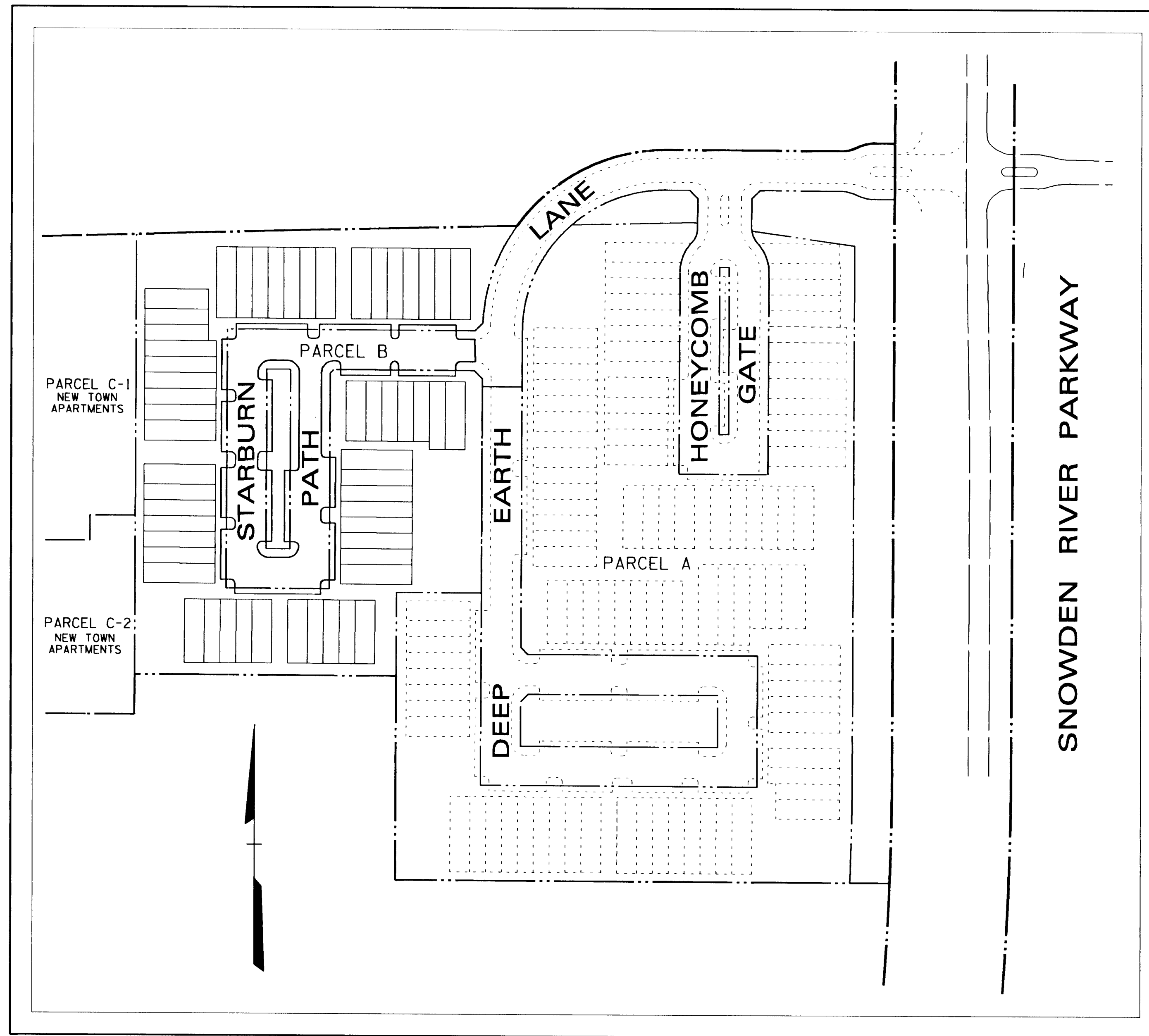
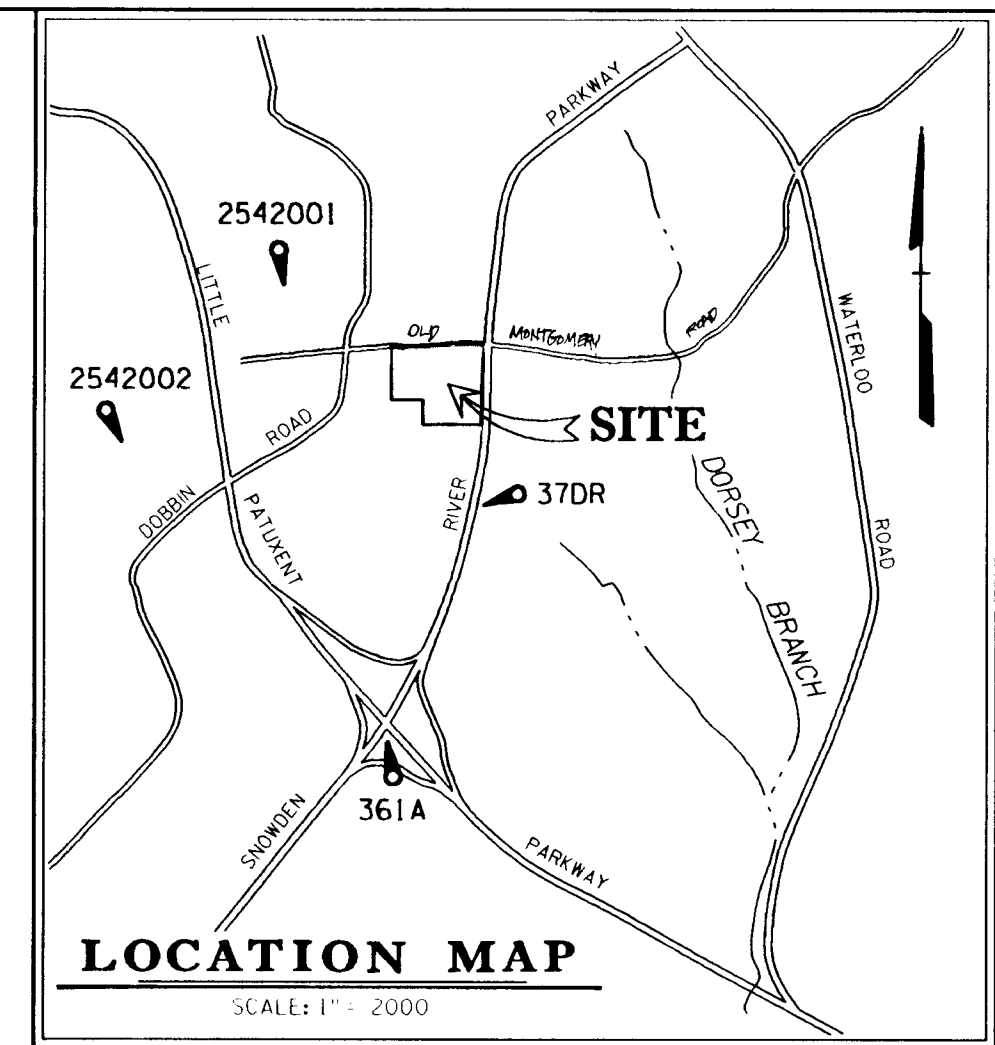


VILLAGE OF LONGREACH

SECTION 4, AREA 3, PHASE 220

HOWARD COUNTY, MARYLAND



PLAN VIEW
SCALE: 1" = 100'

BENCHMARK
DESCRIPTION
STATION 37DR (1/4" REBAR)
N169881.1794, E416566.1155 (FOR HORIZONTAL CONTROL ONLY)
STATION IS LOCATED 0.45± MILES NORTH OF RTE. 175
AND 46'± EAST OF THE EAST CURB OF SNOWDEN RIVER PARKWAY

BENCHMARK
DESCRIPTION
STATION 361A (CONCRETE MONUMENT)
N169205.9263, E416313.5119 (FOR HORIZONTAL CONTROL ONLY)
STATION IS LOCATED AT THE SOUTHEAST CORNER OF THE
INTERSECTION OF SNOWDEN RIVER PARKWAY AND RTE. 175
3'± FROM CURB AND 5.7'± FROM GUARDRAIL END

BENCHMARK
DESCRIPTION
STATION 2542001 (CONCRETE MONUMENT)
ELEV. 426.971 (FOR VERTICAL CONTROL ONLY)
STATION IS LOCATED ON BG&E TRANSMISSION
LINE 1060'± S.W. OF DOBBIN ROAD

BENCHMARK
DESCRIPTION
STATION 2542002 (CONCRETE MONUMENT)
ELEV. 363.638 (FOR VERTICAL CONTROL ONLY)
STATION IS LOCATED 1000'± WEST OF RTE. 175
ON TRANSMISSION LINE AT G. & E. TOWER 19-E
NEAR HANOVERS RESTAURANT ENTRANCE

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1 OF 6	COVER SHEET
2 OF 6	ROAD CONSTRUCTION PLAN
3 OF 6	ROAD CONSTRUCTION DETAILS & STORM DRAIN PROFILES
4 OF 6	STORM DRAIN DRAINAGE AREA MAP
5 OF 6	GRADING PLAN
6 OF 6	SEDIMENT & EROSION CONTROL PLAN

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF CONSTRUCTION INSPECTION AT (301) 792-7272 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- PROJECT BACKGROUND:
LOCATION: SNOWDEN RIVER PARKWAY
TAX MAP: 36
PARCEL: PART OF PARCEL 50
ZONING: NEW TOWN PER 8/2/85 COMPREHENSIVE ZONING
ZB/BA REF: 918-M
ELECTION DISTRICT: 6TH
SECTION/AREA: SECTION 4, AREA 3, PHASE 220
TOTAL TRACT AREA: 5.382 AC.
NUMBER OF PROPOSED LOTS: 57
COMPREHENSIVE SKETCH PLAN: SP 93-10
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- TOPOGRAPHY SHOWN HEREON IS TAKEN FROM AERIAL MAPS DATED 1963 PREPARED FOR HOWARD RESEARCH AND DEVELOPMENT BY MAPS, INC., AND AS UPDATED BY FIELD OBSERVATION PERFORMED IN 1992.
- HORIZONTAL DATUM: NAD 83, VERTICAL DATUM: NGVD 29
- LIGHT POLES AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III, ROADS AND BRIDGES.
- PUBLIC WATER AND SEWER SYSTEMS TO BE MADE AVAILABLE AND UTILIZED.
- THIS PROPERTY IS LOCATED WITHIN THE HOWARD COUNTY METROPOLITAN DISTRICT.
- WETLAND EVALUATION PREPARED BY GEOTECHNOLOGY ASSOCIATES, INC. AUGUST 31, 1992.
- TRAFFIC STUDY PREPARED BY WELLS AND ASSOCIATES OCTOBER 19, 1992 AND UPDATED APRIL 1, 1993.
- EXISTING UTILITIES LOCATED BY DMW.
- OLD MONTGOMERY ROAD WAS ABANDONED PER RESOLUTION NO. 5 DATED APRIL 1988.
- WP-93-43, APPROVED DECEMBER 8, 1992, TO WAIVE SECTION 16.116(C)(6) TO ALLOW GRADING AND REMOVAL OF VEGETATION IN WETLAND AND STREAM BUFFERS.
- PRIVATE MAINTENANCE WITHIN COUNTY RIGHT-OF-WAY SHALL INCLUDE ROUTINE MAINTENANCE SUCH AS LITTER REMOVAL, STRIPPING, ETC. THE COUNTY SHALL BE RESPONSIBLE FOR PAVEMENT RESURFACING AND STRUCTURAL (E.G. CURBS, DRAINS) REPAIR.

THE PURPOSE OF THIS PLAN IS TO PROVIDE CONSTRUCTION DETAILS FOR THE CONSTRUCTION OF STARBURN PATH.

FOR CONSTRUCTION DETAILS FOR DEEP EARTH LANE REFER TO F-93-130 AND F-93-131.

