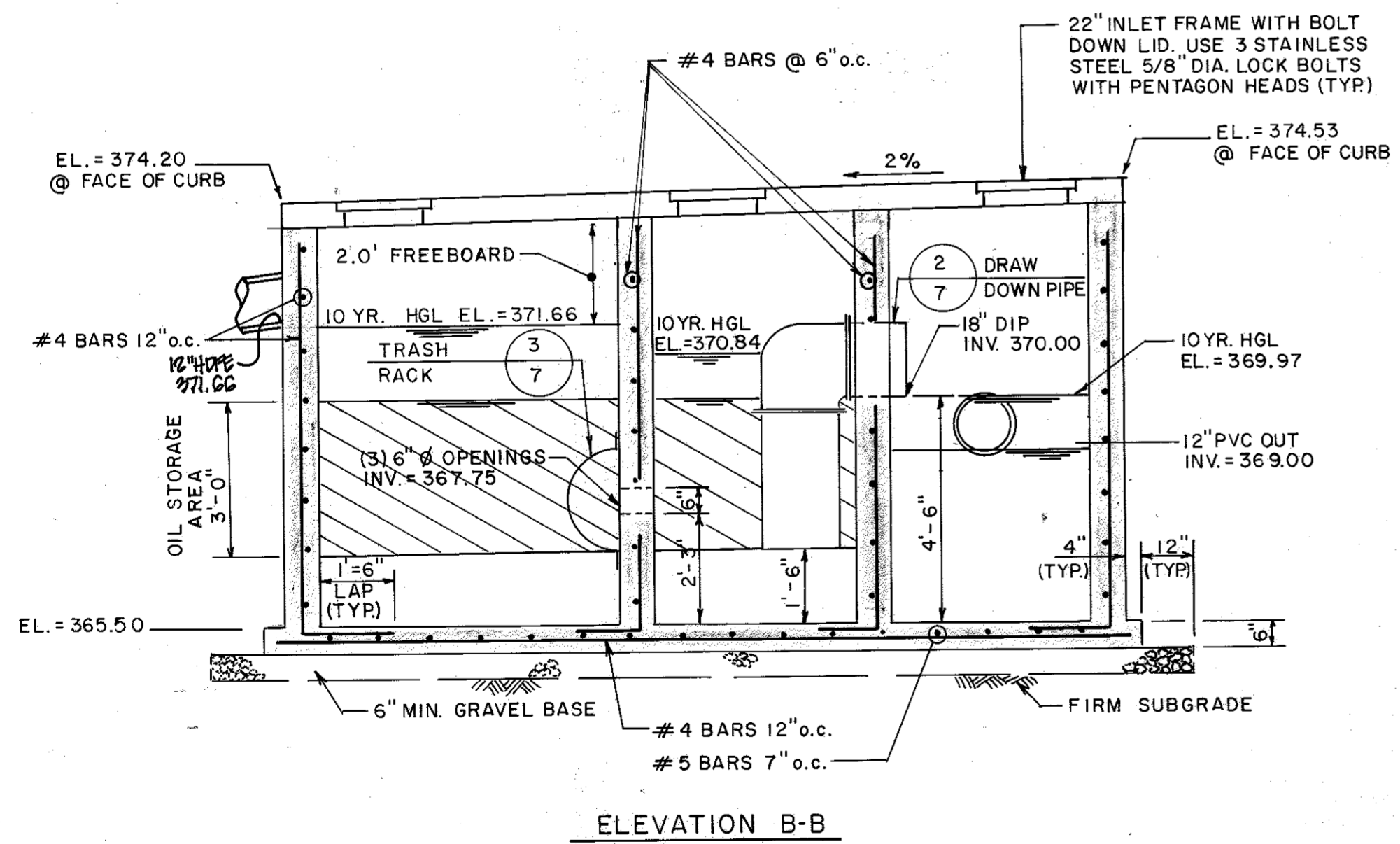
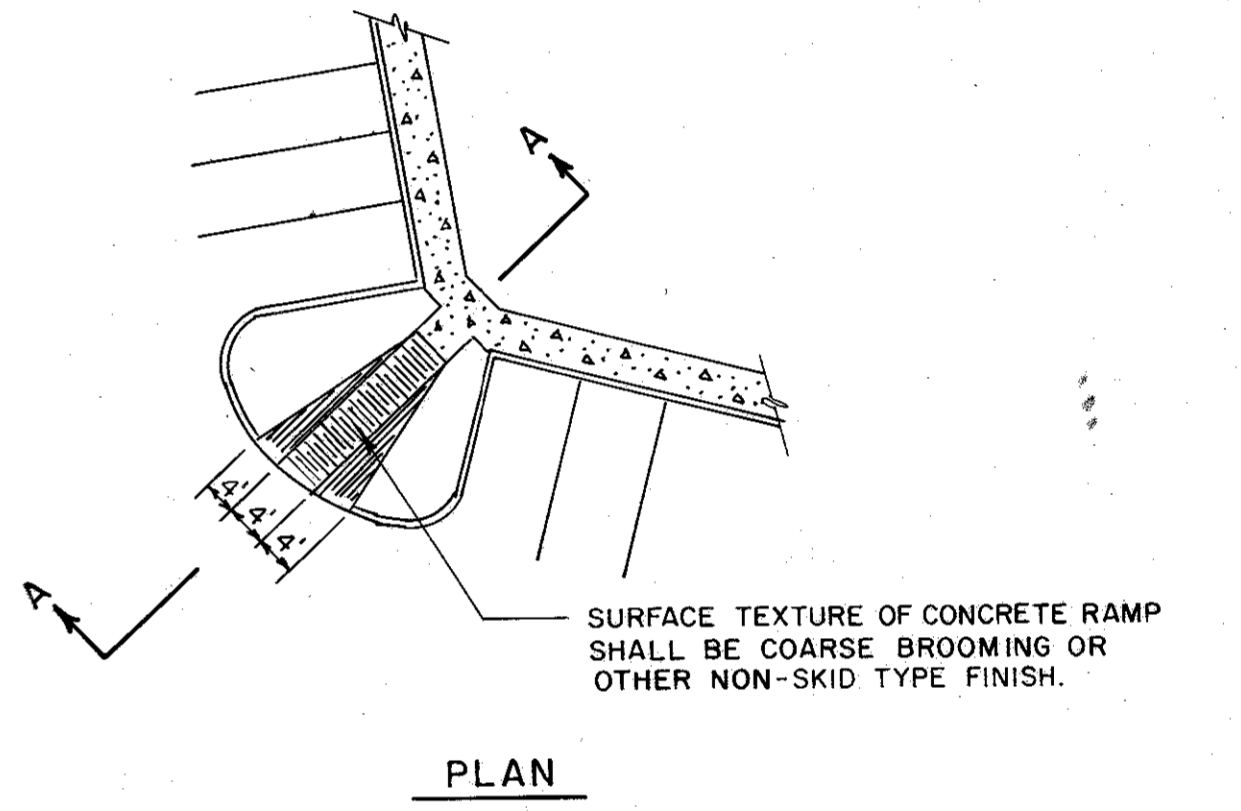
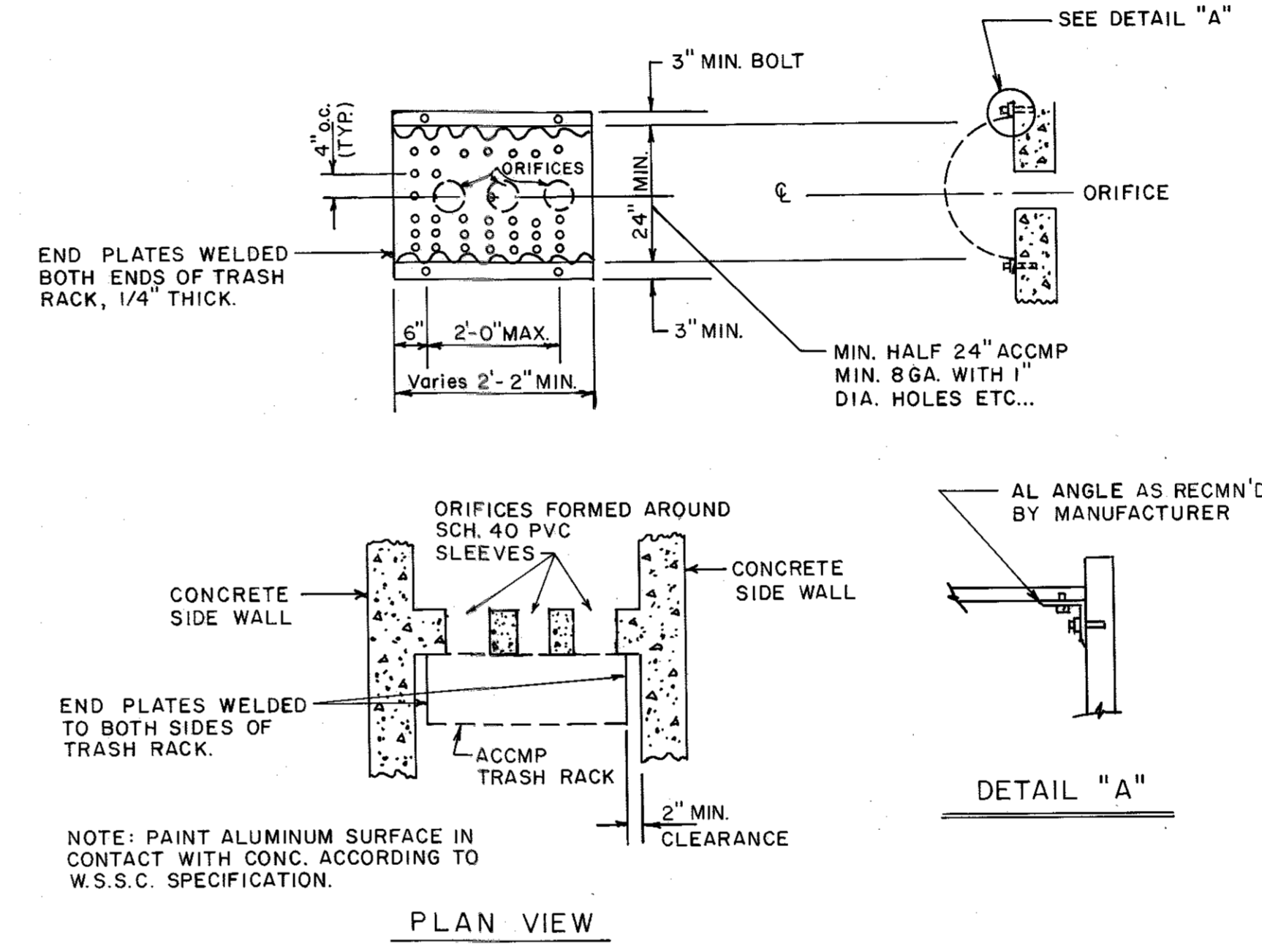
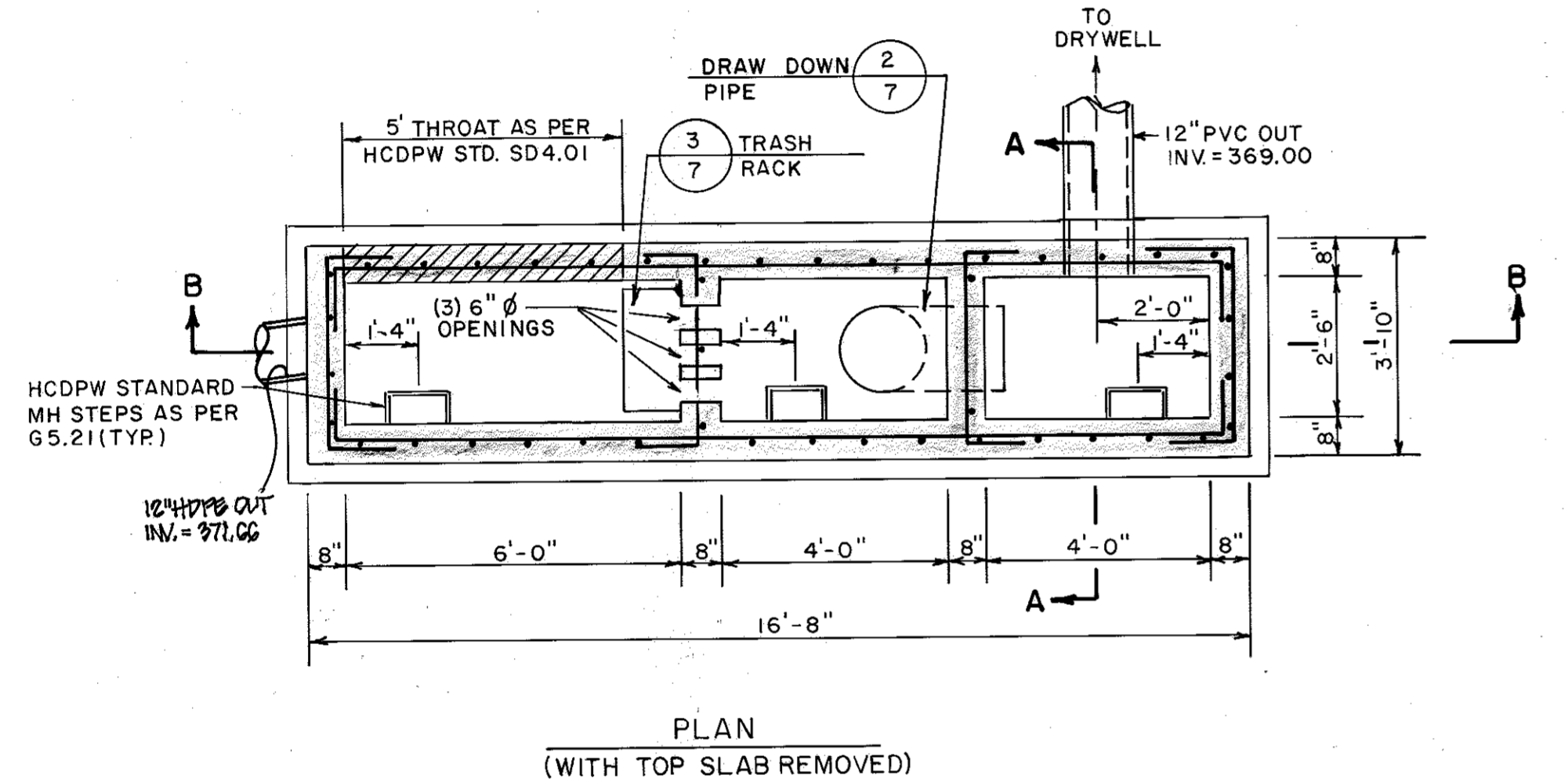
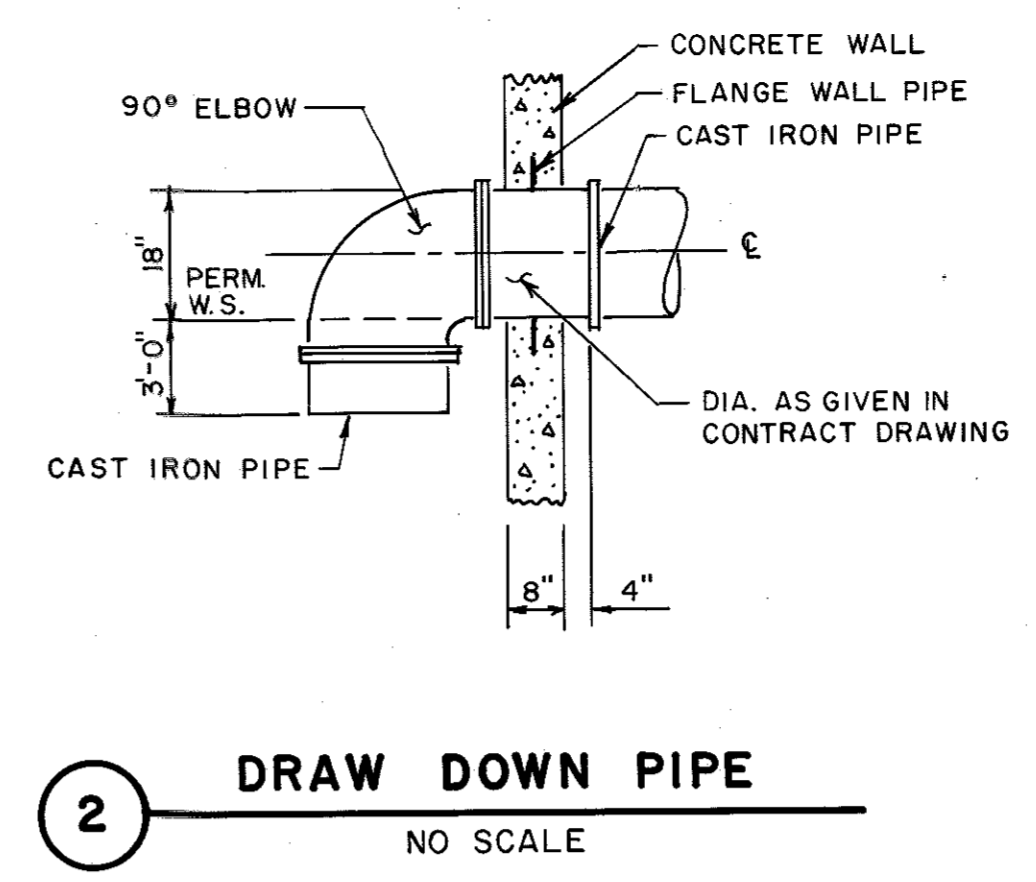
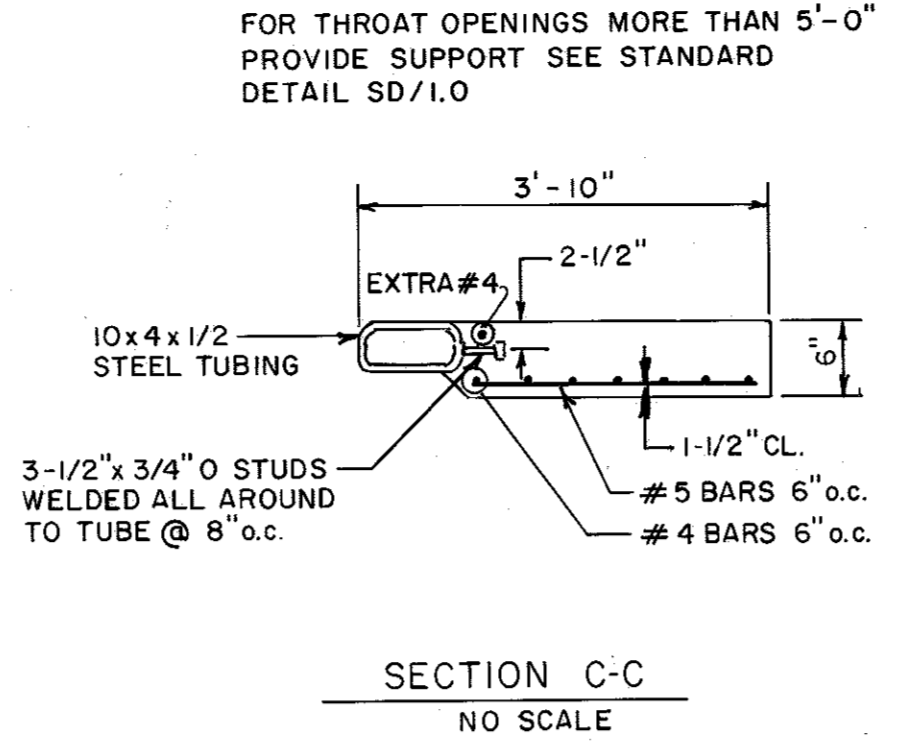
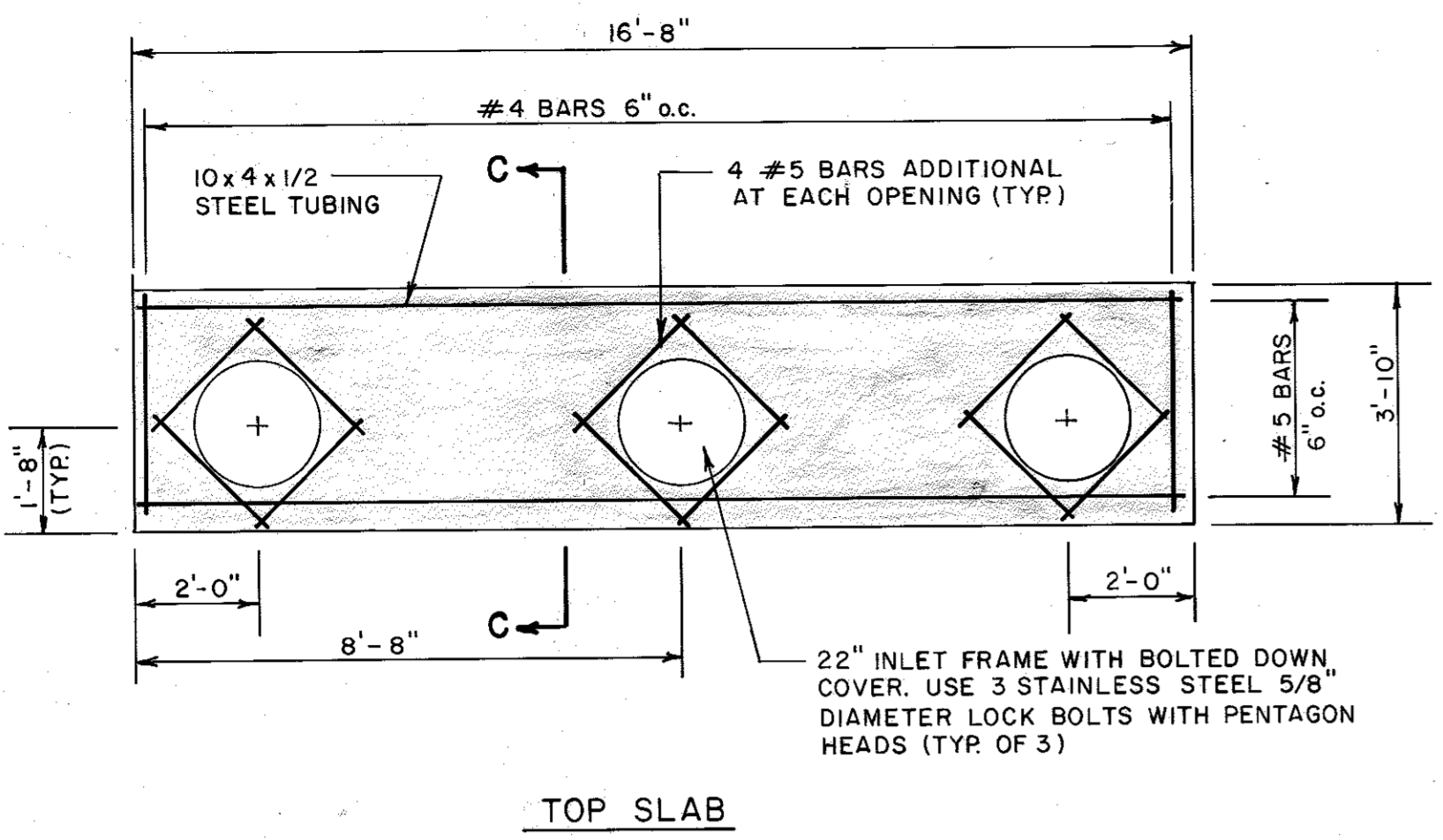
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR: *James J. Shum* 11/7/94  
DATE: 11/7/94

