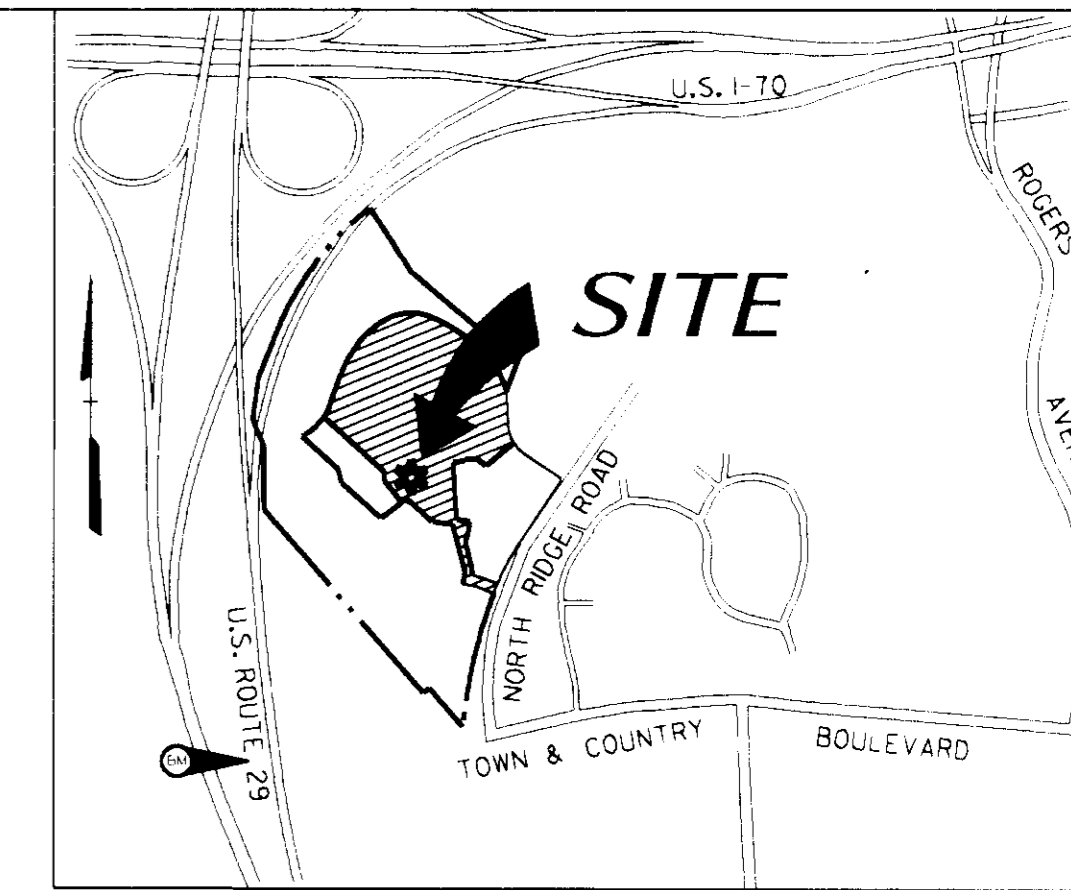


**SHEET INDEX**

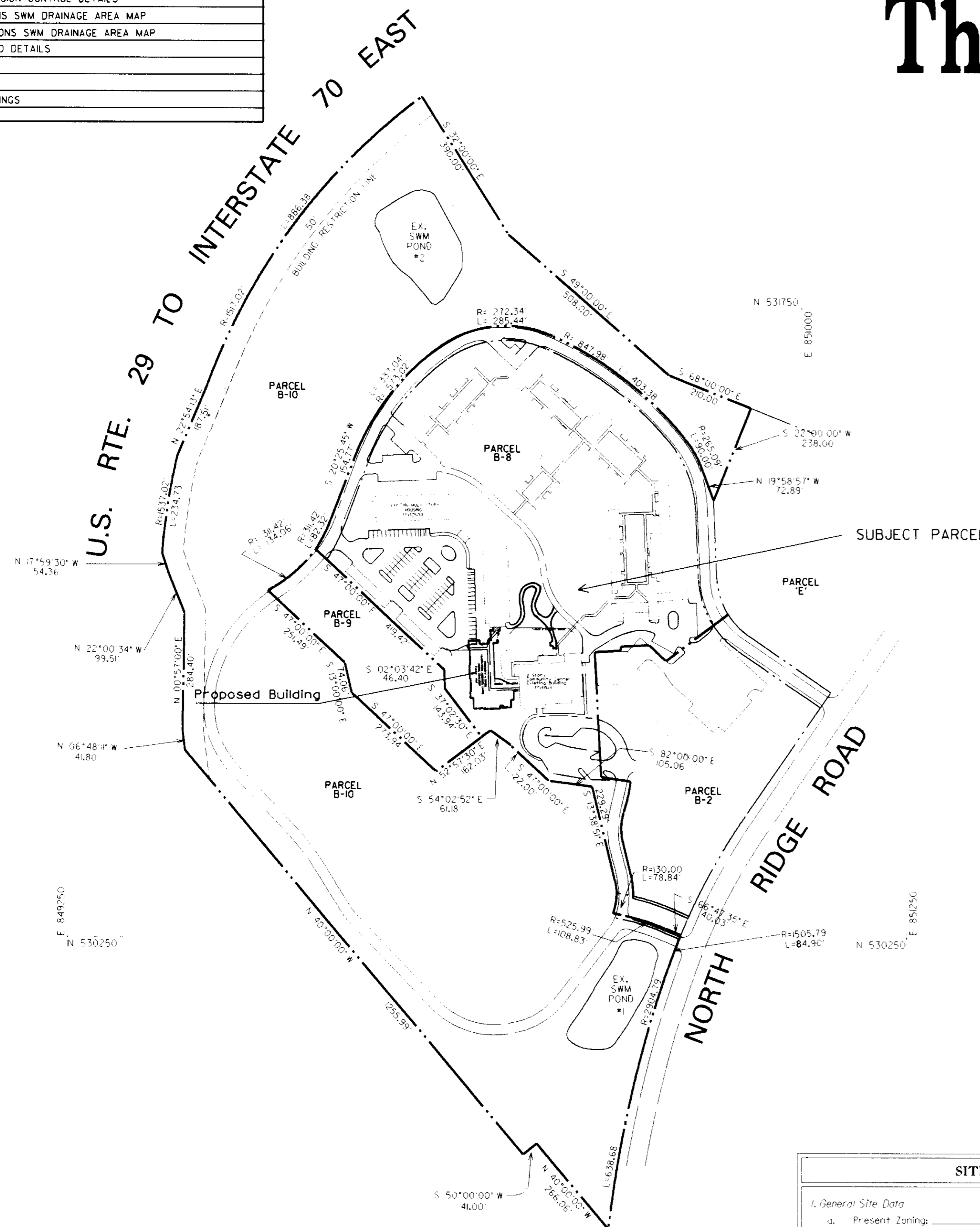
SHEET	DESCRIPTION
1	COVER SHEET
2	DEMOLITION PLAN
3	SITE PLAN
4	SITE DETAIL PLAN
5	SITE DETAILS
6	STORM DRAIN DRAINAGE AREA MAP AND UTILITY PROFILES
7	SEDIMENT AND EROSION CONTROL PLAN
8	SEDIMENT AND EROSION CONTROL DETAILS
9	EXISTING CONDITIONS SWM DRAINAGE AREA MAP
10	PROPOSED CONDITIONS SWM DRAINAGE AREA MAP
11	POND #2 PLAN AND DETAILS
12	POND #2 PROFILES
13	POND #2 DETAILS
14	POND #2 SOIL BORINGS
15	LANDSCAPE PLAN

# SITE DEVELOPMENT PLAN FOR The Heartlands Residence PHASE I An Assisted Living Facility

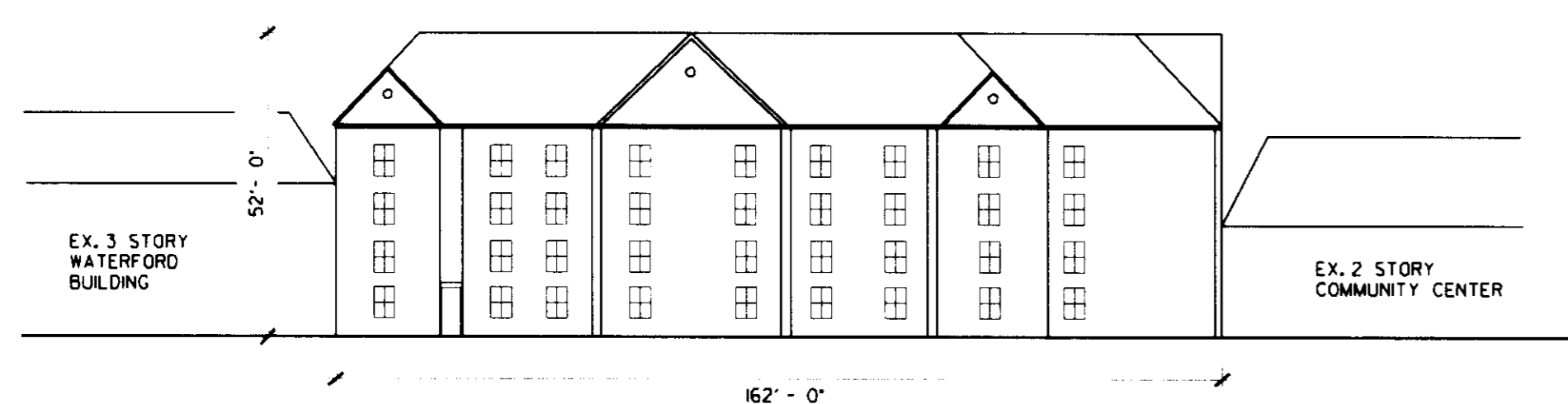


**LOCATION MAP**

ELEVATION 469,057 CONTROL STATION 3342001  
BENCHMARK: HOWARD COUNTY, MARYLAND  
BEING A CONCRETE MONUMENT ON TOP OF HOOSBACK BETWEEN MD. RTE. 29 NORTH AND SOUTH 4000' +/- NORTH OF U.S. RTE. 40



**OVERALL PROPERTY PLAN**  
SCALE 1" = 200'



**BUILDING ELEVATION**  
NTS

SITE ANALYSIS DATA CHART	
<b>1. General Site Data</b>	
a. Present Zoning:	RUR
b. Applicable DPZ File Reference:	F-79-03, S-81-24, F-82-09, F-82-16, F-86-17, PL-1, NO. 15516553, MP 30 130 SDP 96-104, F 97-85
c. Proposed Use of Site or Structures:	ASSISTED LIVING FACILITY TO UNIT
d. Proposed Water and Sewer Systems:	Public: NO Private: NO
e. Any other information which may be relevant:	PUBLIC WATER & SEWER SYSTEMS PROVIDED UNDER CAPITAL PROJECT NO. S-6204
<b>2. Area Tabulation</b>	
a. Total Project Area:	46.45 (PARCEL B-8 & PARCEL B-10) Acres
b. Net Area of Site:	46.45 Acres
c. Area of This Plan Submissions:	3.0 Acres
d. Limit of Disturbed Area:	3.0 Acres
e. Building Coverage of Site:	0.00 Acres and 0.00 % of Total Area (PARCEL B-8)
f. Maximum number of beds:	70
<b>4. Open Space Data</b>	
a. Open Space Required on Site:	N/A Acres
b. Open Space Proposed:	N/A Acres
<b>5. Parking Space Data (see parking justification in file)</b>	
a. Number of Parking Spaces Required by Zoning Regulations:	35 spaces
b. Total Number of Parking Spaces Provided on-site:	35 spaces (16 spaces at Community Center, 20 spaces at Waterford)
c. Number of Handicapped Parking Spaces Provided:	4 spaces
d. Number of Parking Spaces required for Waterford Apartments, Community Center & Assisted Living Facility:	174 spaces
e. Number of Parking Spaces Provided for Buildings listed in (d):	178 spaces

**General Notes**

- All construction shall be performed in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications if applicable or as specified.
- Approximate location of existing utilities are shown from best available information. The contractor shall take all necessary precautions to protect the existing utilities and maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- The contractor shall test all existing utilities at least five (5) days before starting work shown on these drawings to verify their location and elevation. The contractor shall notify the engineer immediately if location of utilities is other than shown.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done, and 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 the start of work.
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- All plan dimensions are to face of curb unless otherwise noted.
- There is no floodplain on this site.
- Wetlands were delineated by Daft McCune Walker in October, 1996.
- Existing Storm Water Quantity Management will be provided on-site by an existing private storm water management pond.
- The existing topography is taken from a field run survey with the two foot contour intervals prepared by Daft McCune Walker, Inc., dated September, 1996.
- All limits shall be constructed in accordance with Howard County Standards or MSHA Standards as specified on structure schedule.
- Operating existing valves, switches, services or start up of new services shall be coordinated with the owner's representative.
- Required siltation and sedimentation control plans shall be provided, installed and maintained.
- Contractor shall carefully remove from the area to be disturbed all trees, shrubs and plant materials using procedures recommended by the American Nurseryman's Association so as to maximize the continued survival and health of the materials. These trees, shrubs and plant materials shall be transported to a designated location on the owner's property, and heeled into a mulch holding bed for future use by the owner in locations other than those involved in the contract work.
- Where demolition is indicated on the drawings, it means to completely demolish feature, clear area of all debris, and dispose of off-site at a legal dumpsite. Abandon means to leave in place and cut where required, and bulkhead all cut ends with a plug or cap, or construct a 9" thick brick and mortar bulkhead conforming to existing utility materials.
- Public water per Capital Project No. S-6204.
- There are no known grave sites or cemeteries on this site.
- The coordinates shown hereon are based upon the Howard County geodetic control which is based upon the Maryland State plane coordinate system. Howard County monument numbers 3443003 and 3342001 were used for this project.
- No traffic study is required for this project.
- The geotechnical report was done on September 16, 1996 and October 21, 1996 by HILLIS-CARNES ENGINEERING ASSOCIATES, INC.
- The water service for the proposed building will be provided internally through the existing community center.
- The dwelling units in the proposed building will not contain individual kitchens.
- There are no known grave sites or cemeteries on this site.
- The contractor is to provide cleanouts for sewer connections into the building 5' from the face of the proposed building and at all bends for the roof leader system.
- As built for all 3 (three) existing ponds must be done upon completion of work and stabilization.

ADDRESS CHART	
PARCEL NUMBER	STREET ADDRESS
PARCEL B-8	3010 NORTH RIDGE ROAD

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*[Signature]* 6/20/97  
CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 6/20/97  
DIVISION OF LAND DEVELOPMENT DATE

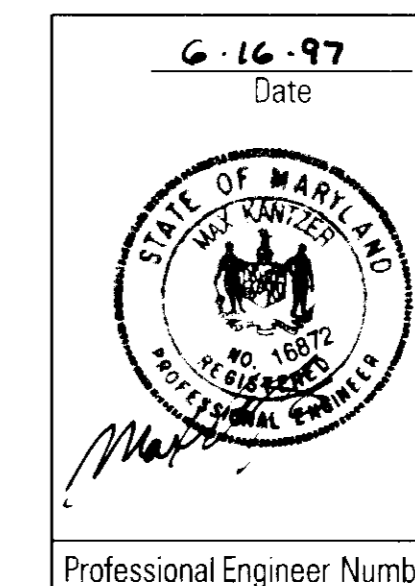
*[Signature]* 6/20/97  
DIRECTOR DATE

Date	No.	Revision Description
7-21-97	1	removed covered walk, added continuous walk

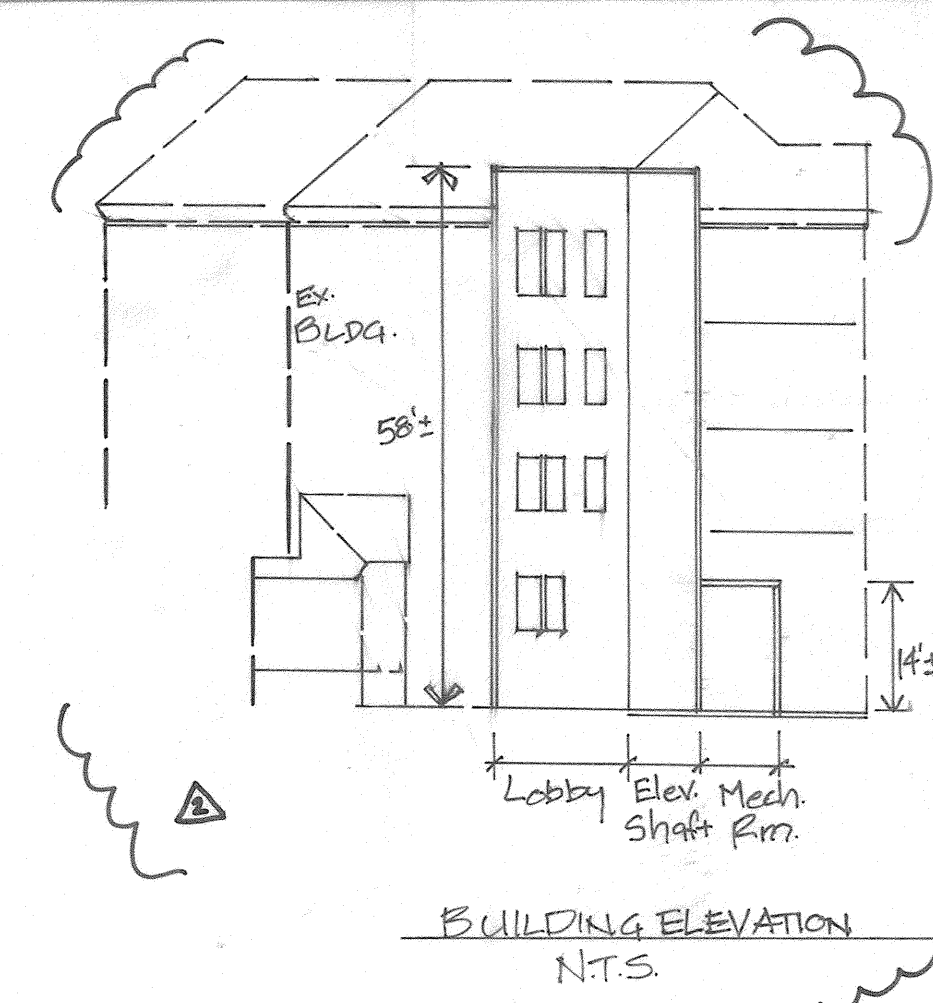
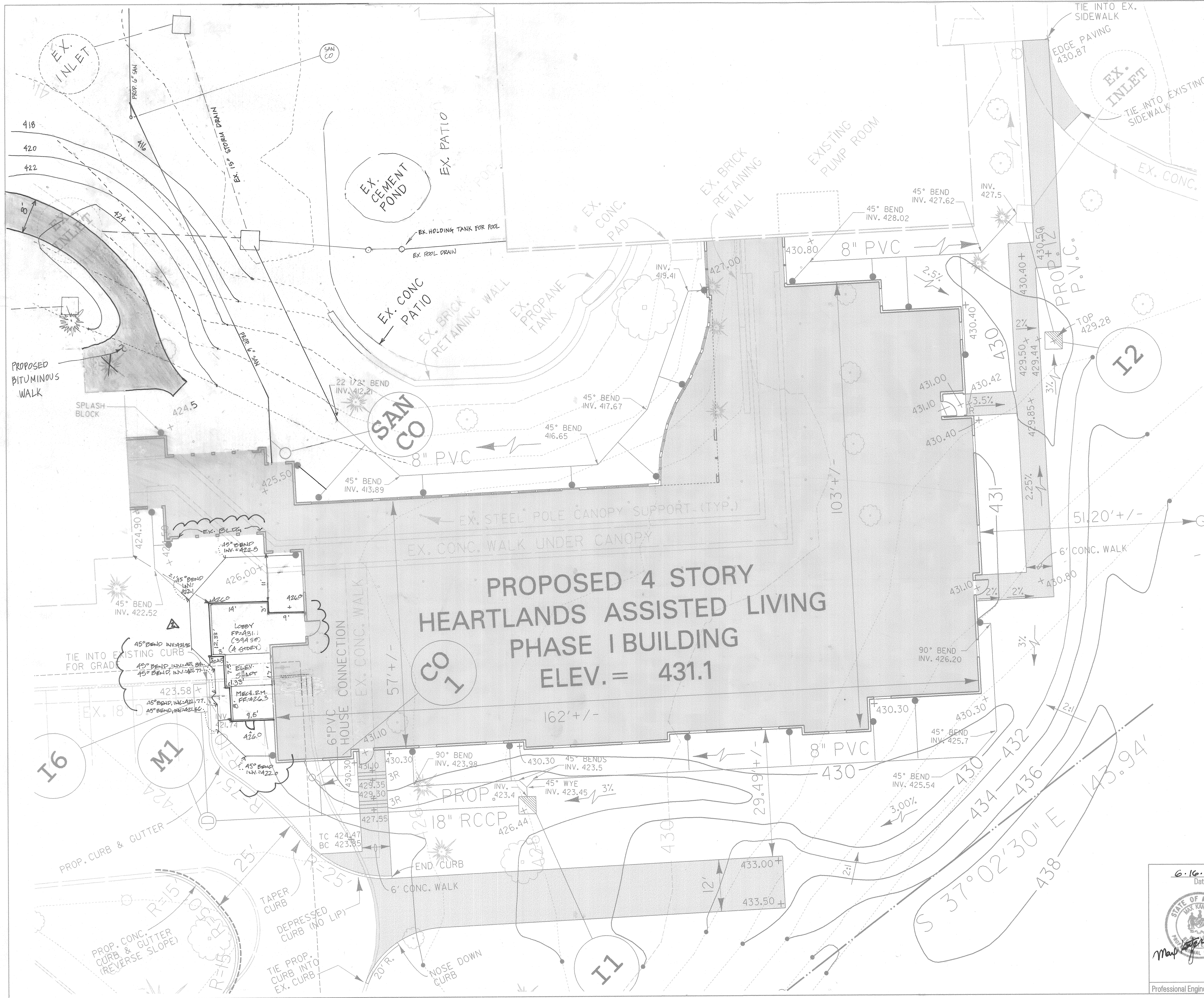
**Heartlands Assisted Living Phase I**  
An Assisted Living Facility  
Howard County, Maryland  
OWNER / DEVELOPER  
THE HEARTLANDS RETIREMENT COMMUNITY -  
ELICOTT CITY 1, INC.  
c/o CONSTELLATION HEALTH SERVICES, INC.  
8815 CENTRE PARK DRIVE, SUITE 308  
COLUMBIA, MARYLAND 21045

**DMW**  
Daft McCune Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals



TITLE	
<b>COVER SHEET</b>	
Des By	MM
Drn By	JWM
Chk By	JWR
Scale	AS SHOWN
Date	2-13-97
Proj No.	81015T
Sheet No.	1 of 15



**PROPOSED 4 STORY  
HEARTLANDS ASSISTED LIVING  
PHASE I BUILDING  
ELEV. = 431.1**

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Chad Dammus* 6/20/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION JFC DATE

*Colleen* 6/20/97  
DIVISION OF LAND DEVELOPMENT DATE

*James K. Smith* 6/20/97  
DIRECTOR DATE

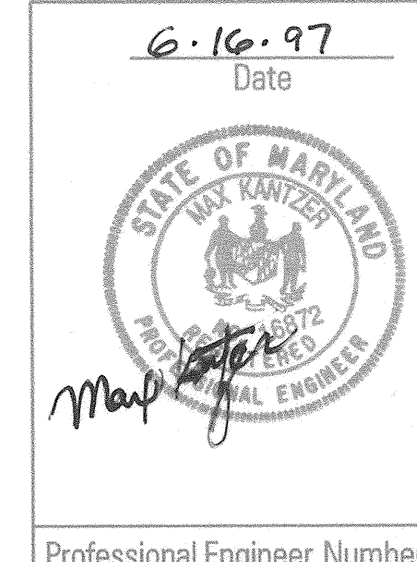
Date	No.	Revision Description
7-29-97	1	removed covered walk, added bituminous walk, rev. sanitary location
6/1/05	2	ADD LOBBY, ELEV. SHAFT & MECH. R.M. (394 S.F.)

