

GENERAL NOTES

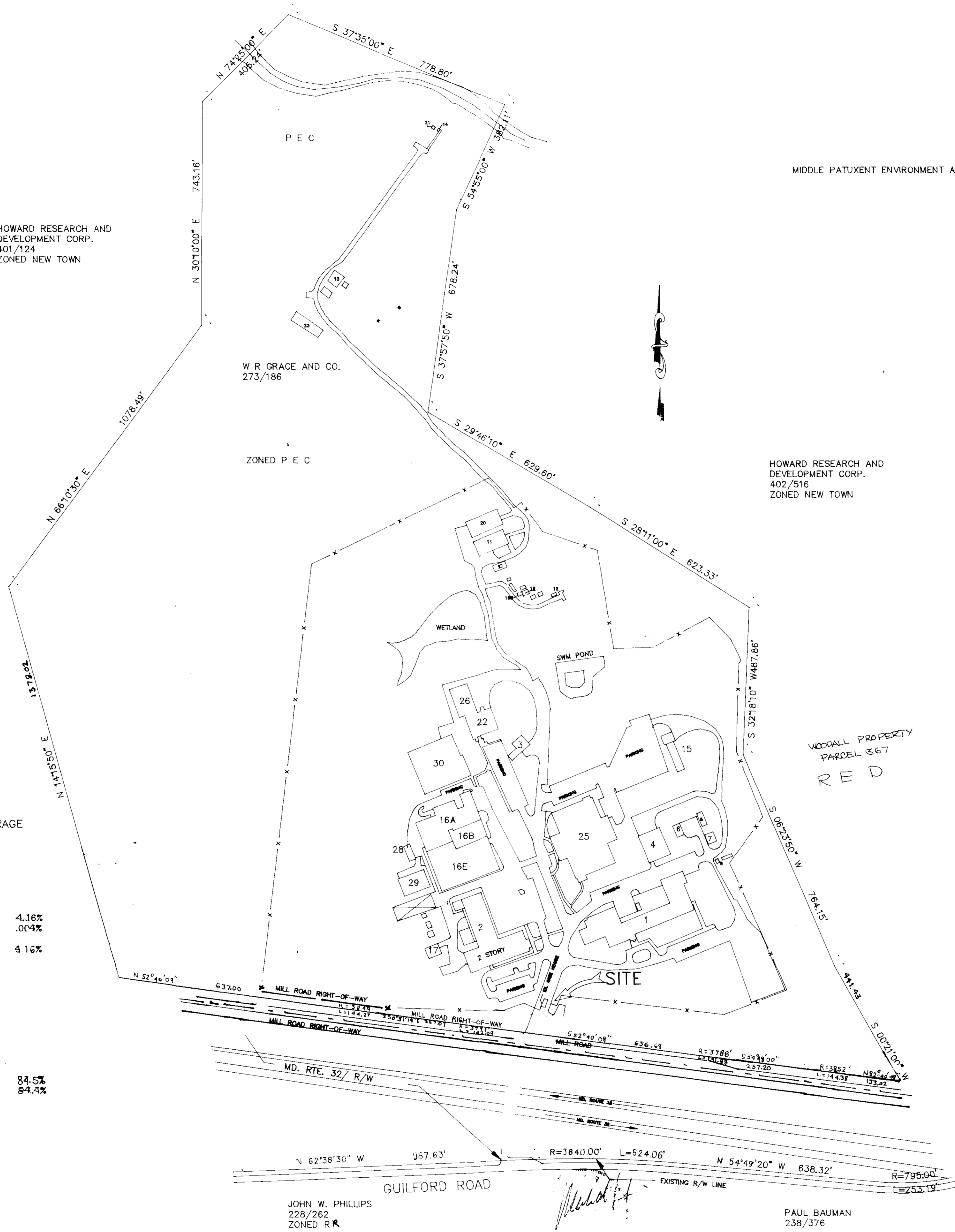
- PRIOR TO THE START OF ANY OPERATIONS, THE CONTRACTOR SHALL STAKE OUT THE BASELINES OF CONSTRUCTION, PROPOSED BUILDING AND VERIFY SETBACKS AND OFFSET DIMENSIONS.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AT (301) 531-4240 AT LEAST 72 HRS. PRIOR TO STARTING EXCAVATION TO VERIFY ALL LOCATIONS.
- ABUTTING PROPERTIES TO BE PROTECTED FROM DAMAGE REPAIRS ARE AN OBLIGATION OF THE CONTRACTOR. ACCESS TO AREAS OUTSIDE THE LIMIT OF CONTRACT WITHIN THE PROPERTY LINE IS PROHIBITED. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE TO EXISTING VEGETATION AND ANY VIOLATIONS OF THE PROTECTED AREAS.
- ALL CONSTRUCTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE LATEST HOWARD COUNTY VOLUME IV - STANDARD SPECIFICATION AND DETAILS.
- THE INFORMATION ON THESE PLANS IS FOR THE CONVENIENCE OF THOSE CONCERNED ONLY. THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION SHOWN IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS OWN SATISFACTION.