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH: *Jim Strumowski* 11/4/94  
DATE: 11/4/94

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER: \_\_\_\_\_ DATE: \_\_\_\_\_



**1 OIL-GRIT STRUCTURE OG-1**  
SCALE: 3/8" = 1'-0"



PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 21416, EXPIRATION DATE: JULY 14, 2017.

*John M. Christman, PE* 10/31/94  
FRANK JOHN MANALAPAN II, L.S.

NO.	REVISION	DATE
1	ADDED GROUND DRAIN & REVISION SHEET NUMBER	9/30/16

RESPONSIBLE PERSONNEL CERTIFICATION  
"I HEREBY CERTIFY THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."

SIGNATURE OF DEVELOPER (PRINT NAME BELOW) \_\_\_\_\_ DATE \_\_\_\_\_

CERTIFICATION BY THE ENGINEER  
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER (PRINT NAME BELOW) \_\_\_\_\_ DATE \_\_\_\_\_  
JOHN M. CHRISTMAN, PE.

CERTIFICATION BY THE DEVELOPER  
"I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY."

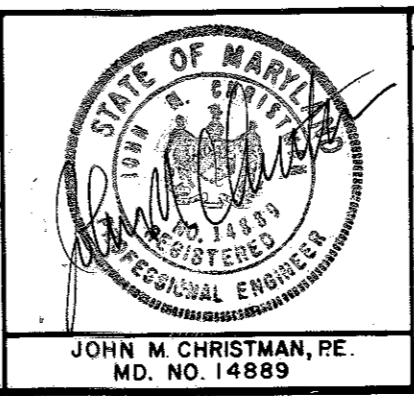
SIGNATURE OF DEVELOPER (PRINT NAME BELOW) \_\_\_\_\_ DATE \_\_\_\_\_  
FRANK JOHN MANALAPAN II, L.S.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: \_\_\_\_\_ DATE \_\_\_\_\_  
HOWARD S.C.D.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

APPROVED: \_\_\_\_\_ DATE \_\_\_\_\_  
U.S. SOIL CONSERVATION SERVICE



revisions

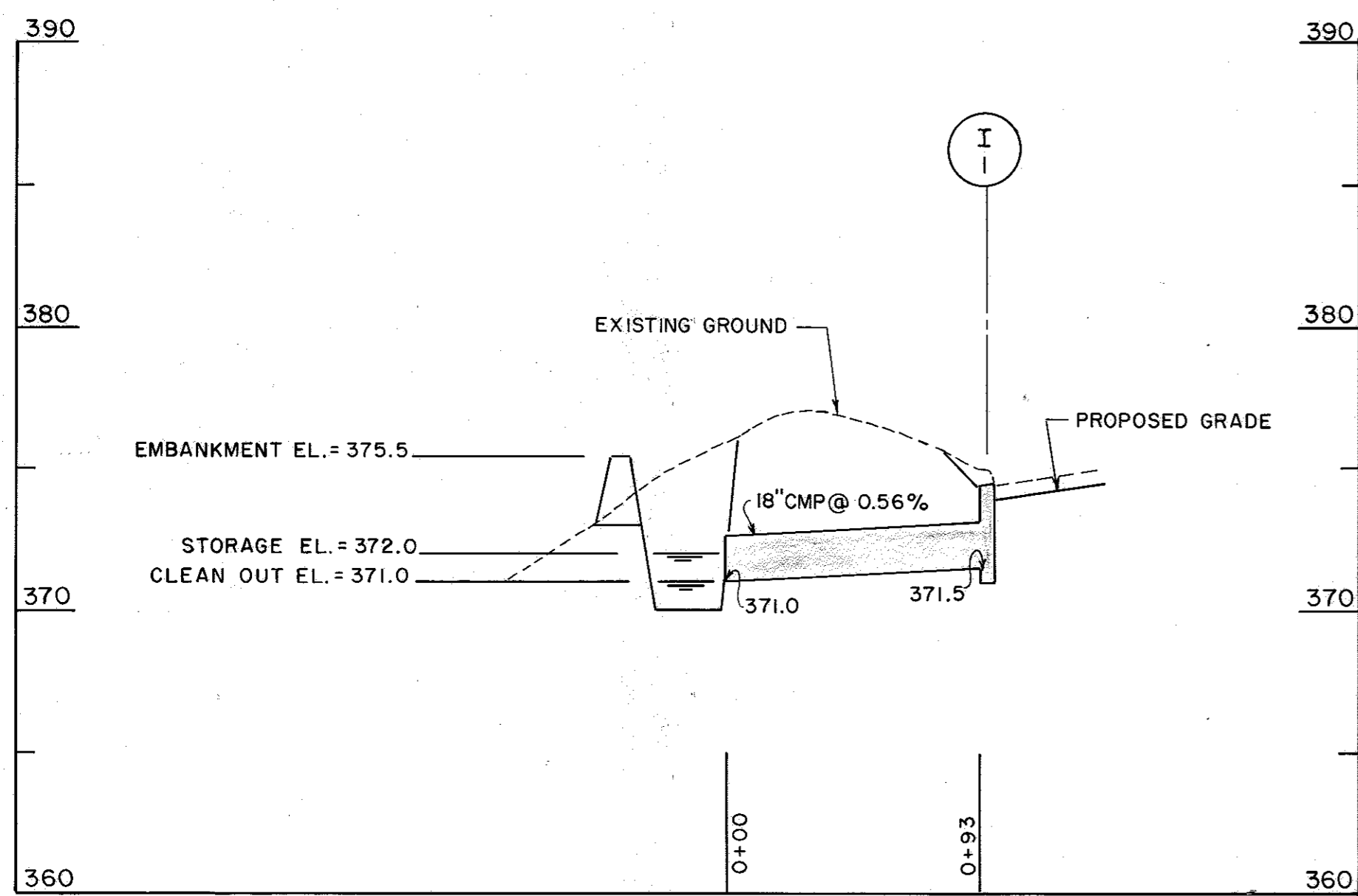
no.	description	date

prepared by  
**RBA** ENGINEERS • ARCHITECTS • PLANNERS  
5560 STERRETT PLACE, SUITE 300  
COLUMBIA, MARYLAND 21044  
301 / 730-7950 621-6050

**4 RESERVED PARKING SIGN**  
NOT TO SCALE

OWNER/DEVELOPER		ADDRESS CHART	
COLUMBIA ASSOCIATION 10221 WINCOPIN CIRCLE COLUMBIA, MD 21044		BUILDING	STREET ADDRESS
		LOT 64	6800 CRADLEROCK WAY
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL	
VILLAGE OF OWEN BROWN	1/2	64	
PLAT	BLOCK/ZONE	TAX/ZONE MAP/ELEC. DIST.	CENSUS TR.
PB.27 F.45	15,16 OS	36	6
WATER CODE			6067.02
SEWER CODE			
SITE DETAILS			
VILLAGE OF OWEN BROWN DASHER GREEN NEIGHBORHOOD CENTER PARKING LOT EXPANSION			
SCALE AS SHOWN		DRAWN J.M.M.	CHECKED J.M.C.
COLUMBIA HOWARD COUNTY, MARYLAND		PROJ. NO. 4	DATE 9
		SHEET	OF





**TEMPORARY 18" CMP PROFILE**  
SCALE: HORIZ. 1" = 50'  
VERT. 1" = 5'

STRUCTURE SCHEDULE							
NO.	TYPE	TOP ELEV.		INVERT		DIAMETER	REMARKS
		UPPER	LOWER	IN	OUT		
I-1	A-5 INLET	374.48	374.40	-	371.27	-	HCDPW STD. SD 4.01
OG-1	OIL /GRIT SEPARATOR	374.53	374.20	-	369.00	-	SPECIAL DESIGN-SEE SHEET 4
MH-1	PRECAST MANHOLE	375.50	-	371.20	370.6±	48"	HCDPW STD. G5.12

PIPE SCHEDULE		
SIZE	TYPE	QUANTITY (ft)
12"	CMP 16 GAUGE	5 *
12"	CMP 16 GAUGE	181**
12"	CMP 90° ELBOW	1
12"x12"	CMP TEE	1
12"	CMP CAP	2
6"	CMP 16 GAUGE	4* B 4.5**