**Heartlands Assisted Living Phase I**  
An Assisted Living Facility  
Howard County, Maryland

OWNER /DEVELOPER  
THE HEARTLANDS RETIREMENT COMMUNITY -  
ELLCOTT CITY I, INC.  
c/o CONSTELLATION HEALTH SERVICES, INC.  
8815 CENTRE PARK DRIVE, SUITE 308  
COLUMBIA, MARYLAND 21045

**DMW**  
Draft: McCreary Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 390-3888  
Fax: 390-4700

A Team of Land Planners,  
Landscape Architects,  
Engineers, Surveyors &  
Environmental Professionals



SUBDIVISION NAME		SECTION	DATE	DATE
Bon Secours Ho. Co. Health Park		21	6/20/97	6/20/97
PLAT OR REF.	BLOCK	ZONE	PARCELS	DATE
12636-12638	23	PUR	B-8, B-9 & B-10	6/20/97
TRACT CODE	BLK CODE	BLK DISTRICT	TRACT	
FG3		2 ND	6026	

TITLE: **SITE DETAIL PLAN**

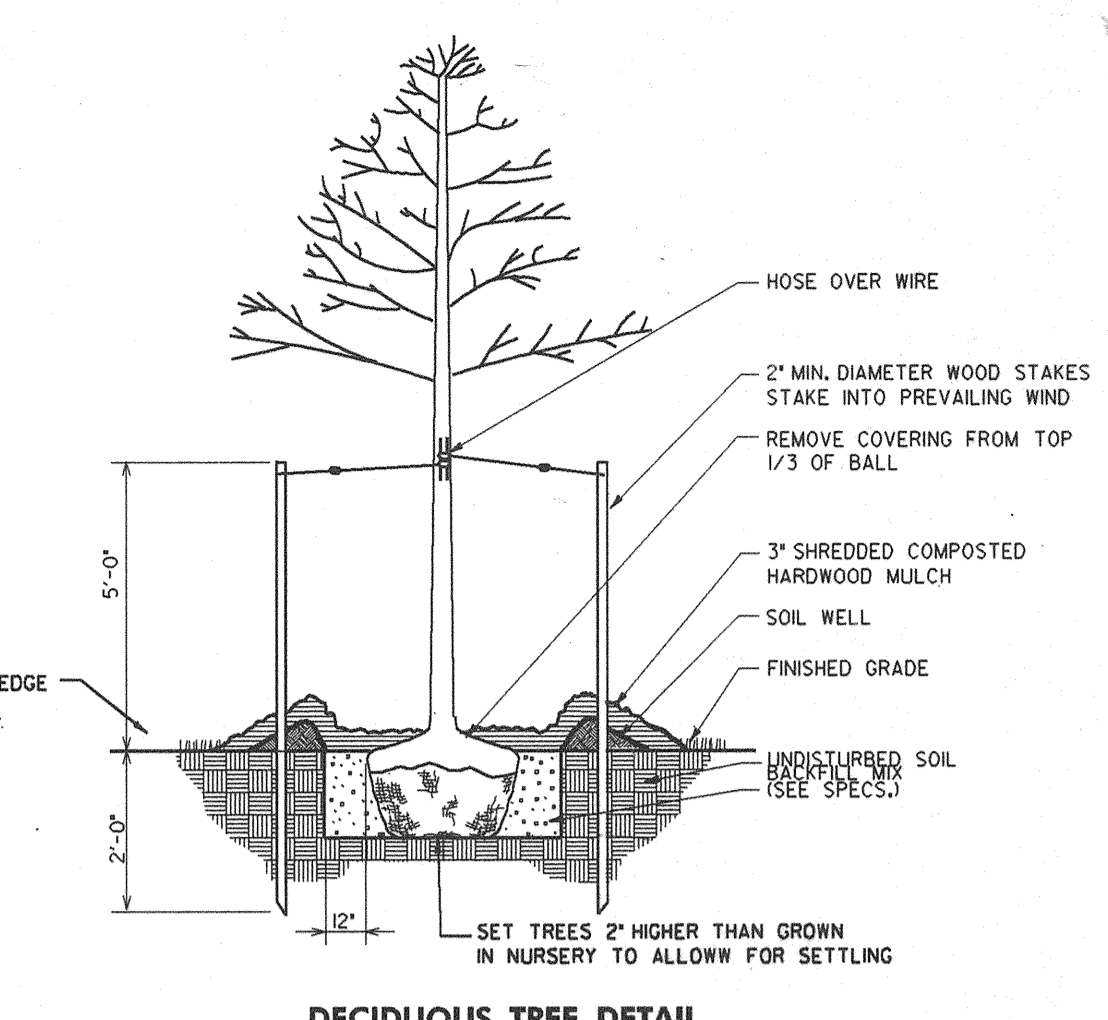
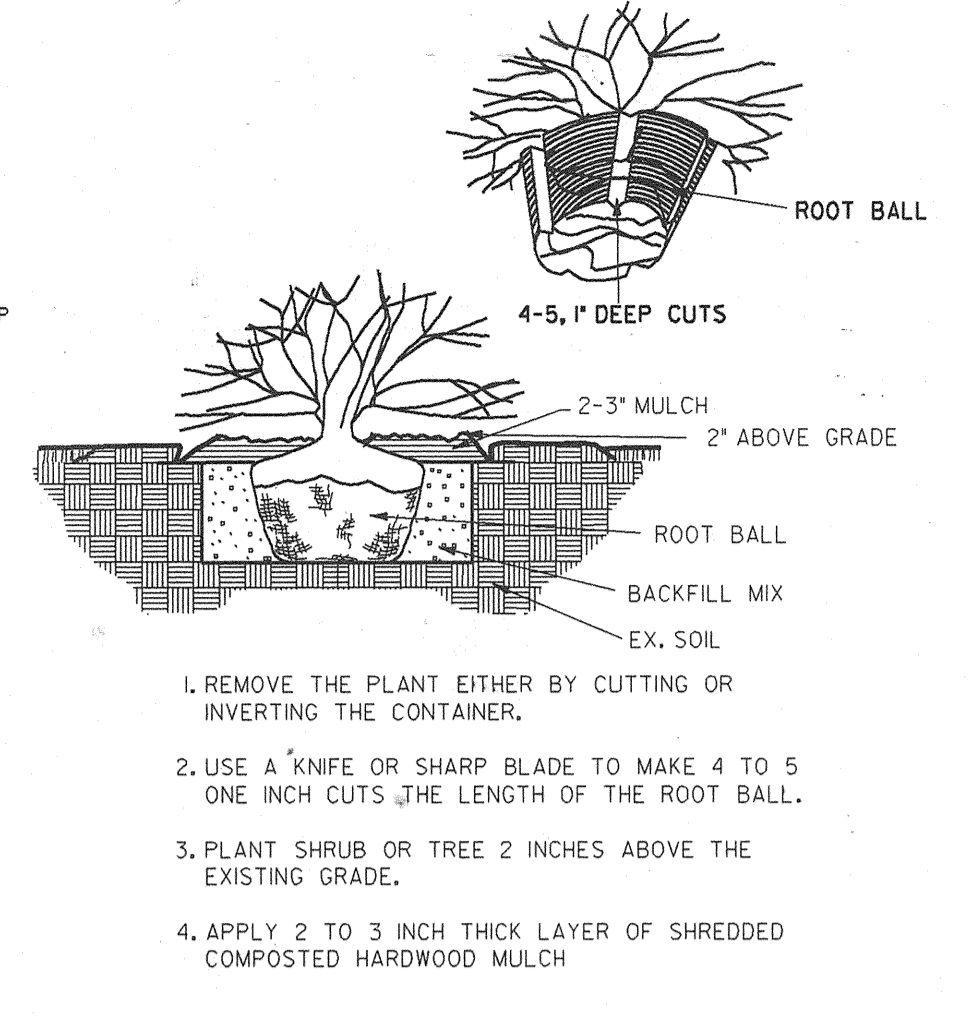
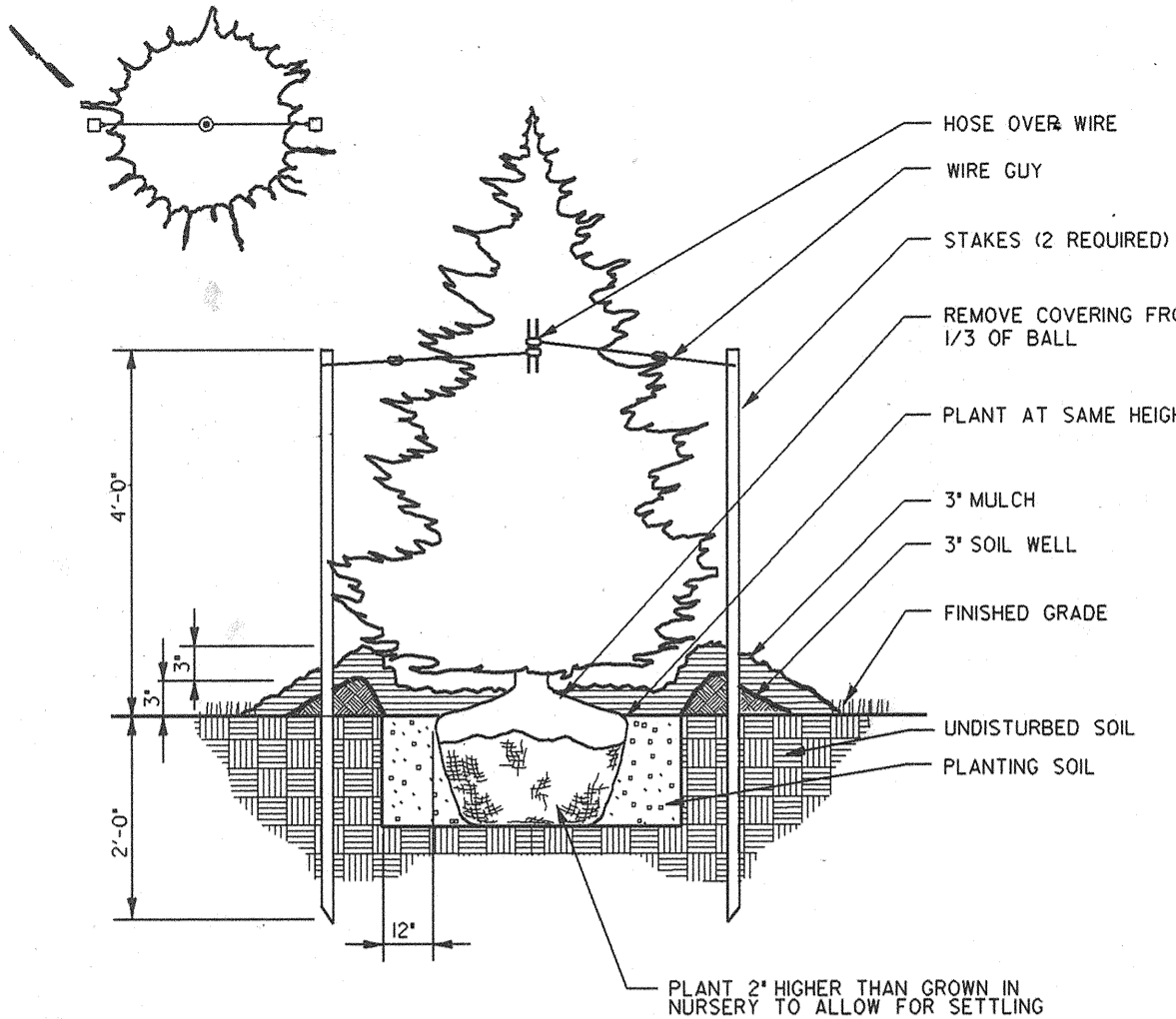
Des By	JDF	Scale	1" = 10'	Proj. No.	81015T
Drn By	JWM	Date	2-13-97		
Chk By	JWR	Approved			4 of 15

SDP 97.51

General Notes

- The contractor shall review architectural/engineering plans to become thoroughly familiar with grading and surface utilities.
- The contractor shall insure that his work does not interrupt established or projected drainage patterns.
- During planting operations, excess waste materials shall be promptly and frequently removed from the site.
- Call Miss Utility a minimum of three days prior to any excavation. The contractor is advised of the existence of underground utilities on the site. Their exact location shall be verified in the field with the owner or general contractor prior to the commencement of any digging operations. In the event they are uncovered, the contractor shall be held responsible for all damage to utilities and such damage shall not result in any additional expenses to the owner. Any damage of unreported lines shall not be the responsibility of the contractor.
- Maintain positive drainage out of planting beds at a minimum 2% slope. All grades, dimensions, and existing conditions shall be verified by the contractor on site before construction begins. Any discrepancies shall be brought to the attention of the landscape architect or owner.
- Every possible safeguard shall be taken to protect building surfaces, equipment, and furnishings. The contractor shall be responsible for any damage or injury to person or property which may occur as a result of his negligence in the execution of the work.
- In the event of variation between quantities shown on the plant list and the plans, the plans shall control. The contractor is responsible for verifying all plant quantities prior to the commencement of work. Sod quantity take-offs are the responsibility of the contractor. All discrepancies shall be reported to the landscape architect for clarification prior to bidding. The contractor shall furnish plant material in sizes as specified in plant list.
- Plants shall be located as shown on the drawings or as designated in the field. The contractor shall stake all material located on the site for review and/or adjustment by the landscape architect prior to planting. All locations are to be approved by the landscape architect before excavation.
- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regard to size, growth, size of ball and density of branch structure. Plant material shall be tagged at the source by the landscape architect unless this requirement is specifically waived.
- All plants (B&B or container) shall be properly identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the landscape architect or agent in charge.
- Any material and/or work may be rejected by the landscape architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the contractor.

- No substitutions shall be made without written consent of the owner or landscape architect.
- The landscape architect or owner shall have the right, at any stage of the operations, to reject any and all work and material which, in his opinion, does not meet the requirements of these plans and specifications.
- The contractor shall be wholly responsible for stability and conditions of all trees and shrubs and shall be legally liable for any damage caused by instability of any plant materials. Staking of all trees shall be done utilizing a method agreed upon by the landscape architect, as indicated on the documents.
- All proposed trees to be installed either entirely on or entirely out of planting beds. Planting bed lines are not to be obstructed. All shrubs and ground cover areas shall be planted in continuous prepared bed and top dressed with 3-inch shredded hardwood mulch. Mulch shall have been shredded within the last six months.
- Space edge all planting beds.
- Maintenance shall begin after each plant has been installed and shall continue until 90 days after final acceptance by the architect or owner representative. Maintenance includes watering, pruning, weeding, fertilizing, mulching, replacement of sick or dead plants, and any other care necessary for the proper growth of the plant material. The contractor must be able to provide continued maintenance if requested by the owner.
- Upon completion of all landscaping, an acceptance of the work shall be held. The contractor shall notify the landscape architect or owner for scheduling the inspection at least seven (7) days prior to the anticipated inspection date.
- All trees shall be guaranteed for 12 months from the date of acceptance. All shrubs and ground covers shall be guaranteed for 12 months from the date of acceptance. Replacement plants used shall be guaranteed for an additional 90 days.
- The contractor is responsible for testing project soils. The contractor is to provide a certified soils report to the owner. The contractor shall verify that the soils on site are acceptable for the proper growth of the proposed plant material. Should the contractor find poor soil conditions, the contractor shall be required to provide soil amendments as necessary. These amendments shall include, but not be limited to, fertilizers, lime, and topsoil. Proper planting soils must be verified prior to planting of materials.
- The contractor shall dispose of stumps and major roots of all plants to be removed. Any depressions caused by removal operations shall be refilled with fertile, friable soil placed and compacted so as to reestablish proper grade for new planting and/or lawn areas.
- The contractor shall insure adequate vertical drainage in all plant beds.
- All disturbed areas of the site not planted with shrubs or ground cover shall be fine graded and seeded. See Sediment and Erosion Control Plans for details.



EVERGREEN PLANTING DETAIL

CONTAINER SHRUBS DETAIL

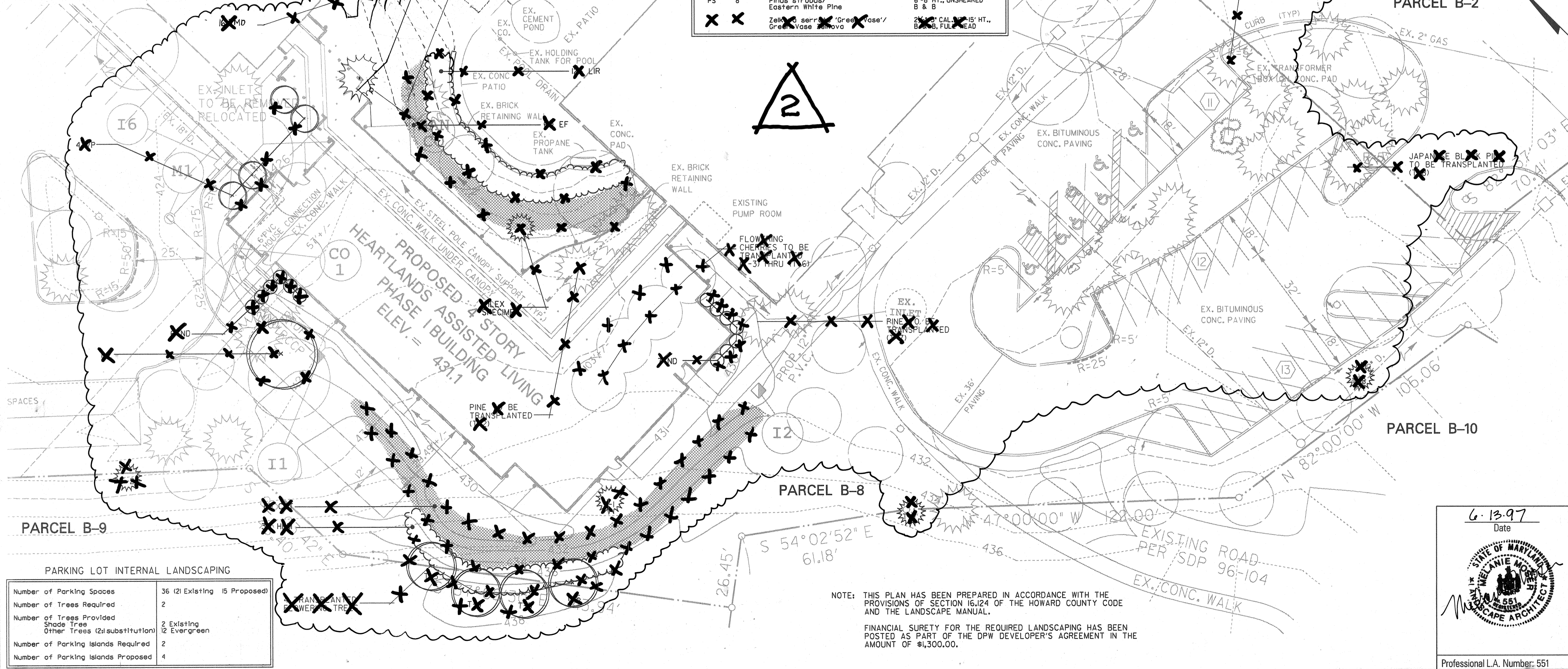
DECIDUOUS TREE DETAIL

PLANT LIST

Key	Qty.	Botanical Name/Common Name	Remarks
X	X	<del>C. neostriata</del> <del>Calliflora</del> <del>rape</del>	<del>2\"/&gt; </del>

SCHEDULE A: PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	B	
Linear Feet of Roadway Frontage/Perimeter	N/A @ BLDG, 250 LF @ SIM	N/A @ BLDG, N/A @ SIM
Credit For Existing Vegetation	NO	
Credit For Wall, Fence or Berm	NO	
Number of Plants Required		
Shade Tree @ 1:50	5	
Evergreen Trees @ 1:40	0	
Shrubs		
Number of Plants Provided		
Shade Trees	4	
Evergreen Trees	8	



PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces	36 (21 Existing 15 Proposed)
Number of Trees Required	2
Number of Trees Provided	2 Existing 12 Evergreen
Number of Parking Islands Required	2
Number of Parking Islands Proposed	4

NOTE: 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 LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$1,300.00.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*John P. Williams* 6/20/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*William Hamilton* 6/20/97  
 DIVISION OF LAND DEVELOPMENT  
*James S. Suter* 6/20/97  
 DIRECTOR

Date	No.	Revision Description
7-29-97	1	revised planting list, removed covered walk, added bituminous walk, revised sanitary location
11-07-05	2	REVISE PLAN & PLANT LIST PER COUNTY COMMENTS

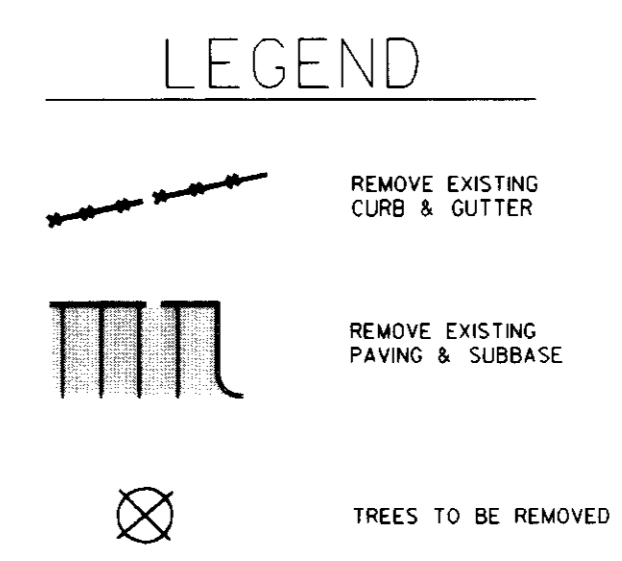
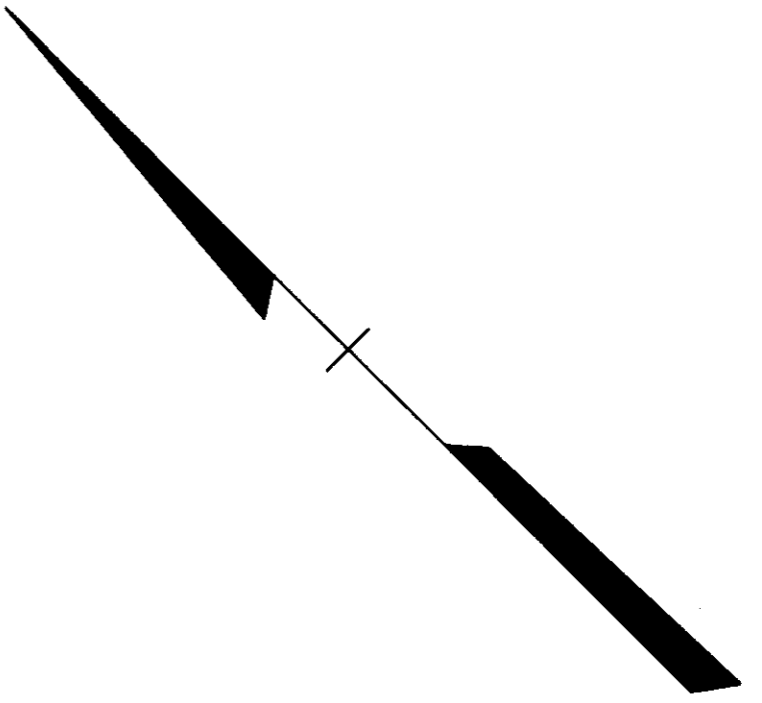
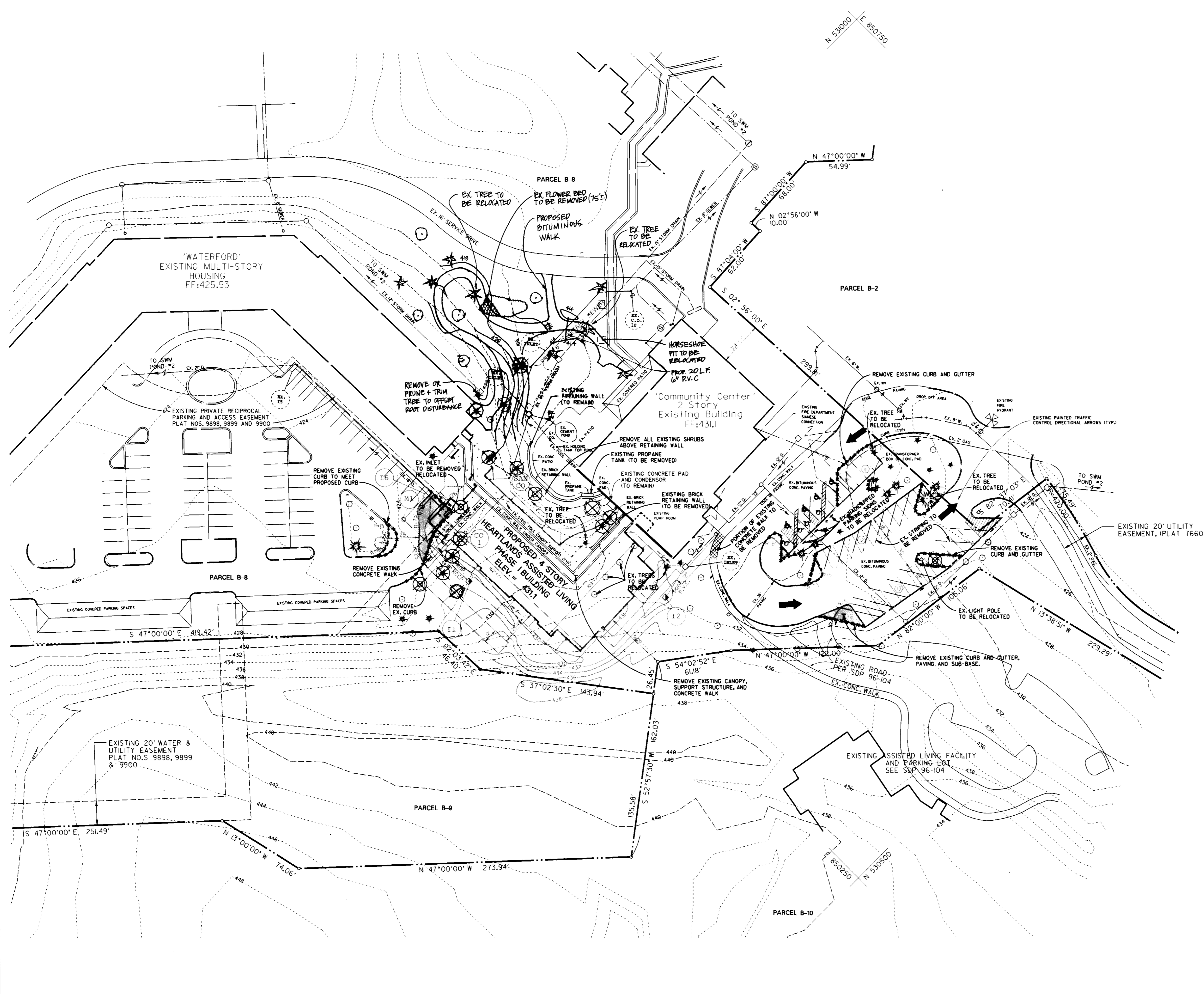
**Heartlands Assisted Living Phase I**  
 An Assisted Living Facility  
 Howard County, Maryland  
 OWNER /DEVELOPER  
 THE HEARTLANDS RETIREMENT COMMUNITY - ELLICOTT CITY 1, INC.  
 c/o CONSTELLATION HEALTH SERVICES, INC.  
 885 CENTRE PARK DRIVE, SUITE 308  
 COLUMBIA, MARYLAND 21045

**DMW**  
 Dawn McConne Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 286-3239  
 Fax: 296-4705  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-13-97  
 Date  
 STATE OF MARYLAND  
 LANDSCAPE ARCHITECT  
 No. 551  
 Professional L.A. Number: 551

TITLE			
<b>LANDSCAPE PLAN</b>			
Des By	MM	Scale	1" = 20'
Dwn By	TC	Date	2-13-97
Chk By	MM	Approved	15 of 15

SDP 97-51



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*John J. Walker* 6/00/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*John J. Walker* 6/00/97  
 DIVISION OF LAND DEVELOPMENT DATE

*John J. Walker* 6/00/97  
 DIRECTOR DATE

Date	No.	Revision Description
7.21.97	1	removed concrete walk, added bituminous walk, rev. sanitary location

**Heartlands Assisted Living Phase I**  
 An Assisted Living Facility  
 Howard County, Maryland

OWNER / DEVELOPER  
 THE HEARTLANDS RETIREMENT COMMUNITY - ELLICOTT CITY I, INC.  
 c/o CONSTELLATION HEALTH SERVICES, INC.  
 8815 CENTRE PARK DRIVE, SUITE 308  
 COLUMBIA, MARYLAND 21045

**DMW**  
 Dan McCune-Walker, Inc.  
 300 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3853  
 Fax: 296-4706

A Team of Land Planners,  
 Landscape Architects,  
 Engineers, Surveyors &  
 Environmental Professionals

6-16-72  
 Date



SECTION NAME	HO Co Health Park	SECTION AREA	DATE	DATE
Box Securus	12636-12638	23	POB	17
				2 MD
				08812
				8026
				1454400

TITLE  
**DEMOLITION PLAN**

Des By	JDF	Scale	1" = 40'	Proj. No.	81015T
Drn By	JWM	Date	2-13-97		
Chk By	JWR	Approved			2 of 15

Professional Engineer Number: 16872

**SDP 97.51**

RECORD OF SOIL EXPLORATION

Project Name Heartlands SWM#2  
Location Ellicott City, Maryland  
Boring # B-1  
Job # 96304A

Datum Surf. Elev. 399.48  
Date Started 10-3-98  
Hammer Wt. 140 Lbs.  
Hammer Drop 30 Inches  
Pipe Size 2.0  
Hole Diameter 6" Rock Core Dia.  
X  
Boring Method HSA  
Foreman Palmer Stephens  
Inspector  
Date Completed 10-3-98

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Properties	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						
	Possible Greenish brown, moist, loose to medium dense, micaceous silty sand (SM)			D	1-1-2-5	1	16"	10" Topsoil
				D	3-5-5-4	2	18"	Groundwater encountered at 17.0' feet while drilling
				D	2-7-9-9	3	22"	Caved in at 10.0' at completion
	Brown to orange brown, moist, medium dense micaceous silty/silty sand (ML/SM)	6.0		D	4-7-7-8	4	20"	Caved in at 8'-8" after 24 hours
				D	3-5-8-8	5	22"	
				D	2-5-6-7	6	20"	
	Greenish brown, very moist to wet, medium dense micaceous silty sand, trace decomposed rock fragments (SM)	12.0		D	2-5-6-7	7	20"	
				D	2-11-8-8	8	16"	
				D	8-10-9-9	9	20"	
				D	2-7-7-8	10	15"	
	Bottom of hole at 20.0'							

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS  
OTHERWISE NOTED.  
PT-PRESSED SHELBY TUBE  
CA-CONTINUOUS FLIGHT AUGER  
RC-ROCK CORE

SAMPLE CONDITIONS: D-DISINTEGRATED  
I-INTACT  
U-UNDISTURBED  
L-LOST

GROUND WATER DEPTH: AT COMPLETION  
AFTER 24 hr.