FOR CONSTRUCTION DETAILS FOR HONEYCOMB GATE REFER TO F-93-131.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
Stephen M. Jones 9-21-93
CHIEF, BUREAU OF HIGHWAYS DATE

Paul D. Eason 10/20/93
CHIEF, BUREAU OF ENGINEERING DATE

John P. ... 10/20/93
CHIEF, LAND DEVELOPMENT DIVISION M.K. DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Gina Swinamy 10/20/93
CHIEF, DIVISION OF LAND DEVELOPMENT & RESEARCH DATE

Date	No.	Revision Description

LONGREACH
SECTION 4, AREA 3, PHASE 220
OWNER / DEVELOPER

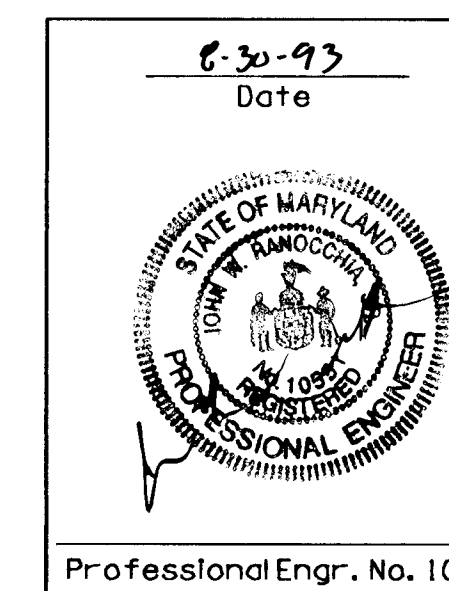
THE HOWARD RESEARCH & DEVELOPMENT CORP.
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

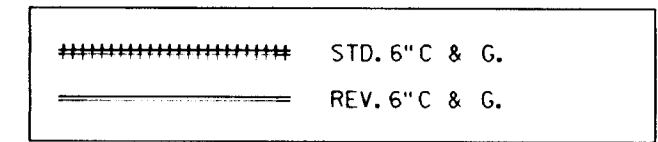
AREA LOTS B-1 THRU B-57
TAX MAP 36.37 PART OF PARCEL 50
6TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

TITLE **COVER SHEET**

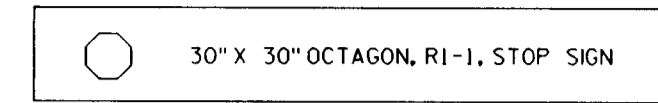
Des By	MAT	Scale	AS SHOWN	Proj. No.	890880
Drn By	MAT	Date	4/12/93		
Chk By	JWR	Approved			1 OF 6



CURB & GUTTER LEGEND

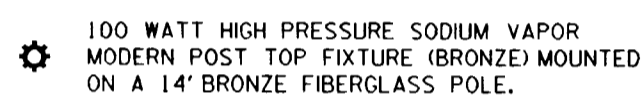


STREET SIGN LEGEND



HOWARD RESEARCH & DEVELOPMENT CORP.
400/727
NEW TOWN

STREET LIGHT LEGEND



LOCATIONS : STARBURN PATH @ STA. 2+11 20.0' LEFT
STARBURN PATH @ STA. 6+40 20.0' RIGHT



PI @ STA. 5+97.59

PI @ STA. 6+77.59

PLAN

SCALE: 1" = 50'

1366250

DOUBLES N

1366250

DOUBLES N

1366250

DOUBLES N

1366250

DOUBLES N

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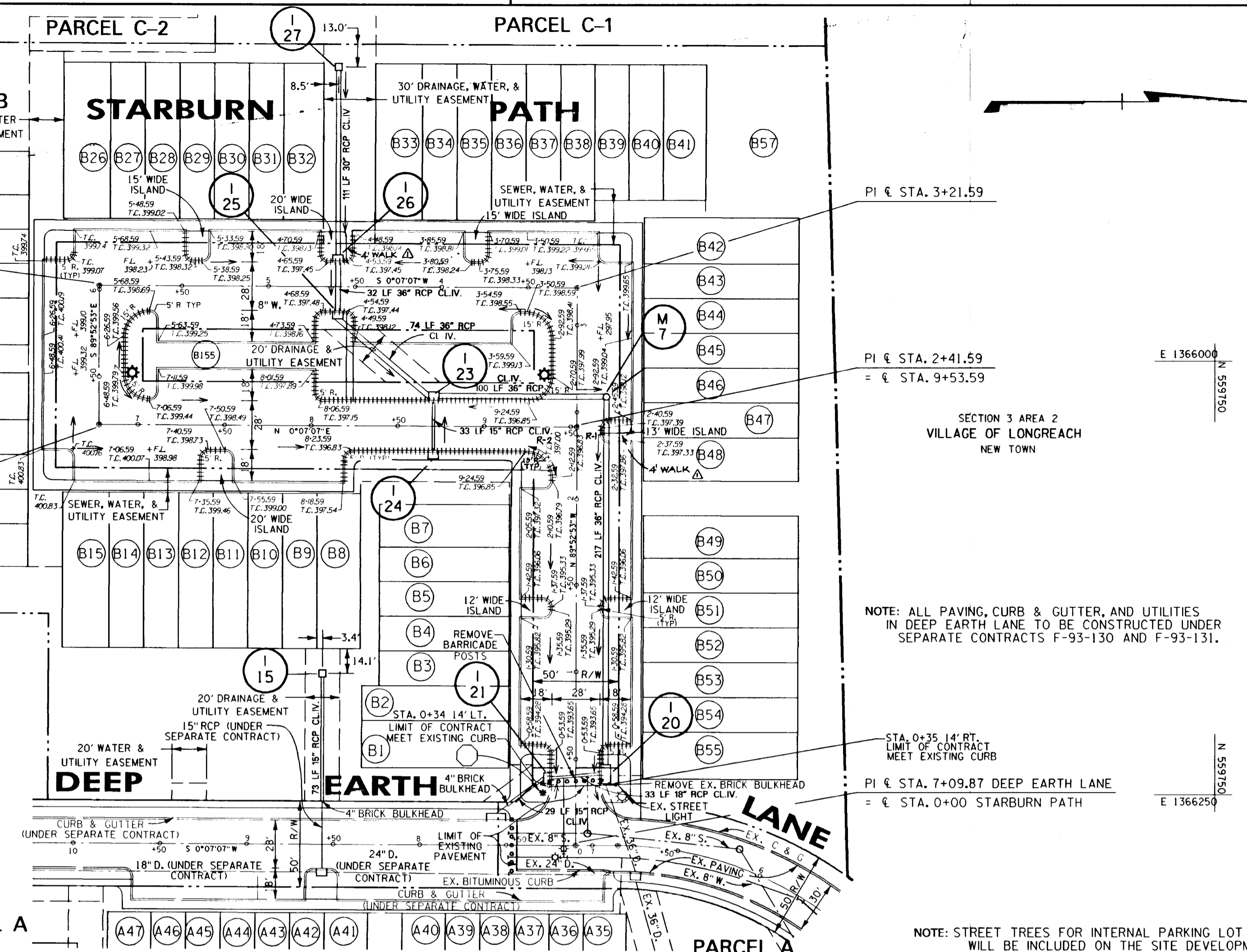
DOUBLES N

1366250

DOUBLES N

1366250

DOUBLES N



PI @ STA. 3+21.59

PI @ STA. 2+41.59
= @ STA. 9+53.59

PI @ STA. 7+09.87 DEEP EARTH LANE
= @ STA. 0+00 STARBURN PATH

NOTE: STREET TREES FOR INTERNAL PARKING LOT LANDSCAPING WILL BE INCLUDED ON THE SITE DEVELOPMENT PLAN.

SECTION 3 AREA 2
VILLAGE OF LONGREACH
NEW TOWN

NOTE: ALL PAVING, CURB & GUTTER, AND UTILITIES IN DEEP EARTH LANE TO BE CONSTRUCTED UNDER SEPARATE CONTRACTS F-93-130 AND F-93-131.

STA. 0+35 14' RT. LIMIT OF CONTRACT MEET EXISTING CURB

EX. STREET LIGHT

EX. BITUMINOUS CURB

EX. PAVING

EX. 8' W. SIDE ISLAND

EX. 8' W. SIDE ISLAND

EX. 8' W. SIDE ISLAND

EX. 8' W. SIDE ISLAND

EX. 8' W. SIDE ISLAND

EX. 8' W. SIDE ISLAND

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EX. 8' W. SIDE ISLAND

EX. 8' W. SIDE ISLAND

EX. 8' W. SIDE ISLAND

EX. 8' W. SIDE ISLAND

8-30-93
Date

Professional Engr. No. 10551

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
Andrew M. Dowdy 9-21-93
CHIEF, BUREAU OF HIGHWAYS DATE

Camille J. Eason 10/20/93
CHIEF, BUREAU OF ENGINEERING DATE

John J. ... 10/20/93
CHIEF, LAND DEVELOPMENT DIVISION M.K. DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Gina Summary 10/26/93
CHIEF, DIVISION OF LAND DEVELOPMENT & RESEARCH DATE

Date	No.	Revision Description
08/20/94	1	REVISED SIDEWALK LOCATIONS, ADDED WALKS & RAMPS

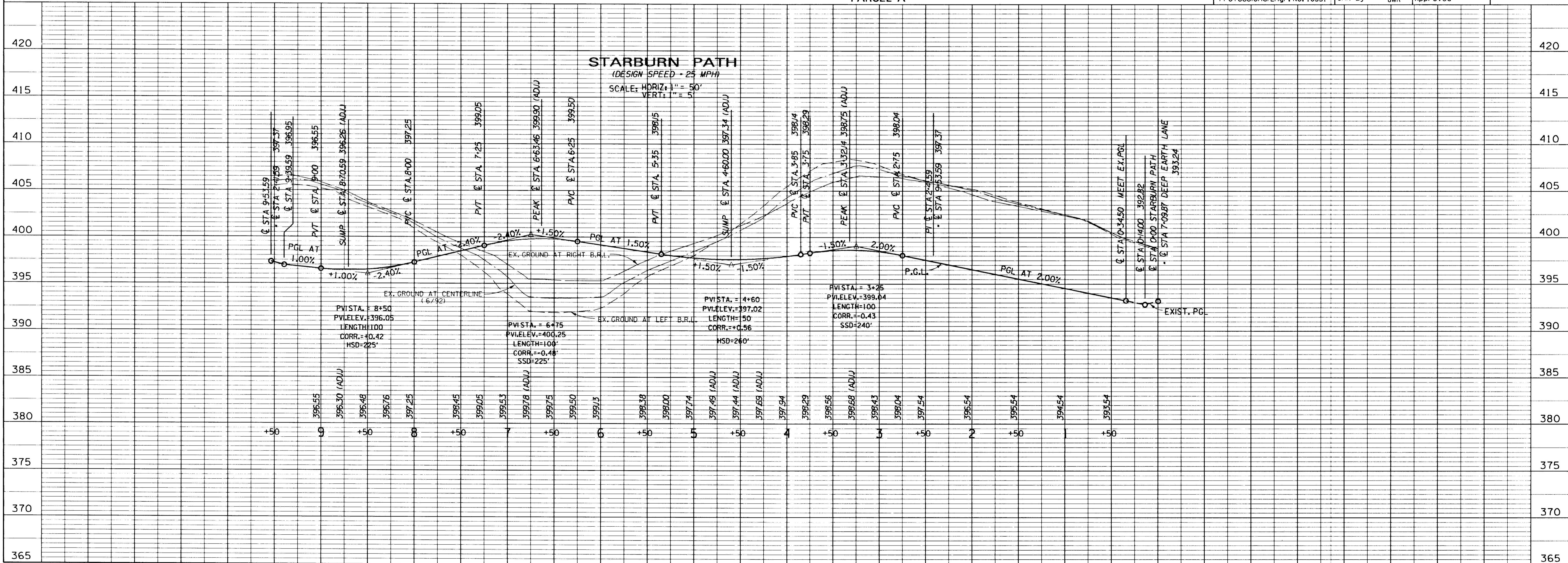
LONGREACH
SECTION 4, AREA 3, PHASE 220
OWNER / DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT CORP.
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

Daft · McCune · Walker, Inc.
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Fax 296 4705