\*\* PERFORATED  
\* SOLID

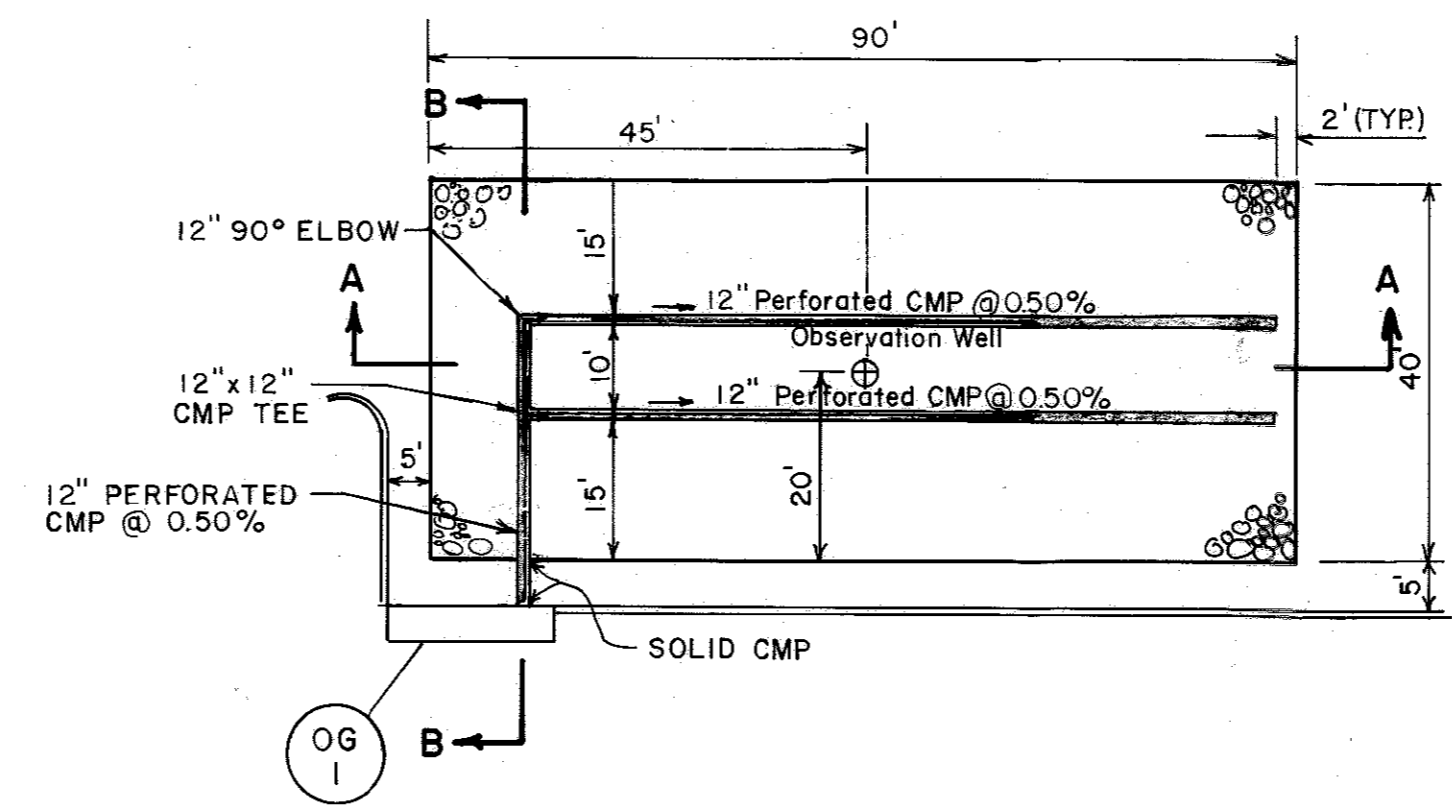
**Construction Specifications**  
**Timing**  
A dry well shall not be constructed or placed in service until all of the contributing drainage area has been stabilized and approved by the responsible inspector.

**Dry Well Preparation**  
Excavate the dry well to the design dimensions. Excavated materials shall be placed away from the excavated sides to enhance wall stability. Large tree roots shall be trimmed flush with the sides in order to prevent fabric puncturing or tearing during subsequent installation procedures. The side walls of the dry well shall be roughened where sheared and sealed by heavy equipment.

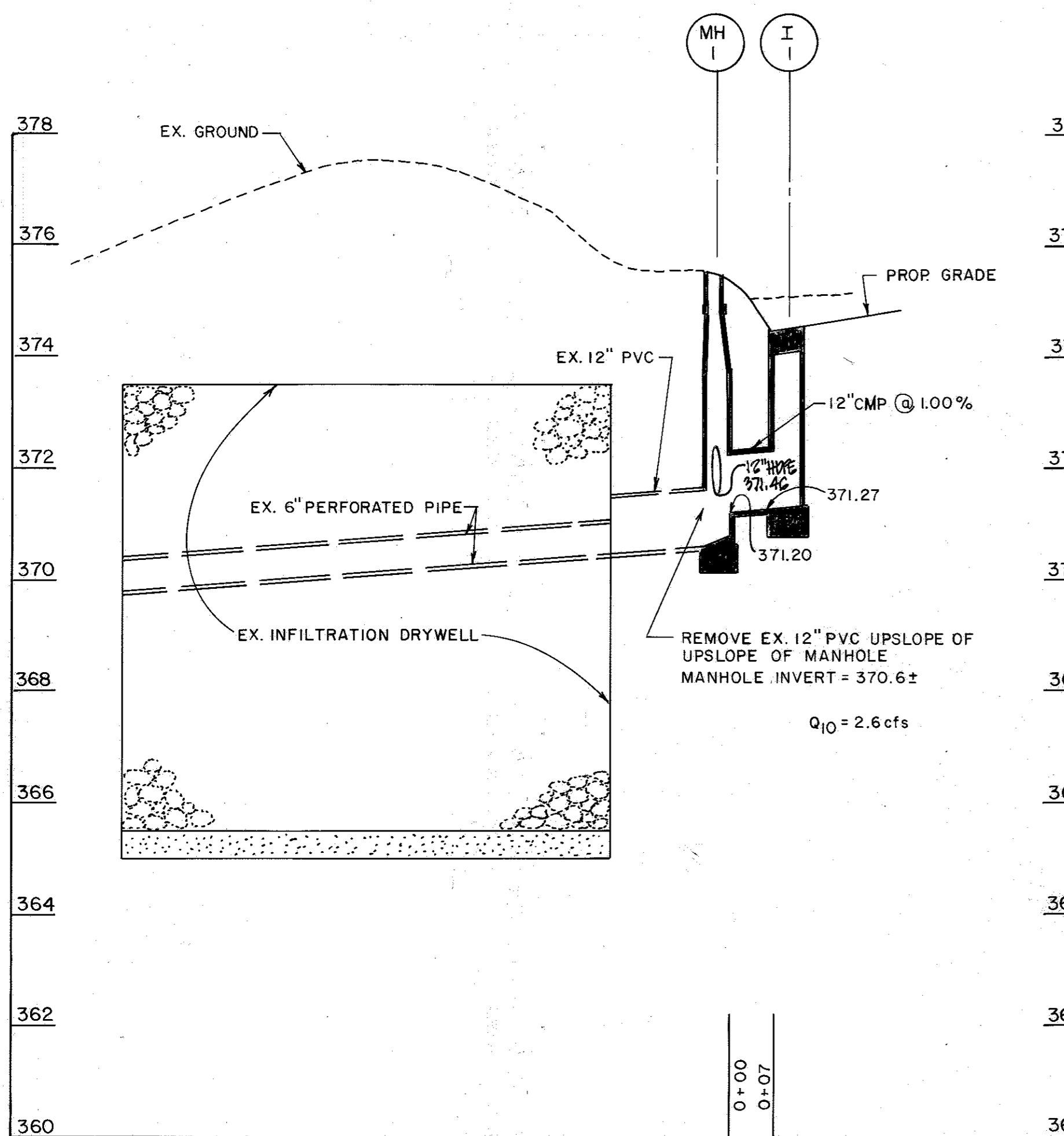
**Fabric Laydown**  
The filter fabric roll shall be cut to the proper width prior to installation. The cut width must include sufficient material to conform to well perimeter irregularities and for a 6-inch minimum top overlap. Place the fabric roll over the well and unroll a sufficient length to allow placement of the fabric down into the well. Stones or other anchoring objects should be placed on the fabric at the edge of the well to keep the lined well open during windy periods. When overlaps are required between rolls, the upstream roll shall lap a minimum of 2 feet over the downstream roll in order to provide a shingled effect. The overlap ensures fabric continuity or the fabric conforms to the excavation surface during aggregate placement and compaction.

**Aggregate Placement and Compaction**  
Drainage aggregate shall be placed in lifts and compacted using plate compactors. As a rule of thumb, a maximum loose lift thickness of 12 inches is recommended. The compaction process ensures fabric conformity to the excavation sides, thereby reducing the potential for soil piping and fabric clogging.

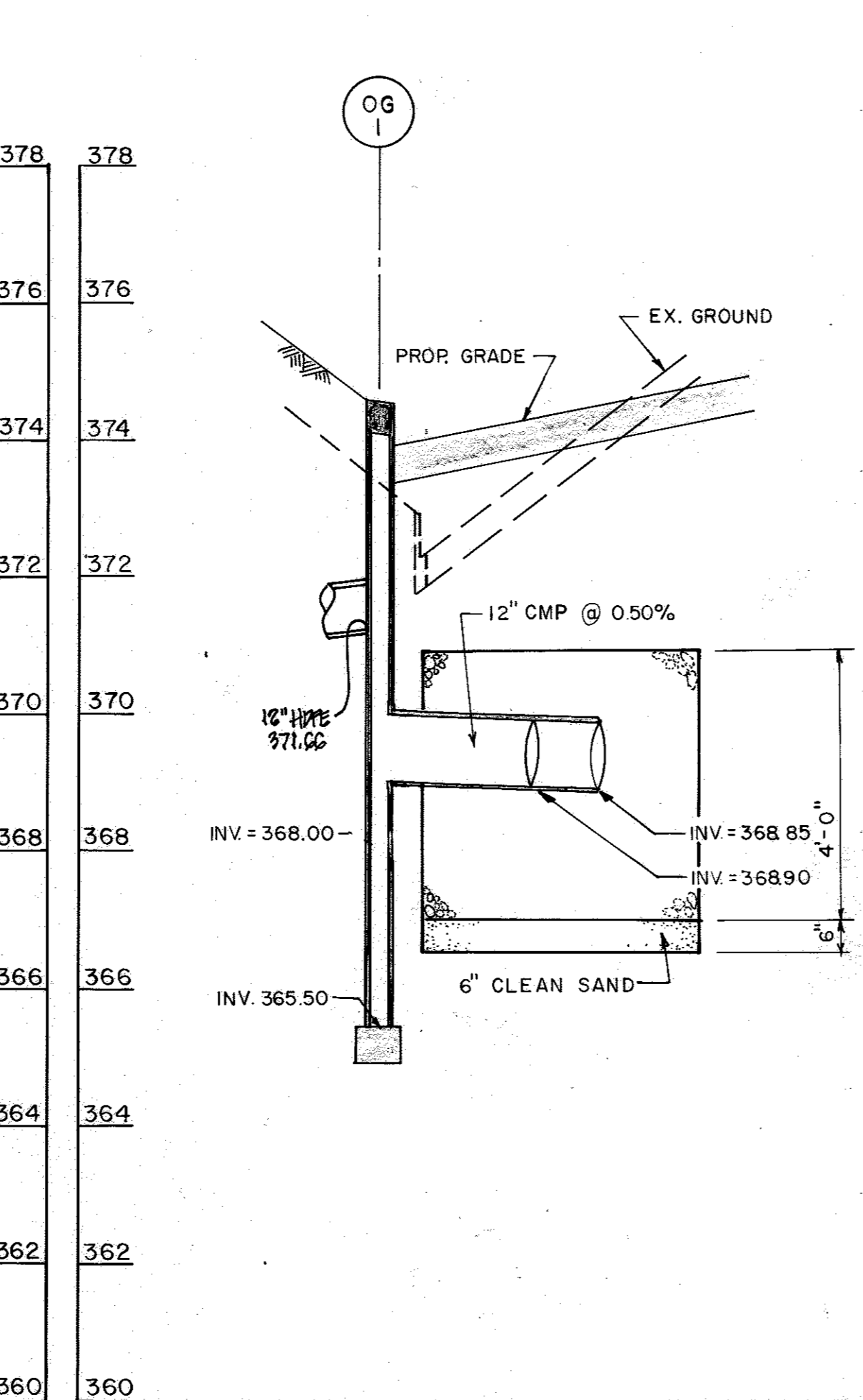
**Overlapping and Covering**  
Following aggregate placement, the fabric previously weighted by stones should be folded over the aggregate to form a 6" minimum longitudinal lap. The desired fill soil should be placed over the lap at sufficient intervals to maintain the lap during subsequent backfilling.



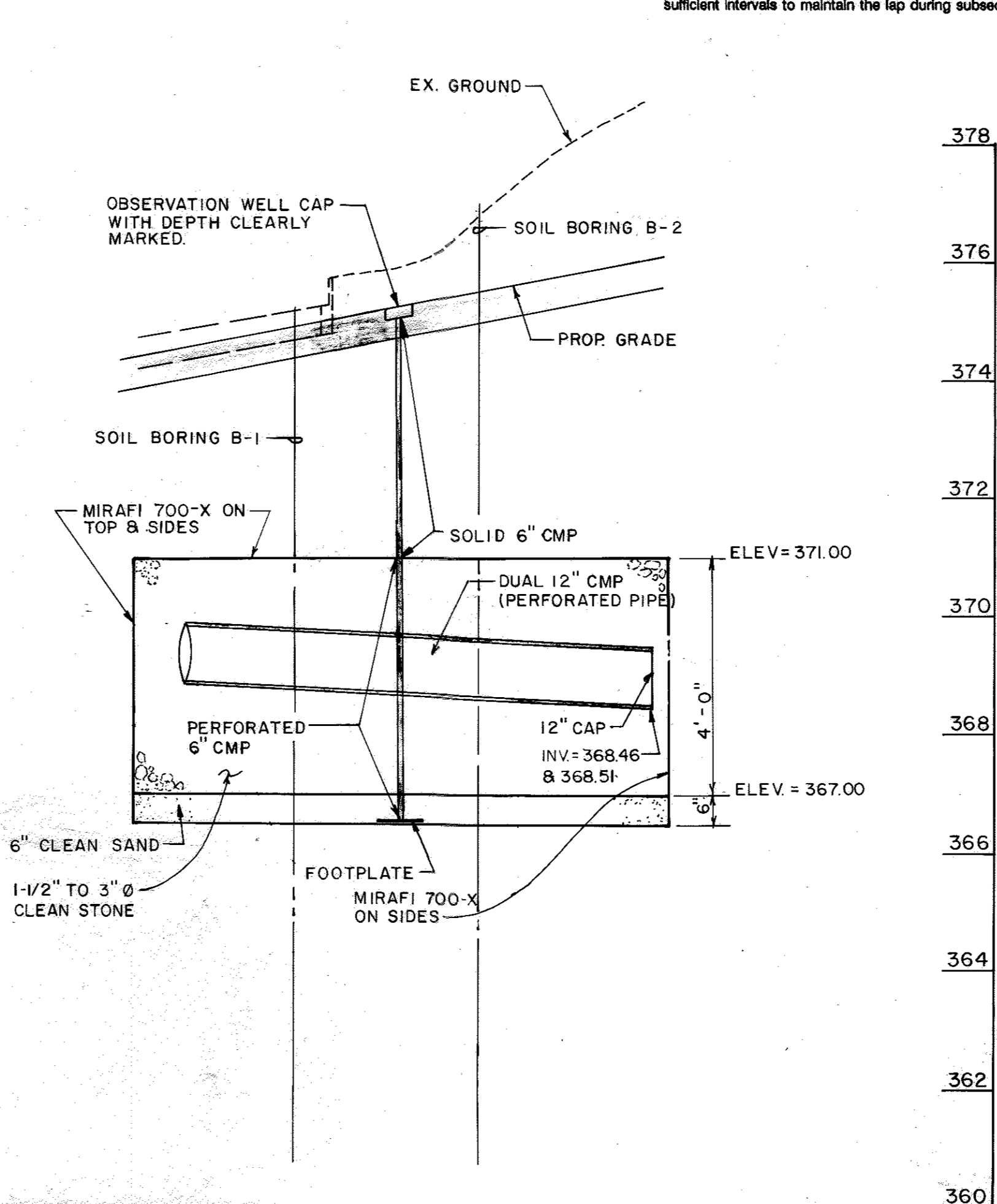
**PLAN**  
SCALE: 1" = 20'



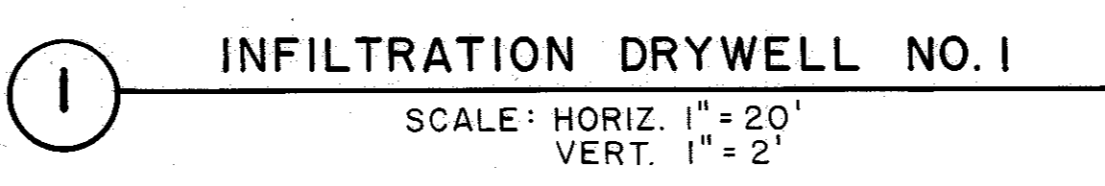
**STORM DRAIN PROFILE**  
SCALE: HORIZ. 1" = 20'  
VERT. 1" = 2'



**SECTION B-B**



**ELEVATION A-A**



**INFILTRATION DRYWELL NO. 1**  
SCALE: HORIZ. 1" = 20'  
VERT. 1" = 2'

**Contamination**  
Care shall be exercised to prevent natural fill soils from intermingling with the drainage aggregate. All contaminated aggregate shall be removed and replaced with uncontaminated aggregate.