BORING METHOD: HSA-HOLLOW STEM AUGERS  
CFA-CONT. FLIGHT AUGERS  
DC-DRIVING CASING  
MO-MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30". COUNT MADE AT 6" INTERVALS

HILLIS - CARNES  
ENGINEERING ASSOCIATES, INC.

RECORD OF SOIL EXPLORATION

Project Name Heartlands SWM#2  
Location Ellicott City, Maryland  
Boring # B-2  
Job # 96304A

Datum Surf. Elev. 398.41  
Date Started 10-3-98  
Hammer Wt. 140 Lbs.  
Hammer Drop 30 Inches  
Pipe Size 2.0  
Hole Diameter 6" Rock Core Dia.  
X  
Boring Method HSA  
Foreman Palmer Stephens  
Inspector  
Date Completed 10-3-98

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Properties	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						
	Possible Dark brown to greenish brown, moist very loose to medium dense, micaceous silty sand (SM)			D	1-3-4-7	1	18"	2" Topsoil
				D	4-6-8-10	2	20"	Groundwater encountered at 16.5' while drilling
				D	8-9-10-8	3	22"	Bag sample taken from 1.0' to 10.0'
	Orange brown and greenish brown, moist to very moist, medium dense micaceous sandy silty/silty sand (ML/SM)	6.0		D	5-8-8-10	4	22"	Caved in at 10'-6" at completion
				D	4-6-9-10	5	20"	Caved in at 9'6" after 24 hours
				D	4-6-6-8	6	20"	
	Greenish brown and gray, moist, medium dense, micaceous silty fine sand (SM)	12.5		D	3-14-29-21	7	16"	
	S-8 has some decomposed rock			D	8-14-12-20	8	12"	
				D	17-25-27-25	9	14"	
				D	6-9-22-33	10	14"	
	Bottom of hole at 20.0'							

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS  
OTHERWISE NOTED.  
PT-PRESSED SHELBY TUBE  
CA-CONTINUOUS FLIGHT AUGER  
RC-ROCK CORE

SAMPLE CONDITIONS: D-DISINTEGRATED  
I-INTACT  
U-UNDISTURBED  
L-LOST

GROUND WATER DEPTH: AT COMPLETION  
AFTER 24 hr.

BORING METHOD: HSA-HOLLOW STEM AUGERS  
CFA-CONT. FLIGHT AUGERS  
DC-DRIVING CASING  
MO-MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30". COUNT MADE AT 6" INTERVALS

RECORD OF SOIL EXPLORATION

Project Name Heartlands SWM#2  
Location Ellicott City, Maryland  
Boring # B-4  
Job # 96304A

Datum Surf. Elev. 400.30  
Date Started 10-1-98  
Hammer Wt. 140 Lbs.  
Hammer Drop 30 Inches  
Pipe Size 2.0  
Hole Diameter 6" Rock Core Dia.  
X  
Boring Method HSA  
Foreman Palmer Stephens  
Inspector  
Date Completed 10-1-98

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Properties	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						
	Dark brown moist very loose silty fine sand, little mica, trace roots (SM)			I	1-2-2	1	14"	12" Topsoil
	Brown moist loose micaceous silt, little fine sand (ML)	2.0		D	3-5-5	2	18"	No groundwater encountered while drilling
	Greenish brown and gray, dry to moist, very loose to dense, silty fine to medium sand, little decomposed rock fragments (SM)	4.5		D	2-3-2	3	15"	Caved in at 8'-6" at completion
	S-5 is very dense			D	2-8-20	4	14"	Caved in at 8'-6" after 24 hours
				D	37-51/5"	5	11"	Backfilled after 24 hours
				D	22-19-15	6	16"	
	Bottom of hole at 16.5'							

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS  
OTHERWISE NOTED.  
PT-PRESSED SHELBY TUBE  
CA-CONTINUOUS FLIGHT AUGER  
RC-ROCK CORE

SAMPLE CONDITIONS: D-DISINTEGRATED  
I-INTACT  
U-UNDISTURBED  
L-LOST

GROUND WATER DEPTH: AT COMPLETION  
AFTER 24 hr.

BORING METHOD: HSA-HOLLOW STEM AUGERS  
CFA-CONT. FLIGHT AUGERS  
DC-DRIVING CASING  
MO-MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30". COUNT MADE AT 6" INTERVALS

RECORD OF SOIL EXPLORATION

Project Name Heartlands SWM#2  
Location Ellicott City, Maryland  
Boring # B-3  
Job # 96304A

Datum Surf. Elev. 398.50  
Date Started 10-1-98  
Hammer Wt. 140 Lbs.  
Hammer Drop 30 Inches  
Pipe Size 2.0  
Hole Diameter 6" Rock Core Dia.  
X  
Boring Method HSA  
Foreman Palmer Stephens  
Inspector  
Date Completed 10-1-98

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Properties	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						
	Possible Dark brown moist very soft silt, little mica and roots, trace sand (ML)			D	1-1-2-3	1	8"	6" Topsoil
	Brown to greenish brown moist loose to medium dense silty fine to medium sand, trace quartz rock fragments (SM)	2.0		D	2-5-5-9	2	21"	Groundwater encountered at 14'-6" feet while drilling
				D	13-9-7-7	3	8"	Caved in at 11.0' at completion
	Greenish brown and gray, dry to wet, medium dense to very dense, micaceous fine to coarse sand, trace to little silt and decomposed rock (SM)	6.0		D	5-11-17-25	4	22"	Caved in at 11.0' after 24 hours
				D	30-51/3"	5	9"	Spoon refusal at 16'-3"
				D	40-40-45-23	6	18"	Auger refusal at 16'-6"
				D	12-51/6"	7	12"	
				D	6-22-51/5"	8	14"	
				D	51/3"	9	3"	
	Bottom of hole at 16.5'							

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS  
OTHERWISE NOTED.  
PT-PRESSED SHELBY TUBE  
CA-CONTINUOUS FLIGHT AUGER  
RC-ROCK CORE

SAMPLE CONDITIONS: D-DISINTEGRATED  
I-INTACT  
U-UNDISTURBED  
L-LOST

GROUND WATER DEPTH: AT COMPLETION  
AFTER 24 hr.

BORING METHOD: HSA-HOLLOW STEM AUGERS  
CFA-CONT. FLIGHT AUGERS  
DC-DRIVING CASING  
MO-MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30". COUNT MADE AT 6" INTERVALS

RECORD OF SOIL EXPLORATION

Project Name Heartlands SWM#2  
Location Ellicott City, Maryland  
Boring # B-5  
Job # 96304A

Datum Surf. Elev. 404.66  
Date Started 10-1-98  
Hammer Wt. 140 Lbs.  
Hammer Drop 30 Inches  
Pipe Size 2.0  
Hole Diameter 6" Rock Core Dia.  
X  
Boring Method HSA  
Foreman Palmer Stephens  
Inspector  
Date Completed 10-1-98

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Properties	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						
	Brown moist very loose micaceous silt, little sand (ML)			D	1-1-2	1	15"	6" Topsoil
	Brown, very moist, medium stiff, micaceous silt (ML)	2.0		D	2-3-4	2	15"	Groundwater encountered at 18.0' while drilling
	Brown very moist, loose, micaceous silt, little sand and decomposed rock fragments (ML)	4.5		D	4-4-5	3	14"	Bag sample taken from 2.0' to 10.0'
				D	3-4-5	4	16"	Caved in at 11.0' at completion
	Greenish brown, moist, loose to dense micaceous silty fine sand (SM)	9.5		D	3-4-5	5	15"	Caved in at 11.0' after 24 hours
				D	12-22-23	7	15"	Backfilled after 24 hours
	Bottom of hole at 20.0'							

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS  
OTHERWISE NOTED.  
PT-PRESSED SHELBY TUBE  
CA-CONTINUOUS FLIGHT AUGER  
RC-ROCK CORE

SAMPLE CONDITIONS: D-DISINTEGRATED  
I-INTACT  
U-UNDISTURBED  
L-LOST

GROUND WATER DEPTH: AT COMPLETION  
AFTER 24 hr.

BORING METHOD: HSA-HOLLOW STEM AUGERS  
CFA-CONT. FLIGHT AUGERS  
DC-DRIVING CASING  
MO-MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30". COUNT MADE AT 6" INTERVALS

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

COUNTY HEALTH OFFICER  
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
CHIEF-DEVELOPMENT ENGINEERING DIVISION  
DIVISION OF LAND DEVELOPMENT & CH  
DIRECTOR

6/30/97  
6/26/97  
6/26/97

Heartlands Assisted Living Phase I  
An Assisted Living Facility  
Howard County, Maryland  
OWNER /DEVELOPER:  
THE HEARTLANDS RETIREMENT COMMUNITY -  
ELICOTT CITY I, INC.  
c/o CONSTELLATION HEALTH SERVICES, INC.  
8815 CENTRE PARK DRIVE, SUITE 308  
COLUMBIA, MARYLAND 21045

DMW  
Dan McGowan, William, Tom  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 896-5553  
Fax 296-4705

A Team of Land Planners,  
Landscape Architects,  
Engineers, Surveyors &  
Environmental Professionals



THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

APPROVED: 6/19/97

DEVELOPERS CERTIFICATE:  
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

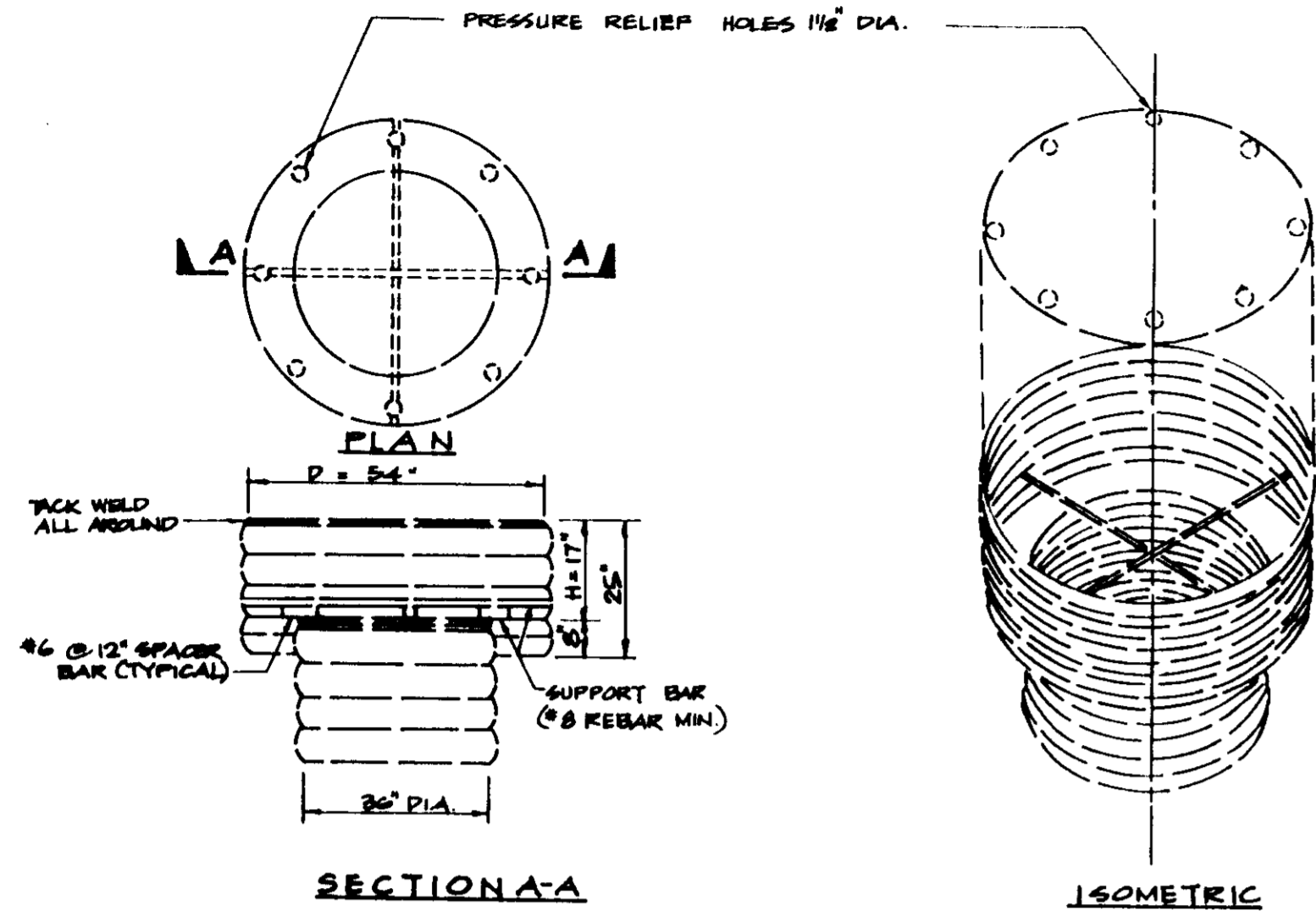
APPROVED: 6/19/97

ENGINEERS CERTIFICATE:  
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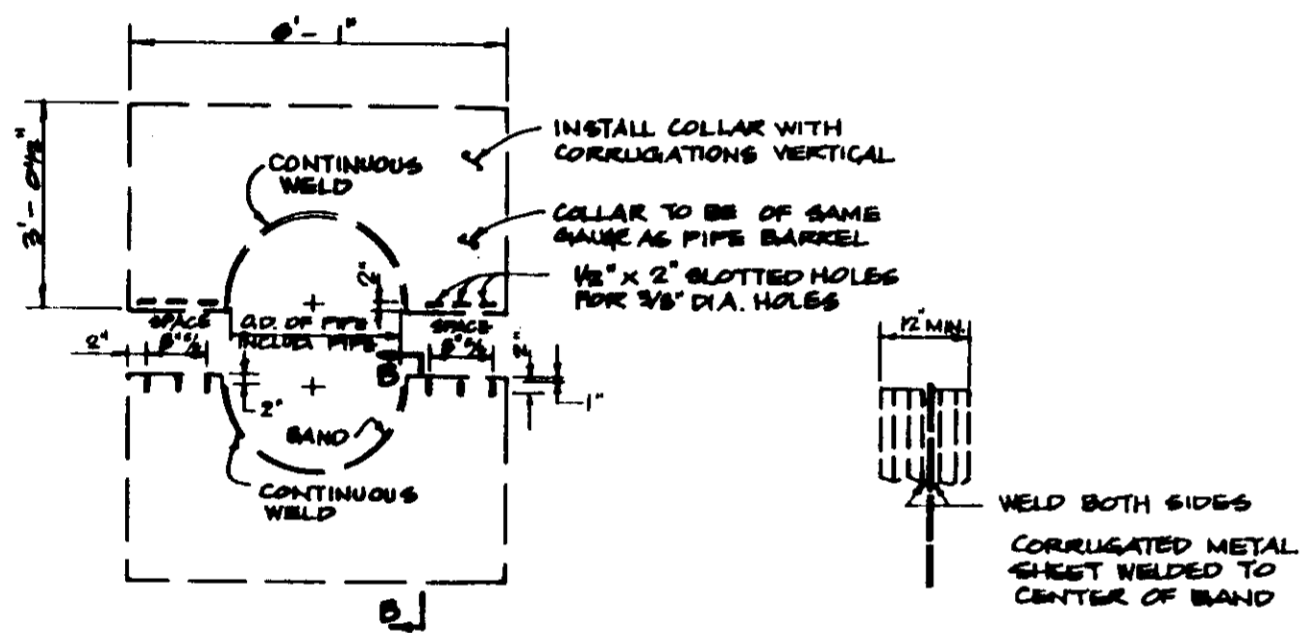
APPROVED: 6.12.97

NO. CO. HEALTH PERM.	NO. CO. HEALTH PERM.	NO. CO. HEALTH PERM.	NO. CO. HEALTH PERM.
1498/1920 23	1498/1920 23	1498/1920 23	1498/1920 23
DATE	DATE	DATE	DATE
6/19/97	6/19/97	6/19/97	6/19/97
TITLE: POND #2 SOIL BORINGS			
Des By MJK	Scale NONE	Proj. No. 81015-T	
Drn By MJK	Date 1-8-97	14 OF 15	
Chk By MJK	Approved		

SOP-97-51



**CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE**  
(NOT TO SCALE)



**CORRUGATED METAL ANTI-SEEP COLLAR**  
(NOT TO SCALE)

TOP IS 12 GAUGE CORRUGATED METAL OR 1/8" STEEL PLATE. PRESSURE RELIEF HOLES MAY BE OMITTED, IF ENDS OF CORRUGATIONS ARE LEFT FULLY OPEN WHEN CORRUGATED TOP IS WELDED TO CYLINDER.

CYLINDER IS 14 GAUGE CORRUGATED METAL PIPE OR FABRICATED FROM 1/8" STEEL PLATE

NOTES:  
1. THE CYLINDER MUST BE FIRMLY FASTENED TO THE RISER.  
2. SUPPORT BARS ARE WELDED TO THE TOP OF RISER OR ATTACHED BY STRAPS BOLTED TO TOP OF RISER.

Existing 36" diameter RISE-COR, with HUGGER Band



Apply Moisture cured polyurethane



4" wide flat neoprene gasket and flat 10 gage 2-1/4" wide band - for internal expansion use single bolt and clip angle



Pipe shall be thoroughly cleaned of all dirt, debris and any other foreign material. Pipe shall then be cleaned with a stiff brush, soap and water. Soap residue must be wiped off.

Moisture cured polyurethane can then be pumped, with a caulking gun, into the void between the pipe and the band. After all joints are caulked, a flat neoprene gasket and a narrow internal expanding band may be used as shown.

**EXPANDABLE INTERNAL BAND DETAIL**  
N.T.S.

**GEOTECHNICAL RECOMMENDATIONS FOR EMBANKMENT CONSTRUCTION - POND #2**  
Any soft or loose surficial soils encountered in the embankment subgrade areas should be undercut. Any materials containing significant amounts of organic or deleterious materials should also be undercut. Localized areas requiring additional undercutting should be anticipated. It should be anticipated that any areas requiring undercutting will be wet and soft or loose; therefore, construction operations should be planned such that the disturbance to the area is minimized during undercutting.

Structural fill should be placed and compacted in accordance with the procedures outlined in Sections 5.2 through 5.4 of this report.

**Fill Material Suitability**

All materials to be used as fill in the embankment should be inspected, tested and approved by the Geotechnical Engineer. Based on our evaluation of the soils encountered, it appears that the on-site soils that are free from organics and other deleterious materials can be used for construction of the embankment. Moisture conditioning (that is, wetting or drying) of the materials may be required in order to achieve proper compaction depending on the season of the year. The moisture contents of the soils should be properly controlled to avoid extensive construction delays. Additional laboratory tests should be performed on the borrow materials prior to their use in the compacted fill.

Imported fill materials should be of equal or greater quality than the on-site materials and should be approved for use by the Geotechnical Engineer.

An experienced soils technician under the direction of a Geotechnical Engineer should perform field density tests on the embankment fill, as necessary, to verify that adequate compaction is achieved. If any compaction problems are encountered during construction, the Geotechnical Engineer should be contacted for advice, as modifications to the compaction procedures may be appropriate.

Slope construction should commence at the toes of the proposed slopes and continue upwards as additional fill is placed. The engineered fill placed for slope construction should be banded into the natural slopes in the abutment areas to provide good contact and to prevent the presence of weak zones.

Typically during slope construction, the compaction equipment has difficulty compacting soils along the shoulder. It is therefore important that the bank should be overfilled during slope construction and then be cut back to the required geometry.

If slopes are designed in a configuration other than those described previously, our office must be contacted in order to review the proposed design to evaluate if changes to the recommendations made herein are required. The fill should be compacted as outlined in the fill placement section of this report.

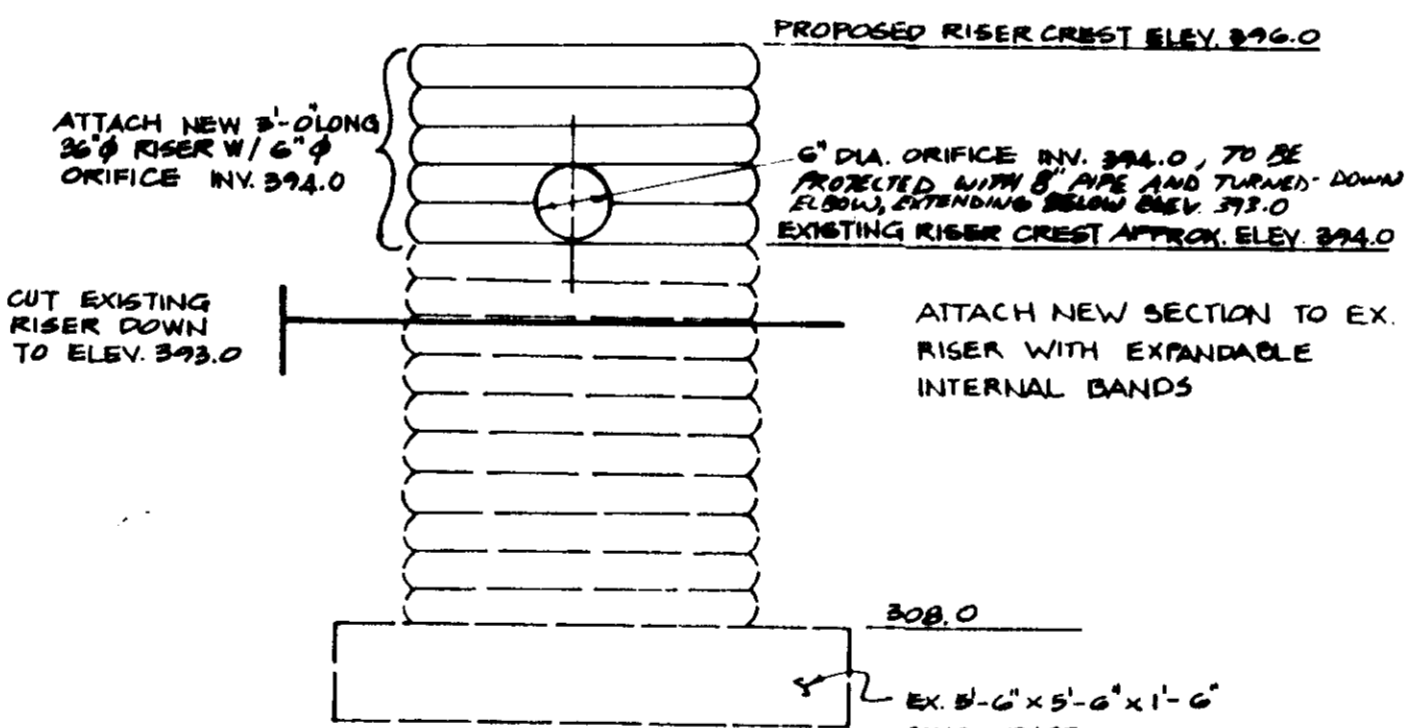
5.3 **Fill Placement and Compaction**  
Fill materials should be placed in relatively horizontal lifts of 12 to 18 inch maximum thickness and should be compacted to dry densities of at least 95 percent of the Standard Proctor maximum dry density (ASTM D 1557). Moisture contents should be maintained within +/- 2 percent of optimum moisture content, and preferably between optimum moisture content and +/- 2 percent of optimum moisture content. This range of moisture contents is required to limit permeabilities and to not seriously affect material strengths.