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- ALL DISTURBED AREAS NOT STABILIZED WITH PAVING, SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS AND SEDIMENT CONTROL PLAN, PRIOR TO CONTRACT COMPLETION.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES.
- TOPOGRAPHIC SURVEY WAS DONE BY LORIA ENGINEERING, INC. ON JAN, 1993.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR OR THE DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HRS. IN ADVANCE OF COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEMS.
- THE BUILDING PROPOSED IS FOR THE EXPANSION OF THE EXISTING GUARD HOUSE.
- THERE ARE NO WETLANDS WITHIN THE LIMITS OF DISTURBANCE SHOWN. THEREFORE, SECTION 404 AND SECTION 401 DO NOT APPLY AND PERMITS ARE NOT REQUIRED.
- INFILTRATION RIPRAPPED OUTLET IS PROVIDED AS STORM WATER MANAGEMENT FOR WATER QUALITY.
- DEPARTMENT OF PLANNING AND ZONING FILES PB CASE NO. 168, VP 82-92, BA CASE NO. 85-30 E, BA CASE NO. 83-54 E, PB CASE NO 212, VP 84-32, VP 84-70, S-87-36, BP-267, FDR-PEC-1A, S 90-37, SDP-90-116 & SDP 91-92, SDP-94-29, SDP-94-51, SDP-95-14.
- ANY LANDSCAPING WILL BE DONE BY W. R. GRACE AFTER BUILDING IS COMPLETED.

