

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	PLAN OF WHEATFIELD WAY, YORKSHIRE DRIVE AND HAYCARRIAGE COURT
3	PROFILES OF WHEATFIELD WAY AND YORKSHIRE DRIVE
4	PROFILE OF HAYCARRIAGE COURT AND STORM DRAIN PROFILES
5	DETAILS AND DRAINAGE AREA MAP
6	S.W.M. PLAN, GRADING AND SEDIMENT CONTROL PLAN
7	S.W.M. NOTES AND DETAILS
8	SEDIMENT CONTROL NOTES AND DETAILS
9	STREET TREE PLAN

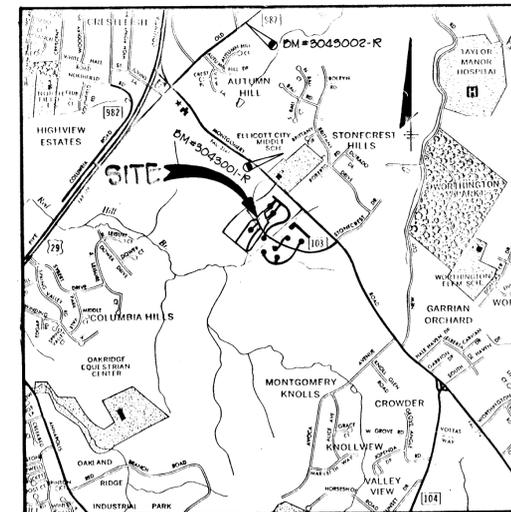
# ROADWAY, STORM DRAIN & STORM WATER MANAGEMENT

## LONG GATE

### SECTION 2, AREA 2

### 2ND ELECTION DISTRICT

## HOWARD COUNTY, MARYLAND



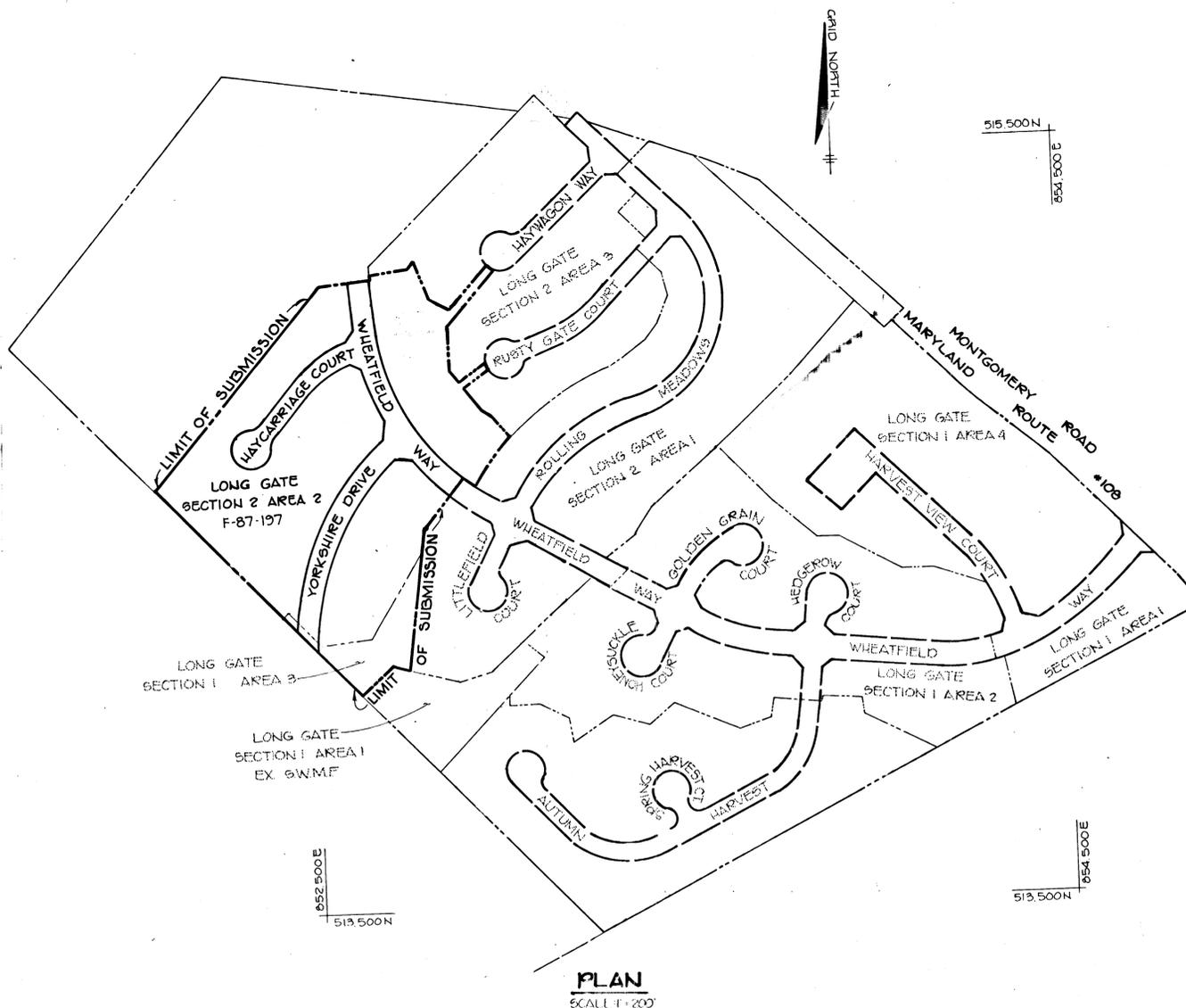
**VICINITY MAP**  
SCALE: 1" = 2000'

**GENERAL NOTES**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR ROAD CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES, WHERE DIRECTED BY THE ENGINEER, A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES AT LEAST THREE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 OR 3554
BALTIMORE GAS AND ELECTRIC	539-8000 EXT. 691
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
HOWARD COUNTY CONSTRUCTION INSPECTION SURVEY DIVISION	992-2417/2418
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURB RETURNS SHALL HAVE 20.0' RADIUS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1978 EDITION.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:

ALL CUL-DE-SAC DESIGNED FOR 30 M.P.H.,
ALL MINOR COLLECTORS DESIGNED FOR 35 M.P.H.,
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM 1929.
- ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM 95% OF MAXIMUM OBTAINABLE DENSITY DETERMINED BY MARSHALL PROCTOR.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED R-SC PER 8-2-85 COMPREHENSIVE ZONING PLAN.
- TOPO TAKEN FROM AERIAL PHOTOGRAMMETRY BY MAPPING ASSOCIATES, FLOWN MAY, 1986.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>[Signature]</i>	8-31-87
CHIEF, BUREAU OF ENGINEERING	DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING	
<i>[Signature]</i>	8-27-87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION	DATE
NO	REVISION
<b>TRACY, SCHULTE &amp; ASSOCIATES INC.</b> planning • architecture • engineering 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105	
OWNER	PROJECT
SECURITY DEVELOPMENT CORP PO BOX 417 ELLICOTT CITY, MARYLAND 21043	<b>LONG GATE</b> SECTION 2 AREA 2 LOTS 243 THRU 287
DEVELOPER	LOCATION
SECURITY DEVELOPMENT CORP PO BOX 417 ELLICOTT CITY, MARYLAND 21043	2 <sup>ND</sup> ELECTION DISTRICT PARCEL 18 HOWARD COUNTY, MD TAX MAP NO 30 ZONING MAP NO 30
DES	TITLE
JKT/JRS	<b>TITLE SHEET</b>
DRN	ZB-813M P-87-41 507-11
COT	DATE AUGUST 24, 1987 PROJECT NO 8708 PSD
	SCALE 1" = 200' DRAWING 1 OF 9

2911

F-87-197

**ε CURVE DATA**  
 HAYCARRIAGE COURT  
 ε STA 0+150.0 TO ε STA 1+97.96  
 Δ = 50° 51' 12"  
 R = 275.00'  
 L = 104.66'  
 T = 96.09'  
 D = 20° 50' 05"  
 CHD = 95.97' @ 26° W, 101.42'

**ε CURVE DATA**  
 YORKSHIRE DRIVE  
 ε STA 0+07.27 TO ε STA 6+32.26  
 Δ = 56° 49' 40"  
 R = 625.00'  
 L = 619.90'  
 T = 332.10'  
 D = 00° 16' 19"  
 CHD = 52.67' @ 26° W, 594.00'

**ε CURVE DATA**  
 WHEATFIELD WAY  
 ε STA 20+67.45 TO ε STA 25+60.55  
 Δ = 46° 40' 55"  
 R = 605.00'  
 L = 492.95'  
 T = 261.07'  
 D = 09° 20' 15"  
 CHD = N29° 54' 33"W, 479.41'