An experienced soils technician under the direction of a Geotechnical Engineer should perform field density tests on the embankment fill, as necessary, to verify that adequate compaction is achieved. If any compaction problems are encountered during construction, the Geotechnical Engineer should be contacted for advice, as modifications to the compaction procedures may be appropriate.

5.4 **Embankment Considerations**

Materials containing organics and large boulders should not be used in engineered fill in the embankment. The following precautions should be observed during the design and construction of embankments to maintain long-term stability:

- a. The embankment foundation should be prepared as outlined previously in this report.
- b. Slope construction should commence at the toes of the proposed slopes and continue upwards as additional fill is placed. The engineered fill placed for slope construction should be banded into the natural slopes in the abutment areas to provide good contact and to prevent the presence of weak zones.
- c. Typically during slope construction, the compaction equipment has difficulty compacting soils along the shoulder. It is therefore important that the bank should be overfilled during slope construction and then be cut back to the required geometry.
- d. If slopes are designed in a configuration other than those described previously, our office must be contacted in order to review the proposed design to evaluate if changes to the recommendations made herein are required. The fill should be compacted as outlined in the fill placement section of this report.
- e. After construction, the slopes should be promptly vegetated to prevent erosion. Also, to prevent erosion from occurring due to sprouting of the vegetation, the slopes should be protected with straw or an erosion control geotextile.
- f. The embankment construction should be done under the supervision of an experienced soil inspector or the Geotechnical Engineer. Sufficient testing during fill placement should be done to verify adequate compaction.



**MODIFICATION TO EXISTING RISER DETAIL**  
NOT TO SCALE

**RISER MODIFICATIONS SEQUENCE OF CONSTRUCTION**

1. DRAIN DOWN POND ELEVATION TO 892.5
2. REMOVE EXISTING TRASH RACK AND ANTI-VORTEX DEVICE
3. REMOVE RISER BARREL MATERIAL TO ELEV. 893.0
4. PLACE NEW 36" RISER STUD ON EXISTING RISER BARREL AND ATTACH WITH INTERNAL BANDS. PLACE ORIFICE 180" FROM OUTLET BARREL.
5. REPLACE EXISTING TRASH RACK AND ANTI-VORTEX DEVICE ON TO TOP OF NEW RISER BARREL CREST.

**PIPE GAUGE SPECIFICATIONS**

DIA.	GAUGE
21"	16
36"	14
34"	14
TOP TRASH RACK	12

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

APPROVED: *Charles J. ...* 6/19/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *John W. Zehner* 6/19/97  
HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN NUMBER: \_\_\_\_\_

**DEVELOPERS CERTIFICATE:**

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John C. ...* AGENT  
HEARTLANDS OF ELLICOTT CITY I II  
SIGNATURE OF DEVELOPER  
PRINT NAME BELOW SIGNATURE  
DATE: 6/12/97

**ENGINEERS CERTIFICATE:**

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*Max Kantzer* 16872 6-12-97  
SIGNATURE OF ENGINEER  
PRINT NAME BELOW SIGNATURE  
REG. NO. DATE

6-12-97  
Date

*Max Kantzer*  
Professional Eng. No. 16872

SDP-97-51

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

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Mark ...* 6/20/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*John ...* 6/20/97  
DIRECTOR OF LAND DEVELOPMENT DATE

*John ...* 6/20/97  
DIRECTOR DATE

Date	No.	Revision Description

**Heartlands Assisted Living Phase I**  
An Assisted Living Facility  
Howard County, Maryland  
OWNER / DEVELOPER:  
THE HEARTLANDS RETIREMENT COMMUNITY - ELLICOTT CITY I, INC.  
c/o CONSTELLATION HEALTH SERVICES, INC.  
8815 CENTRE PARK DRIVE, SUITE 308  
COLUMBIA, MARYLAND 21045

**DMW**  
Duff McConne-Walker, Inc.  
300 East Pennsylvania Avenue  
Lanham, Maryland 21086  
(410) 586-3283  
Fax 286-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

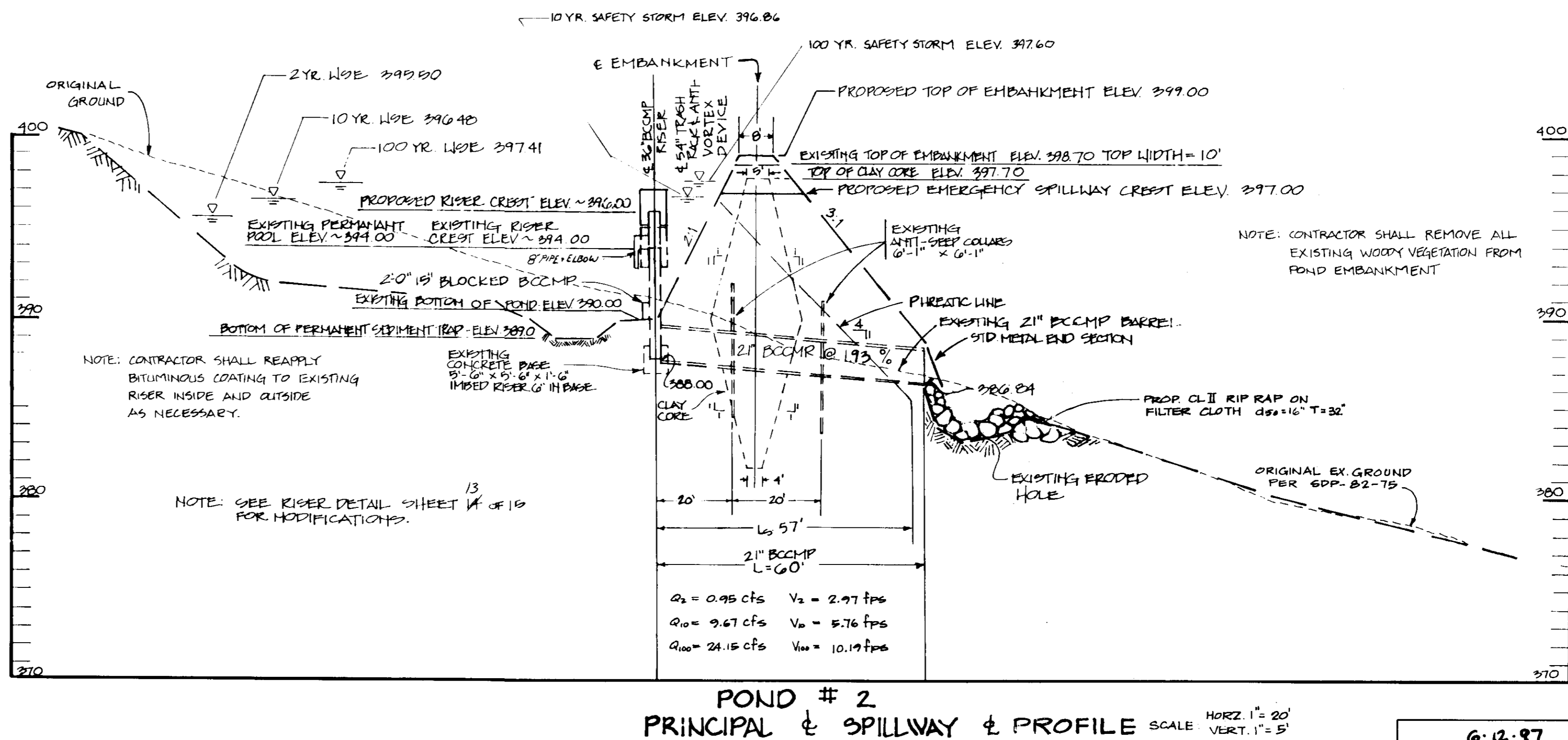
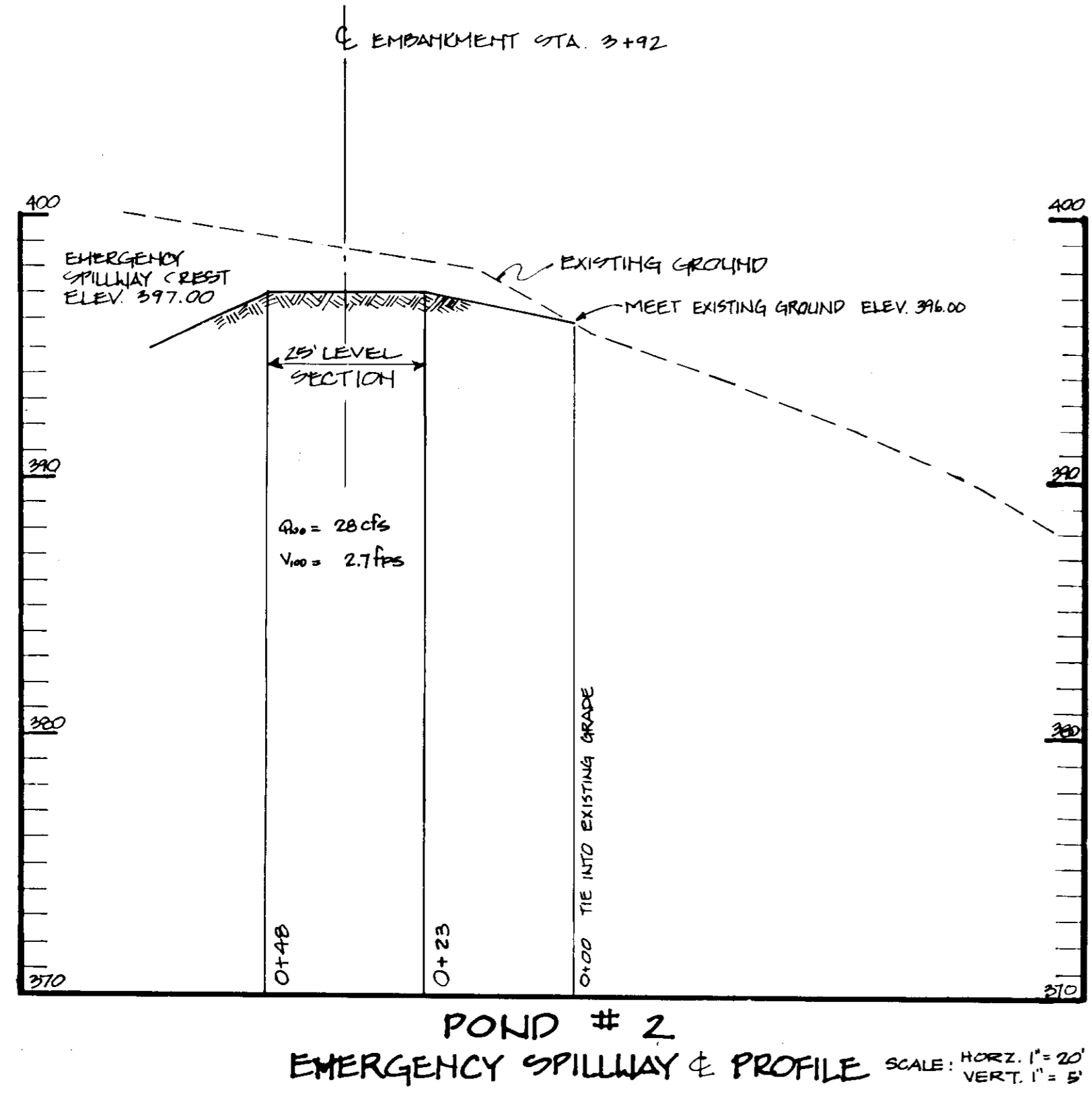
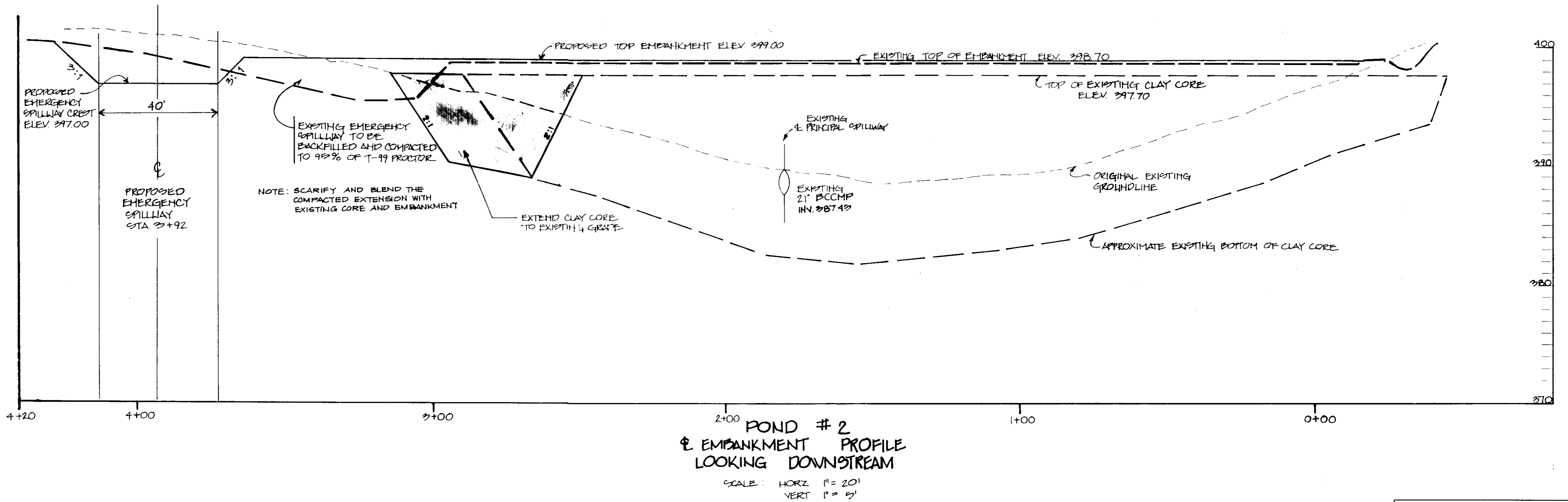
NO. OF SHEETS	TOTAL SHEETS	DATE	SCALE	PROJECT NO.
21	21	6/12/97	AS SHOWN	8105T

TITLE: **POND #2 DETAILS**

Des By	Scale	Proj. No.
MJK	AS SHOWN	8105T

Des By	Date	Appr'd
DBS	1-8-97	

13 OF 15



APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS:  
HOWARD COUNTY HEALTH DEPARTMENT

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 6/20/97 DATE

DIVISION OF LAND DEVELOPMENT *[Signature]* 6/20/97 DATE

DIRECTOR *[Signature]* 6/20/97 DATE

Date No. Revision Description

**Heartlands Assisted Living Phase I**  
An Assisted Living Facility  
Howard County, Maryland  
OWNER / DEVELOPER:  
THE HEARTLANDS RETIREMENT COMMUNITY -  
ELLCOTT CITY 1, INC.  
c/o CONSTELLATION HEALTH SERVICES, INC.  
885 CENTRE PARK DRIVE, SUITE 308  
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**DMW**  
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(410) 298-3333  
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A Team of Land Planners,  
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Engineers, Surveyors &  
Environmental Professionals

6-12-97  
Date

*[Professional Engineer Seal]*

Professional Engr. No. 16872  
SDP-97-51

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*[Signature]* 6/19/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 6/19/97  
APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN NUMBER \_\_\_\_\_

DEVELOPERS CERTIFICATE:

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*[Signature]* 6/12/97  
SIGNATURE OF DEVELOPER DATE  
HEARTLANDS OF ELLCOTT CITY I & II

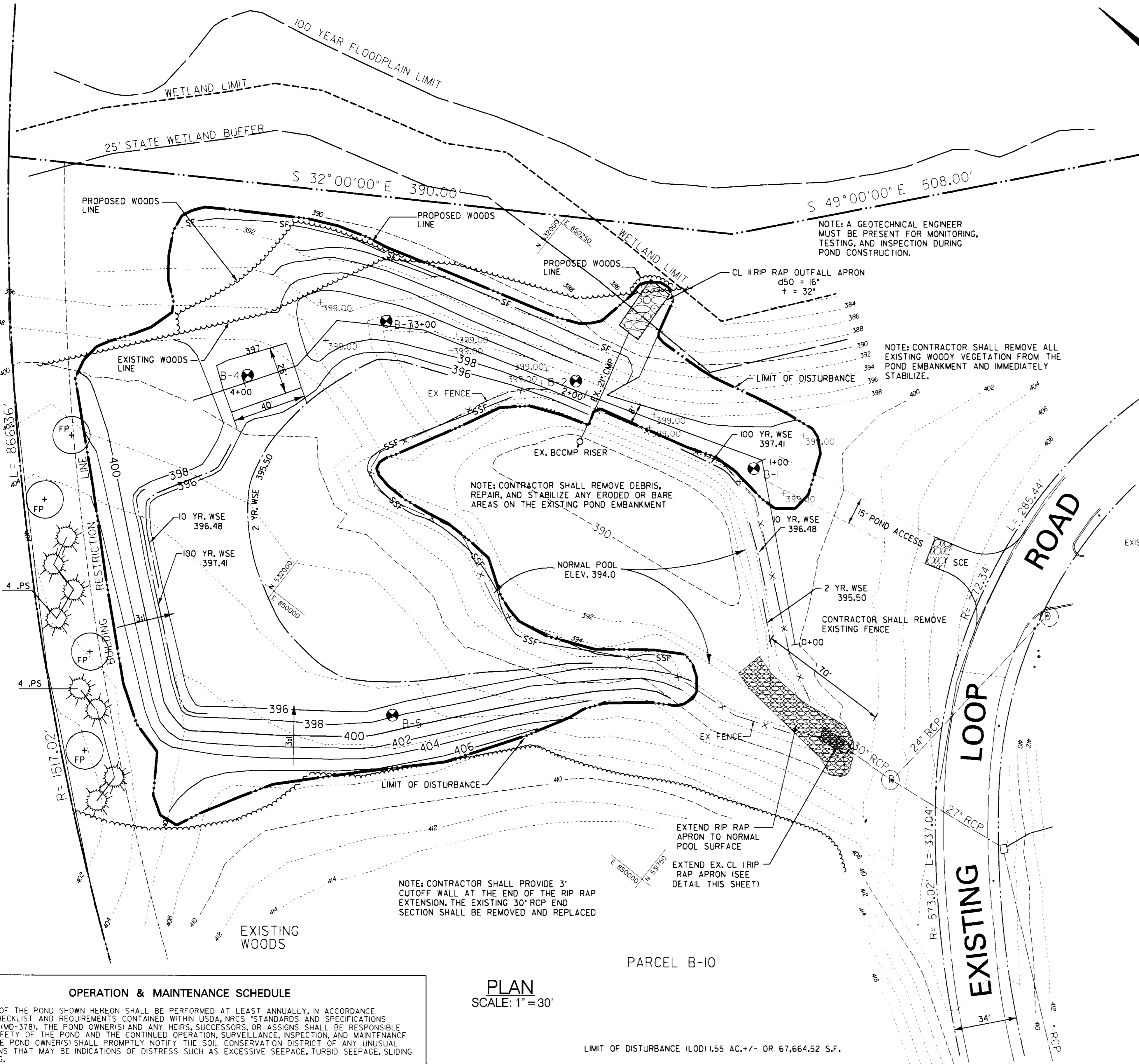
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*[Signature]* 6-12-97  
SIGNATURE OF ENGINEER DATE  
Max Kantzer

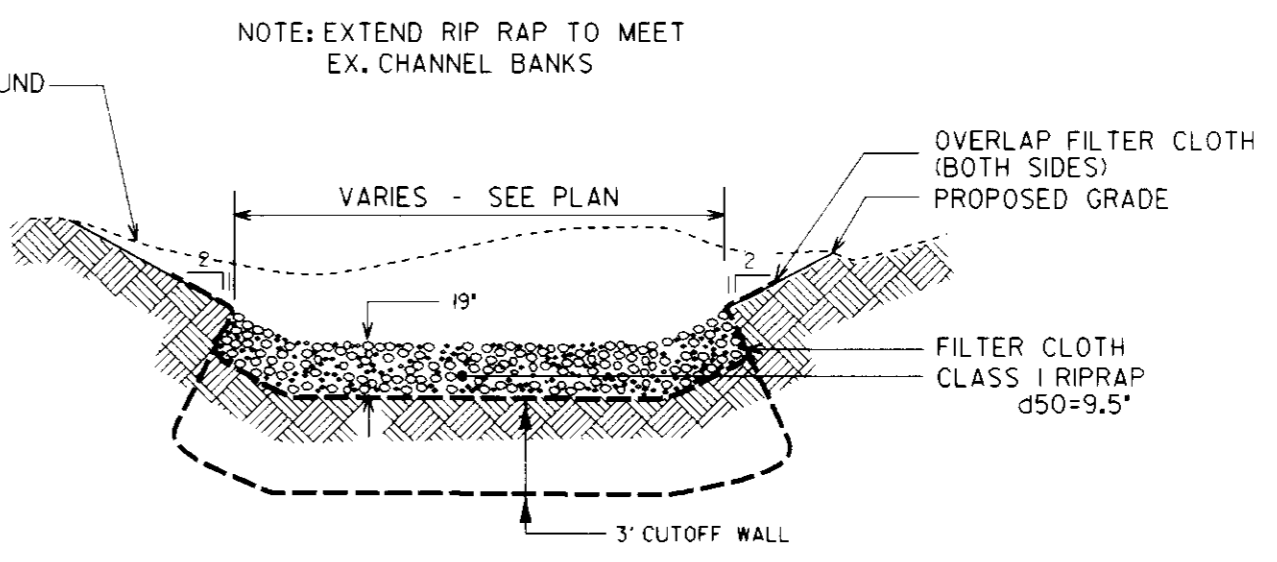
SECTION NAME: SDP-97-51		SECTION: 21		SHEET: 1 OF 1	
DATE: 6/19/97	BY: MJK	DATE: 6/20/97	BY: MJK	DATE: 6/20/97	BY: MJK
TITLE: POND #2 PROFILES		SCALE: AS SHOWN		PROJ. NO: B1015-T	
DESIGNED BY: MJK	CHECKED BY: SQG	DATE: 1-8-97	SHEET: 12 OF 15		

US 29 N RAMP TO I-70 E-B



**LEGEND**

SYMBOL	DESCRIPTION
---	EXISTING CONTOURS
---	PROPOSED CONTOURS
---	100 YR. FLOODPLAIN
---	WETLAND LIMIT
---	LIMIT OF DISTURBANCE
---	SILT FENCE
---	SUPER SILT FENCE
---	TREE LINE
---	STABILIZED CONSTRUCTION ENTRANCE



**DESIGN FLOW SUMMARY**  
Design Point @ Confluence of Sucker Branch and Unnamed Tributary

	2-Year	10-Year	100-Year
Pre-Developed/Original Existing (cfs)	88.21	216.34	373.26
As Designed (1982) (cfs)	69.89	164.99	326.48
Proposed Ultimate Development (cfs)	66.14	149.09	317.51
% Reduction (Pre Dev. to Prop. Ult. Dev.)	25.0	31.1	14.9

**Pond #2 (Proposed Ultimate Development Conditions)**

	2-Year	10-Year	100-Year
Inflow (cfs)	32.24	75.94	128.65
Outflow (cfs)	0.95	9.67	52.15
W.S.E. (Ft)	395.50	396.48	397.41
Storage Volume (Ac-Ft)	1.06	2.01	3.05

**Structure Type**  
Embankment, Wet Pond

**Structure Classification**  
A

**Structure Location**  
Urban

**Total Drainage Area (Ac)**  
20.37

**Proposed Ultimate Impervious Area to Facility (Ac)**  
7.35

**Water Quality Volume (Ac-Ft)**  
1.13 (0.69 Req'd)

**Forebay Volume (Ac-Ft)**  
Inc. w/ WG (0.06 Req'd)

**Maximum Height of Fill (Ft)**  
10

**Storage Height Product (Ac-Ft<sup>2</sup>)**  
18.06 (2.58 Ac-Ft x 7 Ft)

**Minimum Top Width (Ft)**  
8

**100 Year W.S.E. (Ft)**  
397.41

**Freeboard Provided (Ft)**  
1.59

**Stream Classification**  
I

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

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* DATE 6/19/97

DIVISION OF LAND DEVELOPMENT *[Signature]* DATE 6/19/97

DIRECTOR *[Signature]* DATE 6/19/97

Date No Revision Description

**Heartlands Assisted Living Phase I**  
An Assisted Living Facility  
Howard County, Maryland  
OWNER / DEVELOPER  
THE HEARTLANDS RETIREMENT COMMUNITY - ELLICOTT CITY I, INC.  
c/o CONSTELLATION HEALTH SERVICES, INC.  
8815 CENTRE PARK DRIVE, SUITE 308  
COLUMBIA, MARYLAND 21045

**DMW**  
Deft-McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
Tel: 410-296-3333  
Fax: 296-4706

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

DATE: 6-12-97

STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER

**POND #2 PLAN & DETAILS**

Des By: MJK Scale: AS SHOWN Proj. No.: 81015.T  
Dwn By: JEF, MJK Date: 2-13-97  
Chk By: MK Approved: 11 OF 15

**OPERATION & MAINTENANCE SCHEDULE**

INSPECTION OF THE POND SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, NRCS STANDARDS AND SPECIFICATIONS FOR PONDS (MO-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

**PLAN**  
SCALE: 1" = 30'

LIMIT OF DISTURBANCE (LOD) 1.55 AC +/- OR 67,664.52 S.F.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*[Signature]* 6/19/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *[Signature]* 6/19/97  
HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN NUMBER

**DEVELOPERS CERTIFICATE:**

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

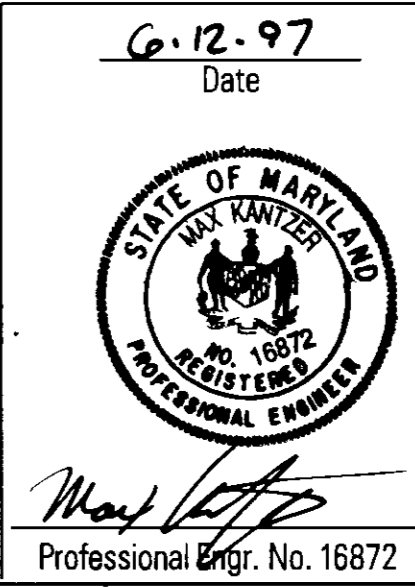
*[Signature]* 6/19/97  
SIGNATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE DATE

**ENGINEERS CERTIFICATE:**

I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

*[Signature]* 6-12-97  
SIGNATURE OF ENGINEER PRINT NAME BELOW SIGNATURE REG. NO. DATE

Max Kantzer







POD#2  
Sequence of Construction

- Obtain all necessary permits for construction. (14 DAYS)
- Notify Howard County Office of Inspections and Permits (410) 313-1855 a minimum of 48 hours prior to the start of any construction. Notify the Maryland Department of the Environment Nontidal Wetlands and Waterways Inspection and Compliance Division (410) 631-3510 at least five (5) days prior to any in-stream construction. (2 DAYS)
- Notify the engineer-in-charge of the As-built inspection at (410) 296-3333. (1 DAY)
- Clear, grub for and install sediment control measures only. Coordinate all work with the approved erosion and sediment control plan sequence of operations. Also refer to the notes "Conditions and Management Practices for Working in Nontidal Wetlands and Buffers" shown on this sheet. (1 DAY)
- Excavate for the cutoff trench extension, additional dry storage, and new emergency spillway. Backfill and compact to proposed top of embankment to 95% of Standard Proctor (T-99). (14 DAYS)
- Replace compacted fill and stone bedding beneath outlet end section and reattach end section to pipe barrel. Place Class II rip-rap outlet channel as shown on plans. ADD EXTENSION TO EXISTING RISER AND REAPPLY DATUMINOUS COATING AS NECESSARY ON INSIDE AND OUTSIDE OF EXISTING RISER. (30 DAYS)
- Stabilize disturbed areas with seed and mulch. (9 DAYS)
- With prior approval of the Sediment Control Inspector and the Howard County Sediment Control Division, remove sediment controls. Fine grade and stabilize these areas. (2 DAYS)
- Conduct "as-built" survey of facility modifications, and submit to appropriate agencies within 30 days of completion. (30 DAYS)

OPERATION AND MAINTENANCE SCHEDULE  
OF PRIVATELY OWNED AND MAINTAINED  
STORMWATER MANAGEMENT FACILITY  
WET POND

ROUTINE MAINTENANCE

- Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes and maintenance access should be mowed as needed.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the pond as well as riprap outlet area shall be repaired as soon as it is noticed.