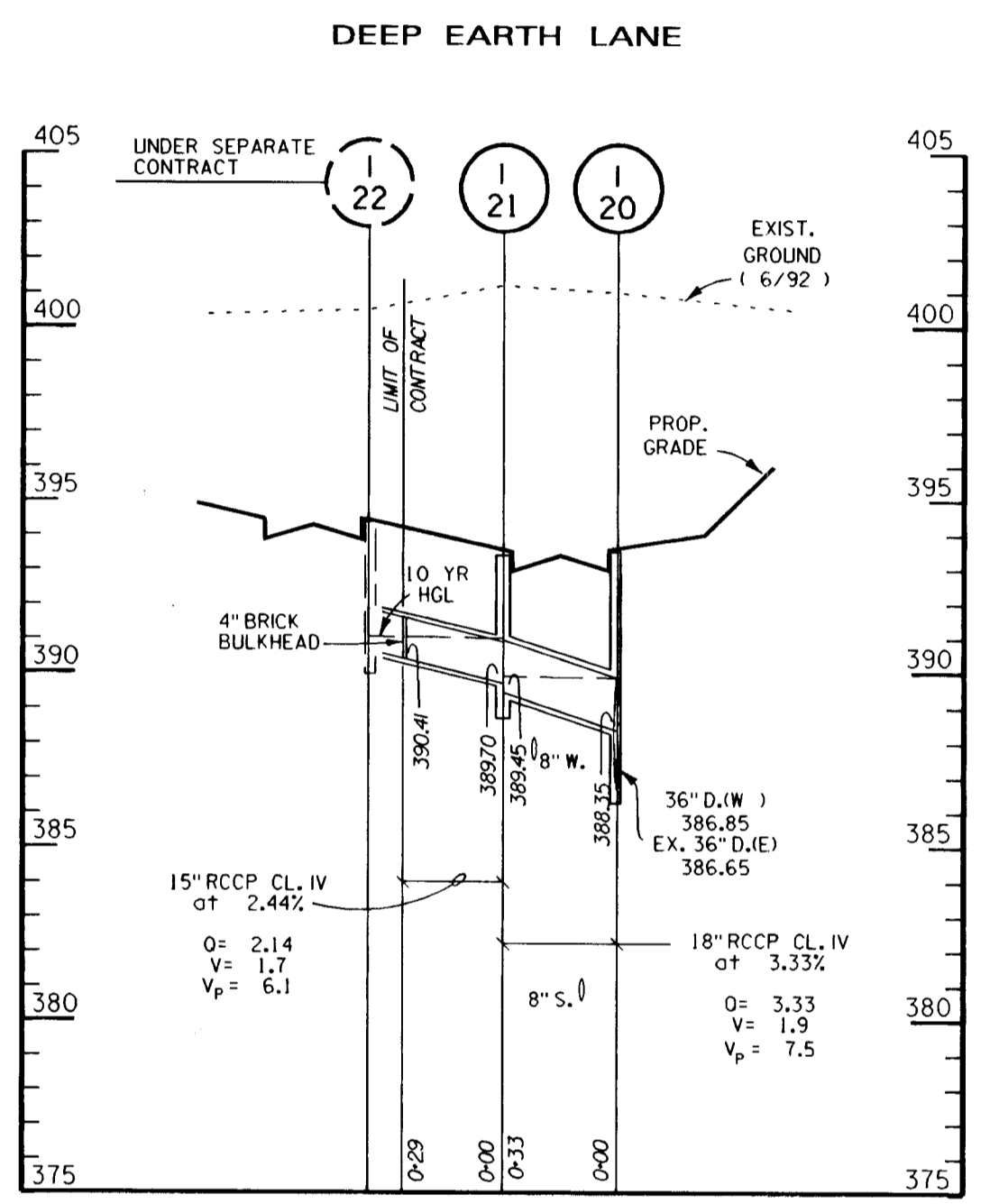
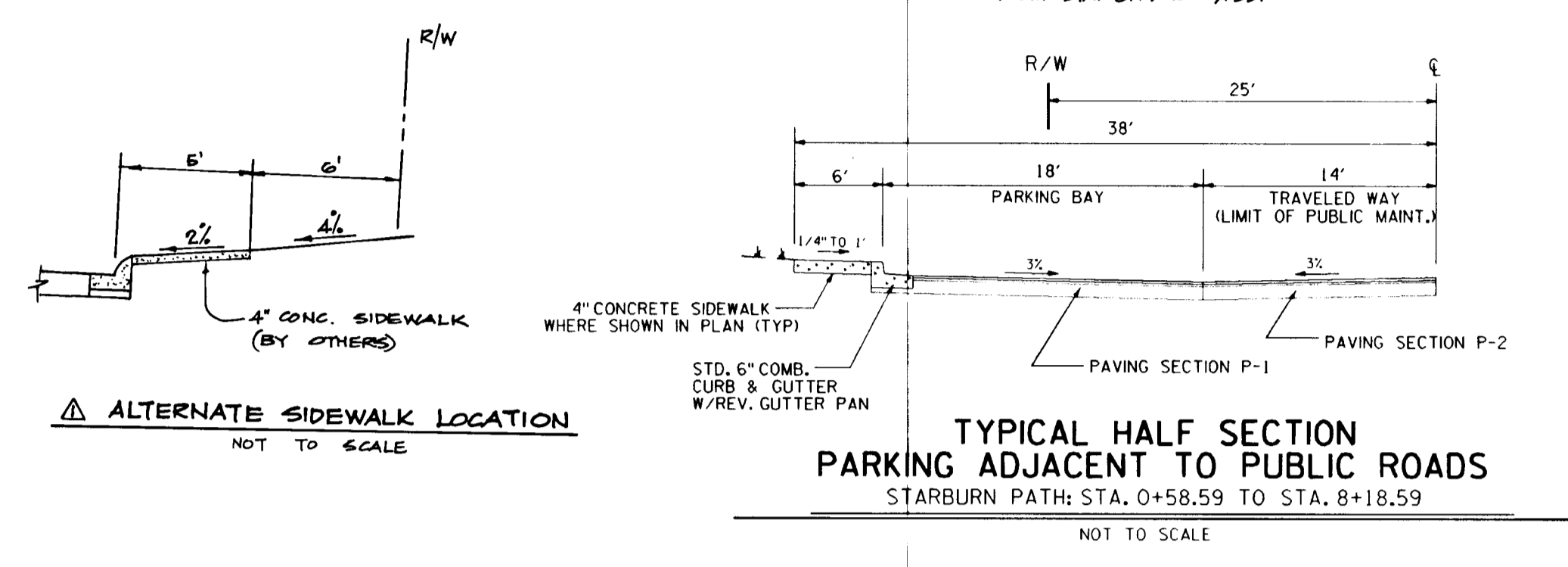
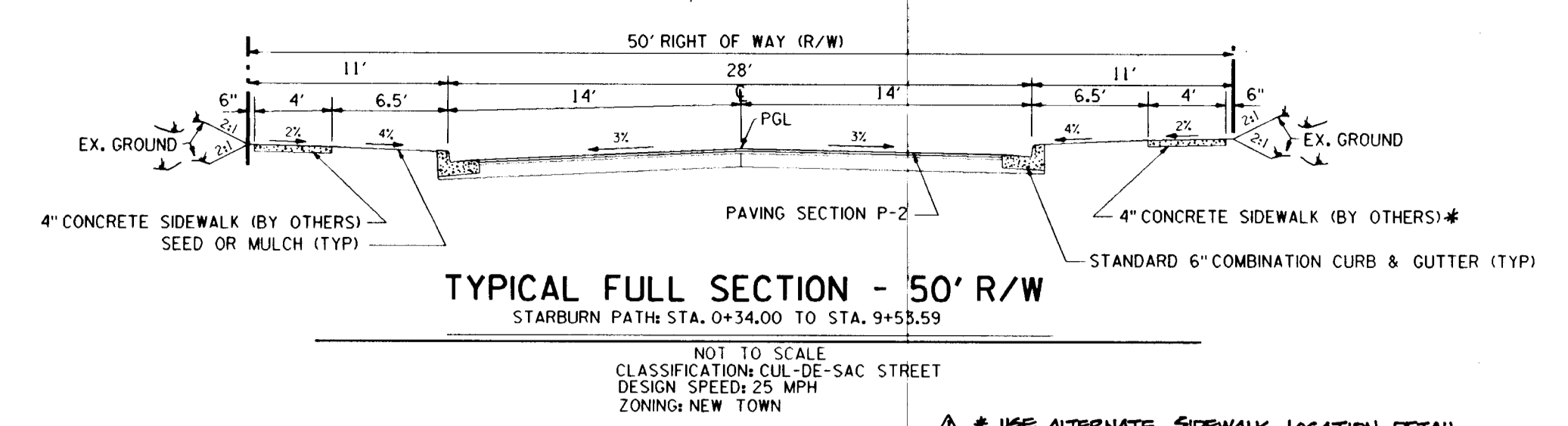
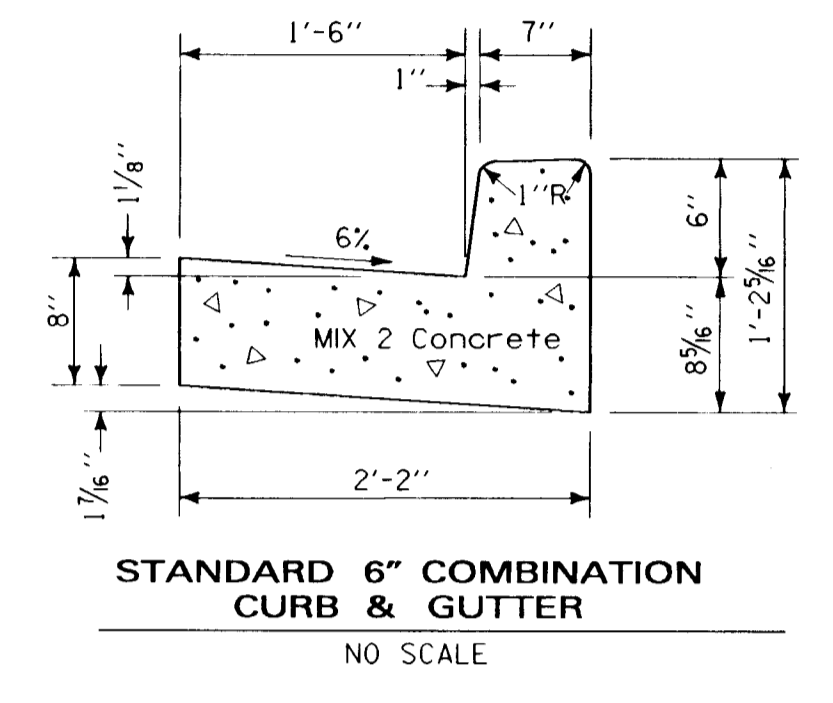
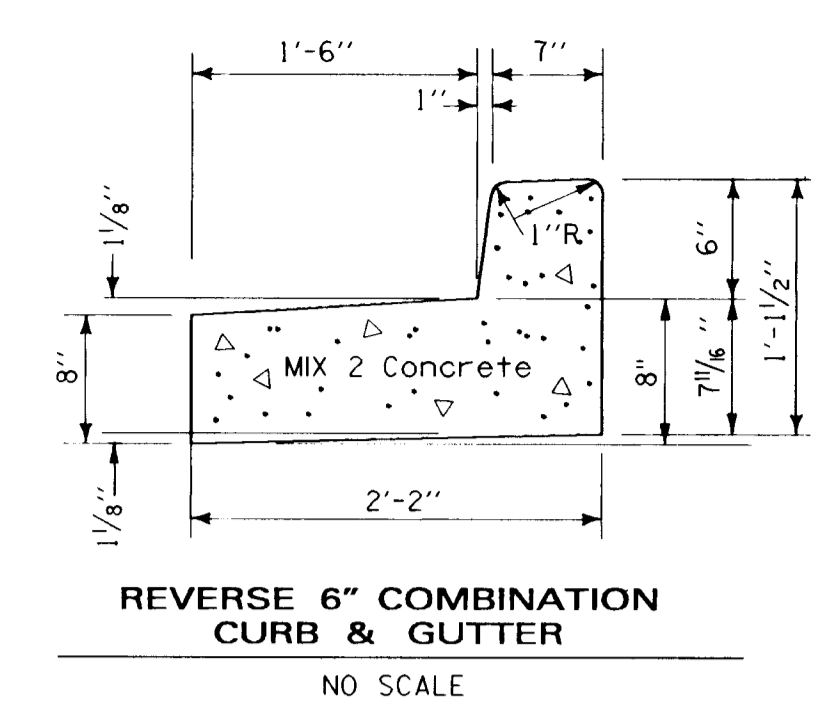
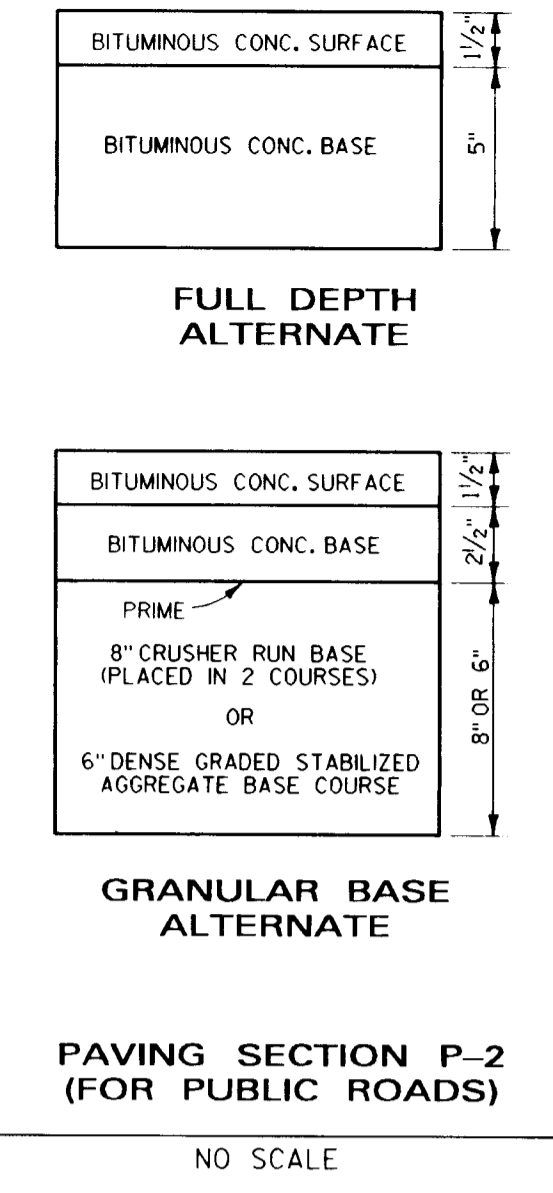
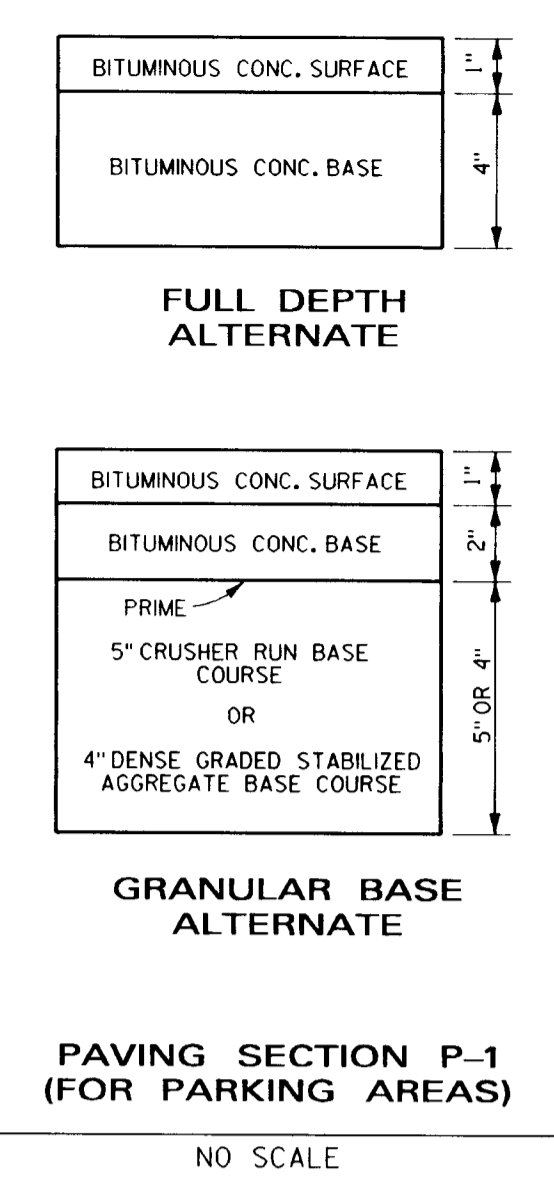
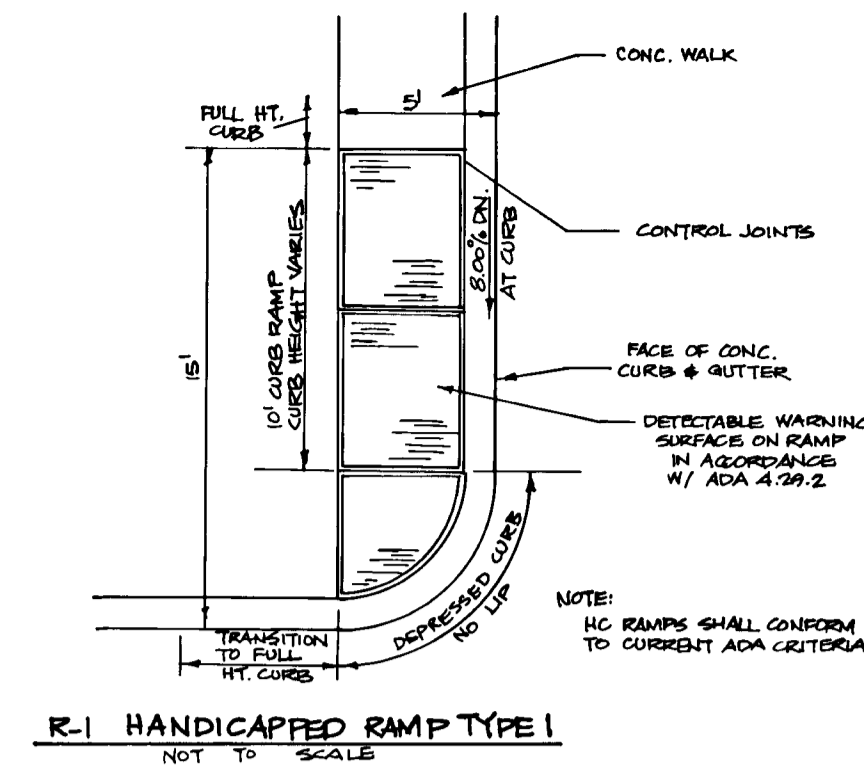
AREA: LOTS B-1 THRU B-57
TAX MAP 36.37 PART OF PARCEL 50
6TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