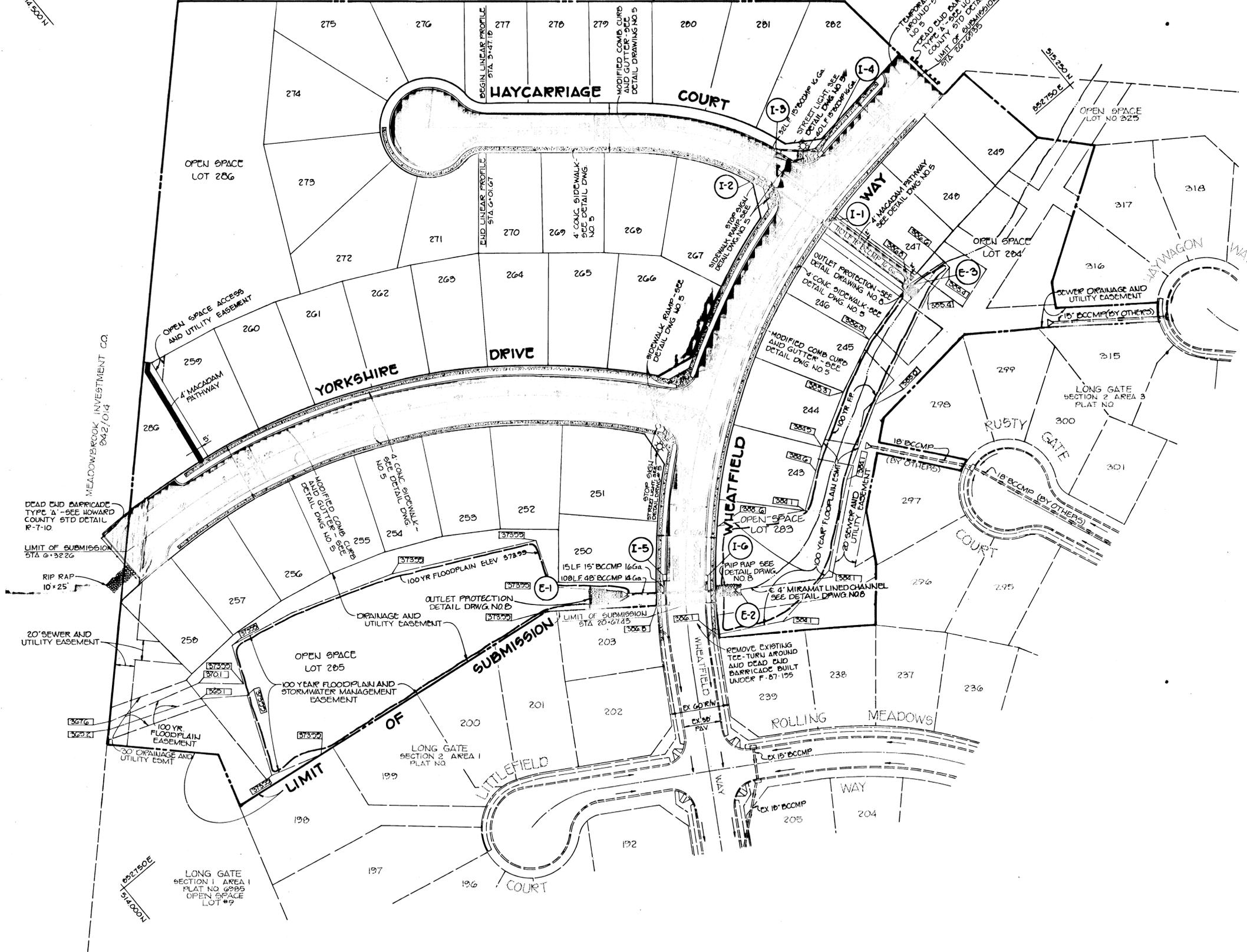
THE LONG GATE VENTURE  
 14%G/606

STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	INV IN	INV OUT	TOP ELEV	DESCRIPTION
1-1	A-5 W/Defl.	21.69' RT of ε STA 24+87.30 WHEATFIELD WAY	389.85	389.65	392.60	HO. CO. STD SD 4.01
1-2	A-10 W/Defl.	17.48' LT of ε STA 0+53.69 HAYCARRIAGE COURT	391.75	391.25	397.19	HO. CO. STD SD 4.02
1-3	A-10 W/Defl.	17.48' RT of ε STA 0+53.69 HAYCARRIAGE COURT	392.59	392.39	397.19	HO. CO. STD SD 4.02
1-4	A-5 W/Defl.	22.41' LT of ε STA 25+44.12 WHEATFIELD WAY	-----	392.80	396.37	HO. CO. STD SD 4.01
1-5	A-10	22.41' LT of ε STA 20+92.62 WHEATFIELD WAY	-----	379.63	383.61	HO. CO. STD SD 4.01
1-6	A-5 W/Defl.	22.41' RT of ε STA 20+92.62 WHEATFIELD WAY	-----	377.89	383.61	HO. CO. STD SD 4.01
E-1	48" METAL END SECT.	59' LT of ε STA 20+79.66 WHEATFIELD WAY	374.11	373.98	-----	HO. CO. STD SD 5.61
E-2	48" METAL END SECT.	49' RT of ε STA 20+79.66 WHEATFIELD WAY	377.54	377.35	-----	HO. CO. STD SD 5.61
E-3	18" METAL END SECT.	150.00' RT of ε STA 24+87.30 WHEATFIELD WAY	369.27	369.12	-----	HO. CO. STD SD 5.61

NOTE: ALL STORM DRAIN BEDDING SHALL BE CLASS C UNLESS OTHERWISE NOTED

154'300N  
 154'300E

LIMIT OF SUBMISSION



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 [Signature] 8-31-87  
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 [Signature] 8-27-87  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