NON-ROUTINE MAINTENANCE

- Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.
- Sediment should be removed FROM THE POND no later than when the capacity of the pond is half full of sediment, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County's Department of Public Works.

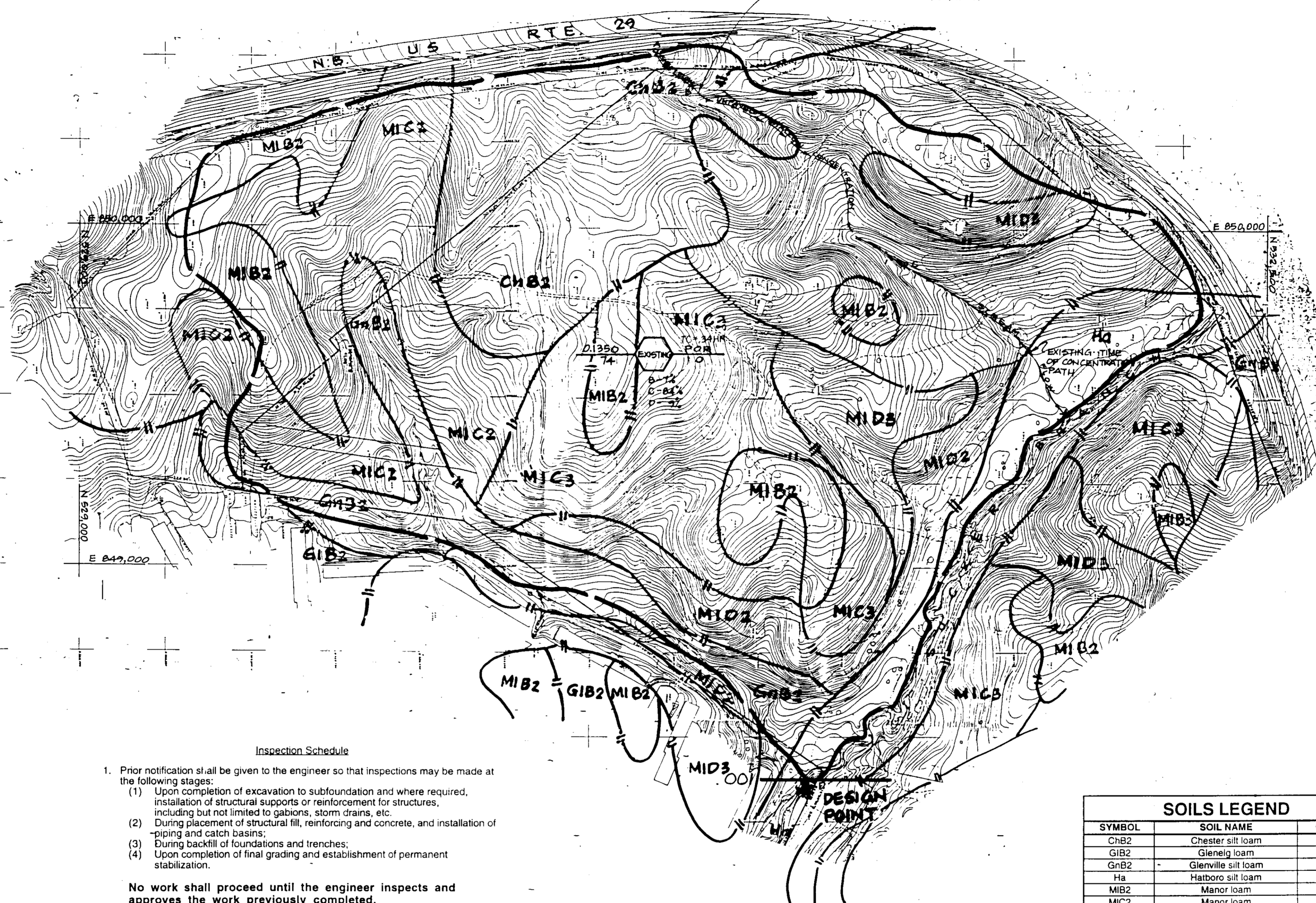
Inspection Schedule

- Prior notification shall be given to the engineer so that inspections may be made at the following stages:
  - Upon completion of excavation to subfoundation and where required, installation of structural supports or reinforcement for structures, including but not limited to gabions, storm drains, etc.
  - During placement of structural fill, reinforcing and concrete, and installation of piping and catch basins;
  - During backfill of foundations and trenches;
  - Upon completion of final grading and establishment of permanent stabilization.
- No work shall proceed until the engineer inspects and approves the work previously completed.
- Geotechnical compaction testing of the facility fill area is required. Certification must be provided to the designated engineer in charge of the as-built.
- A copy of all material supply tickets must be given to the designated engineer in charge of the as-built.

General Notes:

- Unless otherwise noted, all construction and workmanship shall be in accordance with:
  - Howard County standards and specifications.
  - Maryland Soil Conservation Service Standards and Specifications Pond Code 378 November, 1992.
  - Maryland Department of Transportation State Highway Administration, October, 1993, Standard Specifications for Construction and Materials.
- This site lies within the Patapsco River watershed.
- This facility is private and shall be maintained by the developer.
- Two and ten year stormwater management is required and provided by 100' x 100'.
- Drainage Area limit and Pre-Developed peak discharge rates are taken from sheet 9 of the approved SDP 82-75 titled "Bon Secours, Howard County Health Park, Parcel B-1".
- Current (1995) Conditions peak discharge rates are taken from the approved SDP-90-204.
- For Current (1995) Conditions Drainage Area Map refer to SDP-82-75 sheet 23.

EXISTING TIME OF CONCENTRATION PATH



EXISTING DRAINAGE AREA MAP  
SCALE: 1" = 200'

SOILS LEGEND		
SYMBOL	SOIL NAME	GROUP
CHB2	Chester silt loam	B
GIB2	Glenelg loam	B
GNB2	Glenville silt loam	C
Ha	Hatboro silt loam	D
MIB2	Manor loam	B
MIC2	Manor loam	B
MID2	Manor loam	B
MIB3	Manor loam	B
MIC3	Manor loam	B
MID3	Manor loam	B

"Conditions and Management Practices for Working in Nontidal Wetlands and Buffers"

LEGEND	
	DRAINAGE AREA BOUNDARY
	SOILS DELINEATION

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

APPROVED: Charles Zimmerman 6/19/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: Robert W. Zuber 6/19/97  
HOWARD SOIL CONSERVATION DISTRICT DATE

DEVELOPERS CERTIFICATE:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER: John C. Tansey  
PRINT NAME BELOW SIGNATURE: JOHN C. TANSEY

AGENT: Max Kantzer  
HEARTLANDS OF ELLICOTT CITY, INC.  
DATE: 6/12/97

ENGINEERS CERTIFICATE:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

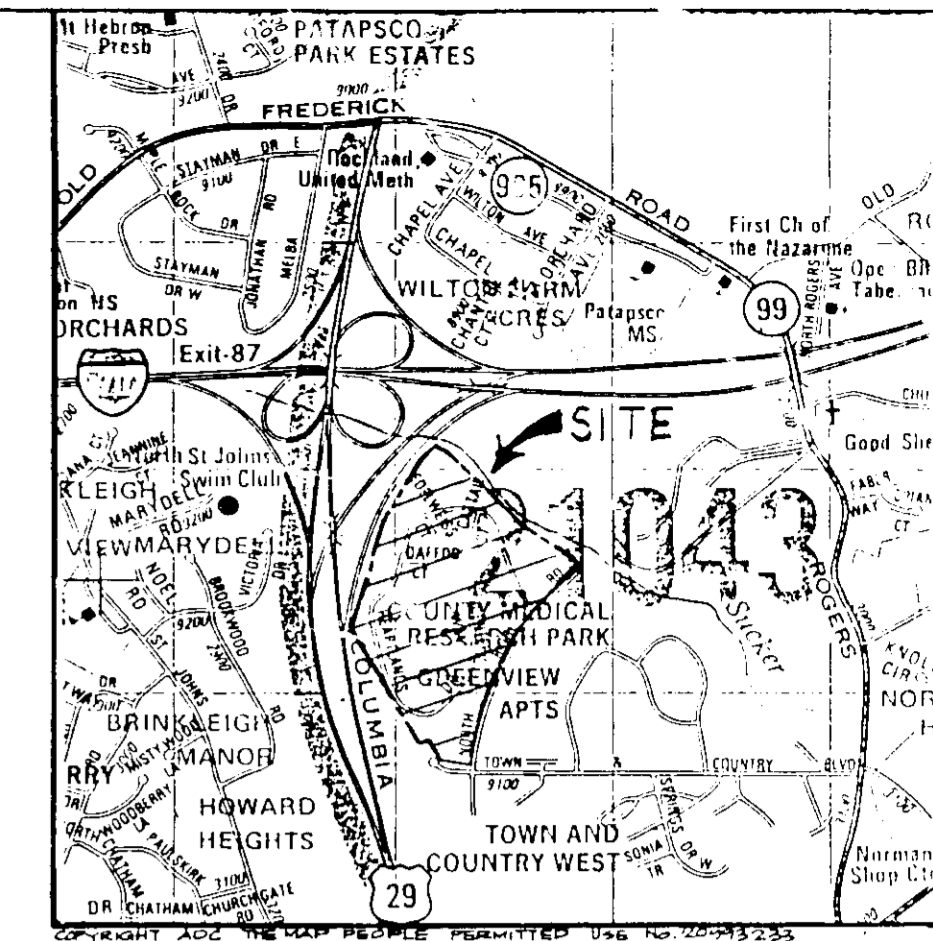
SIGNATURE OF ENGINEER: Max Kantzer  
PRINT NAME BELOW SIGNATURE: Max Kantzer  
DATE: 6-12-97

- Remove excavated material, construction material or debris to an upland disposal area outside of any waterway, floodplain, nontidal wetland, or buffer.
- If backfill is obtained, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
- Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of the nontidal wetland;
- Maintain the hydrologic regime of nontidal wetlands outside the limits of disturbance.
- Rectify any nontidal wetlands and buffers temporarily impacted by the permitted activity. All stabilization in the wetland and buffer shall be of the following recommended species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Setaria italica*), Oats (*Avena sativa*), and/or Rye (*Secale cereale*). Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. Kentucky 31 fescue shall not be utilized in the wetland or buffer. All temporary fills shall be removed in their entirety on or before the completion of construction;
- To protect important aquatic species, in-stream work is prohibited as determined by the classification of the stream as follows:
  - Use I Waters. In-stream work may not be conducted during the period March 1 through June 15, inclusive, during any year.
- No removal of vegetation, grading, filling, draining or other alteration of the nontidal wetlands or buffer outside the limits of disturbance shall occur without written authorization from the Water Management Administration.

6-12-97  
Date

STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER

Professional Engineer Number: 16872



LOCATION MAP  
SCALE: 1" = 2000'

ELEVATION: 469.057 CONTROL STATION 3342001  
ELEVATION: HOWARD COUNTY, MARYLAND BEING A CONCRETE MONUMENT ON TOP OF HOGSBACK BETWEEN MD. RTE 29 NORTH AND SOUTH, APPROX 4 1/2 NORTH OF U.S. RTE 40.

APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: Michael D. ... 6/20/97  
DATE: 6/20/97

DIRECTOR: James B. ... 6/20/97  
DATE: 6/20/97

Heartlands Assisted Living Phase I  
An Assisted Living Facility  
Howard County, Maryland

OWNER / DEVELOPER  
THE HEARTLANDS RETIREMENT COMMUNITY -  
ELLICOTT CITY, INC.  
c/o CONSTELLATION HEALTH SERVICES, INC.  
8815 CENTRE PARK DRIVE, SUITE 308  
COLUMBIA, MARYLAND 21045

DMW  
DRAFT-MADE WALKER, INC.  
300 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4706

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

DATE: 6/20/97  
SCALE: 1" = 200'  
PROJECT NO: 81015.T  
DATE: 1-8-97  
APPROVED: MK  
9 OF 15

SDP 97-51

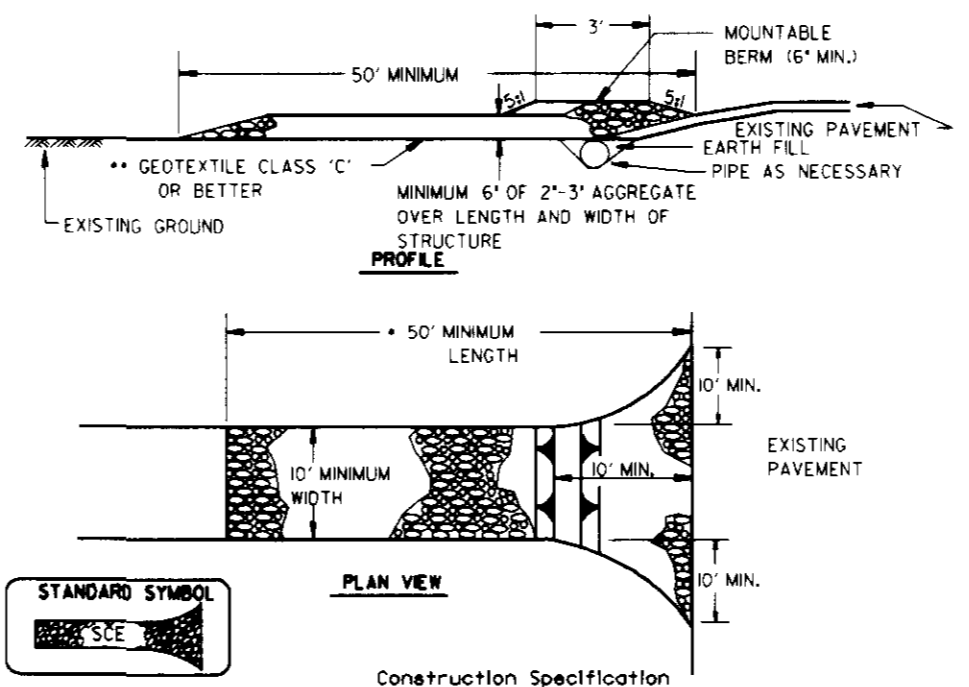
- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION 1992-2437.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
  - SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DUES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
  - FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH SECTION 12.0 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 SEEDINGS, SOIL TEMPORARY SEEDING AND MULCHING SECTION 9.0. 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 PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 

TOTAL AREA OF SITE	46.45 ACRES
AREA TO BE DISTURBED	2.8 ACRES
AREA TO BE ROOFED OR PAVED	0.54 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.12 ACRES
TOTAL CUT	676 CUBIC YARDS
TOTAL FILL	100 CUBIC YARDS
OFF-SITE WASTE/BORROW AREA LOCATION	7 SITE WITH ACTIVE GRADING PERMIT
- 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 CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW 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.

### UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL

#### DUST CONTROL SPECIFICATIONS

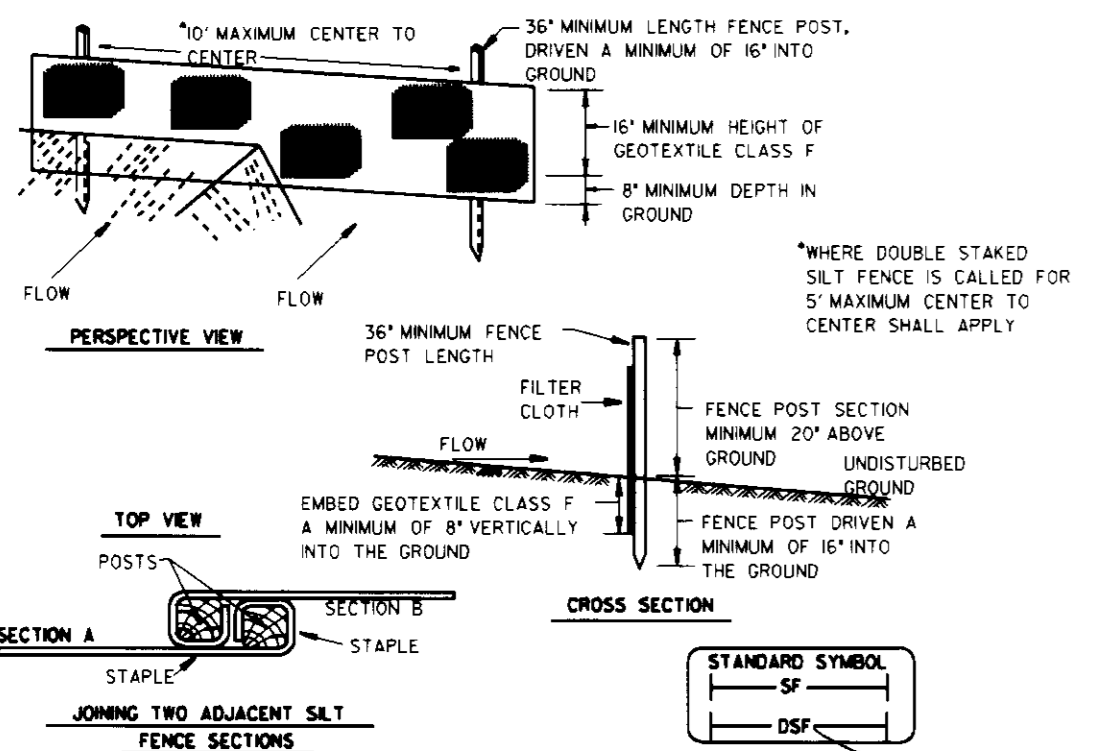
- Temporary Methods:**
- Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
  - Vegetative Cover - See standards for temporary vegetative cover.
  - Tillage - To roughen surface and bring close to the surface. This is an emergency measure which should be used before following steps. Begin only after the 30th day after the start of construction. Examples of equipment used may include the use of a roller.
  - Irrigation - This is generally done as an emergency treatment. Site is irrigated with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point the runoff begins to flow.
  - Barriers - Solid board fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and settling. Barriers should be placed at right angles to prevailing currents at intervals of about 10 times their height or effective in controlling soil blowing.
  - Calcium Chloride - Apply at a rate that will keep surface moist. May need extra water.
- Permanent Methods:**
- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
  - Topsailing - Covering with less erosive soil materials. See standards for topsailing.
  - Stone - Cover surface with crushed stone or coarse gravel.