HOWARD RESEARCH AND DEVELOPMENT CORP.
402/516
ZONED NEW TOWN

HOWARD RESEARCH & DEVELOPMENT CORPORATION
ZONED NT

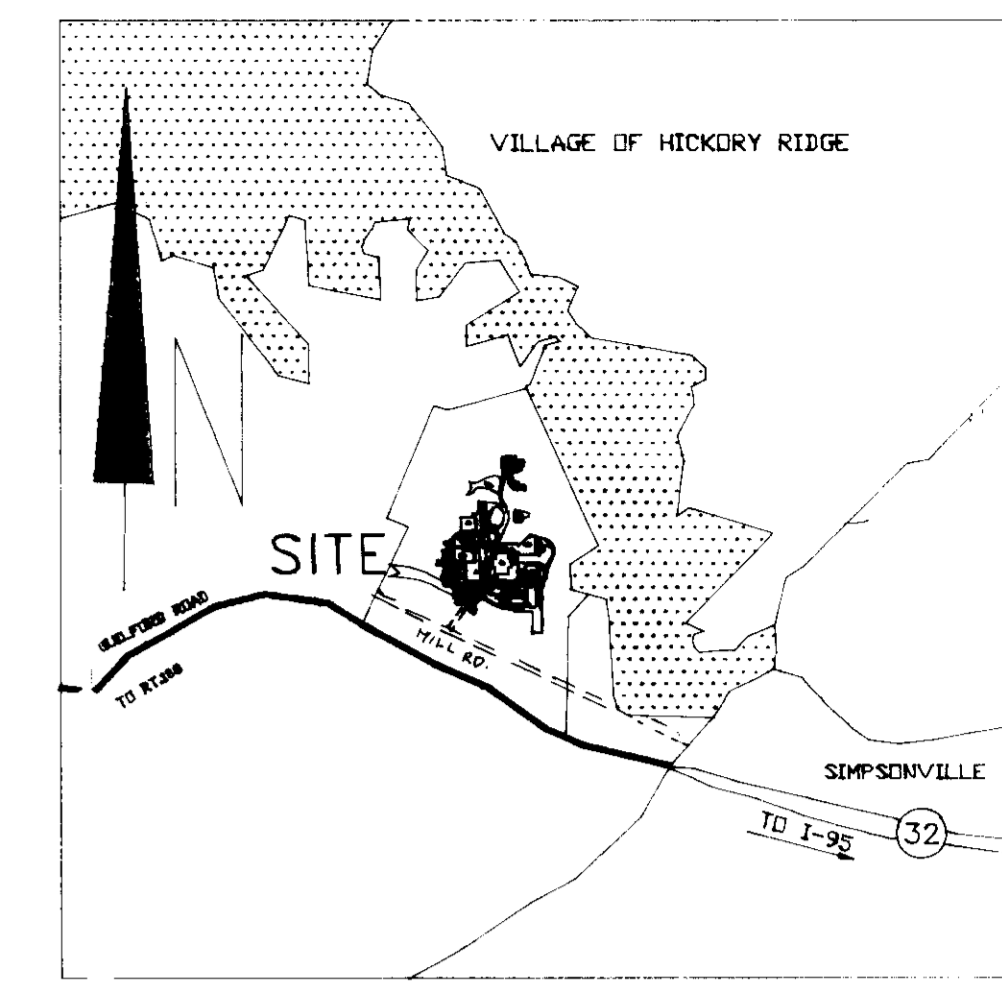
SITE ANALYSIS

PRESENT ZONING		PERCENT COVERAGE	
AREA OF PROPERTY	PEC	126.28 ACRES	
AREA OF SUBMISSION		0.35 ACRES	
BUILDING COVERAGE			
EXISTING	229,377 S.F. = 5.27 ACRES	GUARDHOUSE	4.16%
PROPOSED	210 S.F. = 0.005 ACRES		
TOTAL FLOOR SPACE	210 S.F.		
TOTAL	229,377 S.F. = 5.27 ACRES		4.16%
NUMBER OF EMPLOYEES			
EXISTING	598		
PROPOSED	0		
TOTAL	598		
NUMBER OF PARKING SPACES			
EXISTING	541 includes 5 handicapped parking spaces		
PROPOSED PARKING SPACE	6 includes 2 handicapped parking spaces		
PARKING SPACE TO BE REMOVED	6		
TOTAL PARKING PROVIDED	541 includes 7 handicapped parking spaces		
TOTAL REQUIRED	419		
OPEN SPACE			
EXISTING	106.74 ACRES		84.5%
PROPOSED	106.62 ACRES		84.4%



INDEX

SHEET	DESCRIPTION
1	COVER
2	SITE DEVELOPMENT PLAN
3	DRAINAGE AREA MAP & SEDIMENT CONTROL PLAN
4	CROSS-SECTIONS
5	SEDIMENT CONTROL NOTES



VICINITY MAP
SCALE: 1"=2000'

LOCATION PLAN

SCALE 1" = 200'

ADDRESS CHART				
PARCEL NUMBER	STREET ADDRESS			
P 145	7379 GUILFORD ROAD			
SUBDIVISION	NAME	SECTION/AREA	LOT	PARCEL
W.R. GRACE & CO.				P 145
PLAT NUMBER	BLOCK NUMBER	ZONE	TAX/ZONE MAP	ELECTION DISTRICT
273/186	22	P E C	35	5th
WATER CODE	SEWER CODE		BASIS TRAC	
N/A	6440000		6053.01	
APPROVED: FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.				
<i>[Signature]</i>				12-8-94
COUNTY HEALTH OFFICER				DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING				
<i>[Signature]</i>				12/11/94
PLANNING DIRECTOR				DATE
<i>[Signature]</i>				12/11/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH				DATE
APPROVED: FOR PUBLIC SEWERAGE, STORM DRAINAGE SYSTEM AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.				
<i>[Signature]</i>				11/2/94
DIRECTOR				DATE
<i>[Signature]</i>				11/3/94
CHIEF, BUREAU OF ENGINEERING				DATE

Loria Engineering Inc.
CONSULTING ENGINEERS
8307 MAIN STREET
BETHESDA CITY, MARYLAND 20814
TEL: (301) 965-0400