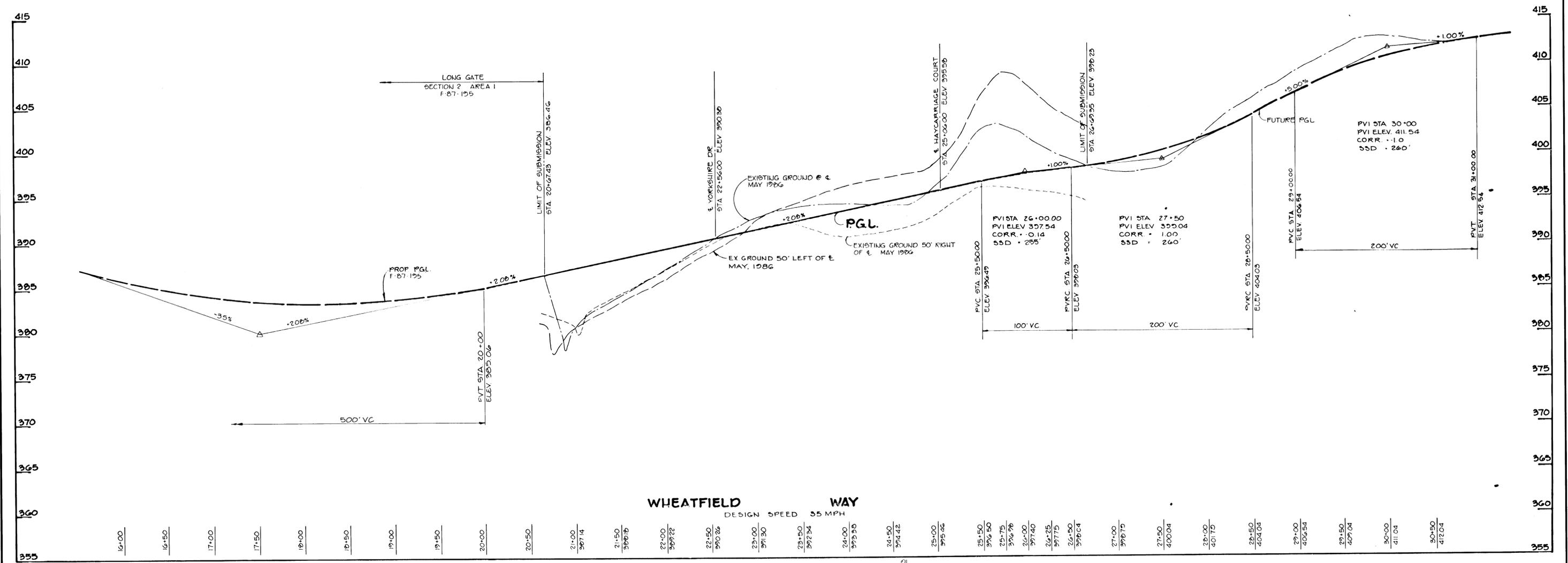
NO	DATE	REVISION

**TRACY, SCHULTE & ASSOCIATES INC.**  
 planning • architecture • engineering  
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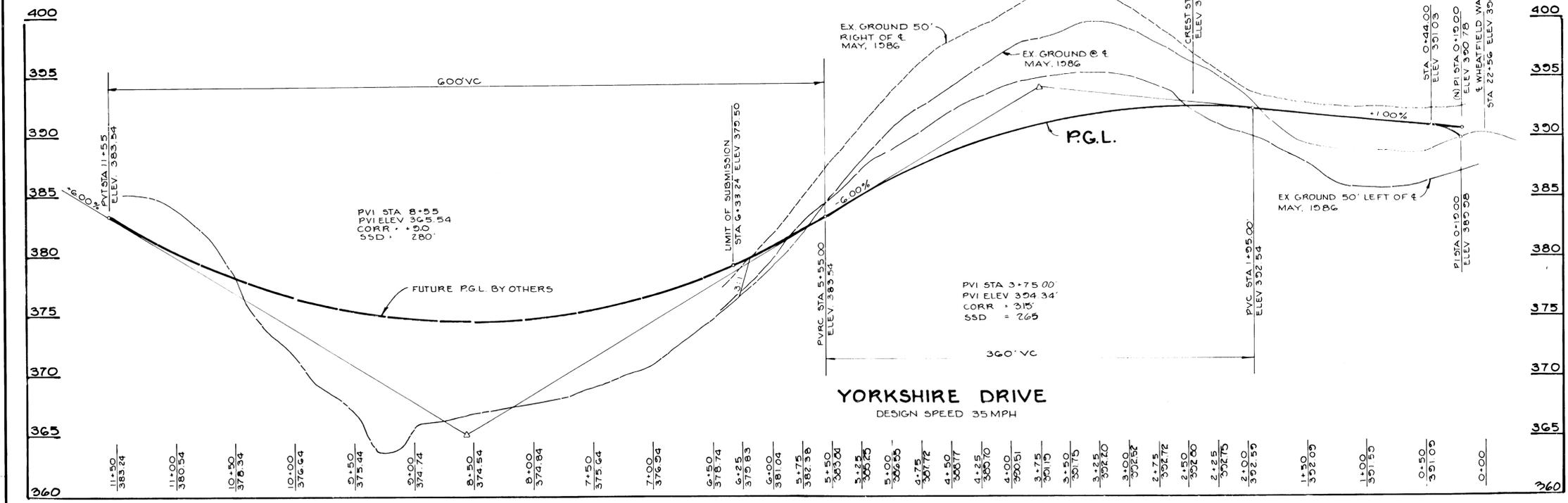
OWNER SECURITY DEVELOPMENT CORP PO BOX 417 ELLCOTT CITY, MARYLAND 21043	PROJECT <b>LONG GATE</b> SECTION 2 AREA 2 LOTS 243 THRU 287
DEVELOPER SECURITY DEVELOPMENT CORP PO BOX 417 ELLCOTT CITY, MARYLAND 21043	LOCATION 2 <sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY MD TAX MAP NO 30 ZONING MAP NO 30 PARCEL 10
TITLE <b>PLAN OF WHEATFIELD WAY AND LITTLEFIELD COURT</b>	DATE AUGUST 24, 1987
DES. CDT	DRN. CDT
SCALE 1" = 50'	DRAWING 2 OF 2

F-87-197

2911



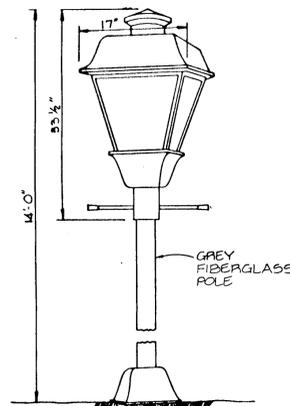
**WHEATFIELD WAY**  
DESIGN SPEED 35 MPH



**YORKSHIRE DRIVE**  
DESIGN SPEED 35 MPH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		8-31-87
 CHIEF, BUREAU OF ENGINEERING		DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING		8-27-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION		DATE
NO	DATE	REVISION
<b>TRACY, SCHULTE &amp; ASSOCIATES INC.</b> planning • architecture • engineering 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465 6105		
OWNER SECURITY DEVELOPMENT CORP PO BOX 417 ELLCOTT CITY MARYLAND 21043		PROJECT <b>LONG GATE</b> SECTION 2 AREA 2 LOTS 243 THRU 267
DEVELOPER SECURITY DEVELOPMENT CORP PO BOX 417 ELLCOTT CITY MARYLAND 21043		LOCATION 2 <sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY MD TAX MAP NO 30 ZONING MAP NO 30 PARCEL 10
DATE: AUGUST 24, 1987		TITLE <b>PROFILE FOR YORKSHIRE DRIVE AND WHEATFIELD WAY</b>
DES CDT	DRN CDT	SCALE: H: 1" = 50' V: 1" = 5'
PROJECT NO 8708 R6D		DRAWING 3 OF 3

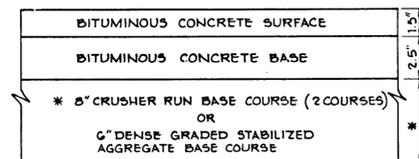




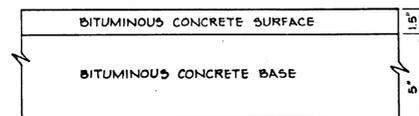
**DETAIL - LIGHTING FIXTURE**

No Scale

NOTE: ALL STREET LIGHT FIXTURES TO BE 175 WATT MERCURY TYPE WITH A MINIMUM OF 7700 LUMENS 14' HIGH WITH GRAY FIBERGLASS POLE AND DIRECTED DOWNWARD. LOCATIONS OF STREET LIGHT FIXTURES ARE ON THE PLAN AND ARE SHOWN THUS ✱



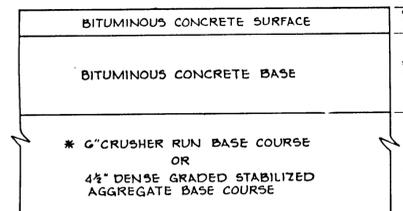
**(ALTERNATE)**



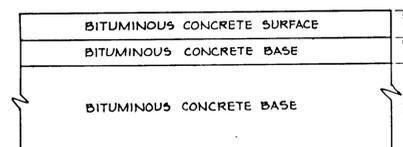
HOWARD COUNTY DESIGN MANUAL VOLUME IV  
STANDARD SPECIFICATIONS AND DETAILS FOR  
CONSTRUCTION (DRAWING R-2.01)

**6 1/2" PAVING, P-2**

HAYCARRIGE COURT



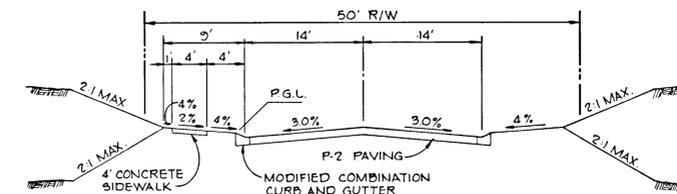
**(ALTERNATE)**



HOWARD COUNTY DESIGN MANUAL VOLUME IV  
STANDARD SPECIFICATIONS AND DETAILS FOR  
CONSTRUCTION (DRAWING R-2.01)

**8 1/2" PAVING, P-3**

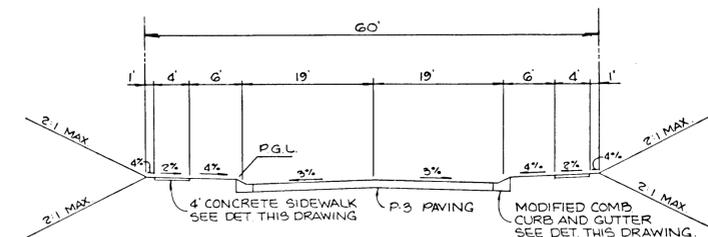
WHEATFIELD WAY  
YORKSHIRE DRIVE



HAYCARRIGE COURT : STA 0+00 TO STA 3+47.18  
CLASSIFICATION : CUL DE SAC  
ZONING : R3C  
DESIGN SPEED : 30 MPH

**TYPICAL SECTION**

NO SCALE



WHEATFIELD WAY : STA 20+6743 TO STA 26+69.35  
CLASSIFICATION : MINOR COLLECTOR  
ZONING : R3C  
DESIGN SPEED : 35 MPH

**TYPICAL SECTION**

NO SCALE

**MACADAM PATHWAY DETAIL**

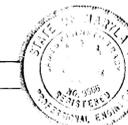
NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard S. King* 8-31-87  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John W. Williams* 8-23-87  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