- Construction Specifications:**
- Length - minimum of 50' x 30' for single residence lot.
  - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
  - Geotextile fabric Class C (firmer cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
  - Stone - crushed aggregate (2" to 3" or reclaimed or recycled concrete equivalent) shall be placed at least 6" deep over the length and width of the entrance.
  - Surface Water - surface water flowing to or diverted toward construction entrance shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mounded berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum width required.
  - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

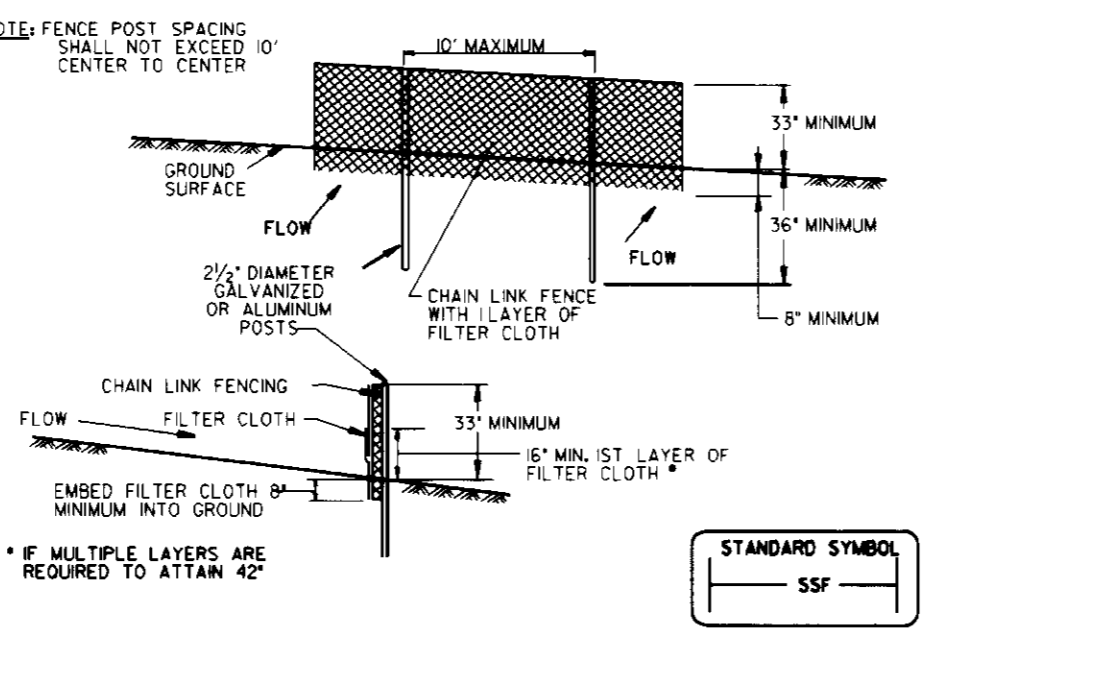
- PERMANENT SEEDING NOTES**
- APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
- SEEDING PREPARATION** - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS** - IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
- PREFERRED - APPLY 2 TONS PER ACRES DOLOMIC LIMESTONE (92 LBS/1000 SQ.F.T.) AND 100 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.F.T.) BEFORE SEEDING. HARBOR OR OSK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAPFORM FERTILIZER (95 LBS/1000 SQ.F.T.)
  - ACCEPTABLE - APPLY 2 TONS PER ACRES DOLOMIC LIMESTONE (92 LBS/1000 SQ.F.T.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ.F.T.) BEFORE SEEDING. HARBOR OR OSK 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 (14 LBS/1000 SQ.F.T.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. PER ACRE OF KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE 105 LBS/1000 SQ.F.T.) OF WEEPING LOVEGRASS. 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 SOD. OPTION (3) - SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.
- MULCHING** - APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.F.T.) OF UNLIMITED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 28 GALLONS PER ACRE (5 GAL/1000 SQ.F.T.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (18 GAL/1000 SQ.F.T.) FOR ANCHORING.
- MAINTENANCE** - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.
- TEMPORARY SEEDING NOTES**
- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDING PREPARATION** - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS** - APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.F.T.)
- SEEDING** - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 THROUGH OCTOBER 15, SEED WITH 2 1/2 BUShEL PER ACRE OF ANNUAL RYE (32 LBS/1000 SQ.F.T.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (107 LBS/1000 SQ.F.T.). FOR THE PERIOD NOVEMBER 1 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 SOD.
- MULCHING** - APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.F.T.) OF UNLIMITED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 28 GAL. PER ACRE (5 GAL/1000 SQ.F.T.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT OR HIGHER, USE 348 GAL. PER ACRE (18 GAL/1000 SQ.F.T.) FOR ANCHORING.
- REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

### HOWARD COUNTY SEDIMENT CONTROL GENERAL NOTES



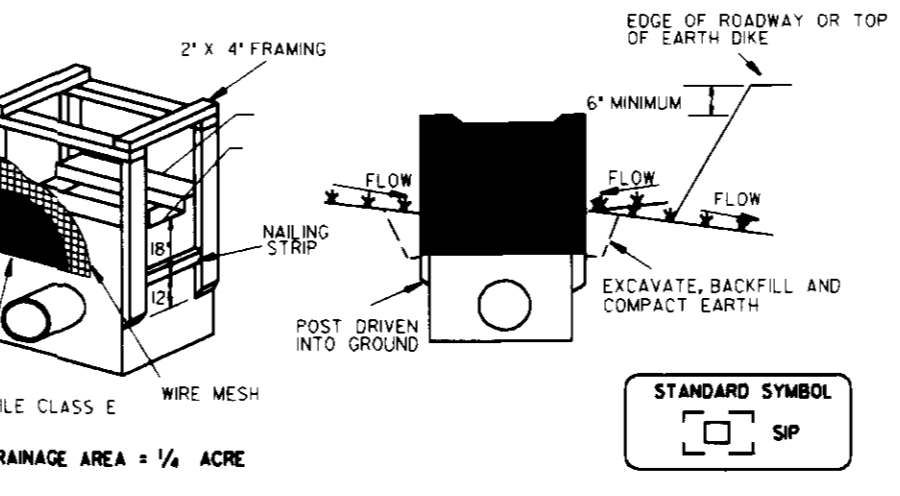
- Construction Specifications:**
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1/2" x 1/2" square (minimum cut) or 1 1/2" diameter (minimum round) and shall be of sound quality hardwood. Steel pipe shall be standard T or U section weighing not less than 100 LBS PER LINEAR FOOT.
  - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
- |                  |                  |               |
|------------------|------------------|---------------|
| Tensile Strength | 50 lbs/in (min.) | Test: MST 509 |
| Tensile Modulus  | 20 lbs/in (min.) | Test: MST 509 |
| Flow Rate        | 0.3 gal/minute   | Test: MST 322 |
| Flow Rate (max)  | 75% (min.)       | Test: MST 322 |
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
  - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

### DUST CONTROL SPECIFICATIONS



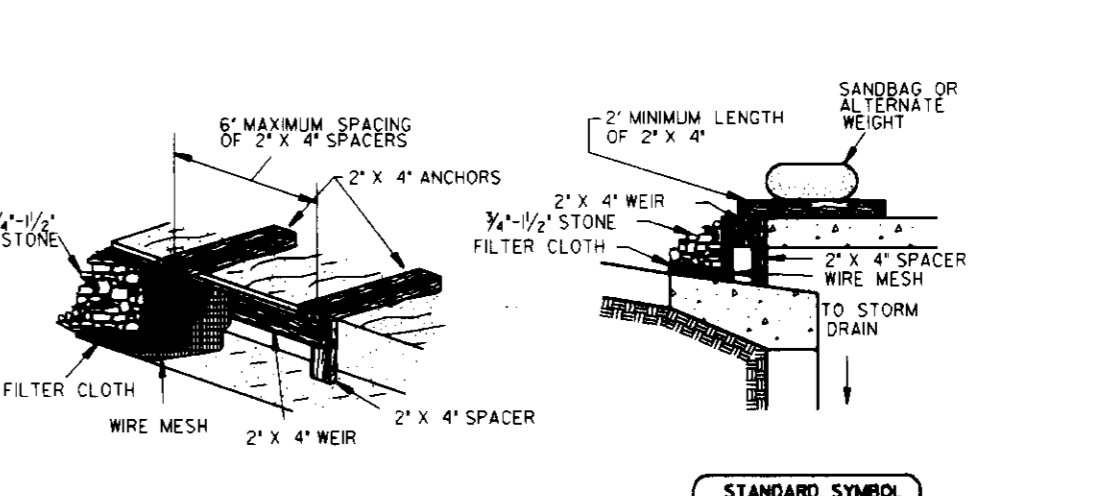
- Construction Specifications:**
- Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) details for Chain Link Fencing. The specification for a 6' fence shall be used substituting 42" fabric and 6' length posts.
  - The posts do not need to be set in concrete.
  - Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.
  - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
  - Filter cloth shall be embedded a minimum of 8" into the ground.
  - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and stapled.
  - Maintenance shall be performed as needed and silt bulges removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.

### STABILIZED CONSTRUCTION ENTRANCE



- Construction Specifications:**
- Excavate completely around the inlet to a depth of 18" below the notch elevation.
  - Drive the 2" x 4" construction grade lumber posts 1" into the ground at each corner of the inlet. Place nailstrips between the posts on the ends of the inlet, assemble the top portion of the 2" x 4" frame using the overlap joint shown on detail. The top of the frame (which must be 6" below adjacent roadways where flooding and safety issues may arise).
  - Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
  - Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 8" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
  - Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
  - If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
  - The structure must be inspected periodically and offer each rain and the geotextile replaced when it becomes clogged.

### TEMPORARY AND PERMANENT SEEDING NOTES



- Construction Specifications:**
- Attach a continuous piece of 1/2" x 1/2" wire mesh 30" minimum width by throat length plus 4" to the 2" x 4" wire measuring throat length plus 2" as shown on the standard drawing.
  - Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" wire.
  - Securely nail the 2" x 4" wire to a 9" long vertical spacer to be located between the wire and the inlet face (max. 4" apart).
  - Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the wall 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 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4" x 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
  - 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 the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

### SILT FENCE

- Sequence of Operations
- Obtain all necessary permits for construction.
  - Notify Howard County Office of Inspections and Permits (410) 313-1855 at least 48 hours in advance of starting any construction (2 days).
  - Notify Engineer in charge of the as-built inspection at (410) 296-3333 at least 24 hours in advance of starting any construction.
  - Install sediment control measures and staging area. \*SEE SHEET #9 OF 15 FOR SWM POND #2 SEQUENCE OF CONSTRUCTION.
  - CONSTRUCT BITUMINOUS WALKWAY.
  - Relocate existing Inlet I-6 and add Inlet protection immediately.
  - Install storm drain system from I-6 to MH-1 to I-1. Do not construct I-1 at this time. Bulkhead pipe.
  - Remove all existing curb & paving as shown on sheet 2 of 15 (demolition plan) and stabilize area within one working day. All paving and curb to be removed from site.
  - Install new curb & gutter and paving in parking areas.
  - Relocate super silt fence (SSF) in upper parking lot.
  - Mass grade entire site keeping staging area accessible, remove walk and canopy, and provide dust controls needed.
  - Begin building construction, install remaining utilities and install inlet protection immediately. Block all proposed inlets. Stabilize all non-active graded surfaces with temporary seeding.
  - Final grade drive on west side of Interconnect building. Apply road subbase.
  - Final grade all low areas and stabilize with permanent seeding.
  - Complete building construction.
  - Pave drive on west side of Interconnect building.
  - Remove staging area and stabilize disturbed area.
  - With the prior permission of the Sediment Control Inspector and the Howard County Sediment Control Division, remove sediment controls and stabilize all areas disturbed by this process.
  - Install landscaping.

### SUPER SILT FENCE

- Sequence of Operations
- Obtain all necessary permits for construction.
  - Notify Howard County Office of Inspections and Permits (410) 313-1855 at least 48 hours in advance of starting any construction (2 days).
  - Notify Engineer in charge of the as-built inspection at (410) 296-3333 at least 24 hours in advance of starting any construction.
  - Install sediment control measures and staging area. \*SEE SHEET #9 OF 15 FOR SWM POND #2 SEQUENCE OF CONSTRUCTION.
  - CONSTRUCT BITUMINOUS WALKWAY.
  - Relocate existing Inlet I-6 and add Inlet protection immediately.
  - Install storm drain system from I-6 to MH-1 to I-1. Do not construct I-1 at this time. Bulkhead pipe.
  - Remove all existing curb & paving as shown on sheet 2 of 15 (demolition plan) and stabilize area within one working day. All paving and curb to be removed from site.
  - Install new curb & gutter and paving in parking areas.
  - Relocate super silt fence (SSF) in upper parking lot.
  - Mass grade entire site keeping staging area accessible, remove walk and canopy, and provide dust controls needed.
  - Begin building construction, install remaining utilities and install inlet protection immediately. Block all proposed inlets. Stabilize all non-active graded surfaces with temporary seeding.
  - Final grade drive on west side of Interconnect building. Apply road subbase.
  - Final grade all low areas and stabilize with permanent seeding.
  - Complete building construction.
  - Pave drive on west side of Interconnect building.
  - Remove staging area and stabilize disturbed area.
  - With the prior permission of the Sediment Control Inspector and the Howard County Sediment Control Division, remove sediment controls and stabilize all areas disturbed by this process.
  - Install landscaping.

### STANDARD INLET PROTECTION

- Sequence of Operations
- Obtain all necessary permits for construction.
  - Notify Howard County Office of Inspections and Permits (410) 313-1855 at least 48 hours in advance of starting any construction (2 days).
  - Notify Engineer in charge of the as-built inspection at (410) 296-3333 at least 24 hours in advance of starting any construction.
  - Install sediment control measures and staging area. \*SEE SHEET #9 OF 15 FOR SWM POND #2 SEQUENCE OF CONSTRUCTION.
  - CONSTRUCT BITUMINOUS WALKWAY.
  - Relocate existing Inlet I-6 and add Inlet protection immediately.
  - Install storm drain system from I-6 to MH-1 to I-1. Do not construct I-1 at this time. Bulkhead pipe.
  - Remove all existing curb & paving as shown on sheet 2 of 15 (demolition plan) and stabilize area within one working day. All paving and curb to be removed from site.
  - Install new curb & gutter and paving in parking areas.
  - Relocate super silt fence (SSF) in upper parking lot.
  - Mass grade entire site keeping staging area accessible, remove walk and canopy, and provide dust controls needed.
  - Begin building construction, install remaining utilities and install inlet protection immediately. Block all proposed inlets. Stabilize all non-active graded surfaces with temporary seeding.
  - Final grade drive on west side of Interconnect building. Apply road subbase.
  - Final grade all low areas and stabilize with permanent seeding.
  - Complete building construction.
  - Pave drive on west side of Interconnect building.
  - Remove staging area and stabilize disturbed area.
  - With the prior permission of the Sediment Control Inspector and the Howard County Sediment Control Division, remove sediment controls and stabilize all areas disturbed by this process.
  - Install landscaping.

### CURB INLET PROTECTION (COG OR COS INLETS)

- Sequence of Operations
- Obtain all necessary permits for construction.
  - Notify Howard County Office of Inspections and Permits (410) 313-1855 at least 48 hours in advance of starting any construction (2 days).
  - Notify Engineer in charge of the as-built inspection at (410) 296-3333 at least 24 hours in advance of starting any construction.
  - Install sediment control measures and staging area. \*SEE SHEET #9 OF 15 FOR SWM POND #2 SEQUENCE OF CONSTRUCTION.
  - CONSTRUCT BITUMINOUS WALKWAY.
  - Relocate existing Inlet I-6 and add Inlet protection immediately.
  - Install storm drain system from I-6 to MH-1 to I-1. Do not construct I-1 at this time. Bulkhead pipe.
  - Remove all existing curb & paving as shown on sheet 2 of 15 (demolition plan) and stabilize area within one working day. All paving and curb to be removed from site.
  - Install new curb & gutter and paving in parking areas.
  - Relocate super silt fence (SSF) in upper parking lot.
  - Mass grade entire site keeping staging area accessible, remove walk and canopy, and provide dust controls needed.
  - Begin building construction, install remaining utilities and install inlet protection immediately. Block all proposed inlets. Stabilize all non-active graded surfaces with temporary seeding.
  - Final grade drive on west side of Interconnect building. Apply road subbase.
  - Final grade all low areas and stabilize with permanent seeding.
  - Complete building construction.
  - Pave drive on west side of Interconnect building.
  - Remove staging area and stabilize disturbed area.
  - With the prior permission of the Sediment Control Inspector and the Howard County Sediment Control Division, remove sediment controls and stabilize all areas disturbed by this process.
  - Install landscaping.

**DEVELOPER'S CERTIFICATION:**  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY 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: *John C. Laney* Date: 6/12/97  
 Signature: *Agent* Date: 6/12/97  
 Signature: *John C. Laney* Date: 6/12/97

**ENGINEER'S CERTIFICATION:**  
 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: *Max Kantzer* Date: 6-12-97  
 Signature: *Max Kantzer* Date: 6-12-97  
 Signature: *Max Kantzer* Date: 6-12-97



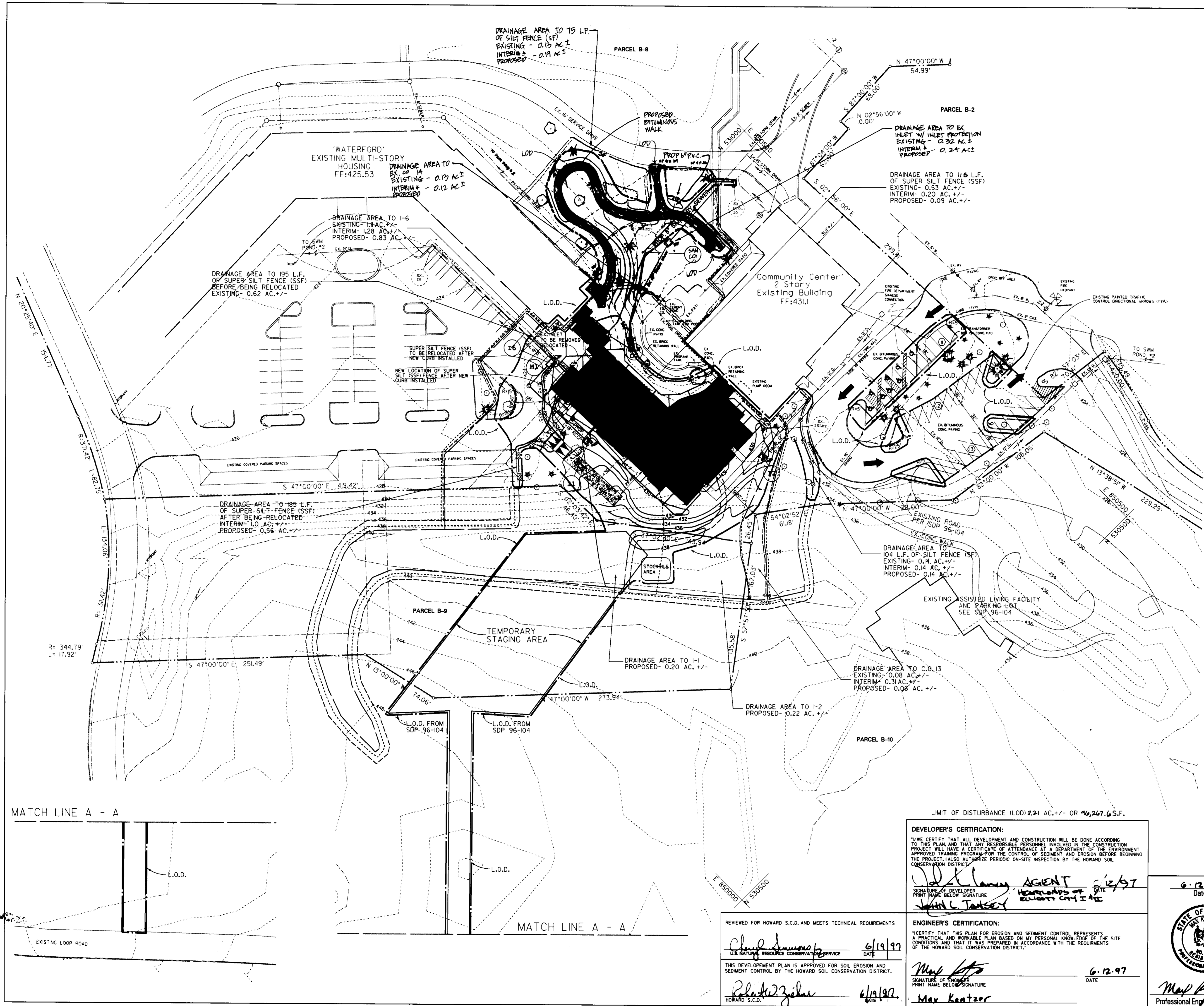
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	6/30/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Catherine</i>	6/28/97
DIVISION OF LAND DEVELOPMENT	DATE
<i>James Smith</i>	6/28/97
DIRECTOR	DATE

7-29-97	1	revised sequence of construction
Date	No.	Revision Description

**Heartlands Assisted Living Phase I**  
 An Assisted Living Facility  
 Howard County, Maryland  
 OWNER / DEVELOPER  
 THE HEARTLANDS RETIREMENT COMMUNITY - ELLICOTT CITY I, INC.  
 c/o CONSTELLATION HEALTH SERVICES, INC.  
 8815 CENTRE PARK DRIVE, SUITE 308  
 COLUMBIA, MARYLAND 21045

<b>DMW</b>		A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals	
Draft: MacCune Walker, Inc. 300 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3358 Fax 296-4708			
ADDRESS NAME	SECTION	OFFICE #	PARCELS
Bon Secours Ho. Co. Health Park	21		PARCELS B-8, B-9 & B-10
NET AC. OF	BLDG. #	PARCELS	BLDG. TRACT
12828-12828	23	17	8026
MAPS CODE	BLDG. CODE	BLDG. CODE	
F03		1454400	
TITLE			
SEDIMENT & EROSION CONTROL PLAN DETAILS			
Des By	Scale	Proj. No.	81015T
Dwn By	JWM	Date	2-13-97
Chk By	JWR	Approved	8 of 15

SOP 97.81



**LEGEND**

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING DRAINAGE AREA
- INTERIM DRAINAGE AREA
- PROPOSED DRAINAGE AREA
- LIMIT OF DISTURBANCE (L.O.D.)
- SF - PROPOSED SILT FENCE
- SSF - PROPOSED SUPER SILT FENCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*[Signature]* 6/20/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 6/23/97  
DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 6/24/97  
DIRECTOR DATE

Date	No.	Revision Description
7.21.97	1	removed covered walk, added vitumnous walk PARCEL L.O.D. & DRAINAGE AREAS, re: sanitary location

**Heartlands Assisted Living Phase I**  
An Assisted Living Facility  
Howard County, Maryland

OWNER / DEVELOPER  
THE HEARTLANDS RETIREMENT COMMUNITY -  
ELLCOTT CITY I, INC.  
c/o CONSTELLATION HEALTH SERVICES, INC.  
8815 CENTRE PARK DRIVE, SUITE 308  
COLUMBIA, MARYLAND 21045

**DMW**  
Dea, McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 896-3833  
Fax 896-4706

A Team of Land Planners,  
Landscape Architects,  
Engineers, Surveyors &  
Environmental Professionals

SECTION NAME	SECTION NO.	SECTION DATE	DATE
San Secoria Ho. Co. Health Park	21		
PLAN OR LOT	1802	23	17
12836-12838			
TRACER CODE	F03	SEWER CODE	1454400

**SEDIMENT & EROSION CONTROL PLAN**

Des By	JWM	Scale	1" = 40'	Proj. No.	81015T
Drn By	JWM	Date	2-13-97		
Chk By	JWR	Approved			7 of 15

**DEVELOPER'S CERTIFICATION:**  
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY 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]* AGENT 6/23/97  
SIGNATURE OF DEVELOPER DATE  
*[Signature]* HEARTLANDS OF ELLCOTT CITY I, INC.

**ENGINEER'S CERTIFICATION:**  
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]* 6.12.97  
SIGNATURE OF ENGINEER DATE  
*[Signature]* Max Kantzor

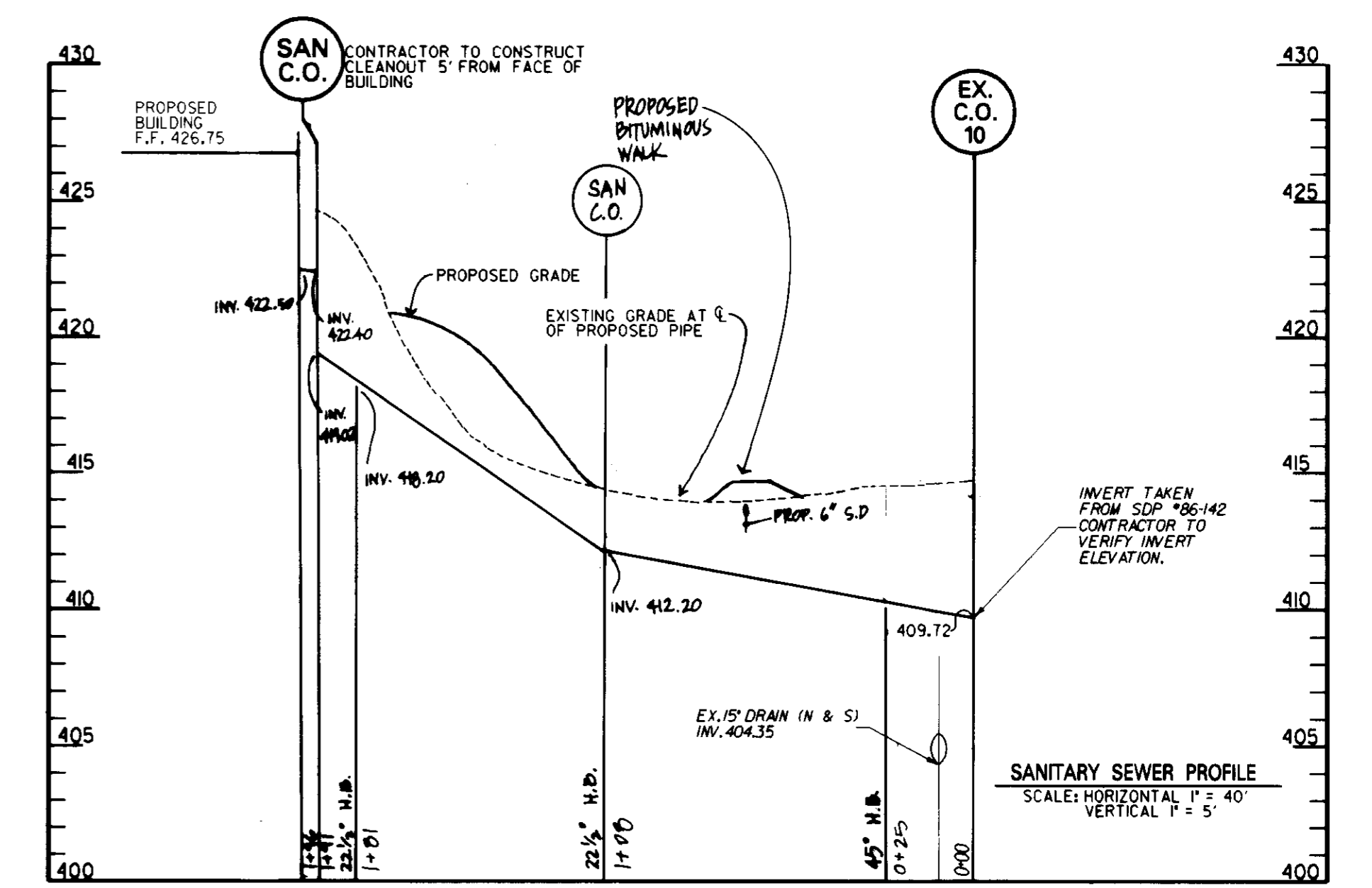
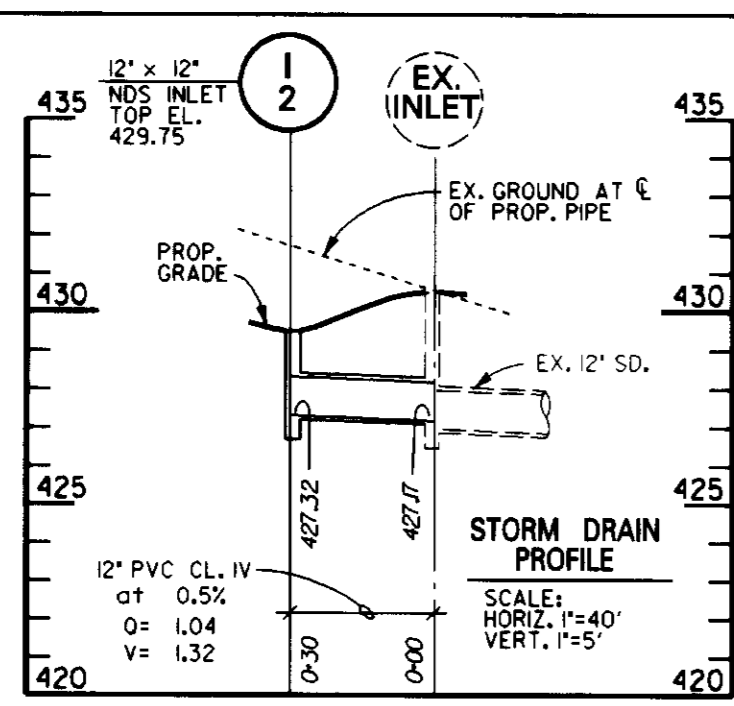
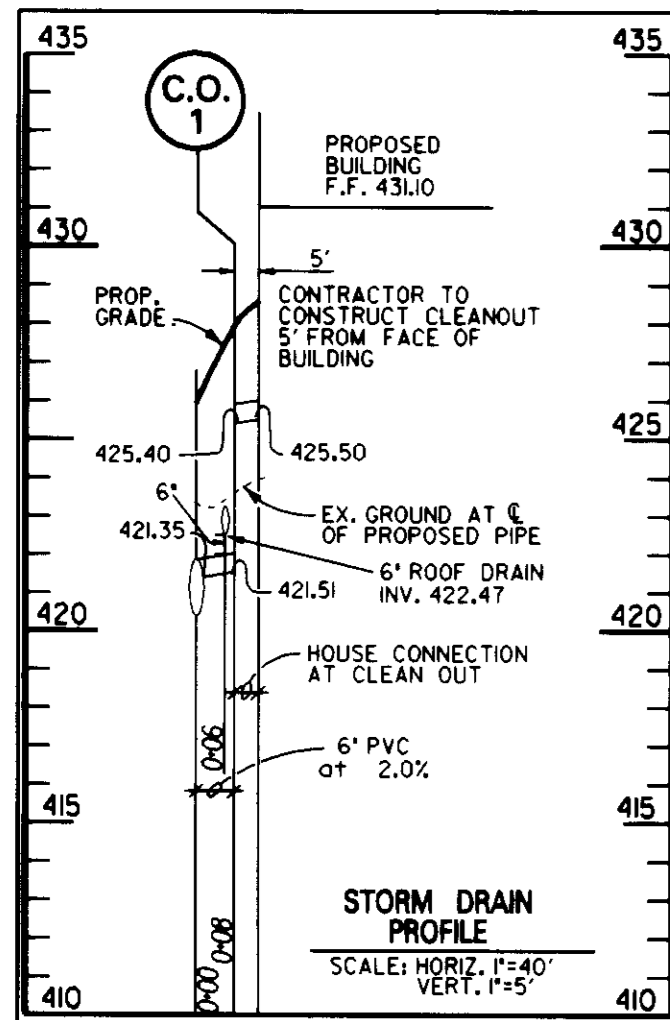
REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