GRACE

W.R. GRACE & CO. - CONN.
WASHINGTON RESEARCH CENTER
7379 ROUTE 32
COLUMBIA, MARYLAND 21044

COVER SHEET

REVISIONS		
DATE	BY	DESCRIPTIONS

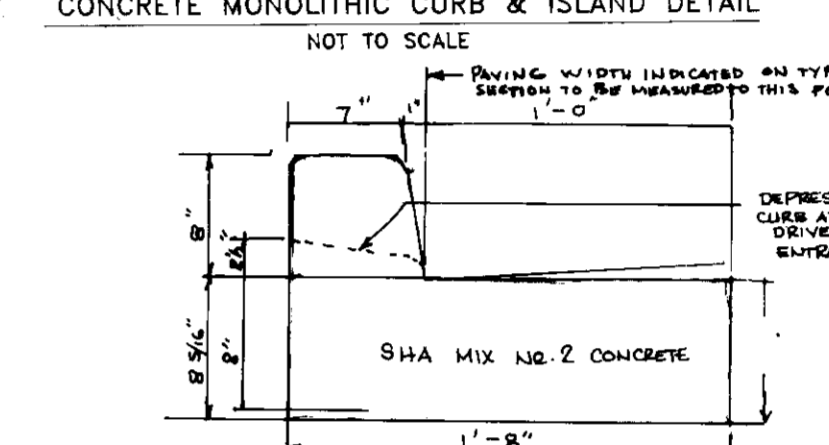