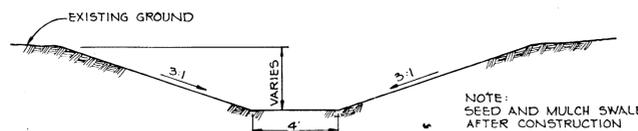
NO DATE REVISION

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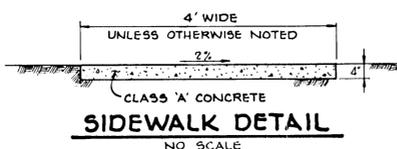
*Richard S. King*

OWNER SECURITY DEVELOPMENT CORP PO BOX 417 ELLCOTT CITY MARYLAND 21043	PROJECT <b>LONG GATE</b> SECTION 2 AREA 2 LOTS 243 THRU 287
DEVELOPER SECURITY DEVELOPMENT CORP PO BOX 417 ELLCOTT CITY MARYLAND 21043	LOCATION 2 <sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY MD TAX MAP NO 30 ZONING MAP NO 30 PARCEL 10
DES CDT	TITLE <b>DETAILS AND DRAINAGE AREA MAP</b> ZB-213M 587-11 P-87-41 DATE AUGUST 24, 1987 PROJECT NO 8708 RSD
DRN CDT/SLB	SCALE NO SCALE DRAWING 5 OF 9



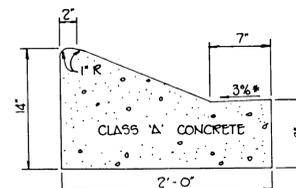
**GRASSED SWALE**

NO SCALE



**SIDEWALK DETAIL**

NO SCALE

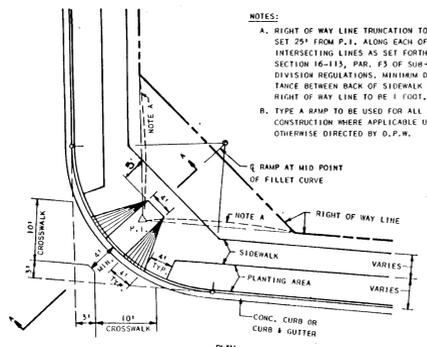


HOWARD COUNTY DESIGN MANUAL VOLUME IV -  
STANDARD SPECIFICATIONS AND DETAILS FOR  
CONSTRUCTION (DRAWING R-3.01)

\* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF THE SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

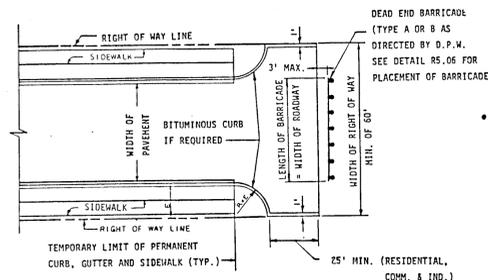
**MODIFIED COMBINATION CURB AND GUTTER**

NO SCALE



**SIDEWALK DETAIL**

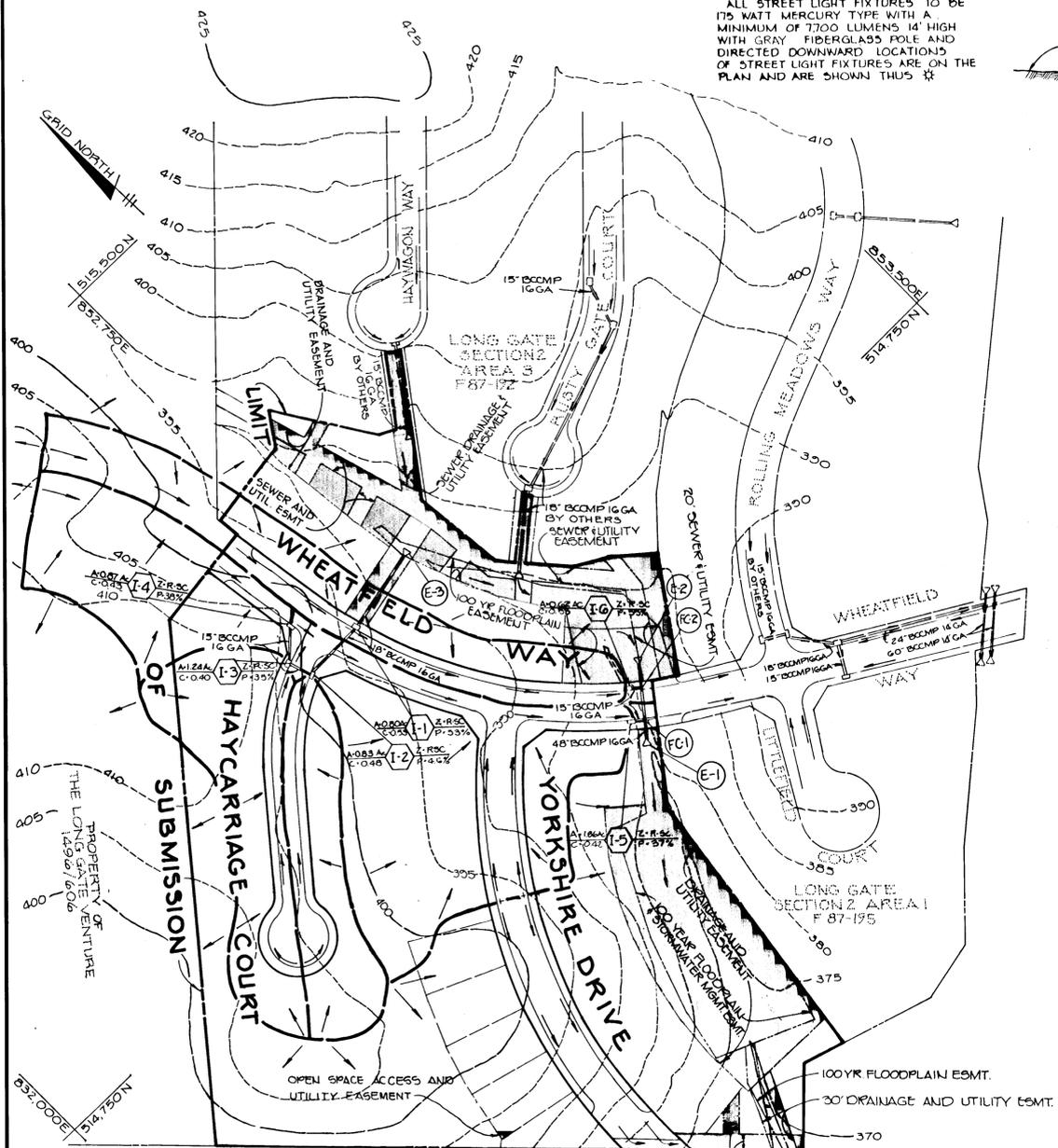
NO SCALE



NOTES:  
1. A TEE TURN-AROUND SHALL BE USED IN LIEU OF A CUL-DE-SAC ONLY IF THE STREET IS TO BE EXTENDED IN THE FUTURE.  
2. BITUMINOUS CURB SHALL EXTEND AROUND THE TEE TURN-AROUND IF AND AS REQUIRED TO CONTROL CURB DRAINAGE FROM THE ROADWAY SECTION.  
3. REFER TO STANDARD R-5.06 FOR TYPICAL ROADWAY PROFILE OF TEMPORARY LIMIT OF PAVING.  
4. FOR LOCAL ROADS, PROVIDE 5' REVERSIBLE EASEMENT EACH END OF THE TEE.  
5. PROVIDE EASEMENTS AS REQUIRED FOR PLACEMENT OF BARRICADE AND ANY NECESSARY GRADING (SEE DETAIL RS.06)