*[Signature]* 6/19/97  
U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE

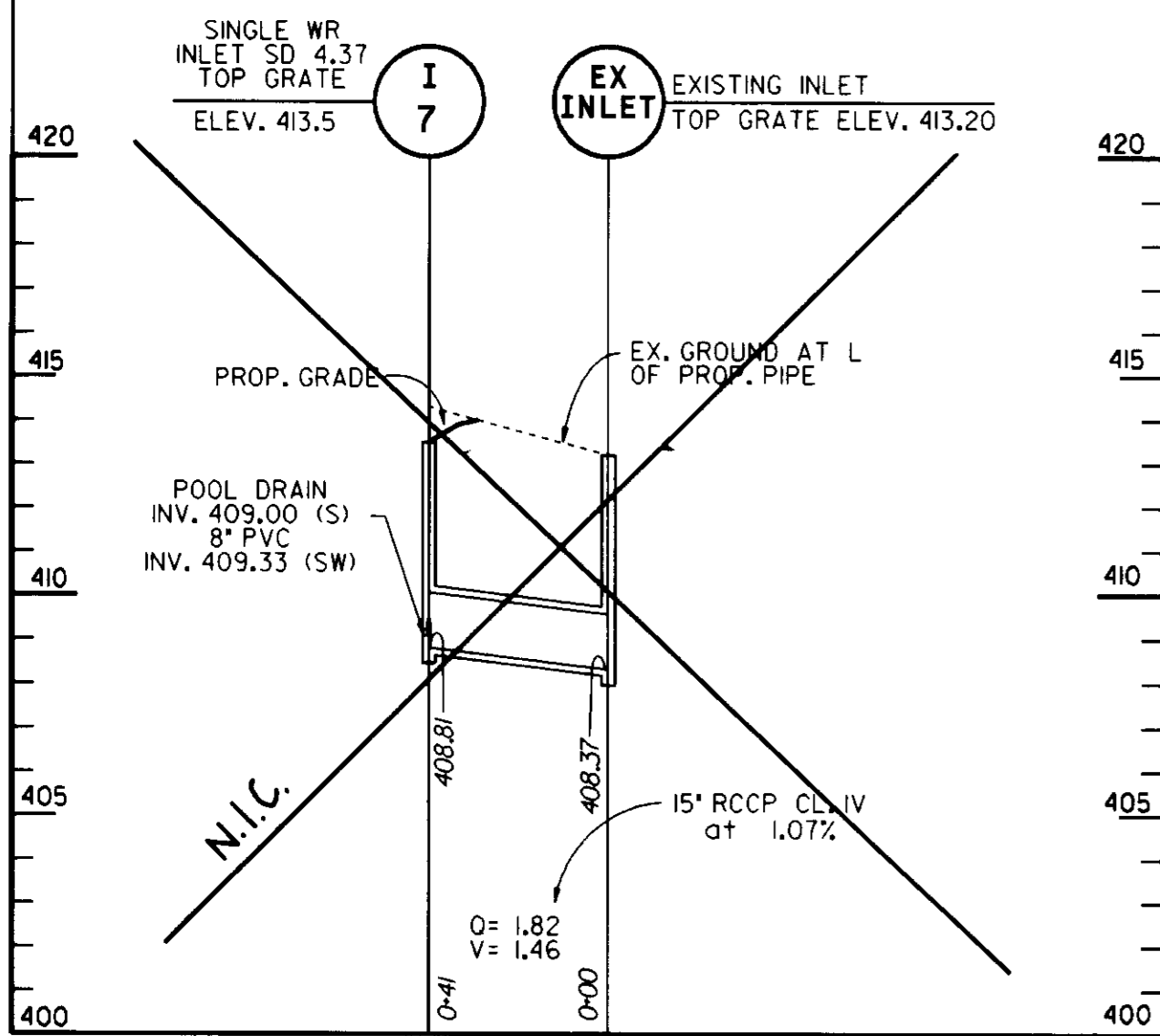
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 6/19/97  
HOWARD S.C.D. DATE



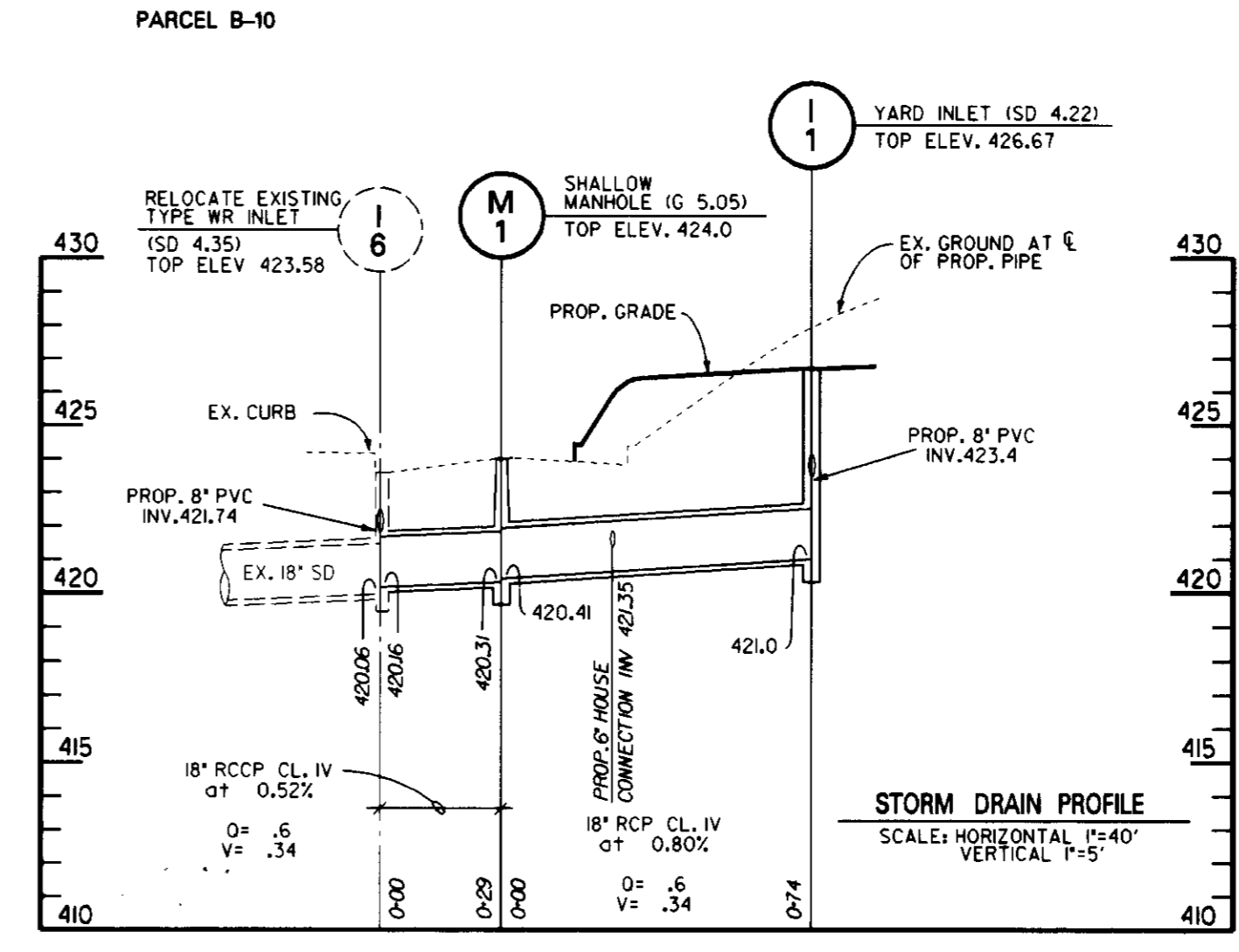


LEGEND  
 AC=1/2 D.A. ZONE IMPERVIOUS  
 --- PROPOSED DRAINAGE AREA  
 - - - FUTURE DRAINAGE AREA



INLET SCHEDULE				
NO.	TYPE	Q	INV. OUT	TOP ELEV.
1	TYPE 'S' INLET (SD 4.22)	.60	421.00	426.67
2	12" X 12" NDS INLET	1.04	427.32	429.75
	SINGLE WR INLET (SD 4.37)		408.81	413.50

MANHOLE SCHEDULE					
NO.	TYPE	SIZE	TOP ELEV.	IN. OUT	DESCRIPTION
1	SHALLOW MH	60"	424.00	420.31	G 5.05

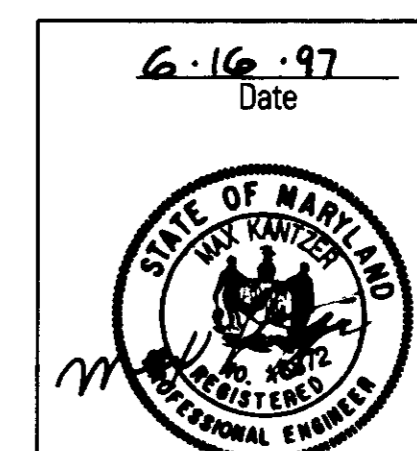


APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 CHIEF DEVELOPMENT ENGINEERING DIVISION  
 DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

Date	No.	Revision Description
7/29/97	1	eliminated I7, removed covered walk, added bituminous walk, revised SHC profile, rev. sanitary location

**Heartlands Assisted Living Phase I**  
 An Assisted Living Facility  
 Howard County, Maryland  
 OWNER / DEVELOPER  
 THE HEARTLANDS RETIREMENT COMMUNITY - ELLICOTT CITY I, INC.  
 c/o CONSTELLATION HEALTH SERVICES, INC.  
 8815 CENTRE PARK DRIVE, SUITE 308  
 COLUMBIA, MARYLAND 21045

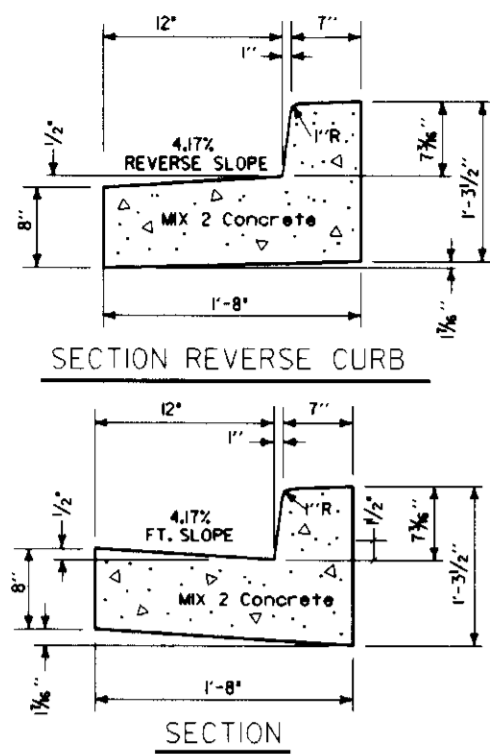
**DMW**  
 Don McChesney & Walker, Inc.  
 300 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 896-3888  
 Fax 396-4708



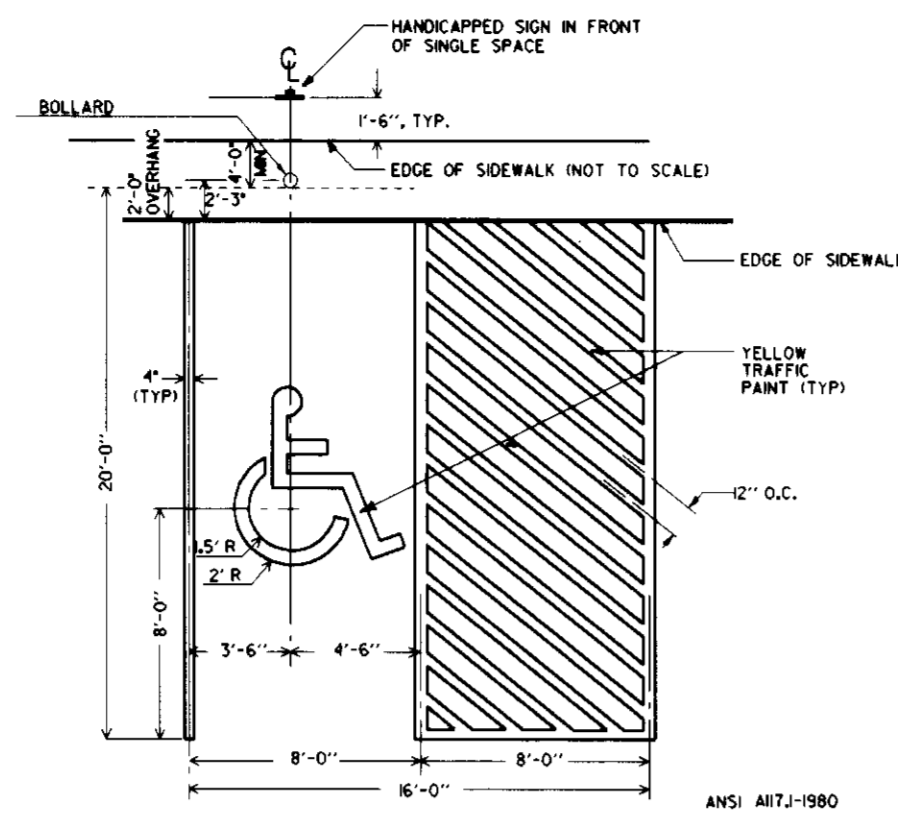
SECTION NAME: Bon Secours Ho. Co. Health Park  
 SHEET NO.: 21  
 PARCELS B-8, B-9 & B-10  
 TITLE: STORM DRAIN DRAINAGE AREA MAP & UTILITY PROFILES  
 Des By: SMD Scale: 1" = 40' Proj. No.: 81015T  
 Dwn By: JWM Date: 2-13-97  
 Chk By: JWR Approved

Professional Engr. No. 16872

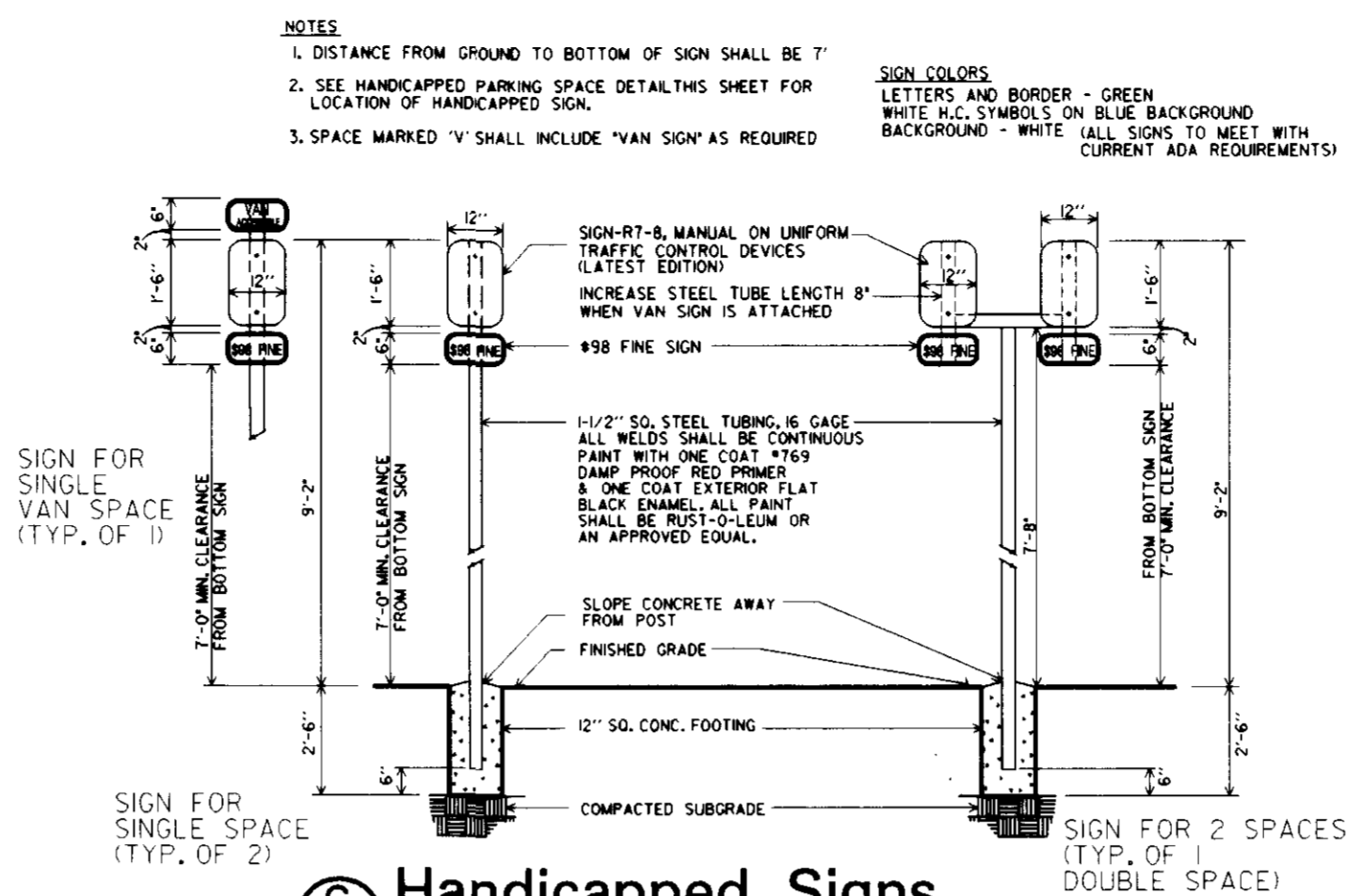
SDP 97-51



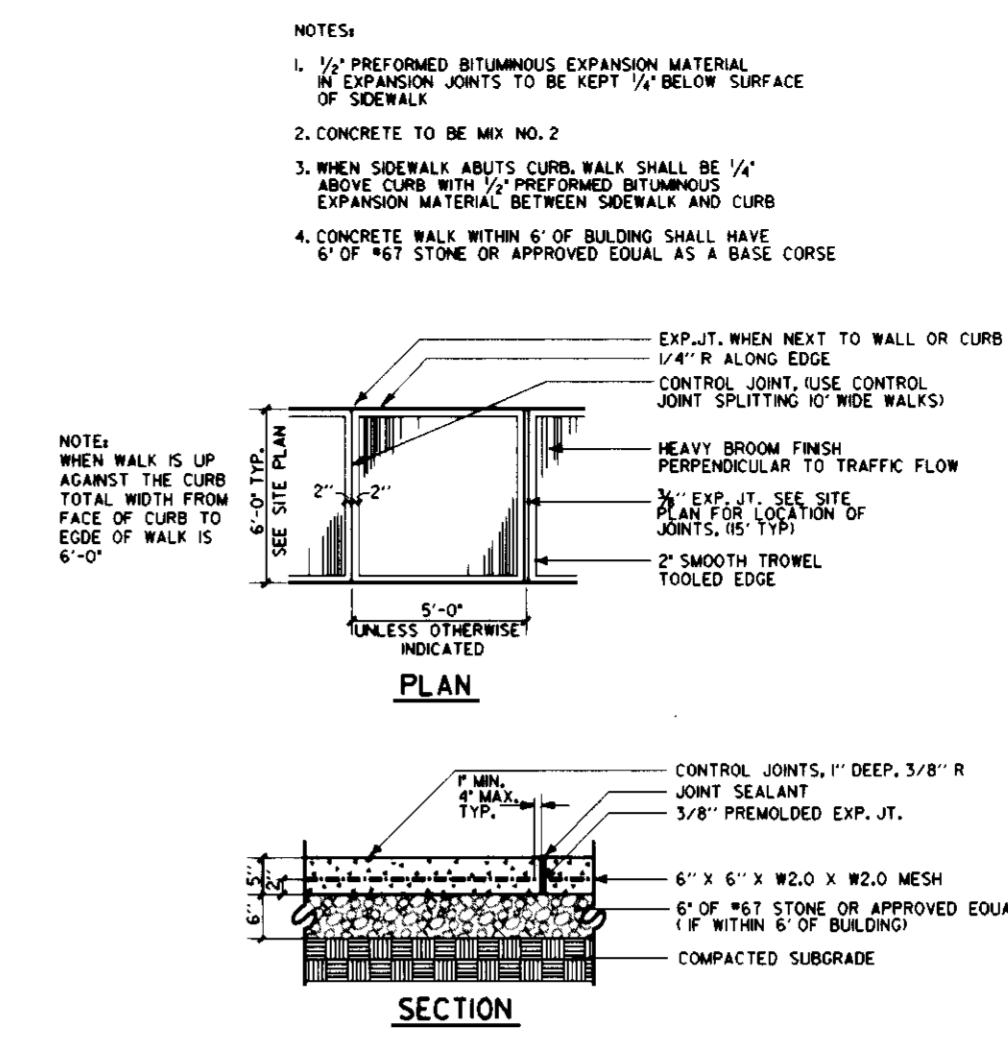
**A** Concrete Curb, Typ.  
5 Not To Scale



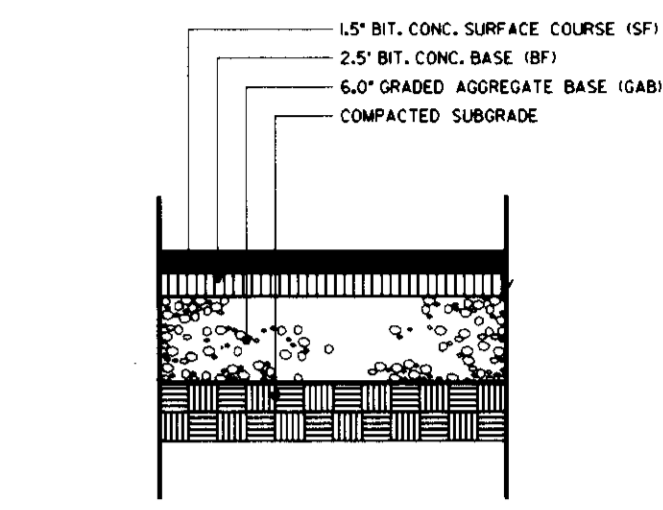
**B** Handicapped Van Parking Space  
5 Not To Scale



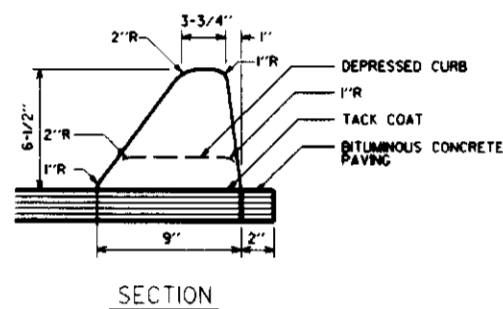
**C** Handicapped Signs  
5 Not To Scale