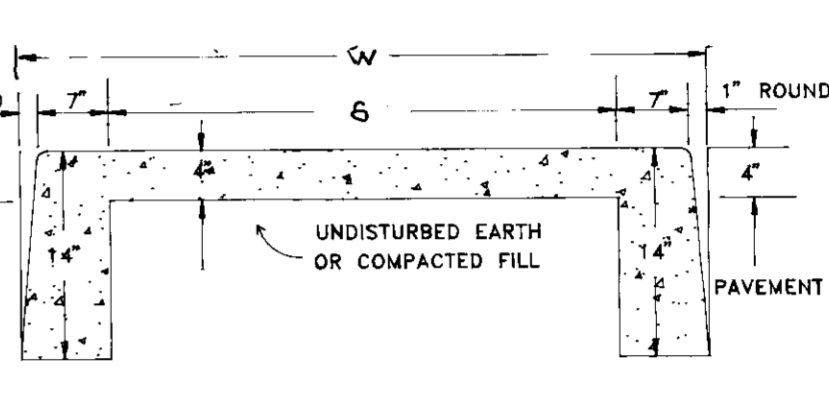
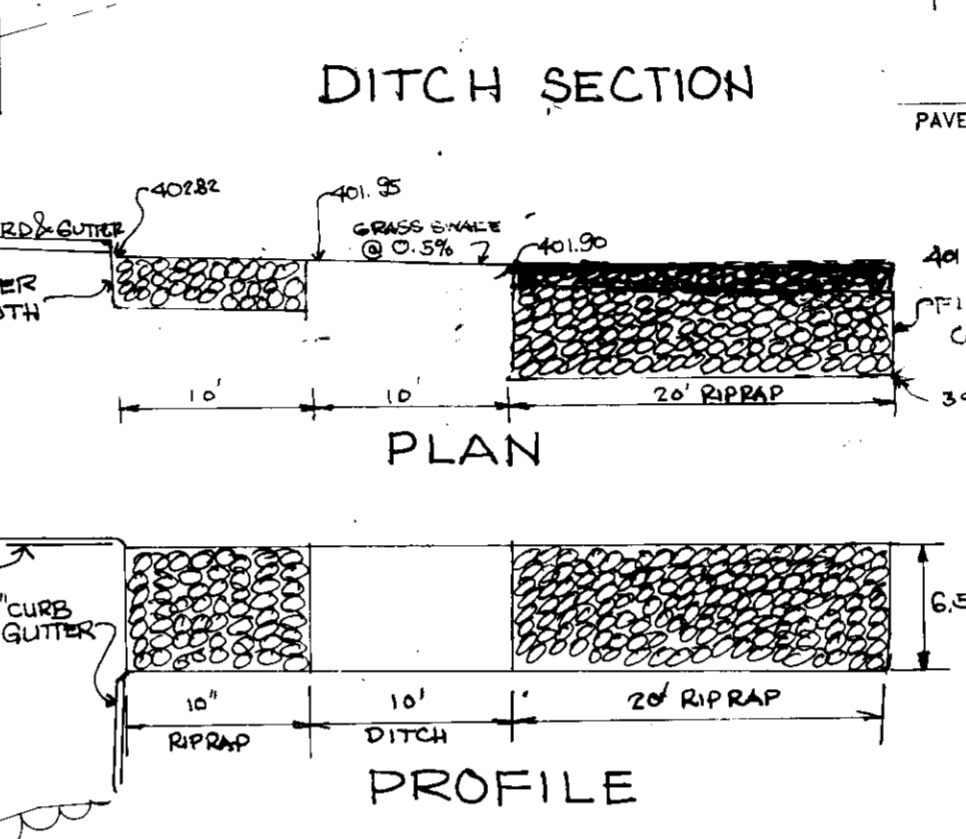
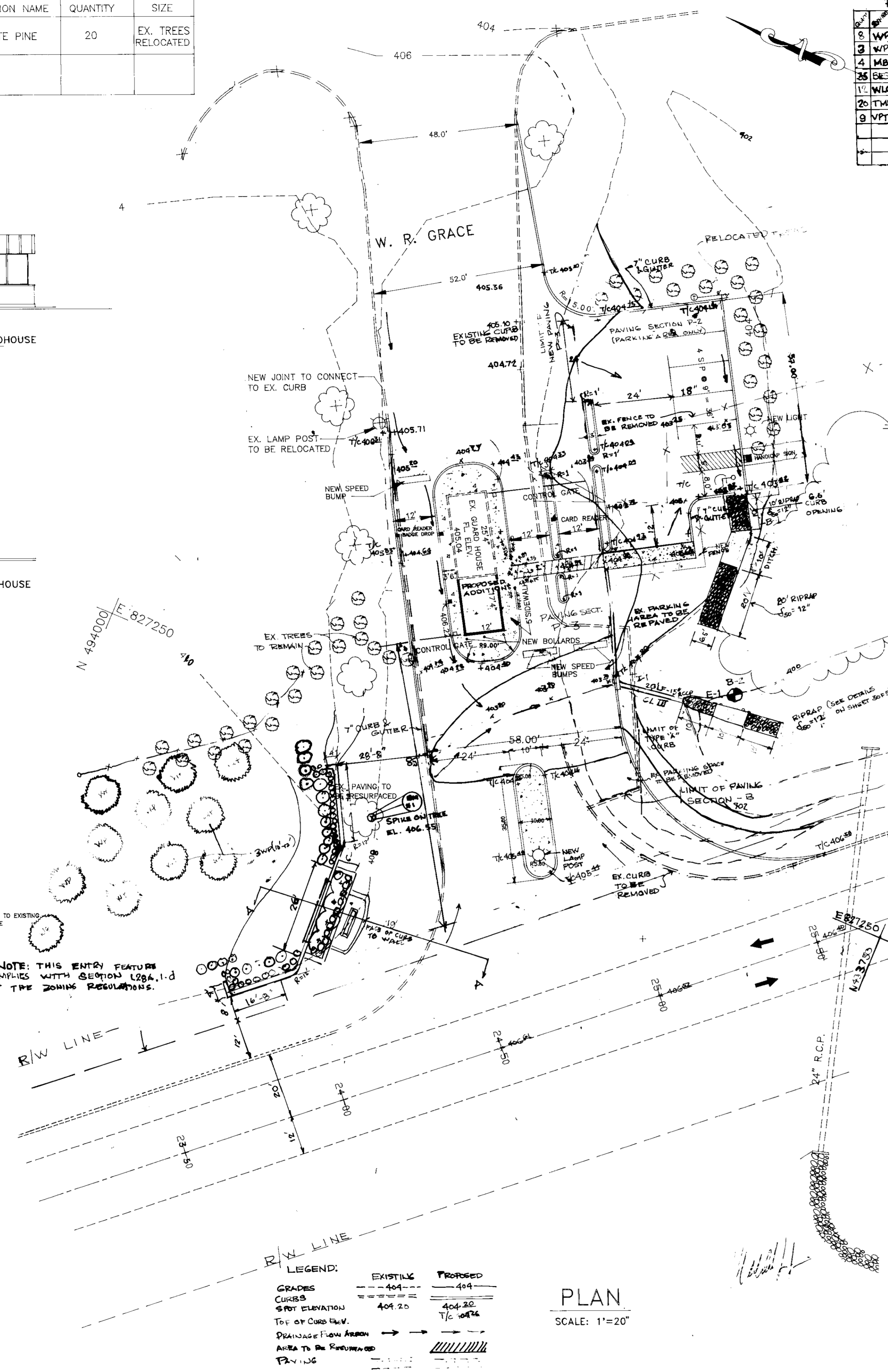
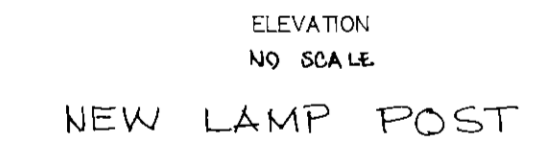
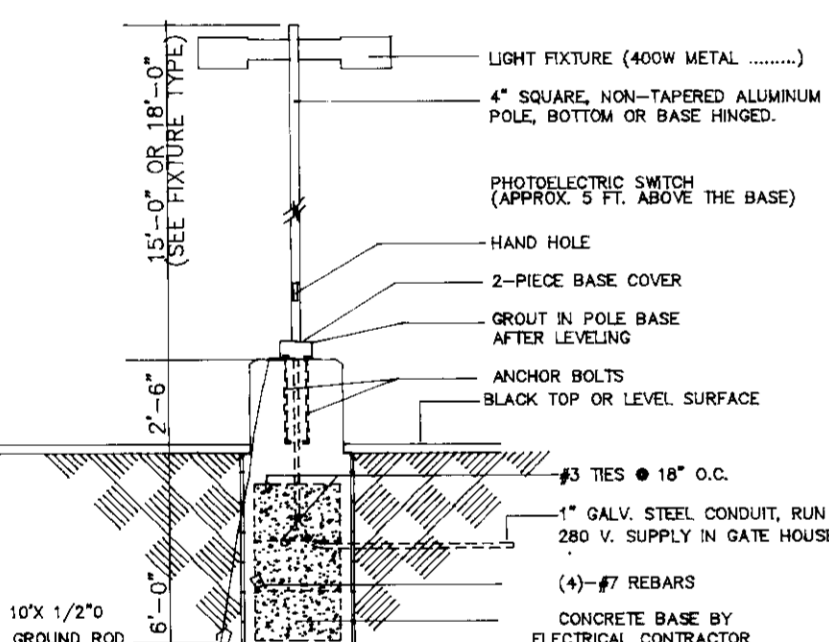
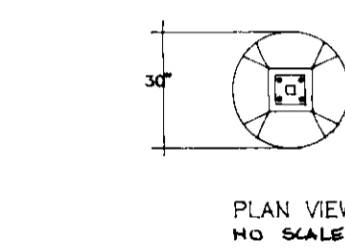