**Voids Behind Fabric**  
Voids can be created between the fabric and excavation sides and should be avoided. Removing boulders or other obstacles from the trench walls is one source of such voids. Natural soils should be placed in these voids at the most convenient time during construction to ensure fabric conformity to the excavation sides. Soil piping, fabric clogging, and possible surface subsidence will be avoided by this remedial process.

**Unstable Excavation Sides**  
Vertically excavated trench walls may be difficult to maintain in areas where the soil moisture is high or where soft cohesive or cohesionless soils predominate. These conditions may require laying back of the side slopes to maintain stability; trapezoidal rather than rectangular cross sections may result.

**Foundation Protection**  
Dry wells 3 or more feet deep shall be located at least 10 feet down gradient from foundation walls.

**Observation Well**  
An observation well shall be installed in every dry well. The observation well will serve two primary functions: 1) it will indicate how quickly the trench dewatering following a storm, and 2) it will provide a method of observing how quickly the dry well fills up with silt and thus requires maintenance cleanout.

The observation well should consist of perforated PVC pipe, 6 inches in diameter. It should be located in the center of the structure and be constructed flush with the ground elevation of the structure. The top of the well shall be capped to discourage vandalism and tampering. The depth of the well at the time of installation should be clearly marked on the well cap.

**Maintenance \***  
Dry wells shall be designed to minimize maintenance. However, it is recognized that all infiltration facilities are subject to clogging by sediment, oil, grease, grit and other debris. Oil and grit separators should be cleaned periodically to insure these pollutants do not enter the infiltration dry wells. In addition, the performance and longevity of these structures is not well documented. Consequently, a monitoring observation well is required for all infiltration structures.

The observation well should be monitored periodically. For the first year after completion of construction, the well should be monitored on a quarterly basis and after every large storm. It is recommended that a log book be maintained indicating the rate at which the facility dewateres after large storms and the depth of the well for each observation. Once the performance characteristics of the structure have been verified, the monitoring schedule can be reduced to an annual basis, unless the performance data indicate that a more frequent schedule is required.

\* OIL GRIT SEPARATOR SHALL BE CLEANED EVERY THREE MONTHS. PUMP ALL CHAMBERS DRY AND CLEAN THOROUGHLY. EFFLUENT SHALL BE DISCHARGED IN AN APPROVED SANITARY SEWER.

NOTE:  
OWNER SHALL MONITOR DRY WELL PERFORMANCE QUARTERLY AND AFTER EVERY RAINSTORM FOR THE FIRST YEAR AFTER INSTALLATION. A LOG SHALL BE KEPT TO DETERMINE THE DRAW DOWN RATE AND PERFORMANCE CHARACTERISTICS. MONITOR WELL ANNUALLY THEREAFTER UNLESS DATA INDICATES OTHERWISE.

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR: *[Signature]* DATE: 10/25/94  
CHIEF BUREAU OF ENGINEERING: *[Signature]* DATE: 10/25/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
DIRECTOR: *[Signature]* DATE: 11/7/94  
CHIEF DIVISION OF LAND AND DEVELOPMENT AND RESEARCH: *[Signature]* DATE: 11/4/94

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.  
COUNTY HEALTH OFFICER: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED  
PLANNING BOARD  
of HOWARD COUNTY  
DATE: 4.14.94

OWNER/DEVELOPER  
COLUMBIA ASSOCIATION  
10221 WINCOPIN CIRCLE  
COLUMBIA, MD 21044

ADDRESS CHART  
BUILDING: \_\_\_\_\_ STREET ADDRESS: \_\_\_\_\_  
LOT 64: 6800 CRADLEROCK WAY

SUBDIVISION NAME VILLAGE OF OWEN BROWN	SECTION/AREA 1/2	LOT/PARCEL 64
PLAT PB 27 F 45	BLOCK/ZONE 15, 16 OS	TAX/ZONE MAP/ELEC DIST/CENSUS TR 36 6 6067.02
WATER CODE	SEWER CODE	

PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: JULY 14, 2017.  
*[Signature]* DATE: 10/16/94



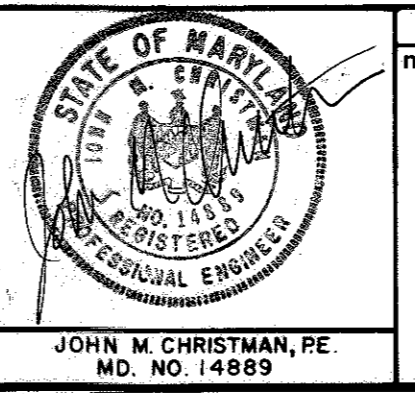
1 APPROVED STORM DRAINAGE & REVISED SHEET NUMBER	9/20/16
NO. REVISION	DATE

**RESPONSIBLE PERSONNEL CERTIFICATION**  
"I HEREBY CERTIFY THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."  
SIGNATURE OF DEVELOPER: \_\_\_\_\_ DATE: \_\_\_\_\_  
SIGNATURE OF ENGINEER: JOHN M. CHRISTMAN, P.E. DATE: \_\_\_\_\_

**CERTIFICATION BY THE ENGINEER**  
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
SIGNATURE OF DEVELOPER: \_\_\_\_\_ DATE: \_\_\_\_\_  
SIGNATURE OF ENGINEER: JOHN M. CHRISTMAN, P.E. DATE: \_\_\_\_\_

**CERTIFICATION BY THE DEVELOPER**  
"I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY."  
SIGNATURE OF DEVELOPER: \_\_\_\_\_ DATE: \_\_\_\_\_  
SIGNATURE OF ENGINEER: JOHN M. CHRISTMAN, P.E. DATE: \_\_\_\_\_

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
APPROVED: HOWARD S.C.D. DATE: \_\_\_\_\_  
REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
APPROVED: U.S. SOIL CONSERVATION SERVICE DATE: \_\_\_\_\_

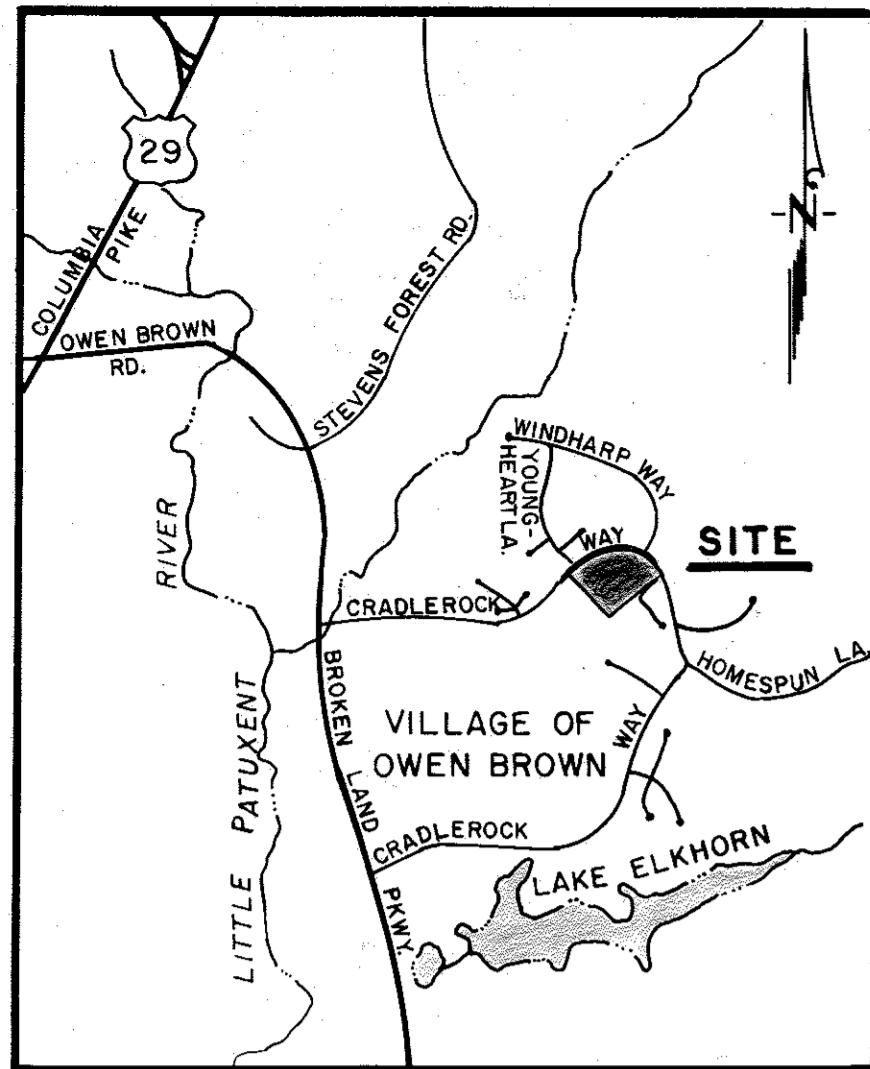


revisions	no.	description	date

prepared by  
**RBA** ENGINEERS • ARCHITECTS • PLANNERS  
5560 STERRETT PLACE, SUITE 300  
COLUMBIA, MARYLAND 21044  
301 / 730-7950 621-6050

**STORM DRAIN PROFILES**  
SCALE AS SHOWN  
DRAWN BY: J.M.M. CHECKED BY: J.M.C.  
PROJ. NO.: \_\_\_\_\_ DATE: \_\_\_\_\_  
5 9  
SHEET OF





VICINITY MAP  
SCALE: 1" = 2,000'

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC WORKS.  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR *James J. Shaw* 10/26/94  
DATE 10/25/94  
CHIEF, BUREAU OF ENGINEERING *John P. ...* 10/25/94  
DATE

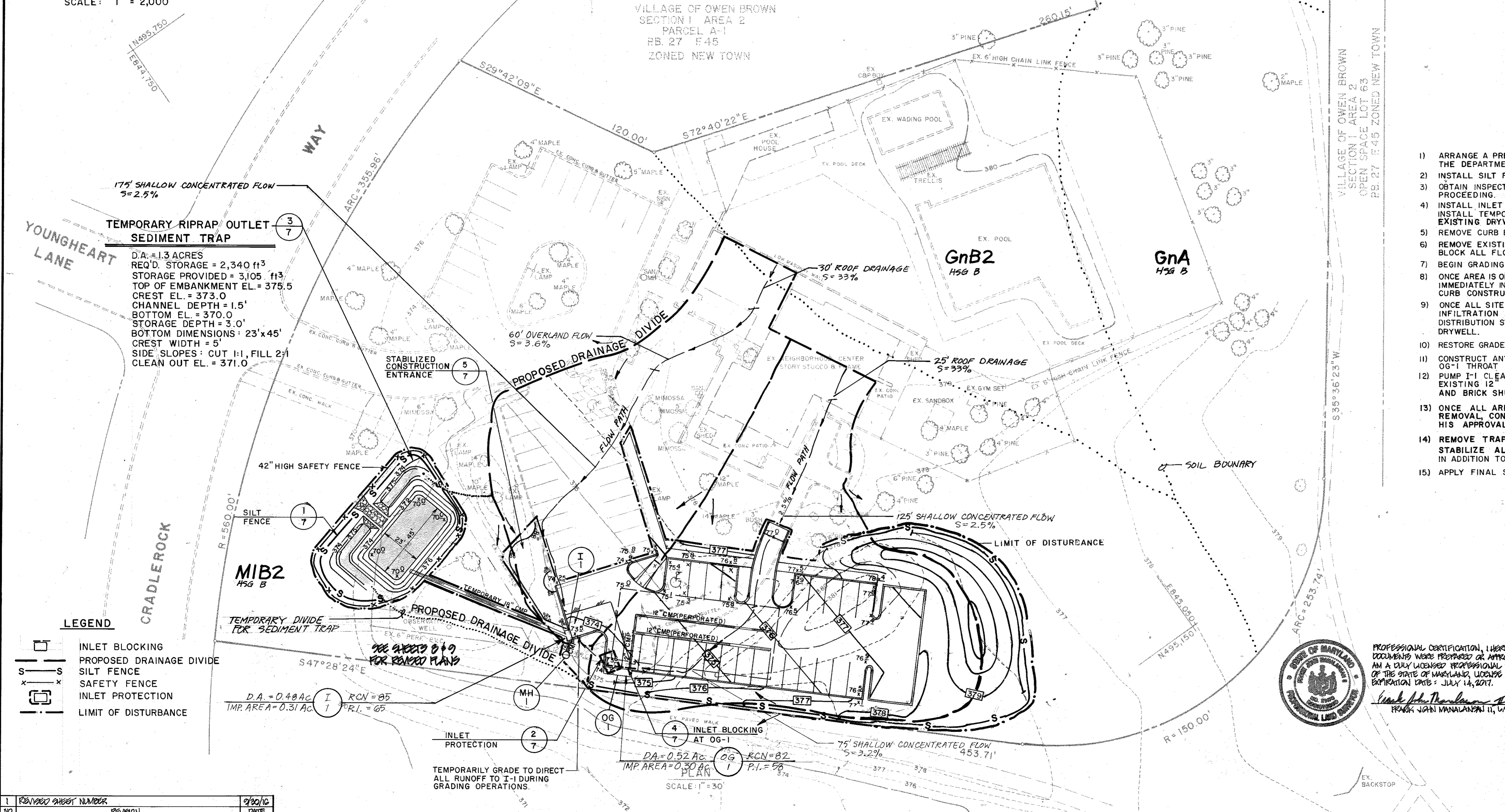
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR *James J. Shaw* 11/7/94  
DATE 11/4/94  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH *John P. ...* 11/4/94  
DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE 4-14-94