**TEMPORARY TEE TURN AROUND**

NO SCALE



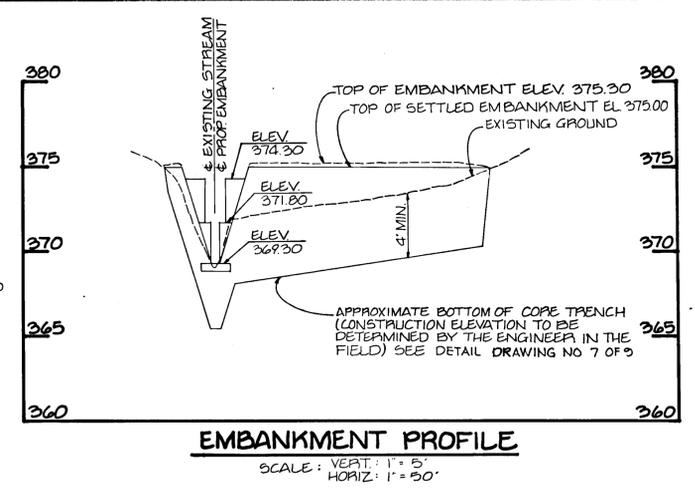
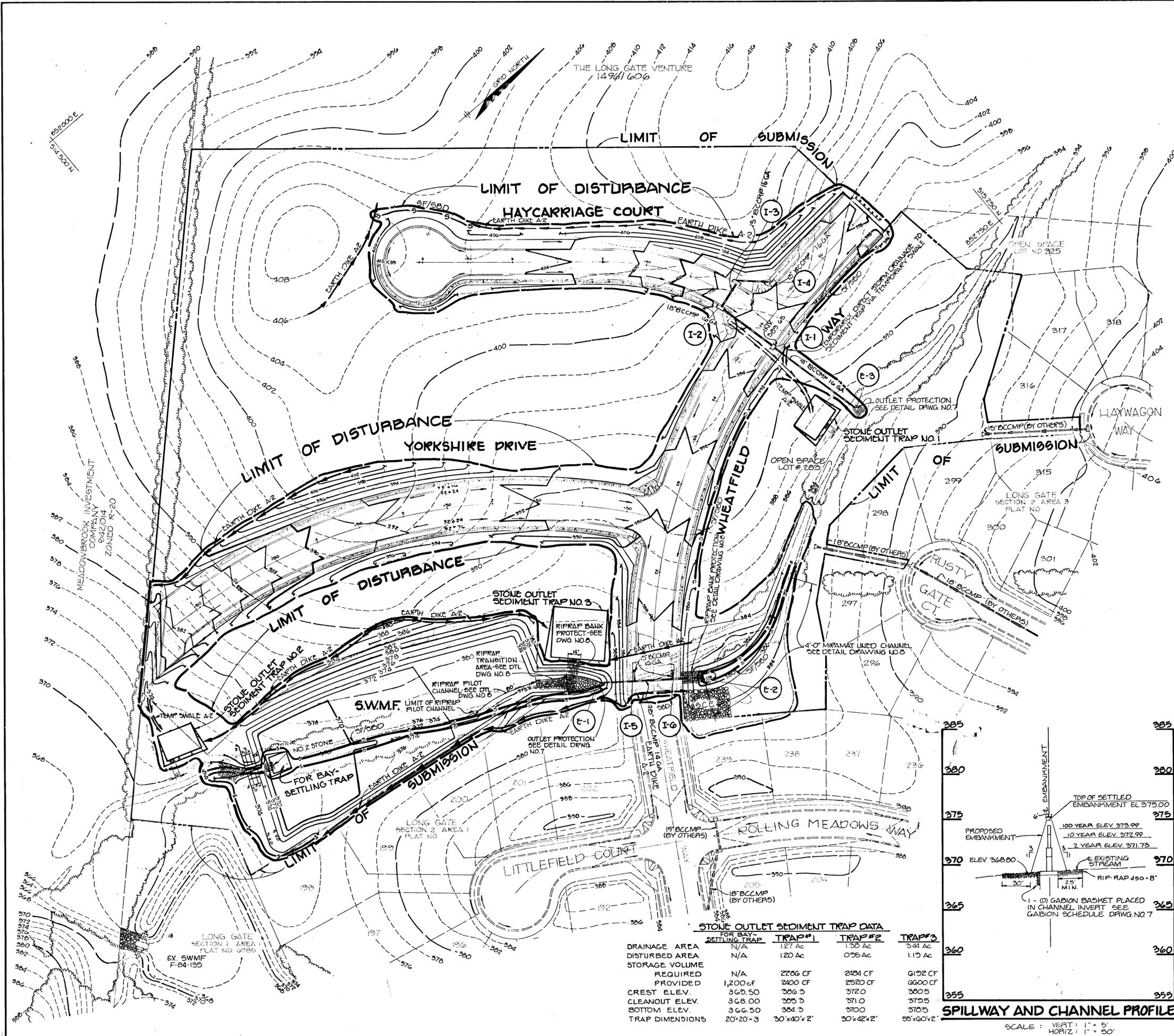
**DRAINAGE AREA MAP**

SCALE: 1"=100'

MEADOWBROOK INVESTMENT COMPANY  
842 1014

1162 2911

F-37-177



BY THE ENGINEER:  
 "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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
 James K. Tracy  
 LICENSE: JAMES K. TRACY, PE #9566  
 DATE: 5-21-87

BY THE DEVELOPER:  
 "I 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
 James R. Moxley Jr.  
 LICENSE: JAMES R. MOXLEY JR., SECURITY DEVELOPMENT CORP.  
 DATE: 5-21-87

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.  
 James M. Helms  
 U.S. SOIL CONSERVATION SERVICE  
 DATE: 8-27-87

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 Robert W. Ziehm  
 HOWARD S.C.D.  
 DATE: 8-27-87

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 William E. Reed  
 CHIEF, BUREAU OF ENGINEERING  
 DATE: 8-31-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 John W. Weidman  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
 DATE: 8-28-87

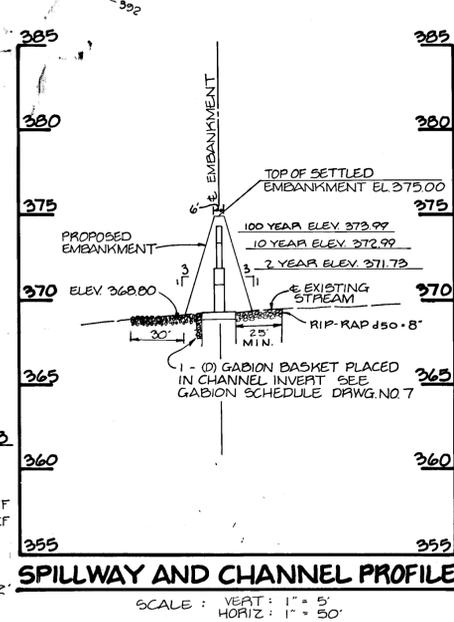
NO	DATE	REVISION

**TRACY, SCHULTE & ASSOCIATES INC.**  
 planning • architecture • engineering  
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105

OWNER SECURITY DEVELOPMENT CORP PO BOX 417 ELLICOTT CITY, MARYLAND 21043	PROJECT <b>LONG GATE</b> SECTION 2 AREA 2 LOTS 243 THRU 287
DEVELOPER SECURITY DEVELOPMENT CORP PO BOX 417 ELLICOTT CITY, MARYLAND 21043	TITLE <b>GRADING, SEDIMENT CONTROL AND 5W.M.F. PLAN</b> ZB-B13M 5-87-11 P87.41
DATE AUGUST 21, 1987	PROJECT NO 8708 R9D
DES CDT	DRN CDT/SLS
SCALE 1" = 50'	DRAWING 6 OF 9

**STONE OUTLET SEDIMENT TRAP DATA**

	TRAP #1	TRAP #2	TRAP #3
DRAINAGE AREA	N/A	1.58 Ac	3.41 Ac
DISTURBED AREA	N/A	0.95 Ac	1.15 Ac
STORAGE VOLUME	N/A	2706 CF	6192 CF
REQUIRED PROVIDED	1,200 CF	2400 CF	6600 CF
CREST ELEV.	369.50	366.3	380.5
CLEANOUT ELEV.	368.00	365.3	379.5
BOTTOM ELEV.	366.50	364.3	378.5
TRAP DIMENSIONS	20'x20'x3'	30'x40'x2'	55'x60'x2'



7911

**I. SITE PREPARATION**

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

**II. EARTH FILL**

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

**Placement**

Areas on which fill to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

**Compaction**

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the Engineer.

**Cutoff Trench**

Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be as shown on the drawings, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

**III. STRUCTURAL BACKFILL**

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

**IV. PIPE CONDUITS**

All pipes shall be circular in cross section.

**A. Corrugated Metal Pipe**

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specifications M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings are commercially available: Nexon, Plast-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminized Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274-791 with watertight coupling bands or flanges.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Coupling bands, anti-seep collars, end sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to the completely watertight. Dimple bands are not considered to be watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

5. Backfilling shall conform to structural backfill as shown above.

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

**B. Reinforced Concrete Pipe**

1. Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. An approved equivalent is AWWA Specification C-301.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3", or as shown on the drawings.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.

4. Backfilling shall conform to structural backfill as shown above.

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

C. For pipes of other materials, specific specifications shall be shown on the drawings.

**V. CONCRETE**

**1. Materials**

a. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

c. Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.

d. Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.

e. Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel conforming to ASTM Specification A-615.

2. Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-4 to 6 U.S. Gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-4. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

3. Mixing - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and of the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.

4. Forms - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

5. Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

6. Consolidating - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

7. Finishing - Defective concrete, honeycombed areas, voids left by the removal of tie rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.

8. Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.

9. Placing Temperature - Concrete may not be placed at temperatures below 37°F with the temperature falling, or 34° with the temperature rising.

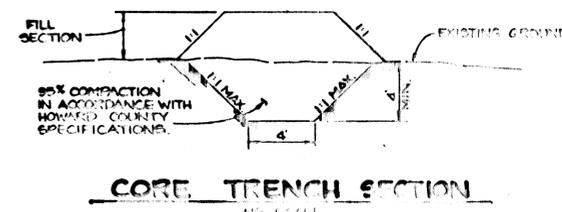
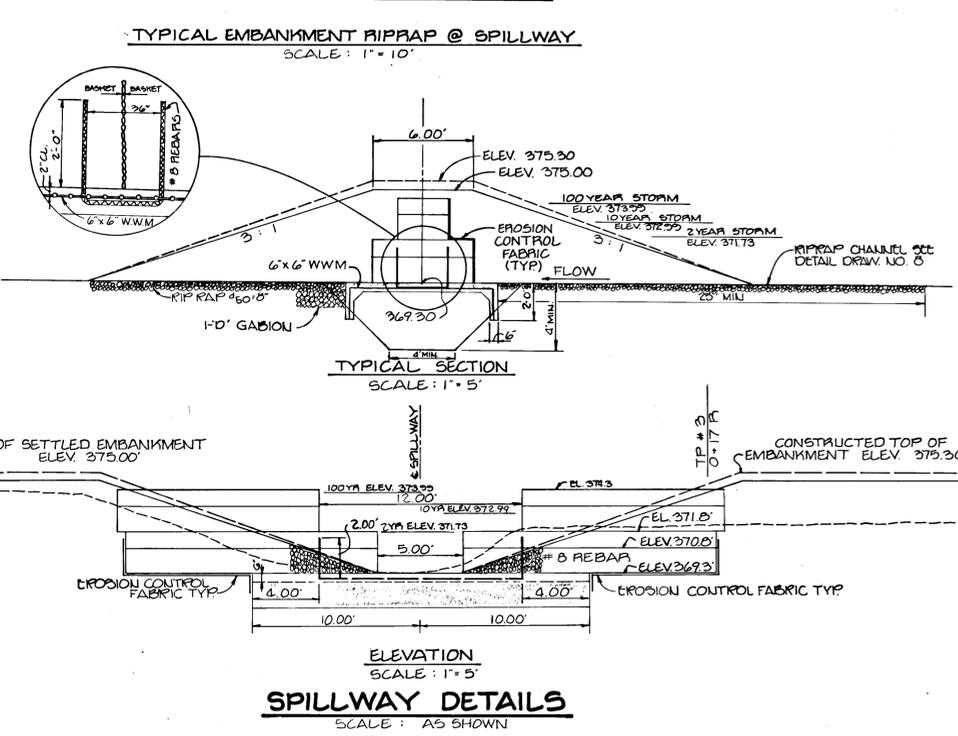
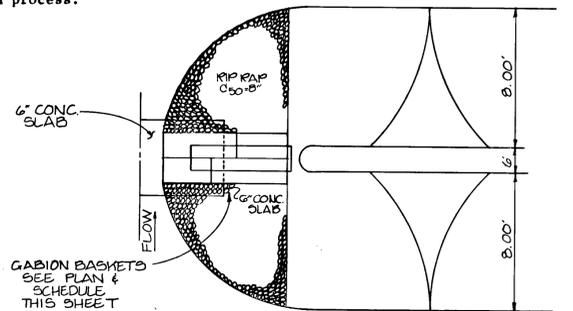
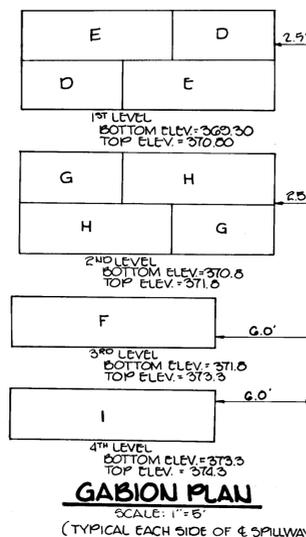
**VI. STABILIZATION**

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

**VII. EROSION AND SEDIMENT CONTROL**

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

GABION SCHEDULE				
TYPE	DIMENSIONS			QUANTITY
	Height	Width	Length	
D	1.5'	3'	6'	5
E	1.5'	3'	9'	4
F	1.5'	3'	12'	2
G	1'	3'	6'	4
H	1'	3'	9'	4
I	1'	3'	12'	2



BY THE ENGINEER:  
 "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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
 James K. Tracy  
 ENGINEER: JAMES K. TRACY #25546  
 DATE: 5-21-87

BY THE DEVELOPER:  
 "I 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
 James R. Murphy  
 DEVELOPER: JAMES R. MURPHY  
 DATE: 5-24-87

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.  
 James M. Helin  
 U.S. SOIL CONSERVATION SERVICE  
 DATE: 8-27-87

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 Robert W. Ziehm  
 HOWARD S.C.D.  
 DATE: 8-27-87

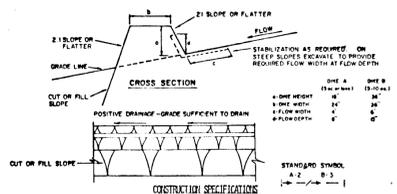
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 John M. Munn  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
 DATE: 8-27-87

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 James R. Tracy  
 CHIEF, BUREAU OF ENGINEERING  
 DATE: 8-31-87

NO	DATE	REVISION

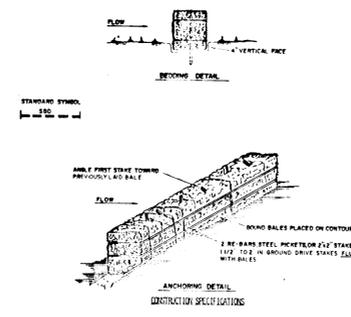
TRACY, SCHULTE & ASSOCIATES INC.  
 planning • architecture • engineering  
 8450 Baltimore National Pike • Suite 34 • Ellicott City, Maryland 21043 • (301) 465-6105  
 STATE OF MARYLAND PROFESSIONAL ENGINEER

OWNER SECURITY DEVELOPMENT CORP. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043	PROJECT <b>LONG GATE</b> SECTION 2, AREA 2 LOTS 243 THRU 287
DEVELOPER SECURITY DEVELOPMENT CORP. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043	LOCATION PARCEL 18 TAX MAP NO. 30 ZONING MAP NO. 30 2nd ELECTION DISTRICT HOWARD COUNTY, MD.
DES. JJB.	TITLE <b>STORM WATER MANAGEMENT SPECIFICATIONS &amp; DETAILS</b> 28-BISM 587-11 P87-41
DRN. SAB / JH	DATE: AUGUST 21, 1987 PROJECT NO: 8708 RSD SCALE: AS SHOWN DRAWING: 7 OF 9



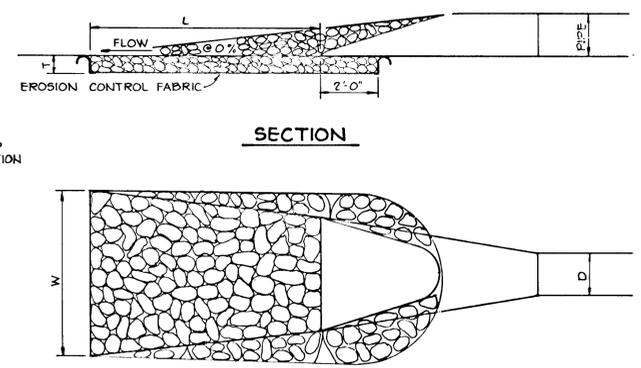
TYPE OF MATERIAL	CHANNEL SIZE	DIKE A	DIKE B
1	5-3.0'	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0'	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELLENT QUALITY STONE
3	5.1-8.0'	SEED WITH JUTE OR SOIL	LINED RIP-RAP 4-8"
4	8.1-20'	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

**EARTH DIKE**  
NO SCALE



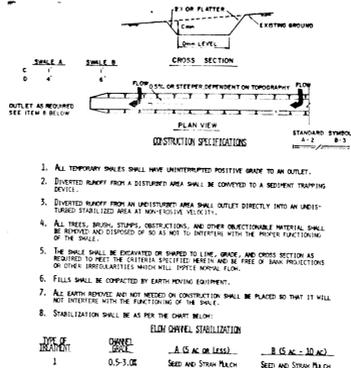
TYPE OF MATERIAL	CHANNEL SIZE	DIKE A	DIKE B
1	5-3.0'	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0'	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELLENT QUALITY STONE
3	5.1-8.0'	SEED WITH JUTE OR SOIL	LINED RIP-RAP 4-8"
4	8.1-20'	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