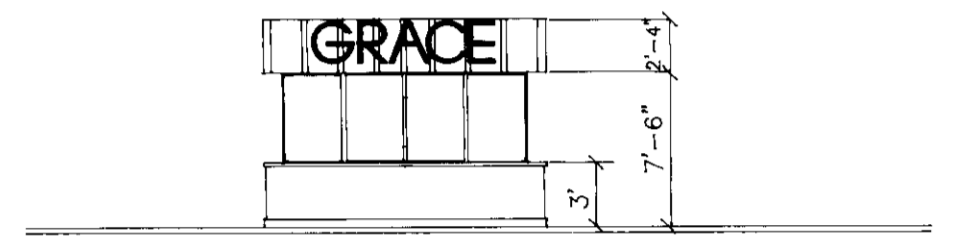
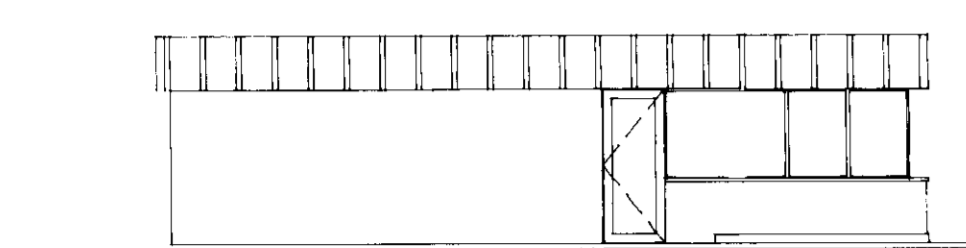
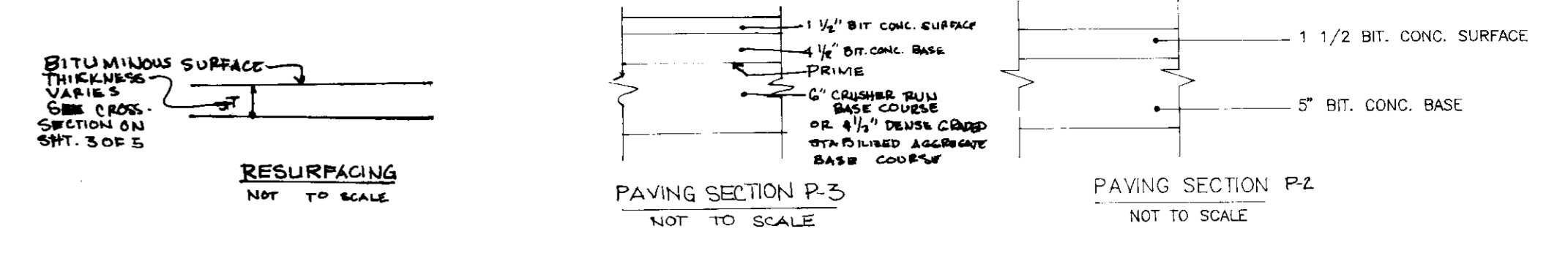
SCALE: 1" = 20'
DATE: 09-15-94
DRWN: JER
DESIGN: JER
CHKD: MLL