- SEQUENCE OF CONSTRUCTION
- 1) ARRANGE A PRECONSTRUCTION MEETING WITH THE ASSIGNED INSPECTOR BY CALLING THE DEPARTMENT OF LICENSING AND PERMITTING.
  - 2) INSTALL SILT FENCE, SEDIMENT TRAP, AND INLET PROTECTION AT EXISTING INLET.
  - 3) OBTAIN INSPECTOR APPROVAL OF SEDIMENT CONTROL INSTALLATION PRIOR TO PROCEEDING.
  - 4) INSTALL INLET I-1 TAKING CARE TO LIMIT DISTURBANCE TO JUST AROUND INLET. INSTALL TEMPORARY 18" CMP TO DISCHARGE INTO TRAP AVOID DISTURBANCE OF EXISTING DRYWELL. DO NOT INSTALL 12" PVC AND MH-1 AT THIS TIME.
  - 5) REMOVE CURB BETWEEN THE TWO INLETS AND GRADE AREA TO DRAIN TO NEW INLET I-1.
  - 6) REMOVE EXISTING INLET AND PROVIDE A 12" PVC CAP ON EXISTING 12" PVC PIPE TO BLOCK ALL FLOWS TO EXISTING INFILTRATION DRYWELL.
  - 7) BEGIN GRADING OF NEW LOT. MAINTAIN POSITIVE DRAINAGE TO I-1 AND SEDIMENT TRAP.
  - 8) ONCE AREA IS ON GRADE BEGIN CURB AND GUTTER CONSTRUCTION. BUILD OG-1 AND IMMEDIATELY INSTALL THROAT BLOCKING DIRECTING ALL DRAINAGE TO I-1. DELAY CURB CONSTRUCTION BETWEEN I-1 AND OG-1.
  - 9) ONCE ALL SITE AREAS ARE TO THE PROPER GRADE, BEGIN CONSTRUCTION OF THE INFILTRATION DRYWELL. DIVERT ALL RUNOFF AWAY FROM EXCAVATION. INSTALL PVC DISTRIBUTION SYSTEM AND CONNECT TO OG-1. INSURE NO RUNOFF ENTERS OG-1 OR DRYWELL.
  - 10) RESTORE GRADES OVER DRYWELL AREA AND BASE PAVE THE LOT.
  - 11) CONSTRUCT ANY REMAINING CURB AND GUTTER, AND COMPLETE BASE PAVING. REMOVE OG-1 THROAT BLOCKING AND INSTALL INLET PROTECTION.
  - 12) PUMP I-1 CLEAN AND INSTALL MH-1 AND CONNECTING PIPING TO I-1. REMOVE EXISTING 12" PVC PIPING UPSLOPE OF MH-1. REMOVE TEMPORARY 18" CMP AND BRICK SHUT THE TEMPORARY OPENING IN I-1.
  - 13) ONCE ALL AREAS HAVE RECEIVED FINAL STABILIZATION, AND PRIOR TO TRAP REMOVAL CONTACT THE HOWARD CO. SEDIMENT CONTROL INSPECTOR FOR HIS APPROVAL.
  - 14) REMOVE TRAP AND RESTORE ALL GRADES TO THE ORIGINAL CONTOURS. STABILIZE ALL REMAINING AREAS THEN REMOVE SILT AND SAFETY FENCE IN ADDITION TO INLET PROTECTION.
  - 15) APPLY FINAL SURFACE COAT TO LOT.

OWNER/DEVELOPER  
COLUMBIA ASSOCIATION  
10221 WINCOPIN CIRCLE  
COLUMBIA, MD 21044  
(410) 715-3000

ADDRESS CHART	
BUILDING	STREET ADDRESS
LOT 64	6800 CRADLEROCK WAY

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL
VILLAGE OF OWEN BROWN	1/2	64
PLAT	BLOCK ZONE	TAX ZONE MAP/ELEC. DIST.
PR.27 F.45	15,16	36
WATER CODE		606Z02



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. 21416, EXPIRATION DATE: JULY 14, 2017.

*Frank John Mavalanjan, P.E.* 10/16/94  
DATE

- LEGEND
- INLET BLOCKING
  - PROPOSED DRAINAGE DIVIDE
  - SILT FENCE
  - SAFETY FENCE
  - INLET PROTECTION
  - LIMIT OF DISTURBANCE

NO.	REVISION	DATE
1	REVISED SHEET NUMBER	9/30/94

RESPONSIBLE PERSONNEL CERTIFICATION  
"I HEREBY CERTIFY THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."

SIGNATURE OF DEVELOPER *John M. Christman* 2-1-94  
DATE  
DESHA E. EUS

CERTIFICATION BY THE ENGINEER  
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER *John M. Christman* 12-16-93  
DATE  
JOHN M. CHRISTMAN, P.E.

CERTIFICATION BY THE DEVELOPER  
"I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY."

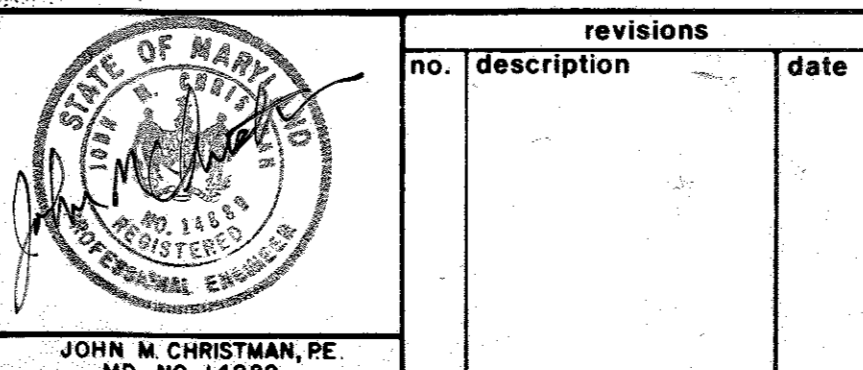
SIGNATURE OF DEVELOPER *John M. Christman* 2-1-94  
DATE  
DESHA E. EUS

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *John P. ...* 10/19/94  
DATE  
HOWARD S.C.D.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

APPROVED: *Patricia ...* 10/19/94  
DATE  
U.S. SOIL CONSERVATION SERVICE



revisions

no.	description	date

prepared by  
**RBA** ENGINEERS • ARCHITECTS • PLANNERS  
5560 STERRETT PLACE, SUITE 300  
COLUMBIA, MARYLAND 21044  
301 / 730-7950 621-6050

SEDIMENT CONTROL PLAN & DRAINAGE AREA MAP

VILLAGE OF OWEN BROWN  
DASHER GREEN NEIGHBORHOOD CENTER  
PARKING LOT EXPANSION

COLUMBIA HOWARD COUNTY, MARYLAND

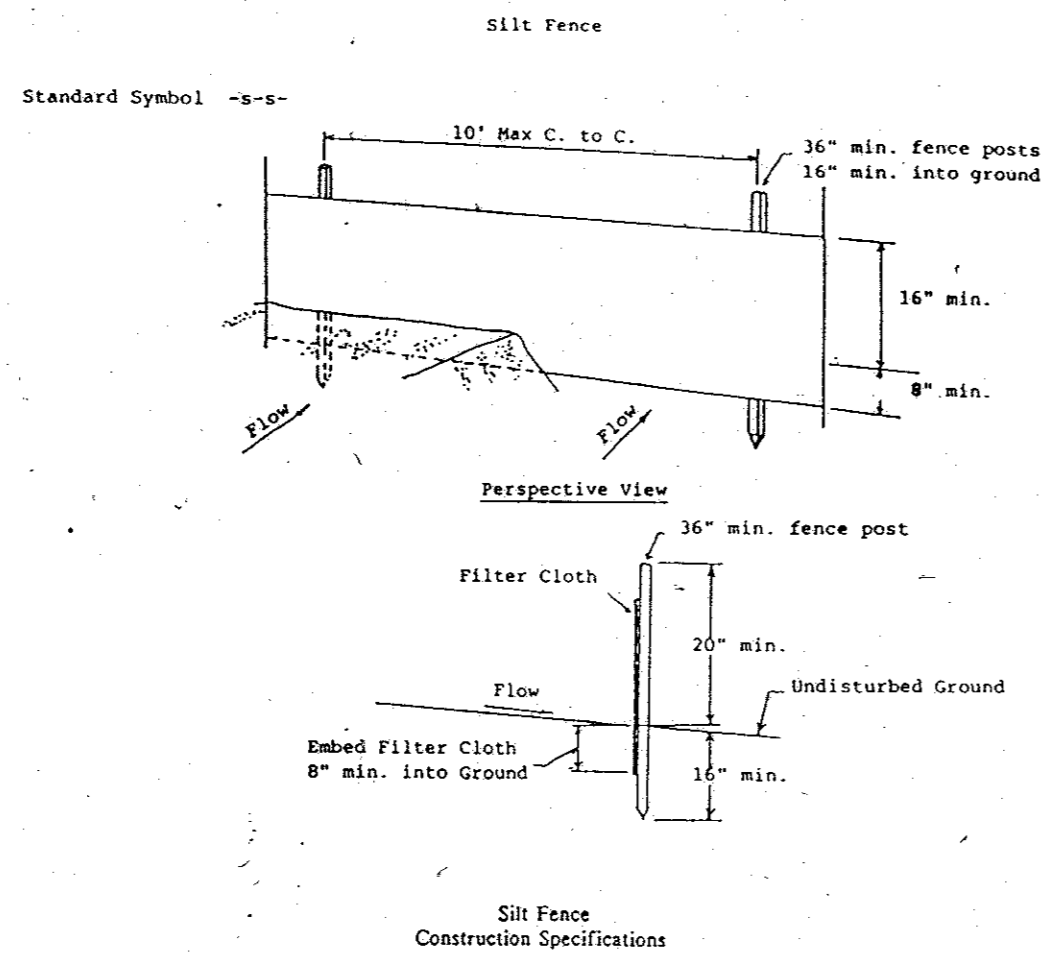
SCALE 1" = 30'

DRAWN J.M.M. CHECKED J.M.C.  
PROJ. NO. DATE  
6 9  
SHEET OF



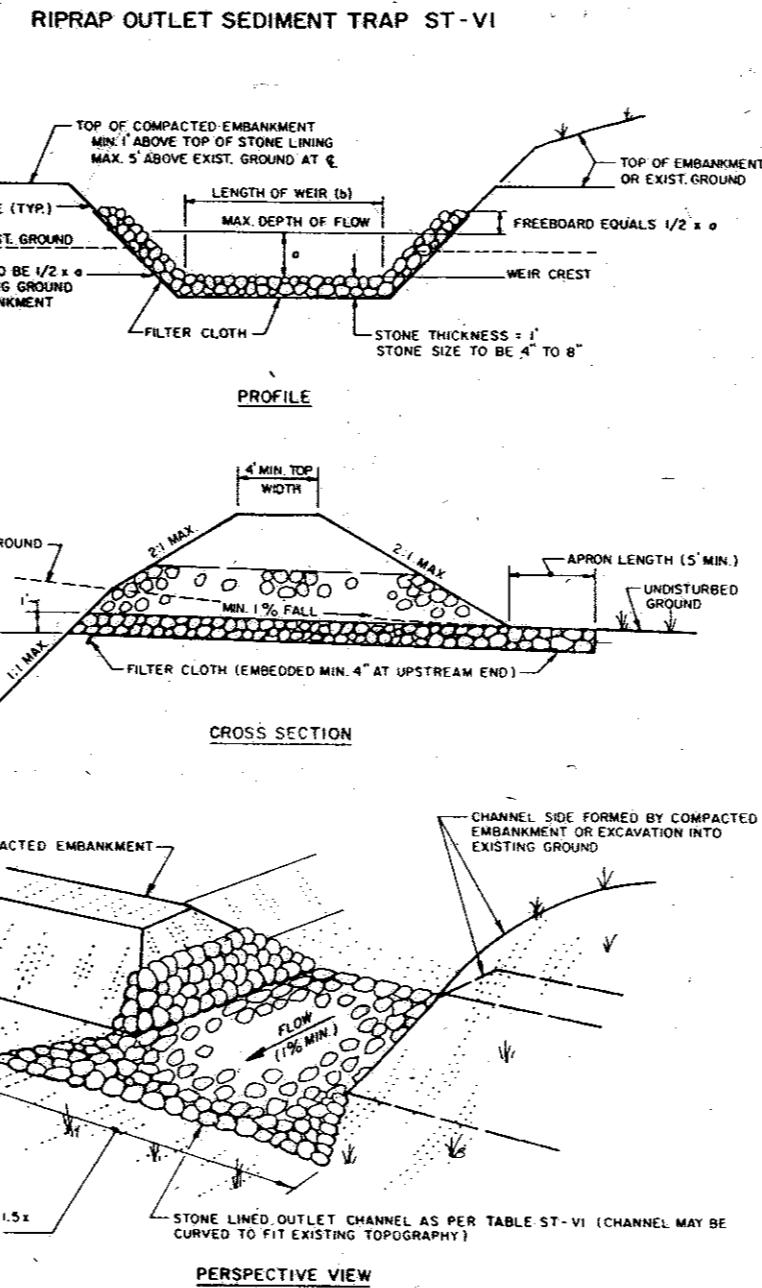
**SEDIMENT AND EROSION CONTROL NOTES**

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (3/3/1995)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS TO THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING THE INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETE WITHIN: A) SEVEN (7) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND B) FOURTEEN (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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51), 300 (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.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED IF DEEMED NECESSARY BY THE HOWARD COUNTY DEPT. OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR.
- REFER TO "1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR THE SOIL EROSION AND SEDIMENT CONTROL" FOR THE STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN.
- WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, MINOR FIELD ADJUSTMENTS CAN BE MADE TO THE SEDIMENT CONTROL STRUCTURES. ANY CHANGES TO THE SEDIMENT CONTROL PRACTICES REQUIRE PRIOR APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
- ANY CHANGE TO THE GRADING PROPOSED ON THIS PLAN REQUIRES RE-SUBMISSION TO HOWARD COUNTY SOIL CONSERVATION DISTRICT FOR APPROVAL.
- DUST CONTROL WILL BE PROVIDED FOR ALL DISTURBED AREAS REFER TO 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, PP 62.01 OR 62.02 FOR ACCEPTABLE METHODS AND SPECIFICATIONS FOR JUST CONTROL.
- ANY VARIATION FROM THE SEQUENCE OF OPERATIONS STATED ON THIS PLAN REQUIRES THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT PRIOR TO THE INITIATION OF THE CHANGE.
- ANY DISTURBED EARTH LEFT IDLE FOR PERIODS EXCEEDING 30 DAYS SHALL BE STABILIZED ACCORDING TO TEMPORARY STABILIZATION SPECIFICATIONS.
- AT THE END OF EACH WORKING DAY ALL SEDIMENT CONTROL PRACTICE WILL BE INSPECTED AND LEFT IN OPERATIONAL CONDITION.
- THE SEDIMENT CONTROL APPROVALS ON THIS PLAN EXTEND ONLY TO AREAS AND PRACTICES IDENTIFIED AS PROPOSED WORK.
- THE APPROVAL OF THE PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH ANY FEDERAL/STATE/COUNTY REQUIREMENTS PERTAINING TO ENVIRONMENTAL ISSUES.
- AT THIS TIME, WE BELIEVE THAT SECTIONS 404 OR 401 OF THE CLEAN WATER ACT DO NOT EFFECT OUR SITE.
- ALL SEDIMENT TRAPS/BASINS MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. I, CHAPTER 12, OF THE HOWARD CO. DESIGN MANUAL, STORM DRAINAGE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORK DAY, WHICHEVER IS SHORTER.