TITLE: ROAD CONSTRUCTION PLANS
STARBURN PATH
STA. 0+20 TO STA. 9+53.59

Des By	FCB	Scale	1" = 50'	Proj. No.	89088D
Drn By	JMJ	Date	4/12/93		
Chk By	JWR	Approved			2 OF 6



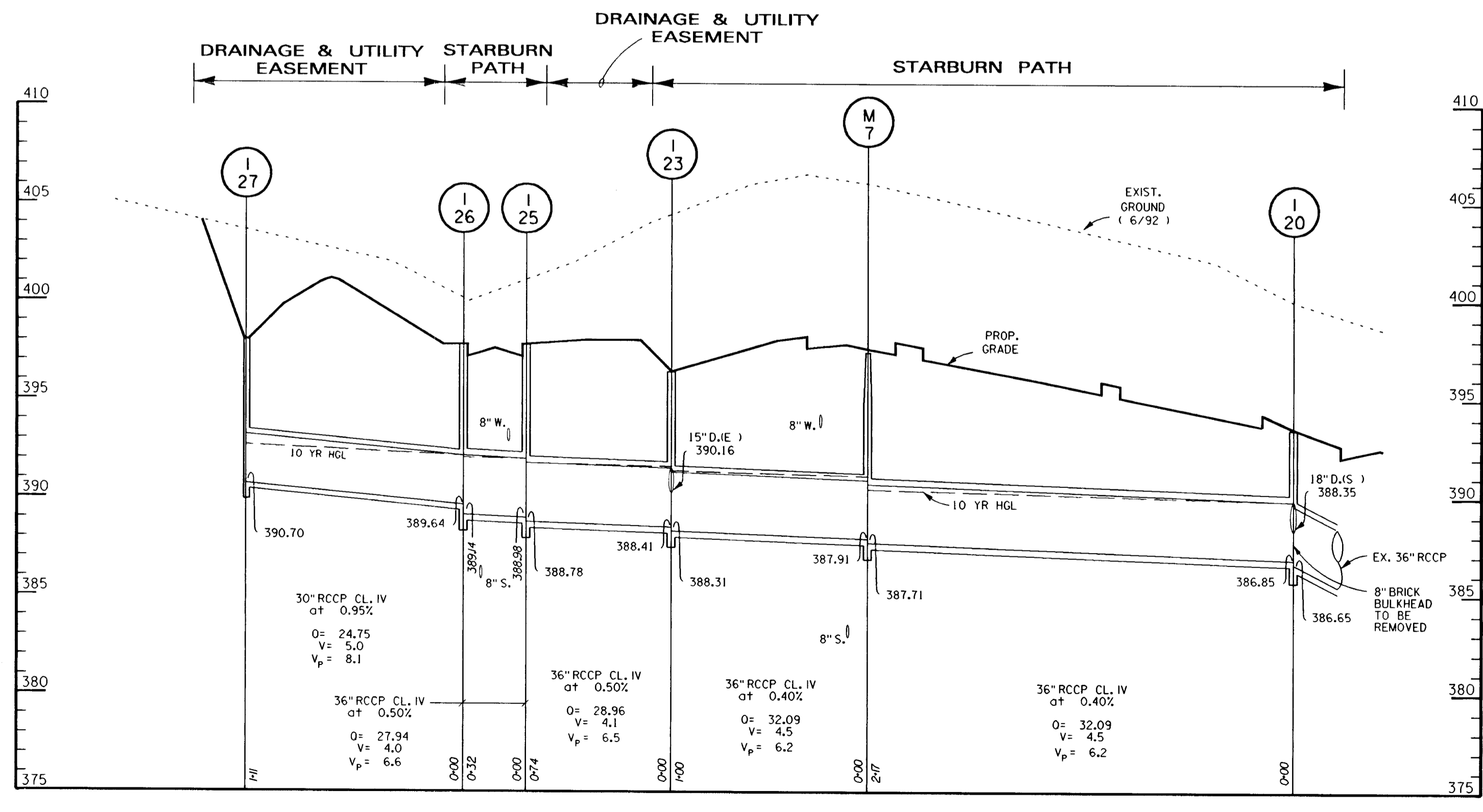
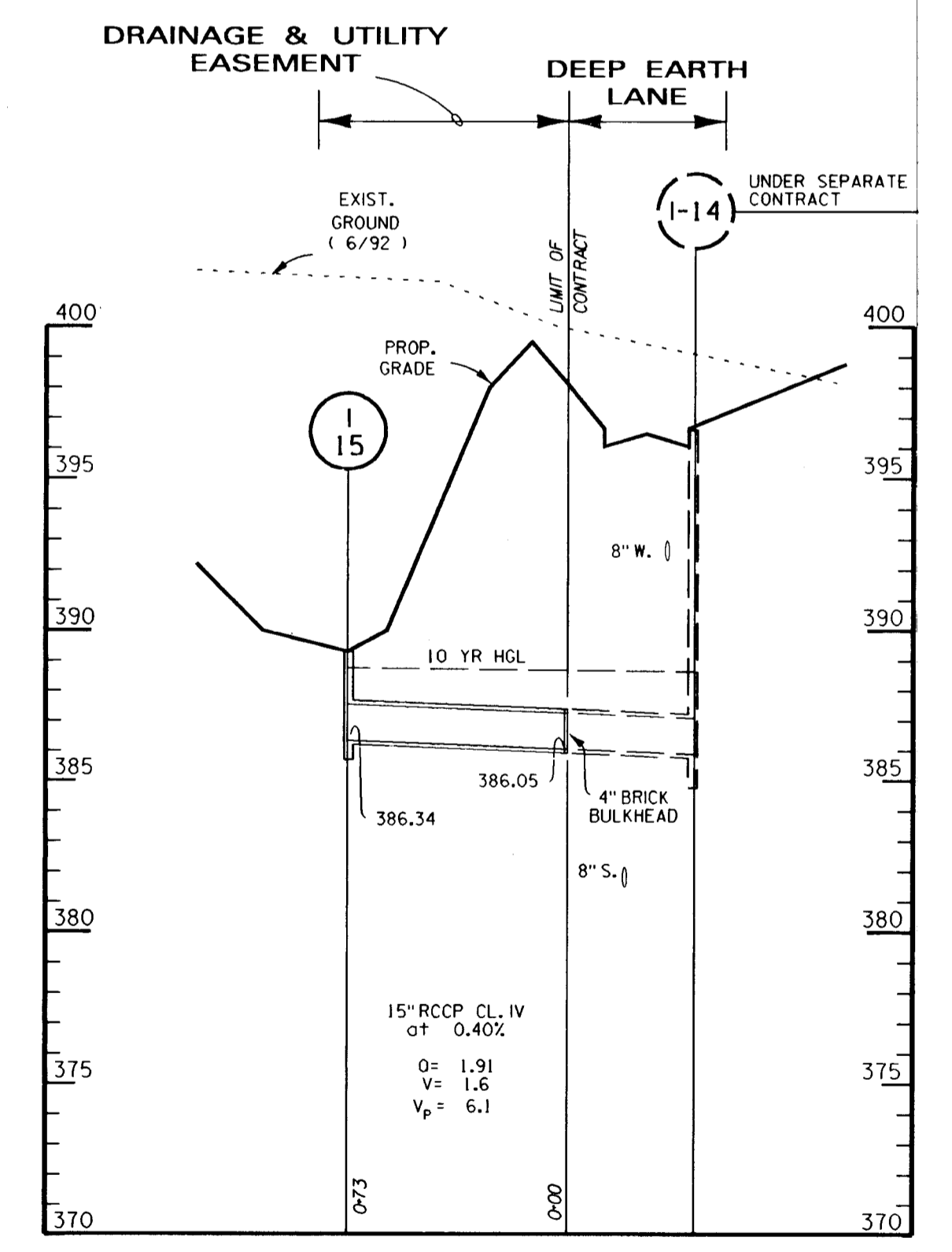
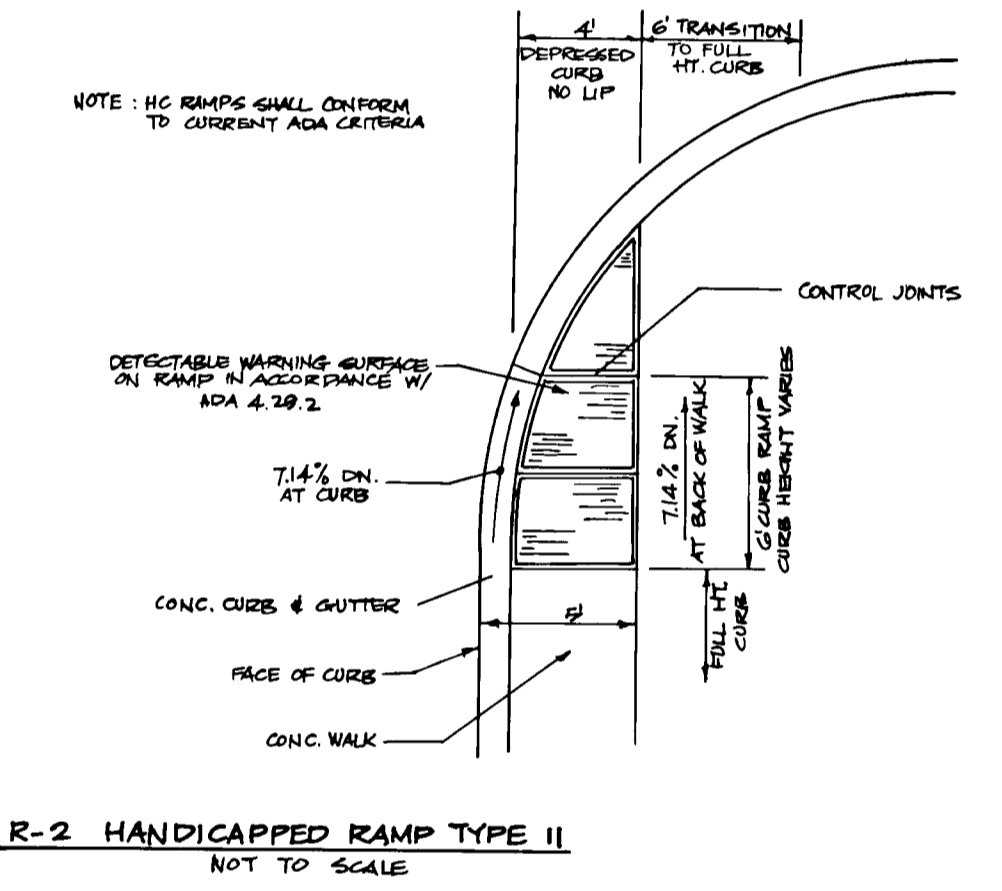
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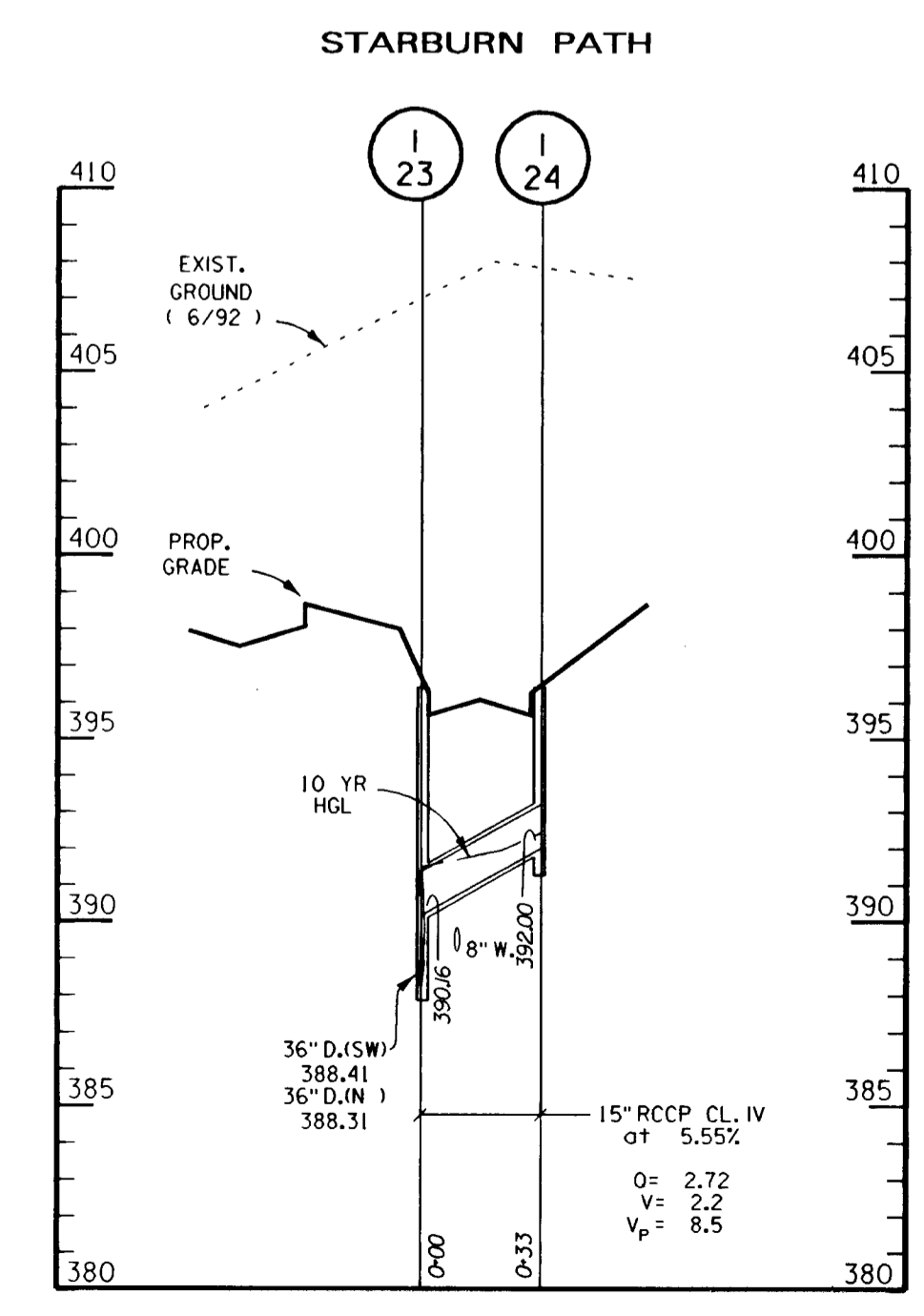
INLET SCHEDULE					
NO.	TYPE	INV. OUT	TOP ELEV. *	DETAIL NO.	LOCATION **
15	'S'	386.34	389.30	HO CO SD 4.22	SEE PLAN
20	A-10 W/ 4.25' WIDTH	386.65	393.41	HO CO SD 4.02	CL STA 0+41.5 14.0' R
21	A-5	389.45	393.31	HO CO SD 4.01	CL STA 0+39 14.0' L
23	A-5 W/ 5.25' WIDTH	388.31	396.30	HO CO SD 4.01	CL STA 8+70.59 14.0' L
24	A-5	392.00	396.30	HO CO SD 4.01	CL STA 8+70.59 14.0' R
25	A-5 W/ 5.25' WIDTH	388.78	397.38	HO CO SD 4.01	CL STA 4+60 14.0' L
26	A-5	389.14	397.38	HO CO SD 4.01	CL STA 4+60 14.0' R
27	'S' W/ 3.5' WIDTH	390.70	398.00	HO CO SD 4.22	SEE PLAN