SHEET NUMBER
1 OF 5

SOP-95-17

PLANT SCHEDULE					
SYMBOL	LOCATION	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
⊕	PARKING LOT	PINUS STROBUS	WHITE PINE	20	EX. TREES RELOCATED

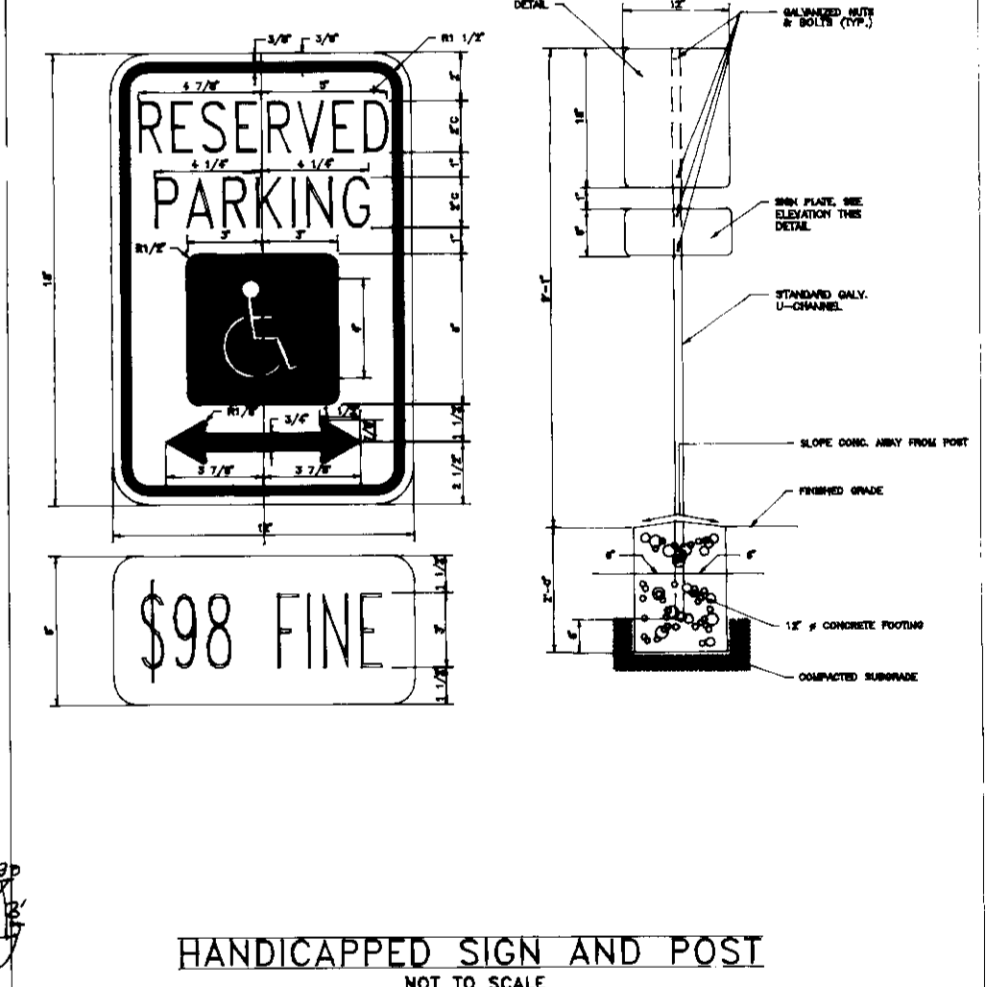
PLANT LIST			
QTY	SYM.	BOTANICAL NAME	COMMON NAME
8	WP	PINUS STROBUS	WHITE PINE
4	MB	MALVACEAE QUINQUE LETA BERRY	ROSE HIPS
25	BES	RUBUS ILLINOENSIS	BLACK EYED SUSAN
10	WLC	CONIORETIC SALICIFOLIA	WILLOW LEAF CUD
20	TMD	TRIFOLIUM MEDIUM	DAWN ROSE
9	VPT	VERBENA PHOENIX	VERBENA