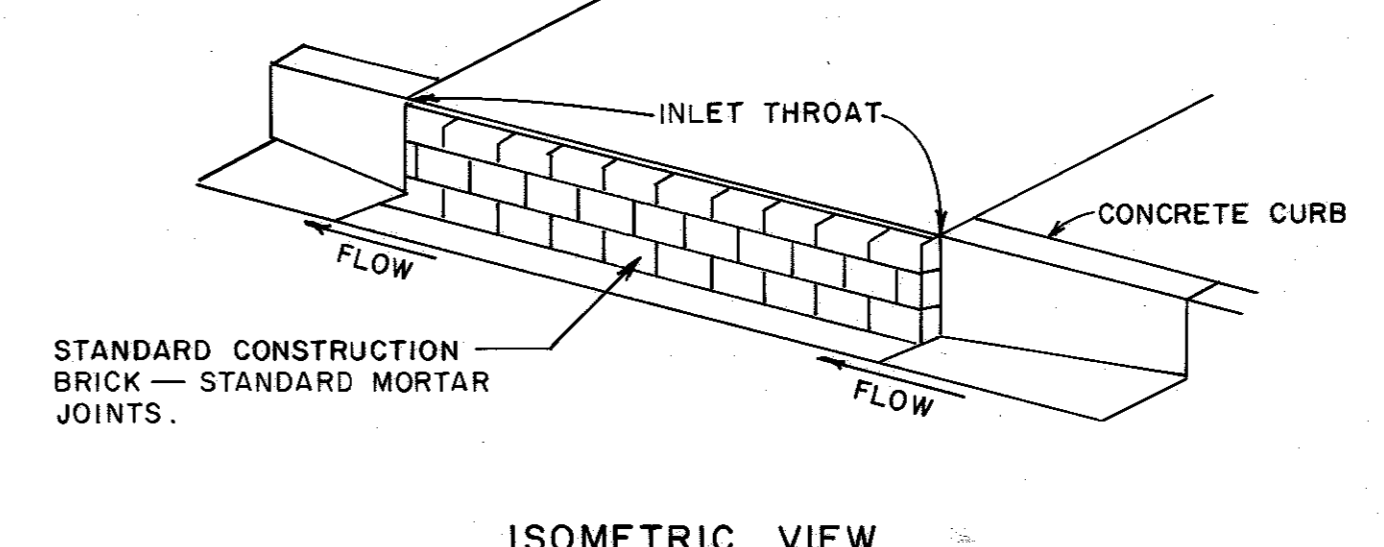
- Silt fences must be embedded, or keyed in, at least 8 inches into the ground. Laying the lower edge of the filter fabric on the ground and covering it with soil is not an acceptable method of keying in. The key-in trench can be excavated by hand or by ditching equipment. After the silt fence is constructed, the trench must be backfilled and compacted.
- Fence posts must be:
  - at least 36 inches long, and
  - have a cross sectional area of at least 3 square inches if wooden, or
  - weigh at least 1 pound per linear foot if steel T or U type, and
  - on 10 foot maximum centers, and
  - driven at least 16 inches into the ground.
- The filter fabric must be fastened securely to the fence posts.
- When two sections of filter fabric are joined together, the joint must occur at a fence post. The ends of the filter fabric should be overlapped by at least 6 inches, folded, and fastened to the fence post so that no gaps in the fence occur. Manufacturer's recommendations for joining fabric sections may be followed as long as the resulting joint does not create gaps in the silt fence.
- Silt fence must be located along the contour.
- Silt fences must be inspected periodically and after each rain event and maintenance performed as necessary.

**1 SILT FENCE DETAIL**  
NOT TO SCALE

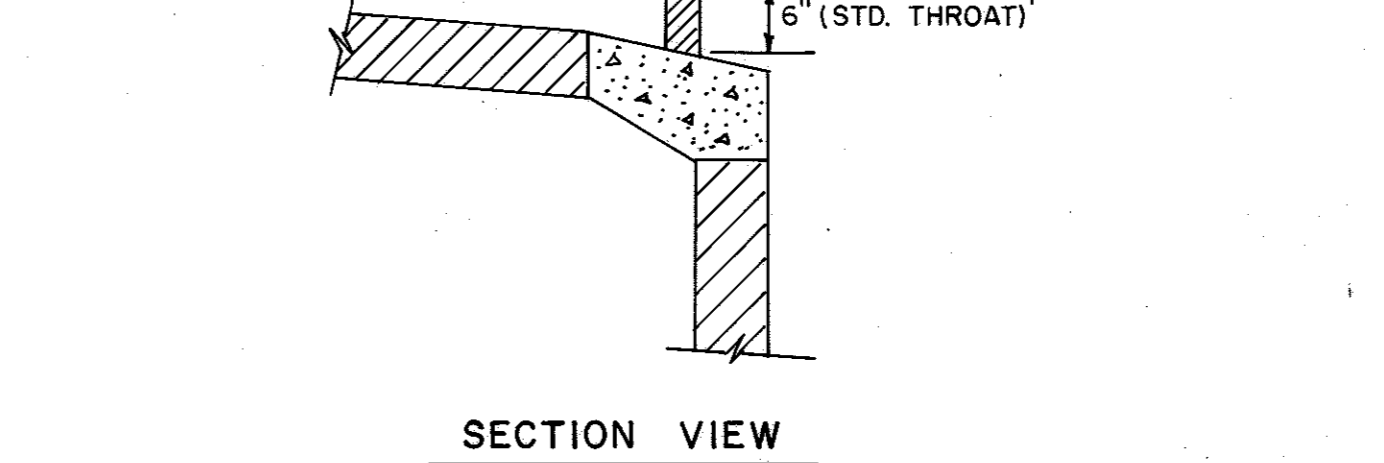


- CONSTRUCTION SPECIFICATIONS FOR ST-VI**
- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
  - The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
  - All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
  - Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
  - Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
  - Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
  - Stone used in the outlet channel shall be four (4) to eight (8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
  - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Remove sediment shall be deposited in a suitable area and in such a manner that it will not erode.
  - The structure shall be inspected after each rain and repaired as needed.
  - Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
  - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
  - Drainage area for this practice is limited to 15 acres or less.

**3 RIPRAP OUTLET SEDIMENT TRAP DETAIL**  
NOT TO SCALE



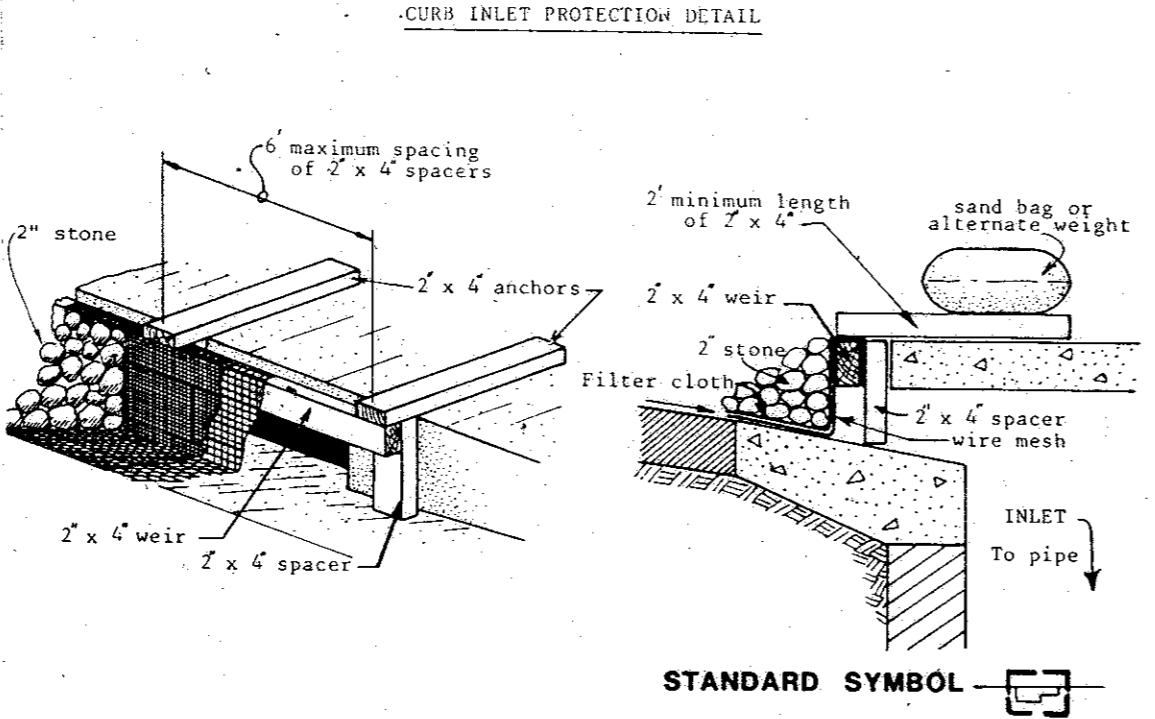
BRICK SHUT THROAT TO PROVIDE A WATERTIGHT SEAL. ALLOW WATER TO BYPASS TO TRAP.



**4 TEMPORARY INLET BLOCKING DETAIL**

**TEMPORARY AND PERMANENT SEEDING NOTES**

- TEMPORARY SEEDING NOTES:** APPLY TO GRADED OR CLEARED AREAS WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS:** APPLY 60 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.)
- SEEDING:** FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 THRU NOVEMBER 15, SEED WITH 1/2 POUND PER ACRE OF ANNUAL RYE (32 LBS/1000 SQ. FT.) FOR THE PERIOD OF MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WHEAT (6 GAL/1000 SQ. FT.) FOR THE PERIOD OF NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.
- MULCHING:** APPLY 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MACH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EXHAUSTED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING. REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.
- PERMANENT SEEDING NOTES:** APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-TERM VEGETATIVE COVER IS NEEDED.
- SEEDING PREPARATION:** LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS:** IN LIEU OF SOIL TESTS RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LB PER ACRE 30-0-0 UREA FERTILIZER (5 LBS/1000 SQ. FT.)
  - ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
- SEEDING:** FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.05 LBS/1000 SQ. FT.) OF WHEAT LOWGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOO. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.
- MULCHING:** APPLY 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MACH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EXHAUSTED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.
- MAINTENANCE:** INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.



- Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
- Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
- Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
- Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
- The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
- Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
- This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

**2 CURB INLET PROTECTION DETAIL**  
NOT TO SCALE

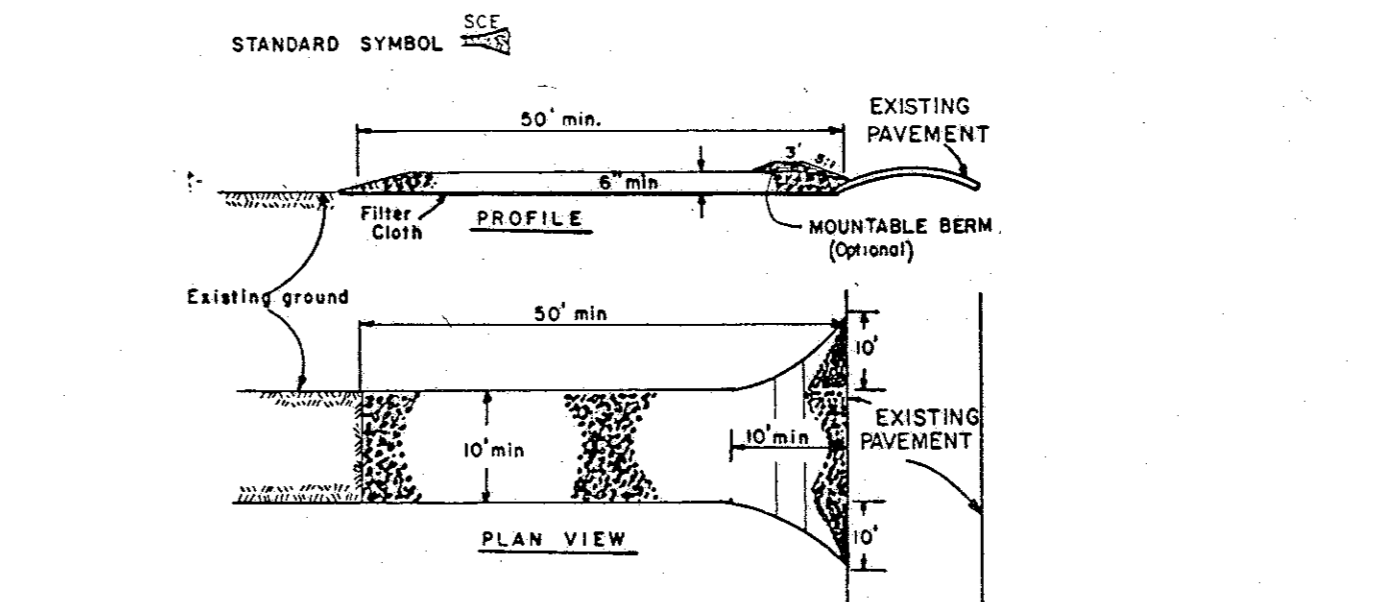
**SITE ANALYSIS FOR SEDIMENT AND EROSION CONTROL**

TOTAL AREA OF SITE: 5.176 AC.  
 AREA DISTURBED: 0.58 AC +/-  
 AREA TO BE ROOFED OR PAVED: 1.47 AC +/-  
 AREA TO BE VEGETATIVELY STABILIZED: 0.37 AC +/-  
 TOTAL CUT: 730 CU YD +/-  
 TOTAL FILL: 95 CU YD +/-

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved: *John M. Christman, PE.* 10/17/94  
 Howard S.C.D.

Reviewed for: *Howard S.C.D.*  
 Name: *John M. Christman, PE.*  
 Signature: *John M. Christman, PE.* Date: *10/17/94*  
 U.S. Soil Conservation Service



- CONSTRUCTION SPECIFICATIONS**
- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
  - Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
  - Thickness - Not less than six (6) inches.
  - Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
  - Filter cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
  - Surface Water - All surface water flowing or directed toward construction entrances shall be piped across the entrance. If piping is impractical, a mounded berm with 5:1 slopes will be permitted.
  - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
  - Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
  - Periodic inspection and needed maintenance shall be provided after each rain.
- U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE College Park, Md.