* TOP ELEV. IS TOP OF CURB FOR A-5 & A-10 INLETS AND TOP OF GRATE FOR 'S' INLETS.
 ** LOCATION OF INLET IS FACE OF CURB FOR 'A' INLETS AND CENTER OF INLET FOR 'S' INLETS.

MANHOLE SCHEDULE					
NO.	TYPE	INV. OUT	TOP ELEV.	DETAIL NO.	LOCATION
7	5.0' STD MH	387.71	397.40	HO CO G 5.02	CL STA 2+59 17.4' R



STORM DRAIN PROFILES
 SCALE: HORIZ. 1" = 50'
 VERT. 1" = 5'



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
Andrew M. Dancker 9-21-93
 CHIEF, BUREAU OF HIGHWAYS DATE
Samuel D. Sapon 10/20/93
 CHIEF, BUREAU OF ENGINEERING DATE
Chris R. ... 10/20/93
 CHIEF, LAND DEVELOPMENT DIVISION M.K. DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Gina Surinomy 10/20/93
 CHIEF, DIVISION OF LAND DEVELOPMENT & RESEARCH DATE

Date	No.	Revision Description
05/20/94	Δ	ADDED DETAILS





LONGREACH
 SECTION 4, AREA 3, PHASE 220
 OWNER / DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT CORP.
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

Daft McCune Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 410.296.3333
 Fax 296.4705

8-30-93
 Date
 PROFESSIONAL ENGINEER
 Professional Engr. No. 10551

AREA	LOTS B-1 THRU B-57
TAX MAP	36.37
PART OF PARCEL	50
6TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND	
TITLE	ROAD CONSTRUCTION DETAILS & STORM DRAIN PROFILES
Des By	JMJ/JCS
Scale	AS SHOWN
Proj. No.	89088D
Chk By	JWR
Date	4/12/93
Approved	3 OF 6

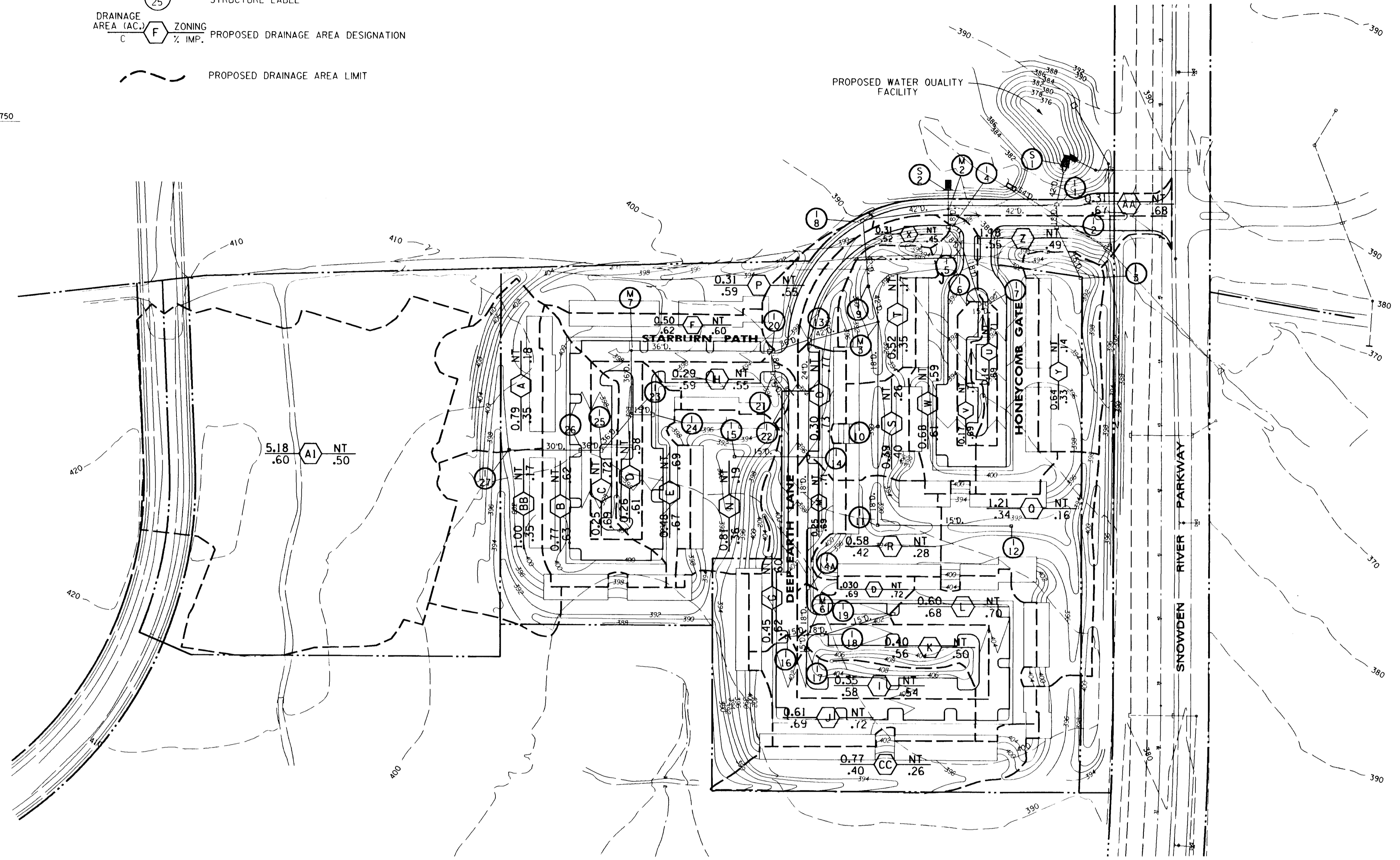
LEGEND

-  STRUCTURE LABEL
-  ZONING
-  PROPOSED DRAINAGE AREA DESIGNINATION
-  PROPOSED DRAINAGE AREA LIMIT

E 1365000
N 559750

E 1365000
N 558500

E 1367250
N 558500



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
Andrew M. Danek 9-21-93
 CHIEF, BUREAU OF HIGHWAYS DATE