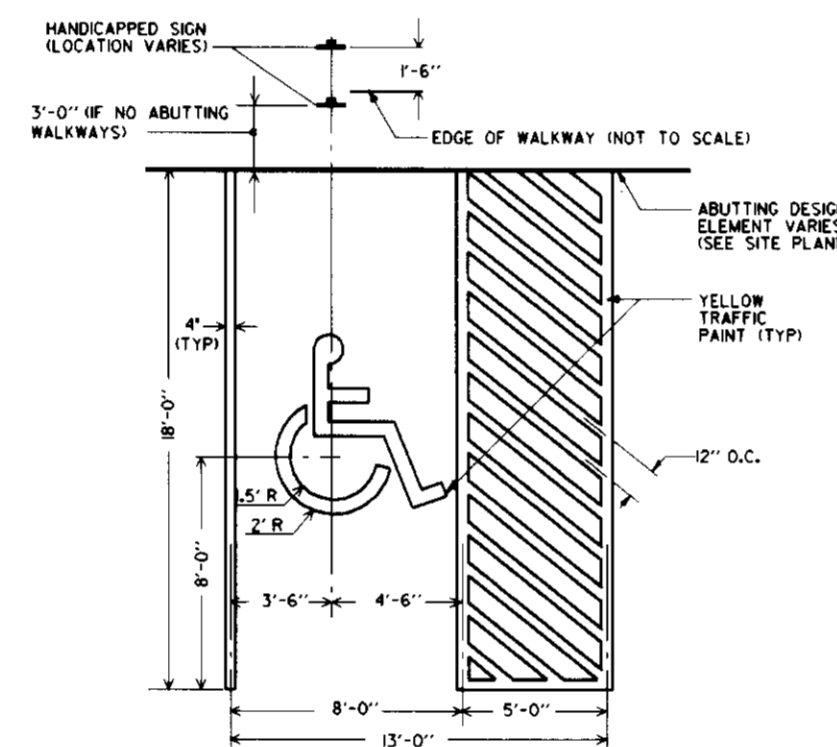
**D** Concrete Walk  
5 Not To Scale



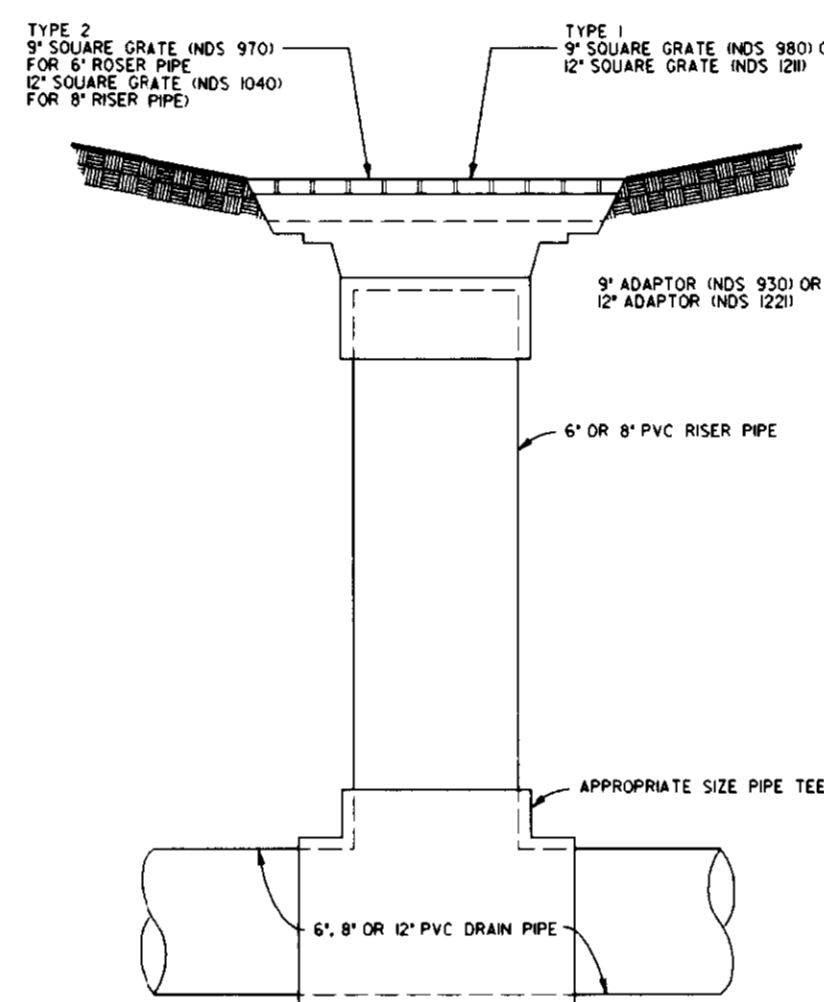
**E** Light Duty Paving P-2  
5 Not To Scale



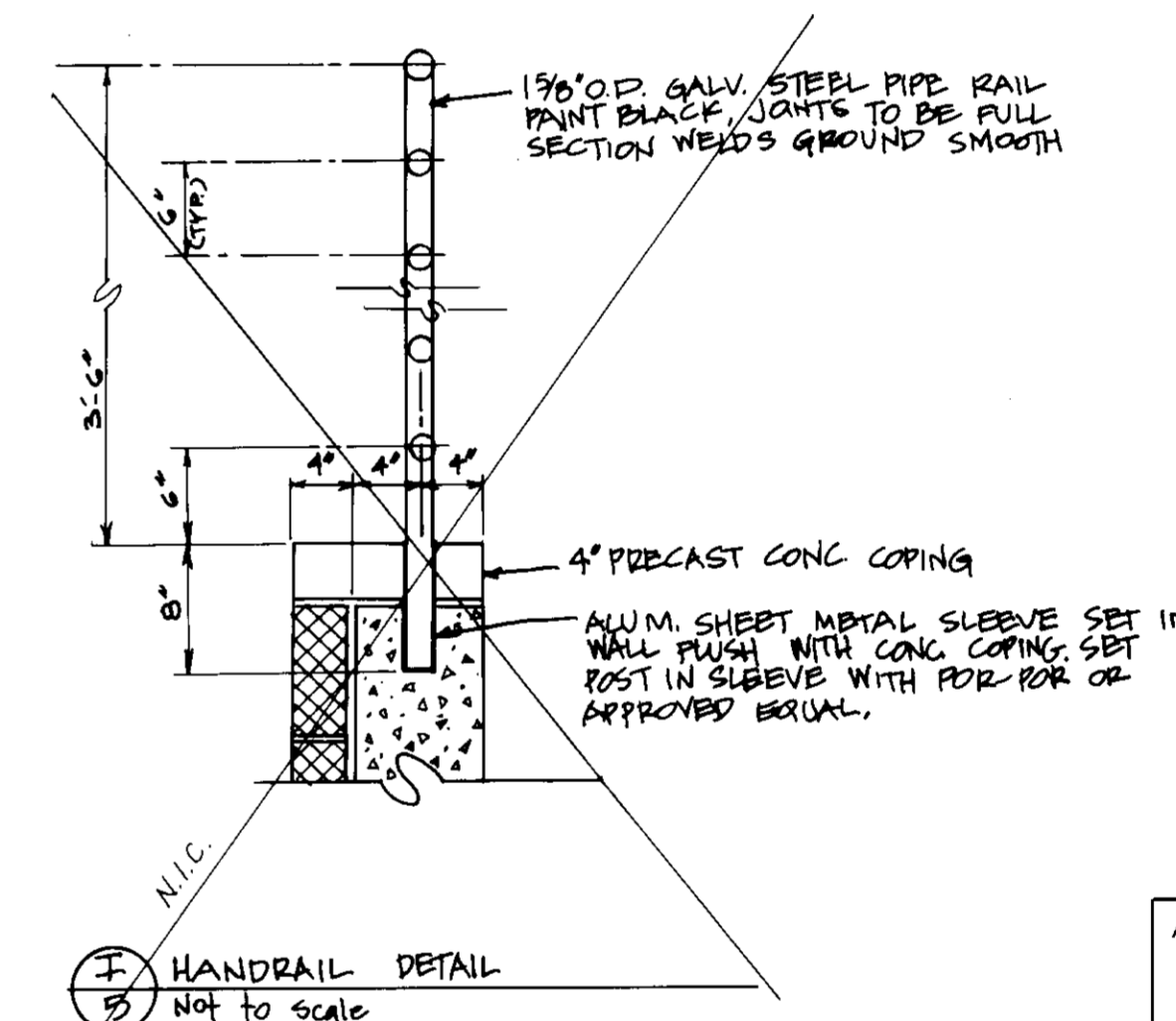
**F** Standard Bituminous Curb  
5 Not To Scale



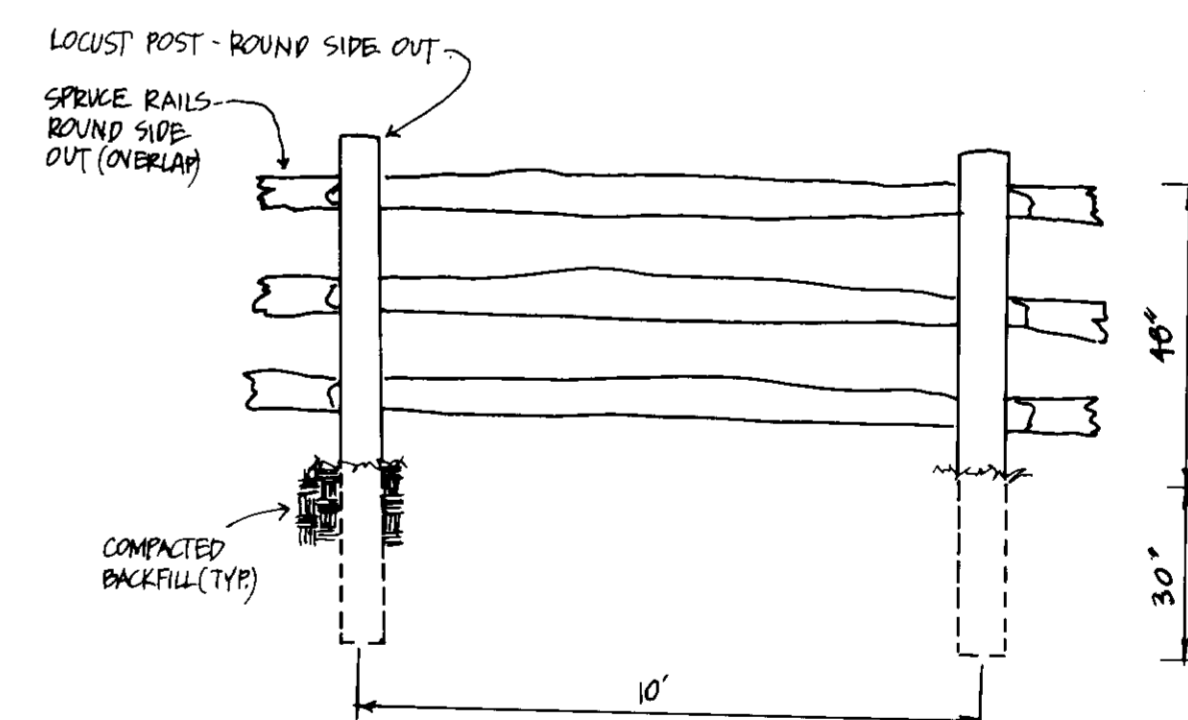
**G** Handicapped Space  
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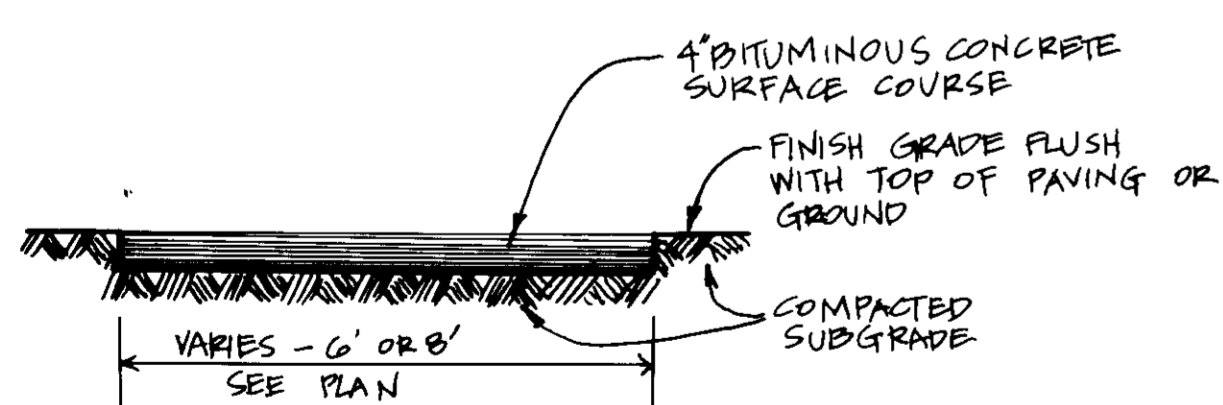
**H** Modified SDB Inlet  
5 Not To Scale



**I** HANDRAIL DETAIL  
5 Not to scale



**J** SPLIT RAIL FENCE  
5 Not to scale



**J** BITUMINOUS WALK  
5 Not to scale

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*[Signature]* 6/20/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 6/20/97  
DIRECTOR, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 6/20/97  
DIRECTOR DATE

Date	No.	Revision Description
7-29-97	1	ADDED HANDRAIL + BITUMINOUS WALK DETAILS, + SPLIT RAIL DETAILS

**Heartlands Assisted Living Phase I**  
An Assisted Living Facility  
Howard County, Maryland

OWNER /DEVELOPER  
THE HEARTLANDS RETIREMENT COMMUNITY - ELLICOTT CITY 1, INC.  
c/o CONSTELLATION HEALTH SERVICES, INC.  
8815 CENTRE PARK DRIVE, SUITE 308  
COLUMBIA, MARYLAND 21045

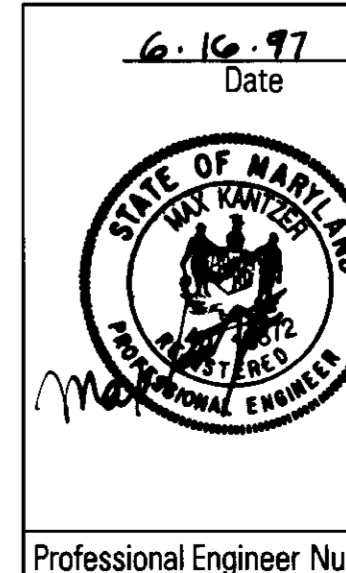
**DMW**  
Dunn, McQuinn & Walker, Inc.  
200 West Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4706

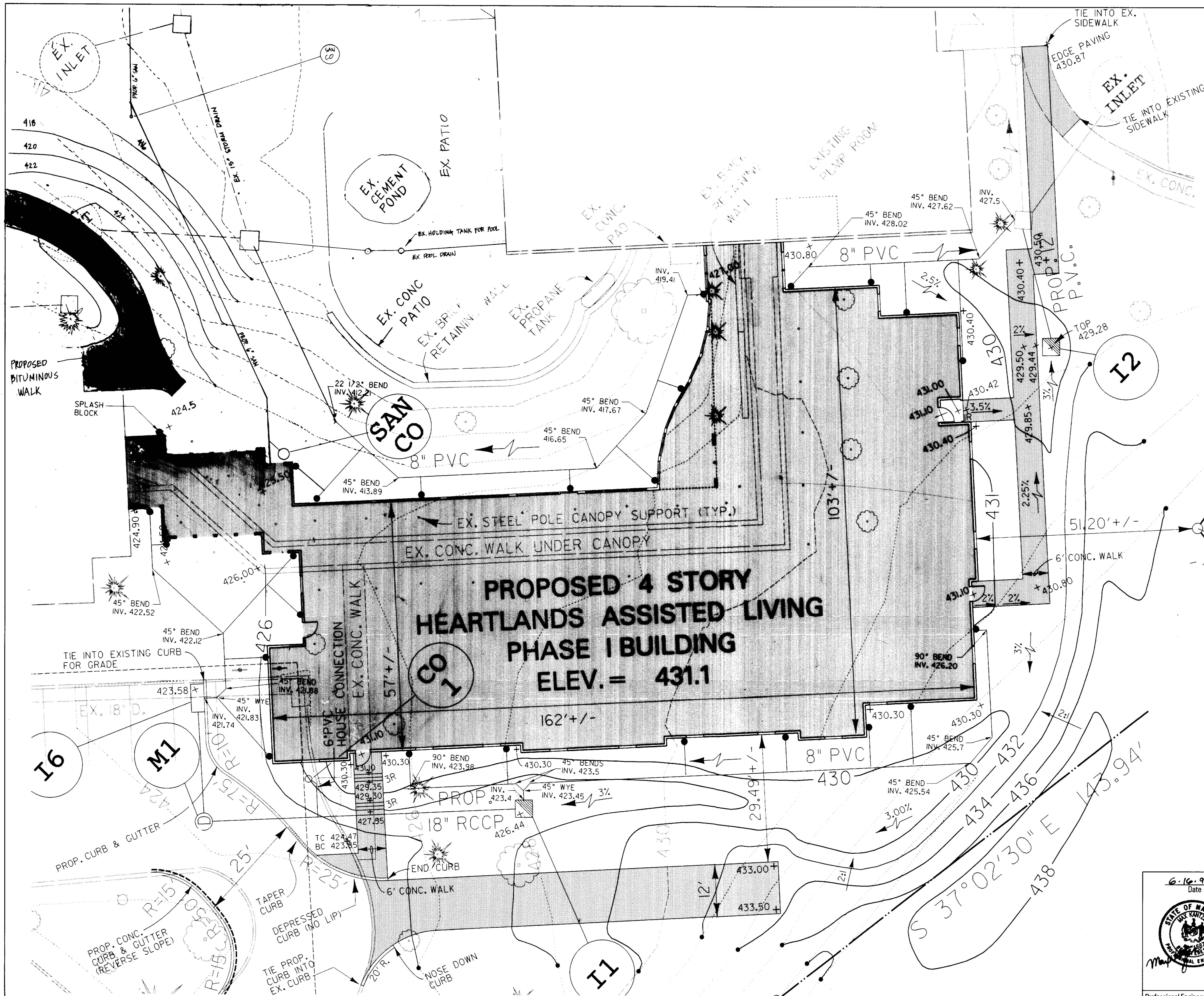
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

REVISION NAME	SECTION/AREA	PROJECT #
Bon Secours Ho. Co. Health Park	21	PARCELS B-8, B-9 & B-10
PLAT # OF 12536-12538	22	ORIGIN PROJECT 6026
DATE CODE F03	ISSUE CODE 1454400	

TITLE: **SITE DETAILS**

Des By: Scale AS SHOWN Proj. No. 81015T  
Dm By: JWM Date 2-13-97 5 OF 15  
Chk By: JWR Approved



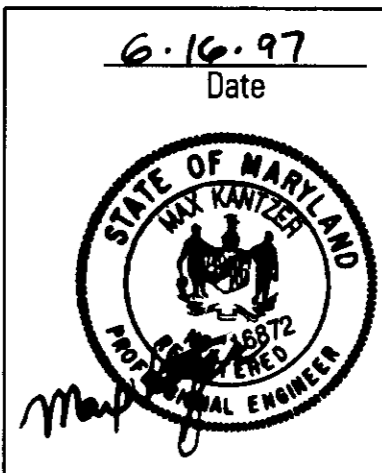


APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*[Signature]* 6/20/97  
 CHIEF DEVELOPMENT ENGINEERING DIVISION DATE  
*[Signature]* 6/20/97  
 DIVISION OF LAND DEVELOPMENT DATE  
*[Signature]* 6/20/97  
 DIRECTOR DATE

Date	No.	Revision Description
7-24-97	1	removed covered walk, added bituminous walk, new sanitary location

**Heartlands Assisted Living Phase I**  
 An Assisted Living Facility  
 Howard County, Maryland  
 OWNER / DEVELOPER  
 THE HEARTLANDS RETIREMENT COMMUNITY -  
 ELLICOTT CITY 1, INC.  
 c/o CONSTELLATION HEALTH SERVICES, INC.  
 8815 CENTRE PARK DRIVE, SUITE 308  
 COLUMBIA, MARYLAND 21045

**DMW**  
 Dan McCune-Walsh, Inc.  
 300 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 286-8339  
 Fax 396-4705  
 A Team of Land Planners,  
 Landscape Architects,  
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 Environmental Professionals

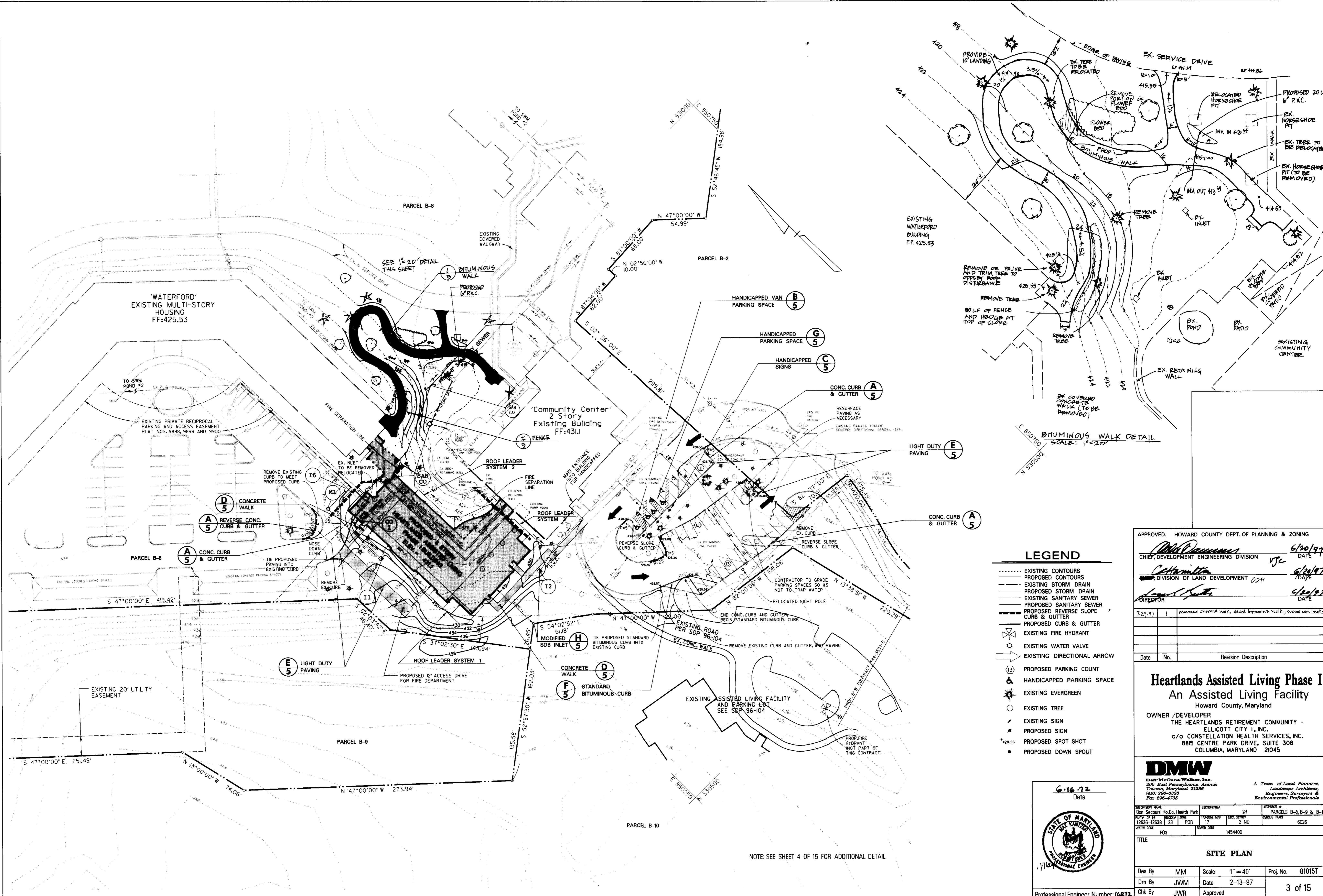


DATE	PROJECT	DATE	DATE	DATE
6/20/97	Bon Secours Ho Co. Health Park	21	21	21
12/26-12/28	17	23	2	2
F03	1454400			

TITLE: **SITE DETAIL PLAN**

Des By: JDF	Scale: 1" = 10'	Proj. No.: 81015T
Dim By: JWM	Date: 2-13-97	
Chk By: JWR	Approved:	4 of 15

SDP 97.51



NOTE: SEE SHEET 4 OF 15 FOR ADDITIONAL DETAIL

- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - EXISTING STORM DRAIN
  - PROPOSED STORM DRAIN
  - EXISTING SANITARY SEWER
  - PROPOSED SANITARY SEWER
  - PROPOSED REVERSE SLOPE CURB & GUTTER
  - PROPOSED CURB & GUTTER
  - ⊕ EXISTING FIRE HYDRANT
  - ⊕ EXISTING WATER VALVE
  - EXISTING DIRECTIONAL ARROW
  - Ⓟ PROPOSED PARKING COUNT
  - ♿ HANDICAPPED PARKING SPACE
  - ⊙ EXISTING TREE
  - ⊙ EXISTING SIGN
  - ⊙ PROPOSED SIGN
  - ⊙\*28.26 PROPOSED SPOT SHOT
  - PROPOSED DOWN SPOUT

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 Chief Engineer: *John Williams* 6/20/97  
 Chief, Planning Engineering Division: *JTC* DATE  
 Director: *John Williams* 6/20/97  
 Division of Land Development: *John Williams* DATE

Date	No.	Revision Description
7.29.97	1	removed covered walk, added bituminous walk, revised van location

**Heartlands Assisted Living Phase I**  
 An Assisted Living Facility  
 Howard County, Maryland  
 OWNER / DEVELOPER  
 THE HEARTLANDS RETIREMENT COMMUNITY - ELLICOTT CITY 1, INC.  
 c/o CONSTELLATION HEALTH SERVICES, INC.  
 8815 CENTRE PARK DRIVE, SUITE 308  
 COLUMBIA, MARYLAND 21045

**DMW**  
 Dan McCann Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 286-3638  
 Fax: 286-4708  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6.16.92  
 Date  
 STATE OF MARYLAND  
 PROFESSIONAL ENGINEER

SUBDIVISION NAME		SECTION	PLAT	DATE	RECORD	DATE	RECORD
Bon Secours Ho. Co. Health Park		21	17	12/23/88	17	2	ND
PARCELS B-8, B-9 & B-10		6026					

TITLE: **SITE PLAN**

Des By: MM Scale: 1" = 40' Proj. No.: 81015T  
 Dwn By: JWM Date: 2-13-97  
 Chk By: JWR Approved: 3 of 15

SDP 97.51