**5 STABILIZED CONSTRUCTION ENTRANCE**

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PAVEMENT ROADS.  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 DIRECTOR: *James J. Slavin* 10/26/94  
 DATE: 10/25/94  
 CHIEF BUREAU OF ENGINEERING: *John M. Christman, PE.* 10/25/94  
 DATE: 10/25/94  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 DIRECTOR: *James J. Slavin* 11/3/94  
 DATE: 11/3/94  
 CHIEF DIVISION OF PLANNING AND DEVELOPMENT AND RESEARCH: *John M. Christman, PE.* 11/4/94  
 DATE: 11/4/94  
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.  
 COUNTY HEALTH OFFICER: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED PLANNING BOARD OF HOWARD COUNTY  
 DATE: 4-14-94

1 REVISION SHEET NUMBER: 02/01/96  
 NO. REVISION DATE

**RESPONSIBLE PERSONNEL CERTIFICATION**  
 I HEREBY CERTIFY THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF THIS PROJECT HAVE RECEIVED ATTENDANCE FROM A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.  
 SIGNATURE OF DEVELOPER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SIGNATURE OF ENGINEER: *John M. Christman, PE.* DATE: \_\_\_\_\_

**CERTIFICATION BY THE ENGINEER**  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 SIGNATURE OF DEVELOPER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SIGNATURE OF ENGINEER: *John M. Christman, PE.* DATE: \_\_\_\_\_

**CERTIFICATION BY THE DEVELOPER**  
 I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY.  
 SIGNATURE OF DEVELOPER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SIGNATURE OF DEVELOPER: \_\_\_\_\_ DATE: \_\_\_\_\_

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 APPROVED: HOWARD S.C.D. DATE: \_\_\_\_\_  
 REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
 APPROVED: U.S. SOIL CONSERVATION SERVICE DATE: \_\_\_\_\_

revisions: no. description date  
 prepared by: **RBA** ENGINEERS • ARCHITECTS • PLANNERS  
 5560 STERRETT PLACE, SUITE 300  
 COLUMBIA, MARYLAND 21044  
 301 / 730-7950 621-6050

**SEDIMENT CONTROL DETAILS**  
 VILLAGE OF OWEN BROWN  
 DASHER GREEN NEIGHBORHOOD CENTER  
 PARKING LOT EXPANSION  
 COLUMBIA HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN  
 DRAWN: J.M.M. CHECKED: J.M.C.  
 PROJ. NO. DATE  
 7 9  
 SHEET OF

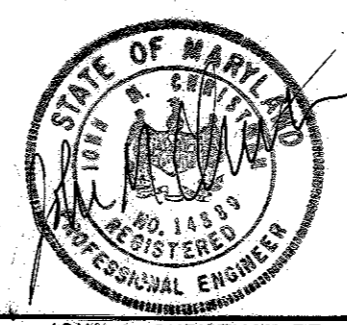
OWNER/DEVELOPER  
 COLUMBIA ASSOCIATION  
 10221 WINCOPIN CIRCLE  
 COLUMBIA, MD 21044

ADDRESS CHART  
 BUILDING STREET ADDRESS  
 LOT 64 6800 CRADLEROCK WAY

SUBDIVISION NAME VILLAGE OF OWEN BROWN  
 SECTION/AREA 1/2 LOT/PARCEL 64  
 PLAT BLOCK ZONE TAX ZONE MAP/ELEC. DIST. CENSUS TR. PB. 27 F.45 15,16 NS 36 6 6067.02  
 WATER CODE SEWER CODE



PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: JULY 14, 2017.  
*John M. Christman, PE.* 10/17/94  
 JOHN M. CHRISTMAN, PE. 11/3/94

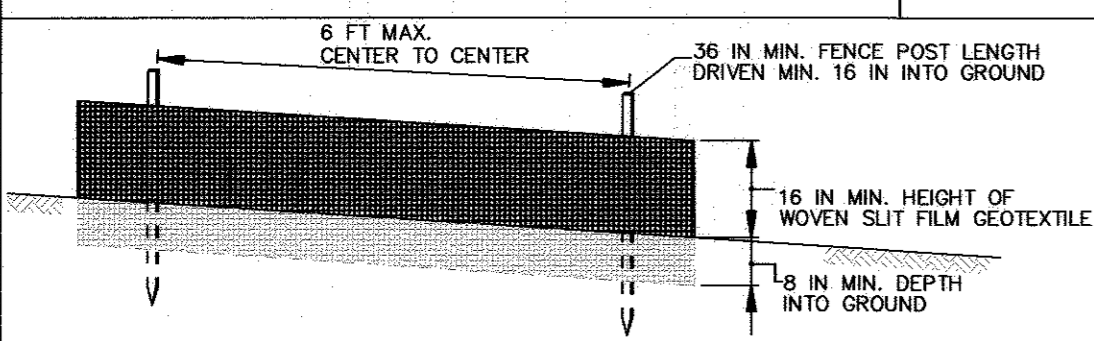


JOHN M. CHRISTMAN, PE. MD. NO. 14889

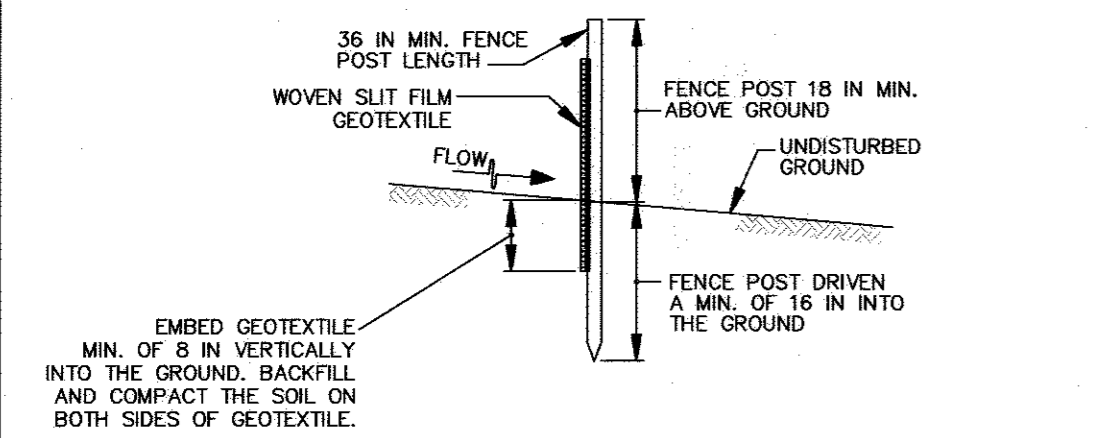


DETAIL E-1 SILT FENCE

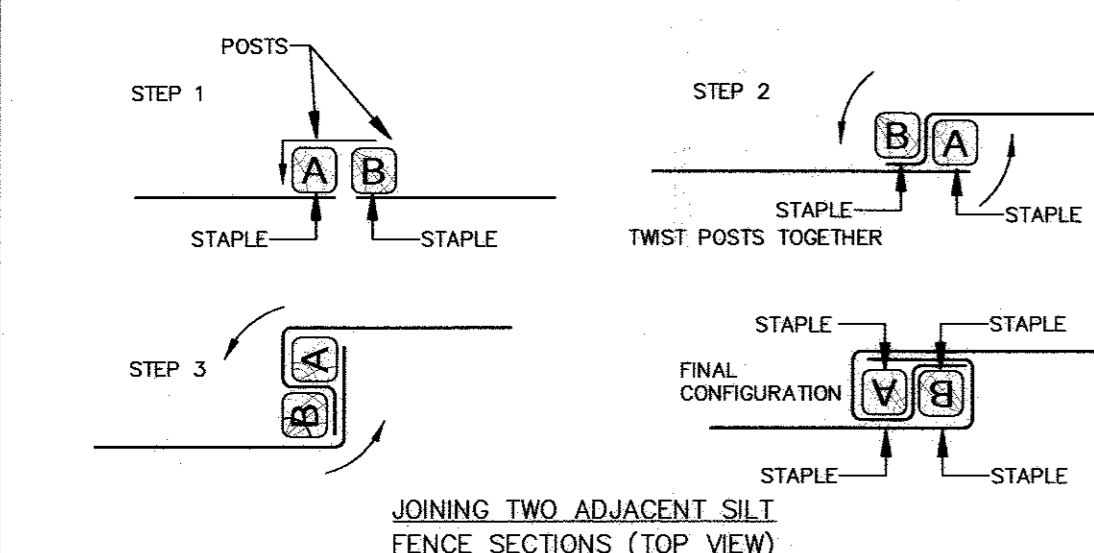
STANDARD SYMBOL



ELEVATION



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

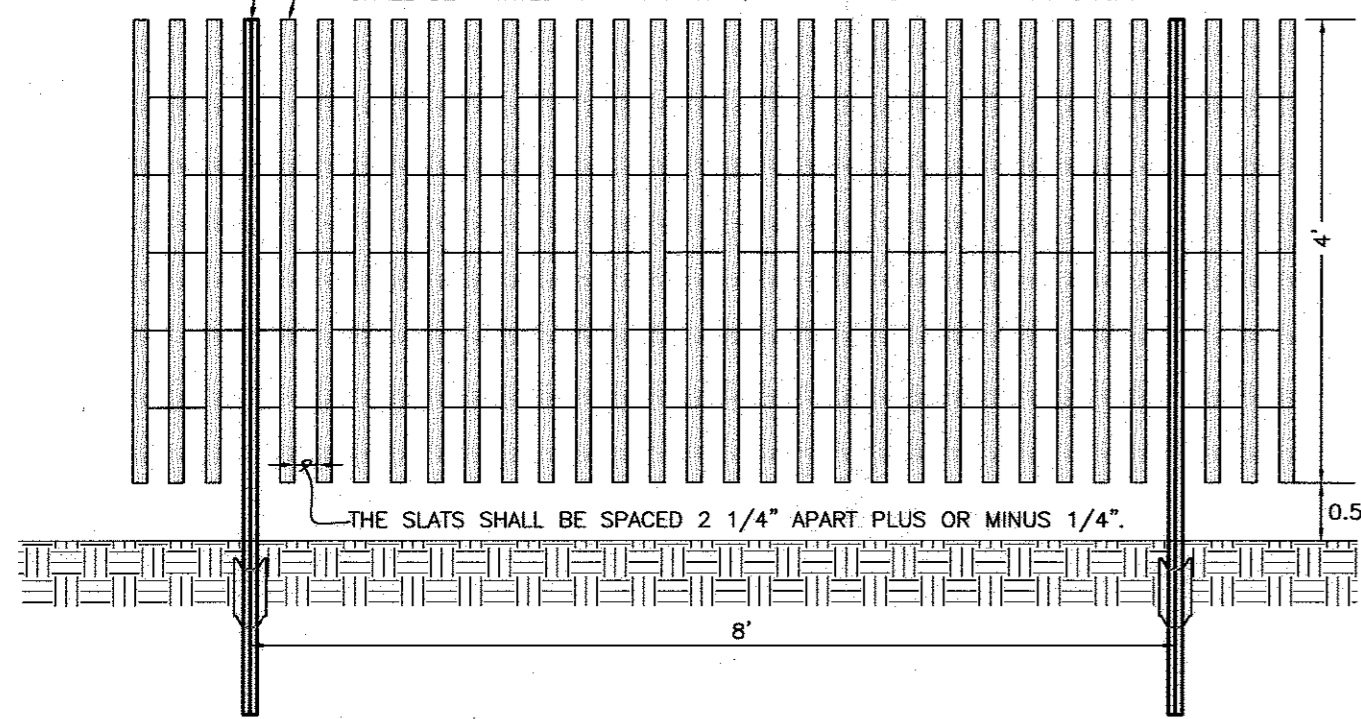
CONSTRUCTION SPECIFICATIONS

- USE WOOD POSTS 1 1/2 X 1 1/2 X 3/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POSTS USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
- USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
- USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND, BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT; REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

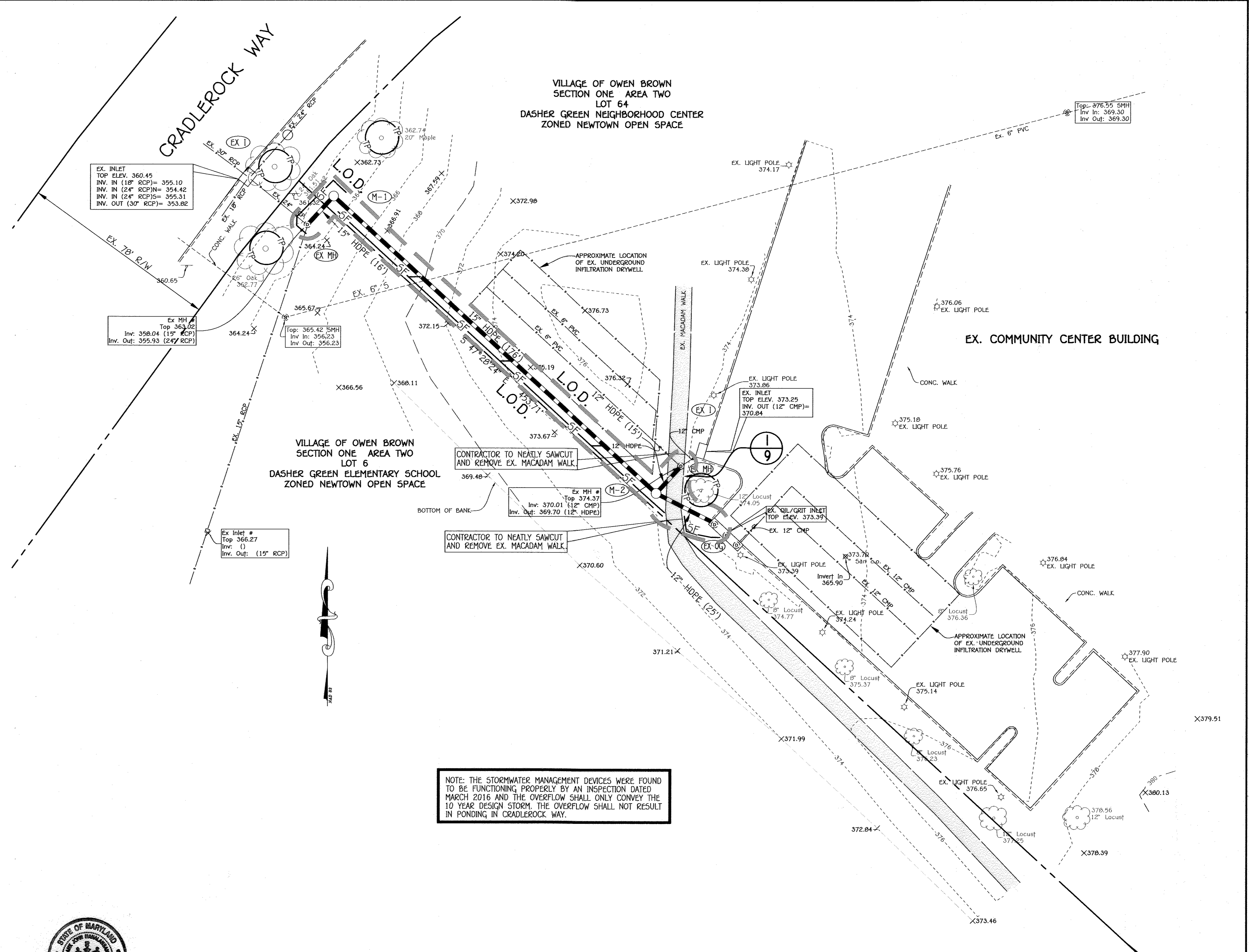
POST - THE POST FOR ERECTING THE TREE PROTECTION FENCE SHALL BE MADE OF HOT ROLLED RAIL STEEL AND FORMED INTO A "T". DIMENSIONS OF "T" POST SECTION, APPROXIMATELY 1 7/16" X 1 5/16" X 1/8" X 6" (SIX FEET) LONG, PAINTED GREEN OR GALVANIZED STEEL "T" WITH 23-SQUARE INCH ANCHOR PLATE.

SLATS - SHALL BE MADE OF NO.1 ASPEN OR SPRUCE MEASURING 3/8" THICK, 1 1/2" WIDE, BOTH ENDS SHALL BE CUT SQUARE. THE SLATS SHALL BE PAINTED WITH A GOOD QUALITY OF RED IRON OXIDE STAIN.



TREE PROTECTION FENCING SHALL CONSIST OF WOOD SLATS WOVEN TOGETHER WITH FIVE 2-WIRE STRANDS OF 13 STEEL WIRE GAUGE GALVANIZED WIRE, NOT LESS THAN (2) THREE HUNDRED AND SIXTY (360) DEGREE TWISTS OF THE WIRE IN THE WEAVE BETWEEN THE SLATS.

TREE PROTECTION FENCE DETAIL  
NOT TO SCALE



NOTE: THE STORMWATER MANAGEMENT DEVICES WERE FOUND TO BE FUNCTIONING PROPERLY BY AN INSPECTION DATED MARCH 2016 AND THE OVERFLOW SHALL ONLY CONVEY THE 10 YEAR DESIGN STORM. THE OVERFLOW SHALL NOT RESULT IN PONDING IN CRADLEROCK WAY.

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW STORM DRAINAGE FROM 2 EXISTING UNDERGROUND SWM'S TO A NEARBY DRAINAGE LINE.

PREPARED FOR  
COLUMBIA ASSOCIATION  
9450 GERWIG LANE  
COLUMBIA, MARYLAND 21046  
410-381-0594

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date: JULY 14, 2017.