Paul D. Sisson 10/20/93
 CHIEF, BUREAU OF ENGINEERING DATE

Chad Damm 10/20/93
 CHIEF, LAND DEVELOPMENT DIVISION M.K. DATE

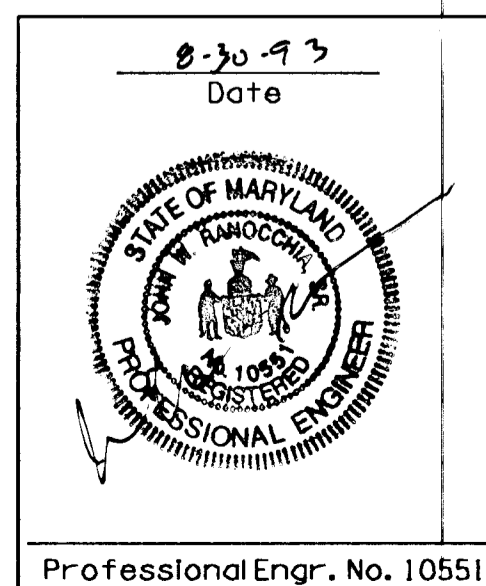
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Gina J. Whitney 10/26/93
 CHIEF, DIVISION OF LAND DEVELOPMENT & RESEARCH DATE

Date	No.	Revision Description

LONGREACH
 SECTION 4, AREA 3, PHASE 220
 OWNER / DEVELOPER

THE HOWARD RESEARCH & DEVELOPMENT CORP.
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DMW
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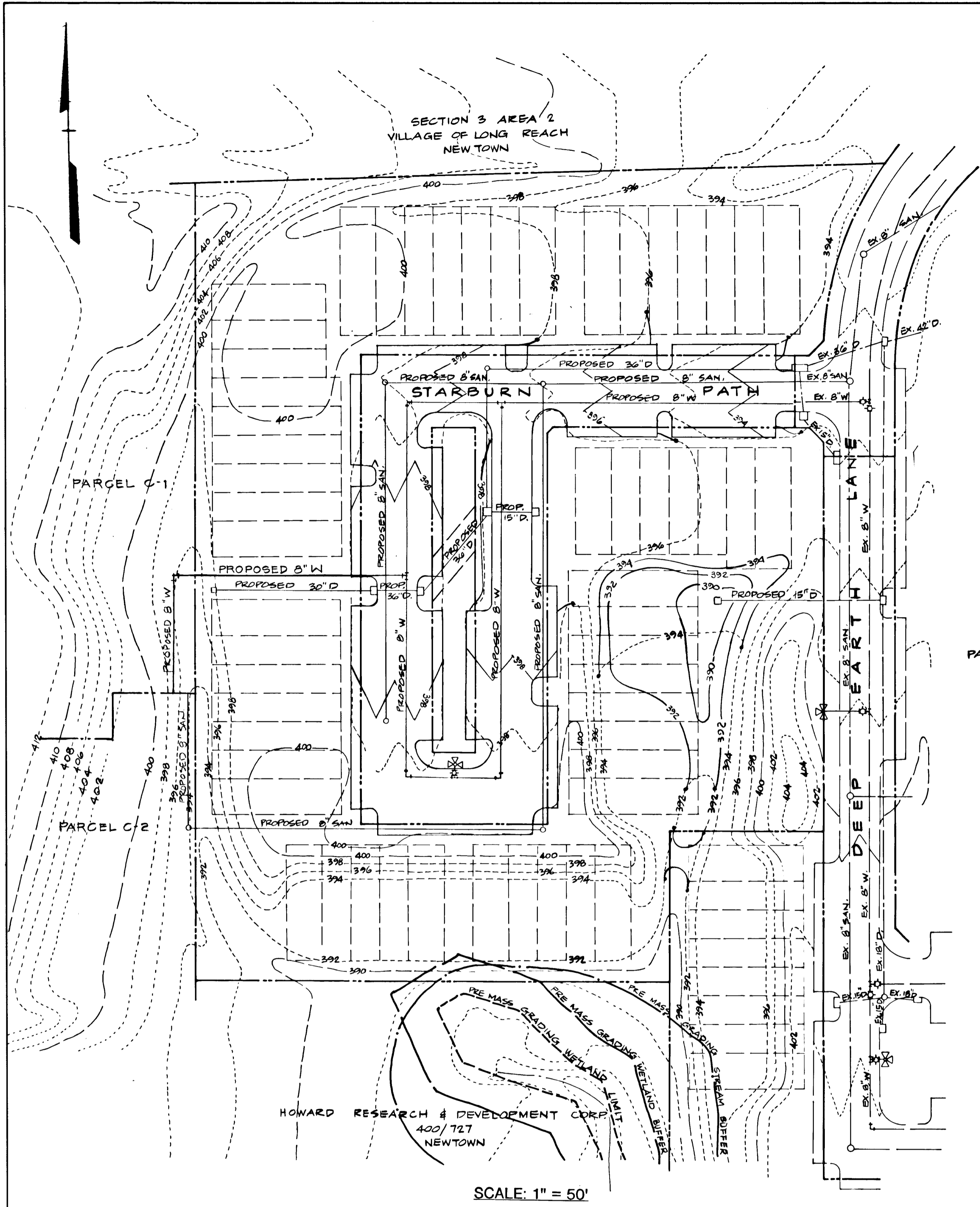
AREA LOTS B-1 THRU B-57
 TAX MAP 36.37 PART OF PARCEL 50
 6TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

TITLE **STORM DRAIN DRAINAGE AREA MAP**

Des By CFB Scale 1" = 100' Proj. No. 890880
 Drn By JCS Date 4/12/93
 Chk By JWR Approved 4 OF 6

Professional Engr. No. 10551

100



DUST CONTROL SPECIFICATIONS

Temporary Methods:

- Mulches** - See standards for critical area stabilization with mulches only. Chemical or wood cellulose fiber binders may be used instead of asphalt to bind mulch material.
- Vegetative Cover** - See standards for temporary vegetative cover.
- Spray-on Adhesives** - On mineral soils (not effective on silt soils). Keep traffic off these areas.

	Water Dilution	Nozzle	Type of Apply	Apply Gallons/Ac.
Anionic asphalt emulsion	7:1	Coarse Spray	Fine Spray	1,200
Latic emulsion	12:1	Fine Spray	Fine Spray	235
Resin-in-water emulsion	4:1	Fine Spray	Fine Spray	300

- Tillage** - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin grading on windward side of site. Chisel-type plows spaced about 12' apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
- Irrigation** - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed.
- Barriers** - Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
- Calcium Chloride** - Apply at rate that will keep surface moist. May need re-treatment.

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.
- Topsoiling** - Covering with less erosive soil materials. See standards for topsoiling.
- Stone** - Cover surface with crushed stone or coarse gravel.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

Seedbed 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. ft.).

Seeding: - For periods March 1 thru April 30 and from August 15 thru October 15, seed with 5-1/2 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 weeping lovegrass (.87 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 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. ft.) of unretted weed free 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 340 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 additional rates and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed 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 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 disk into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform 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 (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding: - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq. ft.) 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. ft.) of unretted 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 340 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance: - Inspect all seeding areas and make needed repairs, replacements and reseedings.

SCALE: 1" = 50'

Vegetative Stabilization with Sod

A. Specifications

- Close of turfgrass sod should be Maryland or Virginia State Certified, or Maryland or Virginia State approved sod.
- Sod should be machine cut to a uniform soil thickness of 3/4 inch plus or minus 1/4 inch, at the time of cutting. Measurement for thickness should exclude top growth and trough.
- Standard size sections of sod should be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- Individual pieces of sod should be cut to the supplier's width and length. Minimum allowable deviation from standard widths and lengths shall be 5 percent broken pads and torn or uneven ends.
- Sod should be harvested or transported when soil moisture is adequate. Sod should be stored in a manner that prevents it from becoming excessively dry or wet.
- Sod should be harvested, delivered and installed within 36 hours. Sod not installed within this period should be re-harvested and approved prior to its installation.

B. Site Preparation

Fertilizer and lime application rates should be determined by soil tests. Under unusual circumstances where there is insufficient time for a complete soil test, fertilizer and lime materials may be applied in amounts shown below.

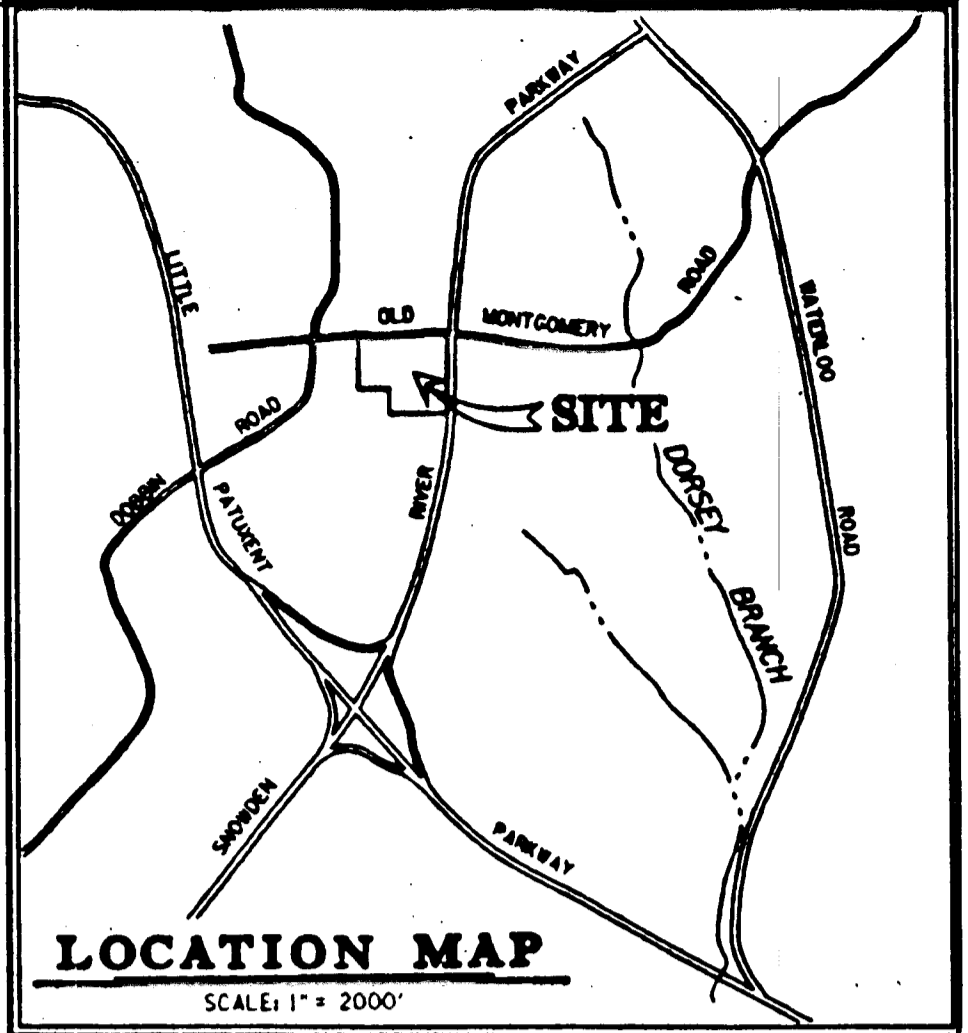
- Prior to adding, the surface should be cleared of all trash, debris, and all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing or maintenance operations.
- Where the soils are acid or composed of heavy clay, ground limestone should be spread at the rate of 2 tons/acre of 100 pounds per 1000 square feet. In all soils, 1000 pounds per 1000 square feet of fertilizer or equivalent should be uniformly applied and mixed into the top 3 inches of soil with the required lime.
- Areas receiving sod should be uniformly fine graded, for pockets of soil that are not graded prior to placement of sod.

C. Sod Installation

- During periods of excessively high temperature the sod should be lightly irrigated immediately prior to laying the sod.
- The first row of sod should be laid in a straight line with adjacent sods placed parallel to and tightly wedged against each other. Later rows should be staggered and should be laid in uniform growth and strength. Insure that sod is not laid with the long edges parallel to the sods. Sod should be staggered and laid in uniform growth and strength. Insure that sod is not laid with the long edges parallel to the sods. Sod should be staggered and laid in uniform growth and strength. Insure that sod is not laid with the long edges parallel to the sods.
- On sloping areas where erosion may be a problem, sod should be laid with the long edges parallel to the contour and with staggered joints. Secure the sod by tamping and pegging or other approved methods.
- As sodding is completed in any one section, the entire area should be rolled or tamped to insure good contact of roots with the soil surface. Sod should be watered immediately after rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of rolling, tamping and irrigating for any piece of sod should be completed within eight hours.