**STRAW BALE DIKE**  
NO SCALE



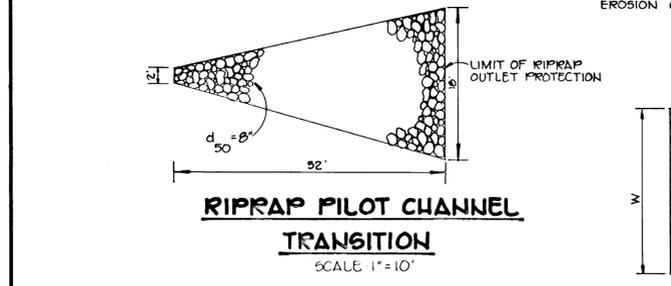
STRUCTURE	d-50	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	4"	34'	18'	6"
E-3	4"	9'	10.5'	6"

**OUTLET PROTECTION DETAIL**  
NO SCALE



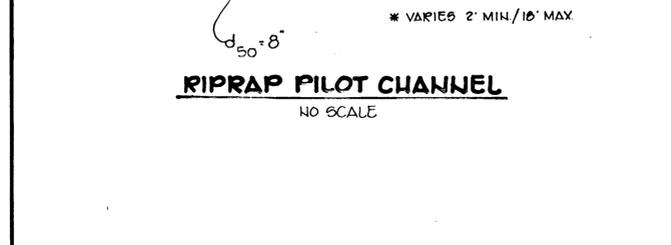
TYPE OF MATERIAL	CHANNEL SIZE	DIKE A	DIKE B
1	5-3.0'	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0'	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELLENT QUALITY STONE
3	5.1-8.0'	SEED WITH JUTE OR SOIL	LINED RIP-RAP 4-8"
4	8.1-20'	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

**TEMPORARY SWALE**  
NO SCALE



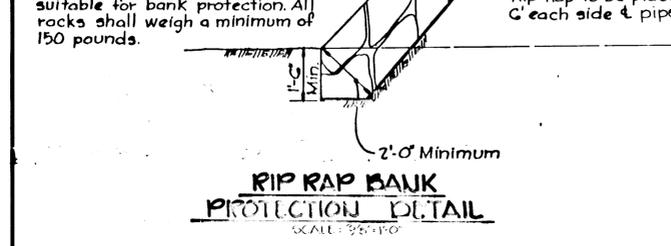
TYPE OF MATERIAL	CHANNEL SIZE	DIKE A	DIKE B
1	5-3.0'	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0'	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELLENT QUALITY STONE
3	5.1-8.0'	SEED WITH JUTE OR SOIL	LINED RIP-RAP 4-8"
4	8.1-20'	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

**RIPRAP PILOT CHANNEL TRANSITION**  
SCALE 1"=10'



TYPE OF MATERIAL	CHANNEL SIZE	DIKE A	DIKE B
1	5-3.0'	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0'	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELLENT QUALITY STONE
3	5.1-8.0'	SEED WITH JUTE OR SOIL	LINED RIP-RAP 4-8"
4	8.1-20'	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

**RIPRAP PILOT CHANNEL**  
NO SCALE



TYPE OF MATERIAL	CHANNEL SIZE	DIKE A	DIKE B
1	5-3.0'	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0'	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELLENT QUALITY STONE
3	5.1-8.0'	SEED WITH JUTE OR SOIL	LINED RIP-RAP 4-8"
4	8.1-20'	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

**RIPRAP BANK PROTECTION DETAIL**  
SCALE 1"=10'

Note: Erosion Control Fabric shall be as manufactured by Carthage Mills, Inc. Erosion Control Division, 124 W. GG<sup>TH</sup> Street Cincinnati, Ohio or approved equal.

Rip Rap to consist of dense rocks of random shapes and sizes, resistant to the action of air and water and suitable for bank protection. All rocks shall weigh a minimum of 150 pounds.

Note: Rip Rap to be placed 6" each side of pipe.

Note: 2'-0" Minimum

Note: 1'-6" Minimum

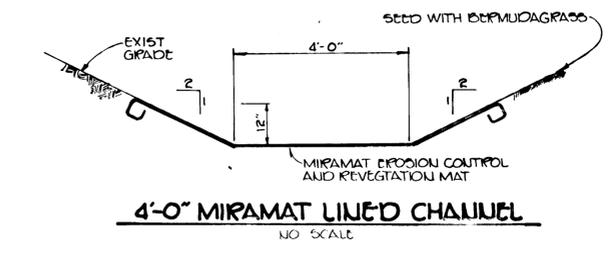
Note: 2'-0" Minimum

- SEDIMENT CONTROL NOTES**
- A minimum of 24 hours notice must be given to the Carroll County Water Resources Administration prior to the start of any construction.
  - All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control.
  - Following initial soil disturbance or redistribution, permanent or temporary stabilization (specified on plans) shall be completed within seven calendar days to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days 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 Vol. 1, Chapter 12, of the Carroll County Design Manual, Storm Drainage.
  - All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control. For permanent seeding (Sec. 51), (Sec. 52), (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52), temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
  - All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Carroll County Water Resources Administration Inspector.
  - SITE ANALYSIS:**  
TOTAL AREA OF SITE: 12.64 ACRES  
AREA DISTURBED: 3.21 ACRES  
AREA TO BE ROOFED OR PAVED: 10.05 ACRES  
AREA TO BE VEGETATIVELY STABILIZED: 10.05 ACRES  
TOTAL CUT: 88.96 CU. YDS.  
TOTAL FILL: 10.05 CU. YDS.  
OFFSITE WASTE/BORROW AREA LOCATION: ON SITE.
  - 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 CARROLL COUNTY WATER RESOURCES ADMINISTRATION INSPECTOR.
  - ALL SEDIMENT TRAPS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER.

- PERMANENT SEEDING NOTES**
- SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 lbs/1000 sq ft) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 lbs/1000 sq ft) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREA-BASED FERTILIZER (9 lbs/1000 sq ft).
  - ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 lbs/1000 sq ft) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (22 lbs/1000 sq ft) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
- SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 lbs/1000 sq ft) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 lbs/1000 sq ft) OF SEEDING LOGGRASS. 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) 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 ft) OF UNBOTTLED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 gal/1000 sq ft) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 gal/1000 sq ft) FOR ANCHORING.
- MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

- TEMPORARY SEEDING NOTES**
- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 lbs/1000 sq ft)
- SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 25 BUSHEL PER ACRE OF ANNUAL RYE (3.2 lbs/1000 sq ft). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF SEEDING LOGGRASS (0.7 lbs/1000 sq ft). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH OR ANCHOR STRAW AS SOON AS POSSIBLE IN THE SPRING. ON USE SURF.
- MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 lbs/1000 sq ft) OF UNBOTTLED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 gal/1000 sq ft) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 gal/1000 sq ft) FOR ANCHORING. REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

- SEQUENCE OF CONSTRUCTION**
- DAY 1. OBTAIN GRADING PERMIT.
  - DAY 2. CLEAR AND GRUB AREA FOR AND INSTALL STABILIZED CONSTRUCTION ENTRANCE.
  - DAY 2-3. INSTALL 48" BCMP UNDER WHEATFIELD WAY, STA 20+80, AND BACKFILL FOR ACCESS ACROSS EXISTING STREAM.
  - DAY 3-6. CLEAR AND GRUB AREAS FOR SEDIMENT CONTROL DEVICES FOR SWM FACILITY ONLY.
  - DAY 6-11. INSTALL SEDIMENT CONTROL DEVICES FOR SWM FACILITY.
  - DAY 11-16. CLEAR AND GRUB AREA WITHIN LIMITS OF SWM FACILITY.
  - DAY 16-31. CONSTRUCT SWM FACILITY AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
  - DAY 31-38. INSTALL REMAINDER OF SEDIMENT CONTROL DEVICES AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES.
  - DAY 38-52. GRADE REMAINDER OF SITE.
  - DAY 52-55. GRADE CHANNEL RELOCATION AT E-2 AND STABILIZE IMMEDIATELY.
  - DAY 55-97. INSTALL ALL UTILITIES. NOTE: THE BACK OF INLET I-1 AND THE 16" BCMP BETWEEN E-3 AND I-1 CANNOT BE COMPLETED AT THIS TIME. HOWEVER, IT MAY BE COMPLETED FROM E-3 TO STATION 0+0. STORM DRAINAGE EXITING FROM I-1 SHALL BE DIVERTED TO SEDIMENT TRAP NO. 1 VIA THE TEMPORARY SWALE.
  - DAY 97-101. COMPLETE GRADING OPERATION AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
  - DAY 101-122. COMPLETE ALL ROADWAY CONSTRUCTION AND STABILIZE ALL DISTURBED AREAS AS PER PERMANENT SEEDING NOTES.
  - DAY 122-127. UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR, COMPLETE CONSTRUCTION OF 16" BCMP AT I-1 AND REMOVE ALL SEDIMENT CONTROL DEVICES AND SEED DISTURBED AREAS AS PER PERMANENT SEEDING NOTES.