Frank John Manalansan II, L.S. 10/3/16

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PLACE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461-2899

**DEVELOPER'S CERTIFICATE**

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Developer: *Frank John Manalansan II* 10/3/16  
Date: 10/3/16

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Signature: *Valaris Joffe* 10-19-16  
Date: 10-19-16  
Director - Department of Planning and Zoning

Signature: *Ken DeLorenzo* 10-17-16  
Date: 10-17-16  
Chief, Division of Land Development

Signature: *John R. Roberts* 10-13-16  
Date: 10-13-16  
Chief, Development Engineering Division

**PROFESSIONAL'S CERTIFICATE**

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Licensed Professional: *Frank John Manalansan II* 10/3/16  
Date: 10/3/16

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
Signature: *John R. Roberts* 10/4/16  
Date: 10/4/16  
Howard SCD

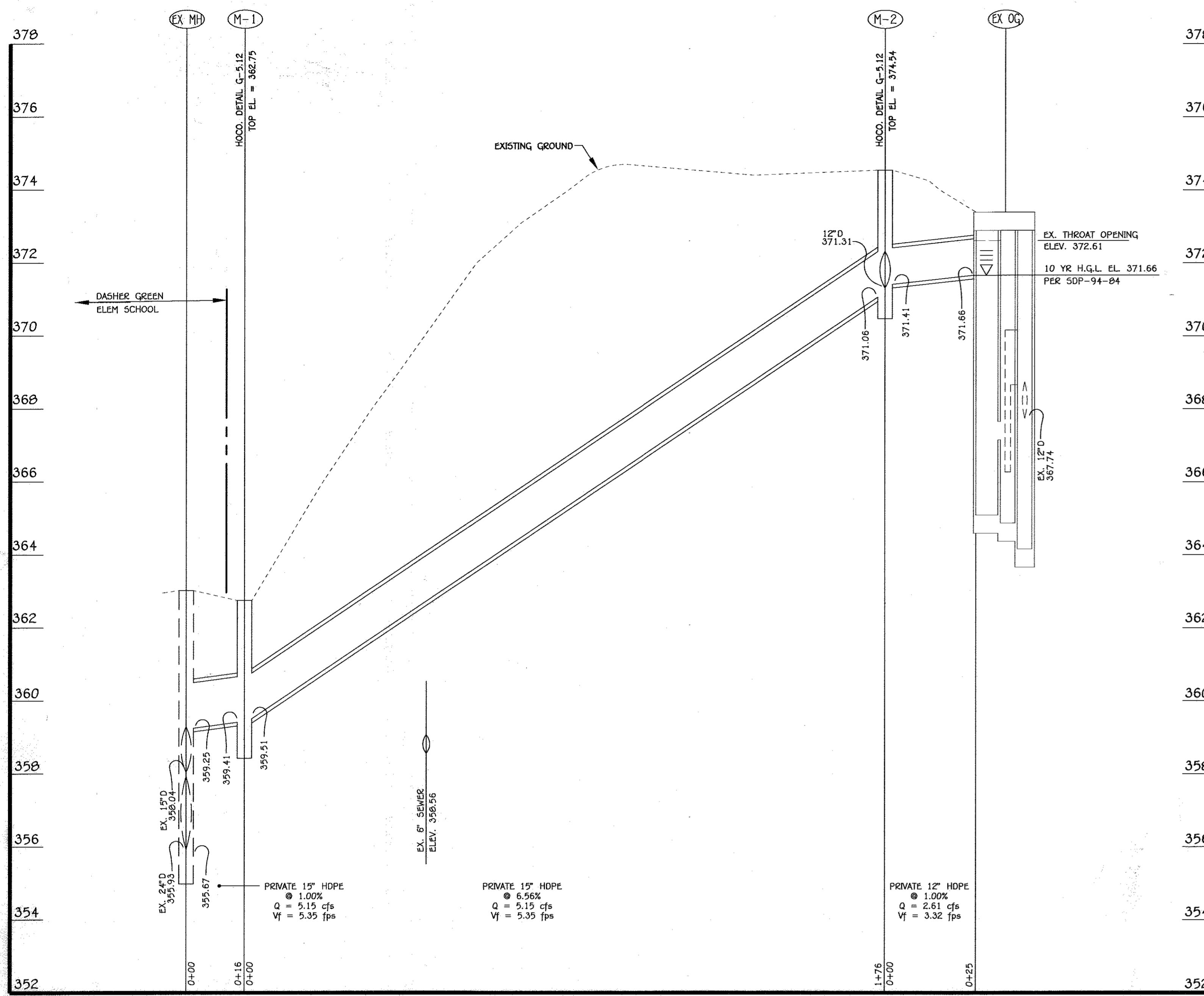
ADDRESS CHART			
LOT/PARCEL#	STREET ADDRESS		
LOT 64	6800 CRADLEROCK WAY COLUMBIA, MARYLAND 21044		
PERMIT INFORMATION CHART			
SUBDIVISION NAME DASHER GREEN NEIGHBORHOOD CENTER	SECTION/AREA 1/2	LOT/PARCEL NO. LOT 64	
PLAT# OR L/F# P.B.27, F.45	ZONING NT	TAX MAP# 36	ELECT. DISTR. SIXTH
GRID# 15.16		CENSUS TRACT 6067.02	

**SITE DEVELOPMENT PLAN AND SEDIMENT AND EROSION CONTROL PLAN**  
"REVISED SITE DEVELOPMENT PLAN"  
VILLAGE OF OWEN BROWN

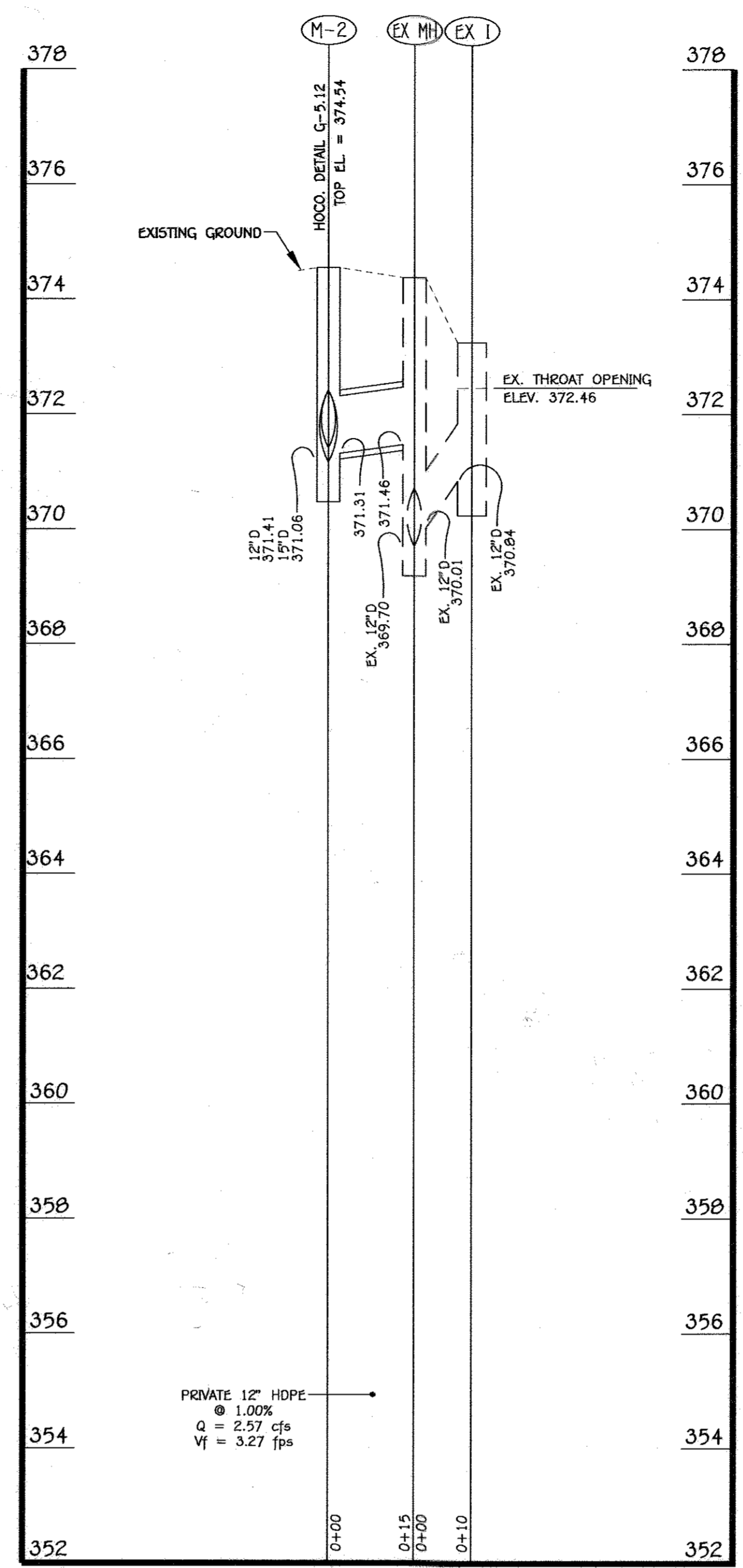
LOT 64  
SECTION 1 AREA 2  
DASHER GREEN NEIGHBORHOOD CENTER

ZONED NEWTOWN PARCEL No.: 64  
TAX MAP No.: 36 GRID No.: 15, 16  
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1" = 20' DATE: SEPTEMBER 30, 2016  
SHEET 8 OF 9



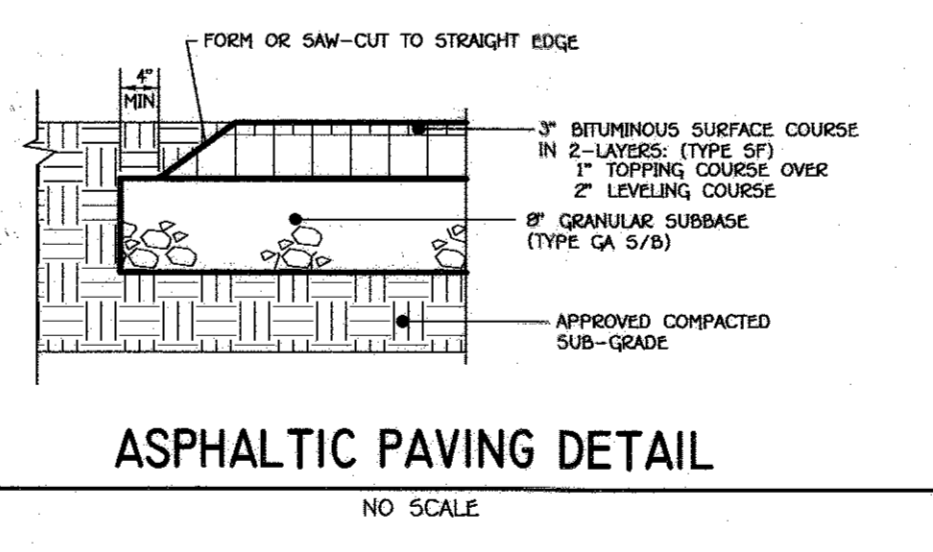


**STORM DRAIN PROFILE**  
SCALE:  
HORZ: 1" = 20'  
VERT: 1" = 2'



**STORM DRAIN PROFILE**  
SCALE:  
HORZ: 1" = 20'  
VERT: 1" = 2'

STRUCTURE SCHEDULE								
STRUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION	INV. IN	INV. OUT	COORDINATES	WIDTH	TYPE	REMARKS
M-1	PRIVATE	362.75	359.51 (15")	359.41 (15")	N 556,198.00 E 1,357,033.10	4'	STD. MANHOLE	G - 5.12
M-2	PRIVATE	374.54	371.41 (12"), 371.31 (12")	371.06 (15")	N 556,079.54 E 1,357,163.19	4'	STD. MANHOLE	G - 5.12



- ### HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES
- A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES: A. PRIOR TO THE START OF EARTH DISTURBANCE.
  - UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
  - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT, D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
- OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCIES HAS BEEN MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
  - FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
  - ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-3), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-5). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
  - ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
6. SITE ANALYSIS:
- |                                     |                |
|-------------------------------------|----------------|
| TOTAL AREA OF SITE:                 | 5.1 ACRES      |
| AREA TO BE SCOOPED OR PAVED:        | 0.06 ACRES     |
| AREA TO BE VEGETATIVELY STABILIZED: | 0.06 ACRES     |
| TOTAL CUT:                          | _____ CU. YDS. |
| TOTAL FILL:                         | _____ CU. YDS. |
| OFFSITE WASTE/BORROW AREA LOCATION: | _____          |
- 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 CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
    - INSPECTION DATE
    - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
    - NAME AND TITLE OF INSPECTOR
    - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
    - BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
    - EVIDENCE OF SEDIMENT DISCHARGES
    - IDENTIFICATION OF PLAN DEFICIENCIES
    - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
    - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
    - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
    - PHOTOGRAPHS
    - MONITORING/SAMPLING
    - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
  - TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
  - ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
  - DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
  - WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
  - TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
  - ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
  - STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
    - USE I AND IF MARCH 1 - JUNE 15
    - USE II AND IF OCTOBER 1 - APRIL 30
    - USE III MARCH 1 - MAY 31
  - A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

**SEQUENCE OF CONSTRUCTION**

- OBTAIN GRADING PERMIT. (1 DAY)
  - NOTIFY "HSS UTILITY" AT 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 48 HOURS BEFORE STARTING WORK.
  - INSTALL ALL TREE PROTECTION FENCE FOR TREES AND SILT FENCE AS INDICATED ON THE PLAN (1/2 DAY). CONTRACTOR TO INSPECT AFTER EVERY RAINFALL. REPAIR OR REPLACE AS NECESSARY IF DAMAGED UNTIL COMPLETION OF PROJECT.
  - WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR BEGIN PIPE INSTALLATION. (3 DAYS)
  - INSTALL MACADAM SIDEWALK TO EXISTING LOCATION. (1/2 DAY)
  - FINE GRADE ALL AREAS, INSTALL PERMANENT SEEDING. (1/2 DAY)
  - OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE SEDIMENT AND EROSION CONTROL DEVICES. THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS WITH PERMANENT SEEDING. (1/2 DAY)
  - NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.
- SEQUENCE NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL EVENT AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE SILT FENCE WHEN SEDIMENT REACHES 25% OF THE FENCE HEIGHT.

PREPARED FOR  
COLUMBIA ASSOCIATION  
9450 GERWIG LANE  
COLUMBIA, MARYLAND 21046  
410-391-0594

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional surveyor under the laws of the State of Maryland, License No. 21476. Expiration Date: JULY 14, 2017."

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE: 10722 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2899

**DEVELOPER'S CERTIFICATE**

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Developer: *[Signature]* DATE: 10/31/16

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Signature: *[Signature]* DATE: 10-19-16  
Director - Department of Planning and Zoning

Signature: *[Signature]* DATE: 10-17-16  
Chief, Division of Land Development

Signature: *[Signature]* DATE: 10-13-16  
Chief, Development Engineering Division

**PROFESSIONAL'S CERTIFICATE**

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Licensed Professional: *[Signature]* DATE: 10/31/16

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
Signature: *[Signature]* DATE: 10/31/16  
Howard SCD

**ADDRESS CHART**

LOT/PARCEL#	STREET ADDRESS
LOT 64	6800 CRADLEROCK WAY COLUMBIA, MARYLAND 21044

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL NO.
DASHER GREEN NEIGHBORHOOD CENTER	1/2	LOT 64
PLAT# OR L/F	GRID#	ZONING
P.B.27, F.45	15.16	NT
TAX MAP#	ELECT. DISTR.	CENSUS TRACT
36	SIXTH	6067.02

**STORM DRAIN PROFILES, SEDIMENT CONTROL NOTES AND DETAILS**

"REVISED SITE DEVELOPMENT PLAN" VILLAGE OF OWEN BROWN

LOT 64  
SECTION 1 AREA 2  
ZONED NEWTOWN PARCEL No.: 64  
TAX MAP No.: 36 GRID No.: 15, 16  
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: SEPTEMBER 30, 2016  
SHEET 9 OF 9