D. Sod Maintenance

- In the absence of adequate rainfall, watering should be performed daily or as often as necessary during the first week and in sufficient quantities to maintain soil moisture to a depth of 4 inches. Watering should be done during the heat of the day to prevent wilting.
- After the first week sod should be watered as necessary to maintain adequate moisture and insure establishment.
- First mowing should not be attempted until sod is firmly rooted. No more than 1/3 of the grass leaf should be removed by the mowing of subsequent cuttings. Grass height should be maintained between 2 and 3 inches unless otherwise specified.
- Maintenance of established sod should follow specifications outlined in Table 54-1.



BY THE DEVELOPER:

"I HEREBY 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 THE 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."

Albert F. Edwards, P.E. 8-27-93
SIGNATURE OF DEVELOPER 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 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."

Ernest I. Sheppett, M.D., P.E. 16580 8-27-93
SIGNATURE OF ENGINEER DATE

J.A. Washburn, P.E. 9/3/93
SIGNATURE OF ENGINEER DATE

John R. Robertson 9/3/93
SIGNATURE OF ENGINEER DATE

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

Andrew M. Daneker 9-21-93
CHIEF, BUREAU OF HIGHWAYS DATE

Charles J. Eason 10/20/93
CHIEF, BUREAU OF ENGINEERING DATE

Mark Summers 10/20/93
CHIEF, LAND DEVELOPMENT DIVISION M.K. DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Gina Durnham 10/20/93
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
& RESEARCH JH

Date	No.	Revision Description
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LONGREACH
SECTION 4 AREA 3, PHASE 220
OWNER / DEVELOPER

THE HOWARD RESEARCH & DEVELOPMENT CORP.
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMAI
Daft · McCune · Walker, Inc.
200 East Montgomery Avenue
Columbia, Maryland 21046
410.796.1533
Fax: 796.4705

AREA LOTS B-1 THRU B-57
TAX MAP 38.37 PART OF PARCEL 80
6TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

GRADING PLAN

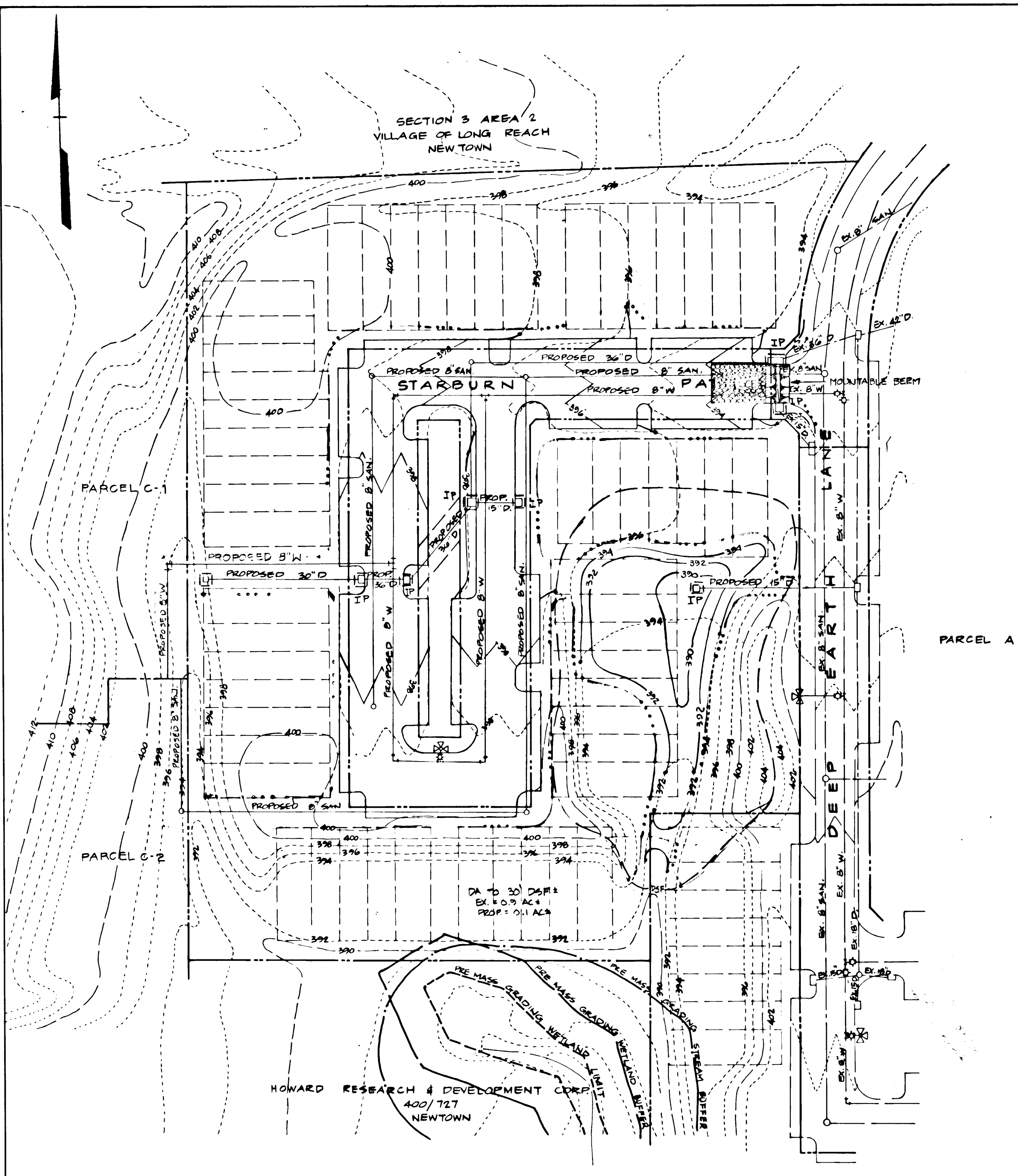
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Drn By CRW Date 4/1/93
CHK By JWR Approved 5 OF 6'

8-27-93
Date

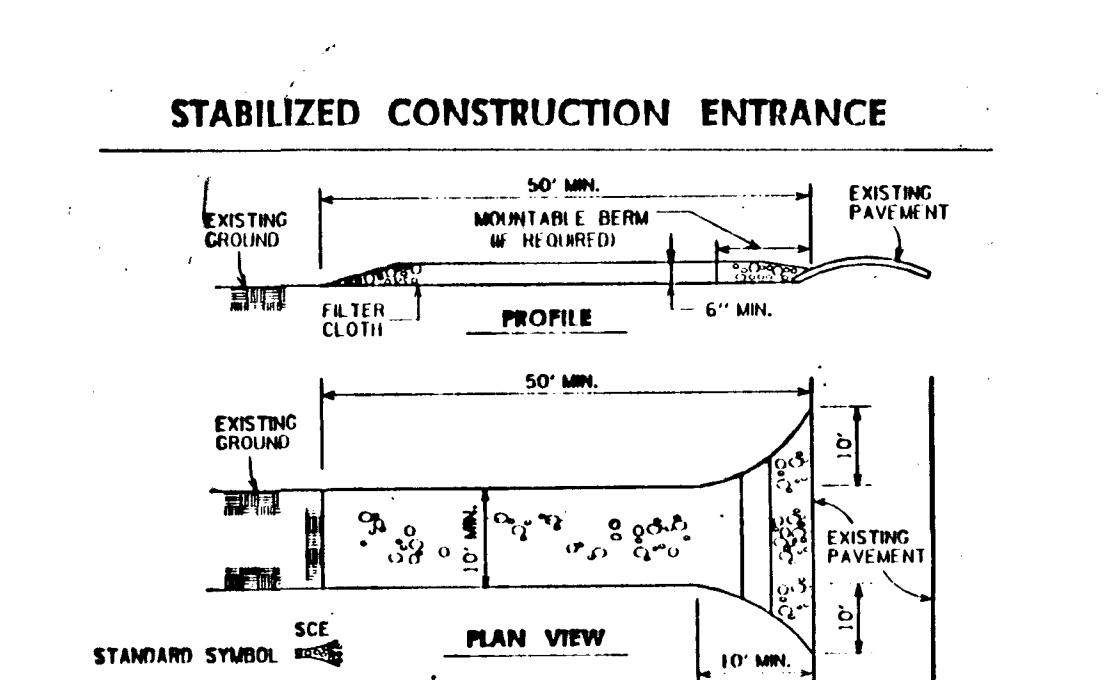
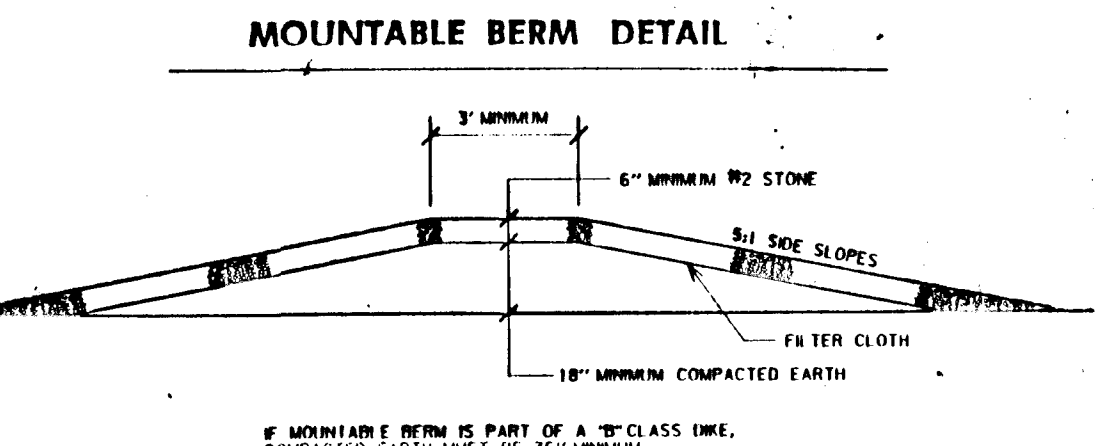
Ernest I. Sheppett
Professional Engr. No. 16580

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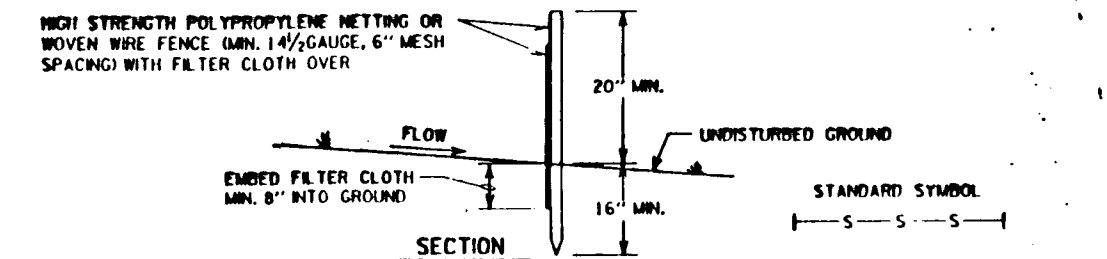
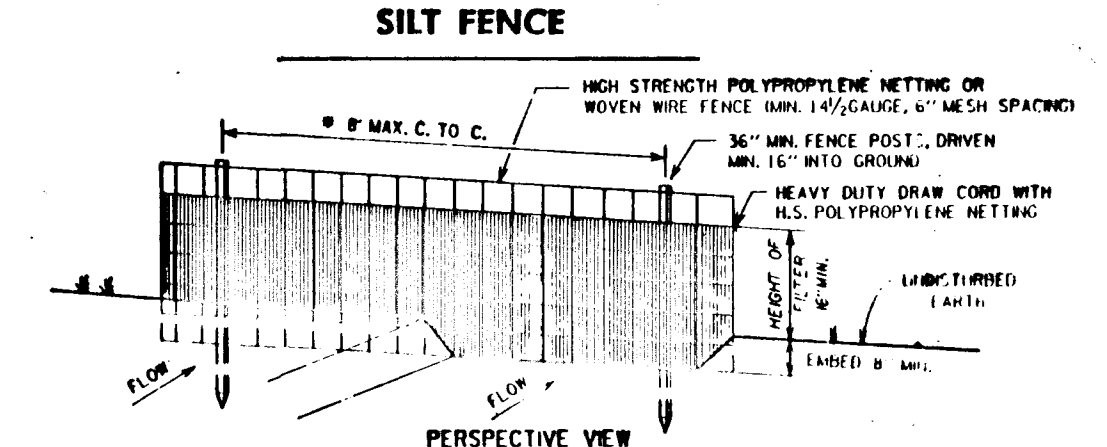
F 93-132



- ### UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL PRACTICES
- EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON UPSTREAM SIDE OF TRENCH.
 - IMMEDIATELY FOLLOWING PIPE INSTALLATION THE TRENCH SHALL BE BACKFILLED, COMPACTED AND IMMEDIATELY STABILIZED WITH GRASS, SEED, AND/OR SODDED MECHANICAL STABILIZATION AT THE END OF EACH WORK DAY.
 - SET FENCE SHALL BE PLACED IMMEDIATELY DOWN STREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED LONGER THAN ONE (1) WORKING DAY. SET FENCE AS PER SCS STANDARD DRAWING: 1-5(1).
 - THE CONTRACTOR SHALL DISTURB AND OPEN TRENCH THE MINIMUM PRACTICAL AREA REQUIRED TO ACCOMPLISH THE WORK DESIGNATED FOR EACH DAY.
 - ALL SEDIMENT AND EROSION CONTROL PRACTICES AND VEGETATIVE STABILIZATION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS.