**4" MIRAMAT LINED CHANNEL**  
NO SCALE

BY THE DEVELOPER:  
"I 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
*James R. Moxley, Jr.*  
DEVELOPER: JAMES R. MOXLEY, JR.  
SECURITY DEVELOPMENT CORP. - PRESIDENT  
5-21-87 DATE

BY THE ENGINEER:  
"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 NOTICED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
*James K. Tracy*  
ENGINEER: JAMES K. TRACY, P.E. NO 0566  
5-21-87 DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
APPROVED: *Robert W. Zickm*  
HOWARD S.C.D.  
8-27-87 DATE

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.  
*John M. Walsh*  
U.S. SOIL CONSERVATION SERVICE  
8-27-87 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William E. Reay*  
CHIEF, BUREAU OF ENGINEERING  
8-31-87 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*John W. Wachman*  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
8-27-87 DATE

NO	DATE	REVISION

**TRACY, SCHULTE & ASSOCIATES INC.**  
planning • architecture • engineering  
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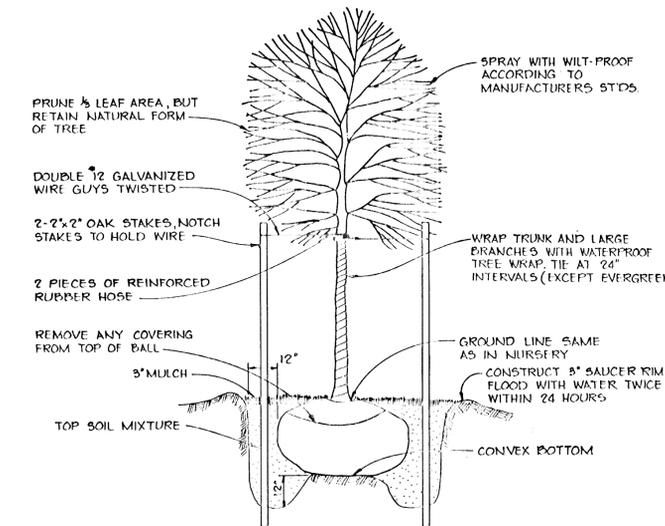
OWNER	PROJECT
SECURITY DEVELOPMENT CORP P.O. BOX 417 ELLCOTT CITY, MARYLAND 21043	<b>LONG GATE</b> SECTION 2 AREA 2 LOTS 233 THRU 287
DEVELOPER	LOCATION
SECURITY DEVELOPMENT CORP P.O. BOX 417 ELLCOTT CITY, MARYLAND 21043	PARCEL 1B TAX MAP NO. 30 ZONING MAP NO. 30 2nd ELECTION DISTRICT HOWARD COUNTY, MD
TITLE	DATE
SEDIMENT CONTROL NOTES AND DETAILS	08-11-87
DESIGNER	SCALE
DES RJW	SCALE AS SHOWN
DRAWN	DRAWING
DRN SAB	8 OF 9

F-87-197

**PLANT LIST**

SYMBOL	QUANTITY	NAME	REMARKS
○	11	ACER RUBRUM Red Maple	2 1/2 Min. Cal. B & B Full Head
○	11	QUERCUS PALUSTRIS Pin Oak	
○	11	ACER SACCHARUM Sugar Maple	
○	11	QUERCUS BOREALIS Red Oak	
<b>TOTAL</b>	<b>44</b>		

LENGTH OF PROPOSED ROADS 1501.35 + 40 + 39.5  
 LENGTH OF LINEAR PROFILES 254.49 + 80 + 3.2  
**TOTAL REQUIRED 427**  
**TOTAL PROVIDED 44**



**TREE PLANTING DETAIL**  
NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William E. Riley* 8-31-87  
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John W. Muschman* 8-27-87  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

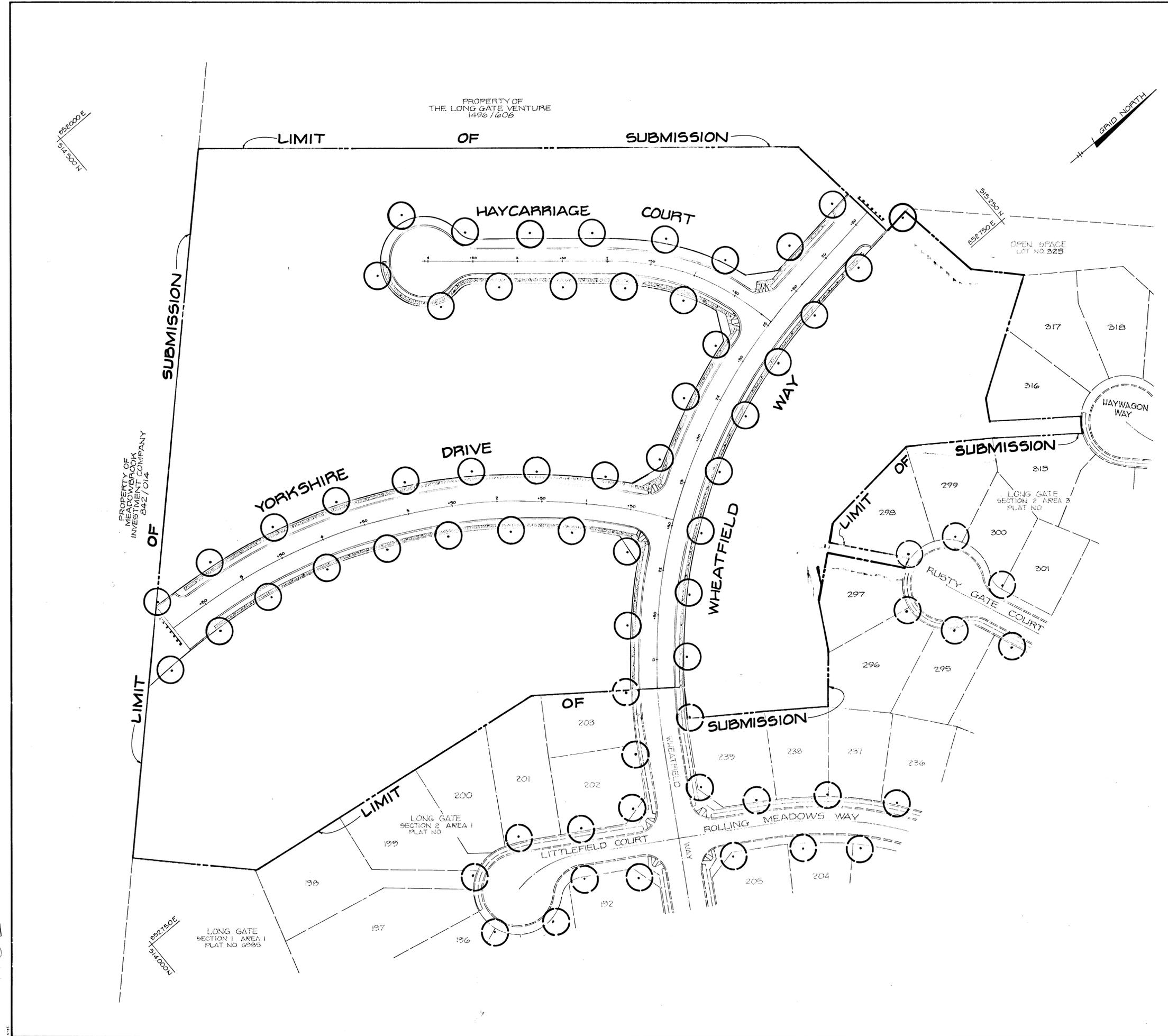
NO	DATE	REVISION

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*James K. Tracy*

OWNER: SECURITY DEVELOPMENT CORP P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043	PROJECT: <b>LONG GATE</b> SECTION 2 AREA 2 LOTS 203 THRU 287
DEVELOPER: SECURITY DEVELOPMENT CORP P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043	LOCATION: 2 <sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY MD TAX MAP NO 30 ZONING MAP NO 30 PARCEL 1B
TITLE: <b>STREET TREE PLAN</b> ZB-813M 6-87-11 P87.41	DATE: AUGUST 24, 1987 PROJECT NO 8708 R6D
DES. CDT. DRN. CDT. / JH	SCALE 1" = 50' DRAWING 9 OF 9

F-87-197



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