- ### CONSTRUCTION SPECIFICATIONS
- STONE SIZE: USE 2" STONE OR EQUIVALENT OR RECYCLED CONCRETE EQUIVALENT.
 - LENGTH: AS REQUIRED BUT NOT LESS THAN 50 FEET EXCEPT ON A SLOPE RESISTANCE TO FLOW OF 4.0. MINIMUM LENGTH SHOULD APPLY.
 - WIDTH: TEN (10) FEET MINIMUM BUT NOT LESS THAN THE FILL WIDTH AT POINTS OF ENTRY AND EXIT.
 - INSTALLATION: ALL SURFACES SHALL BE PROPERLY PREPARED AND STABILIZED PRIOR TO INSTALLATION.
 - MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT FLOW OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY.
 - INSPECTION: INSPECTION AND MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

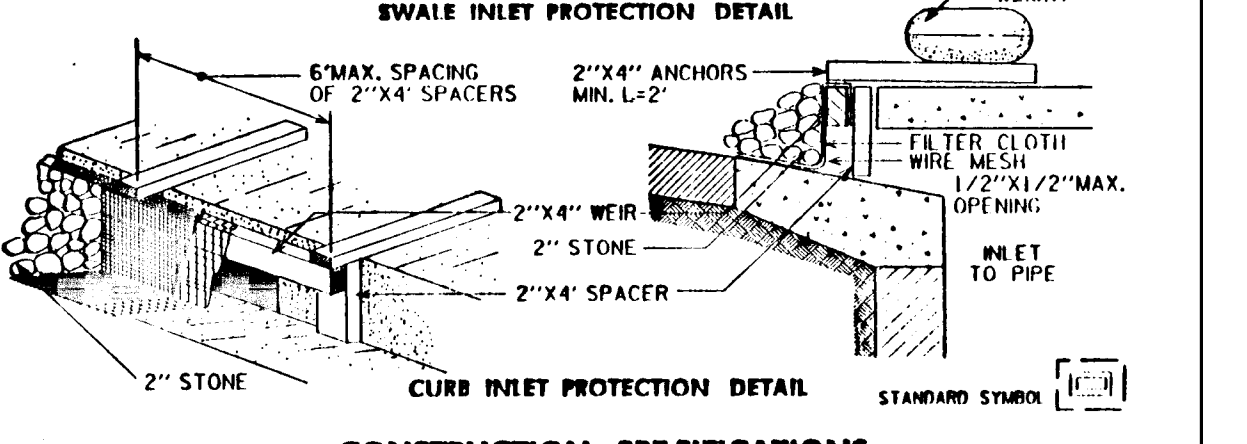
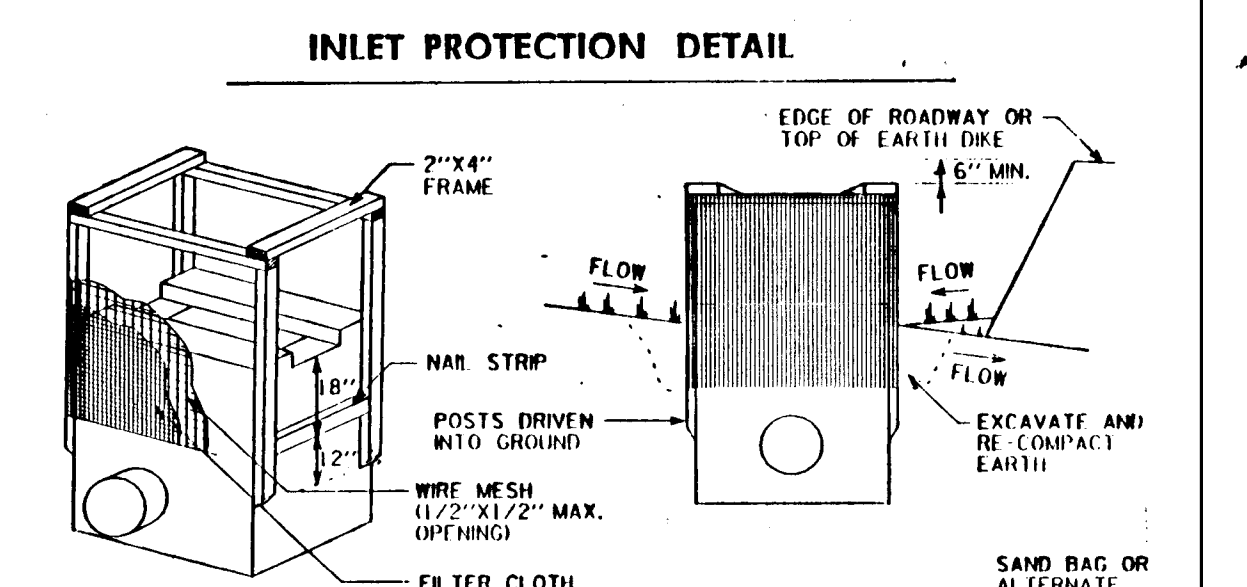


- ### CONSTRUCTION NOTES FOR FABRICATED SILT FENCE
1. HIGH STRENGTH POLYPROPYLENE NETTING OR WOVEN WIRE FENCE TO BE FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 2. FILTER CLOTH TO BE FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

- ### Sequence of Construction
- Obtain a grading permit.
 - Notify the Howard County Dept. of Inspections and Permits (915-1250) a minimum of 48 hours prior to the start of any construction.
 - Clear and grub for and install sediment and erosion control measures or devices (2 weeks).
 - Clear, grub, and strip and grade site (3 weeks).
 - Stabilize all nonactive graded surfaces with temporary seeding (1 day).
 - Install utilities. Inlets are to be protected upon installation (1 month).
 - Repair any sediment or erosion control devices disturbed during utility construction (1 day).
 - Final grade all road surfaces. Install curb and gutters. Apply road subbase (2 weeks).
 - Final grade adjoining Starbun Path and permanently stabilize those areas (2 weeks).
 - Pave road (1 week).
 - With the prior permission of the Sediment Control Inspector and the Howard County Sediment Control Division, remove sediment controls. Final grade and stabilize these areas (2 days).

- ### HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES
- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licensing and Permits, and Sediment Control Division prior to the start of any construction, (313-1850).
 - All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
 - Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
 - All sediment traps/basins shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
 - All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 53) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding rates 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	20.0 Acres ±
Area Disturbed	2.1 Acres ±
Area to be roofed or paved	1.2 Acres ±
Area to be vegetatively stabilized	0.7 Acres ±
Total Cut	1875 Cu. Yds. ±
Total Fill	1875 Cu. Yds. ±
Offsite waste/borrow area location	NA
 - Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
 - ADDITIONAL sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
 - On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, and before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
 - Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.



- ### SEDIMENT CONTROL LEGEND
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - EXISTING DRAINAGE AREA
 - PROPOSED DRAINAGE AREA
 - LIMIT OF DISTURBANCE
 - STABILIZED CONSTRUCTION ENTRANCE
 - MOUNTABLE BERM
 - SILT FENCE
 - DOUBLE STAKED SILT FENCE

The contractor is required to install inlet protection on all storm drain inlets with the exception of the following:

- Any inlet outfalling directly into a sediment trapping device.
- Inlets on private or public paved roadways open to the public.

All inlet protection will be installed as directed by the Inspector in accordance with the 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control, Page 21.01 (or as may be amended).

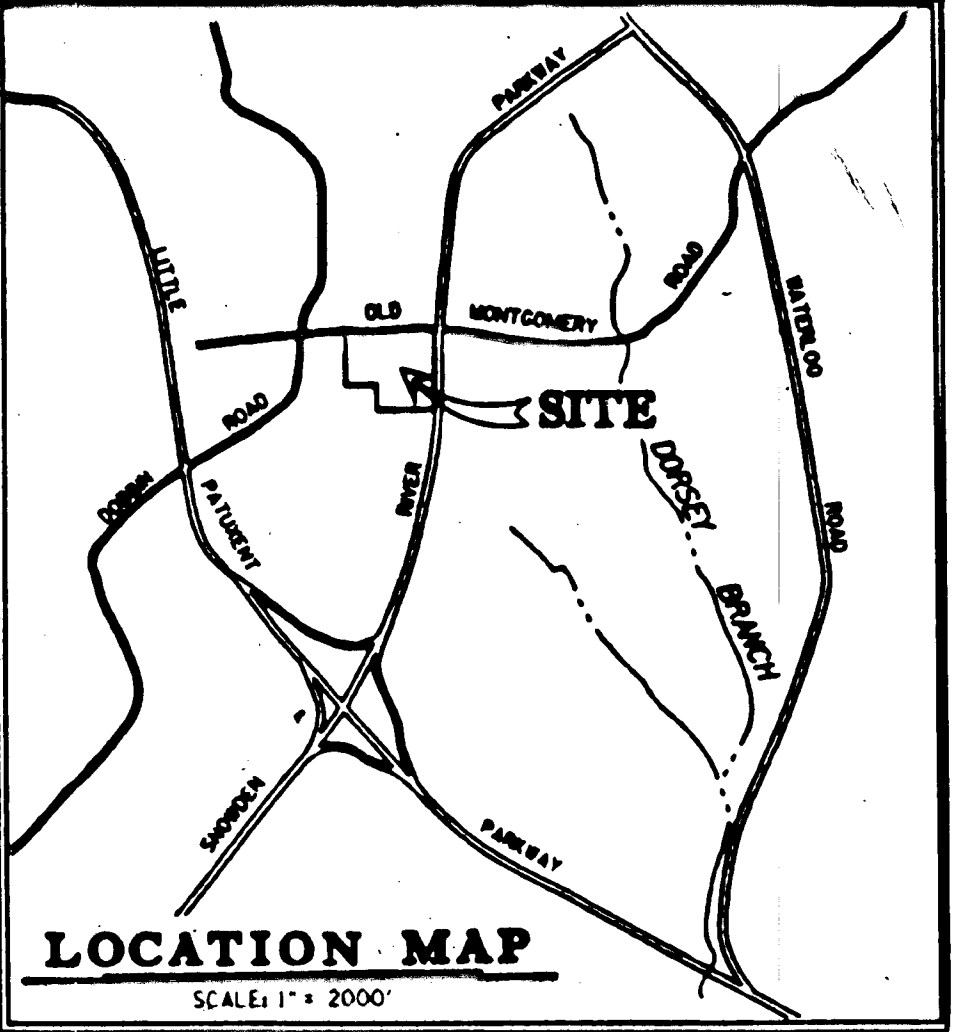
The removal of any inlet protection devices will require approval from the Inspector.

* Storm drains are to be flushed prior to removal of trapping devices.

8-27-93
Date

Professional Engr. No. 14552

Emmett Shippert



B: THE DEVELOPER

"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 THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. SMALL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. ALSO AUTHORIZED PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Developer: Albert F. Edwards, P.E.
Date: 9-29-93

Signature of Engineer: Emmett Shippert
Date: 8-27-93

Signature of Inspector: John K. Hunter
Date: 9/3/93

Date	No.	Revision	Description
9-21-93			APPROVED-HOWARD COUNTY DEPT. OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS
10/20/93			CHIEF, BUREAU OF ENGINEERING
10/26/93			CHIEF, LAND DEVELOPMENT DIVISION M.K.
10/26/93			APPROVED-HOWARD COUNTY DEPT. OF PLANNING AND ZONING CHIEF, DIVISION OF LAND DEVELOPMENT & RESEARCH

LONGREACH

SECTION 4 AREA 3 PHASE 220
OWNER / DEVELOPER

THE HOWARD RESEARCH & DEVELOPMENT CORP.
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

Daft · McCune · Walker, Inc.
200 East Pennsylvania Avenue
Annapolis, Maryland 21403
Tel: 410-296-1313
Fax: 410-296-4705

AREA: LOTS B-1 THRU B-57
TAX MAP 36.37 PART OF PARCEL 60
6TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

TITLE

SEDIMENT & EROSION CONTROL PLAN

Des By	CRW	Scale	AS SHOWN	Proj. No.	890880
Dwn By	CRW	Date	4/1/93		
Chk By	EIS	Approved			6 OF 6

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