STD TYPE "A" CONC COMBINATION CURB & GUTTER NOT TO SCALE

LOCATION	W	S
ENTRANCE	10'	8'-10"
GUARDHOUSE (N)	3'-6"	2'-10"
GUARDHOUSE (S)	5'-0"	4'-4"
MIDDLE ISLAND	3'-0"	1'-8"
SOUTH ISLAND	3'-0"	1'-8"

- NOTES:
- LONGITUDINAL JOINT BETWEEN SIDEWALK AND CURB SHALL BE CONTINUOUS AND TO A DEPTH OF 1/4" THE SIDEWALK THICKNESS OR 1" MAX. LONGITUDINAL JOINTS SHALL RUN FROM BACK EDGE OF SIDEWALK, CONTINUOUS TO THE BOTTOM FACE OF CURB TO A DEPTH OF 1/4" AND SPACED 5' APART.
 - PROVIDE 1/2" EXPANSION JOINTS AT 15' INTERVALS, IN LONGITUDINAL JOINTS TO FULL CROSS-SECTION.



ADDRESS CHART	
PARCEL NUMBER	STREET ADDRESS
P 145	7379 GUILFORD ROAD
SUBDIVISION NAME	SECTION/AREA LOT PARCEL
W.R. GRACE & CO.	P 145
PLAT NUMBER	BLOCK NUMBER ZONE TAX/ZONE MAP ELECTION DISTRICT CENSUS TRAC
273/186	22 P E C 35 5th 6053.01
WATER CODE	SEWER CODE
N/A	6440000
APPROVED: FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.	
<i>James H. ...</i>	12-2-94
COUNTY HEALTH OFFICER	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>James J. ...</i>	12/15/94
PLANNING DIRECTOR	DATE
<i>Anna ...</i>	12/14/94
CHEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	DATE
APPROVED: FOR PUBLIC SEWERAGE, STORM DRAINAGE SYSTEM AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
<i>James ...</i>	11/3/94
DIRECTOR	DATE
<i>Charles ...</i>	11/3/94
CHIEF, BUREAU OF ENGINEERING	DATE

oria Engineering Inc.
CONSULTING ENGINEERS
8307 MAIN STREET
ELLCOTT CITY MARYLAND 21043

GRACE
W.R. GRACE & CO. - CONN.
WASHINGTON RESEARCH CENTER
7379 ROUTE 32
COLUMBIA, MARYLAND 21044

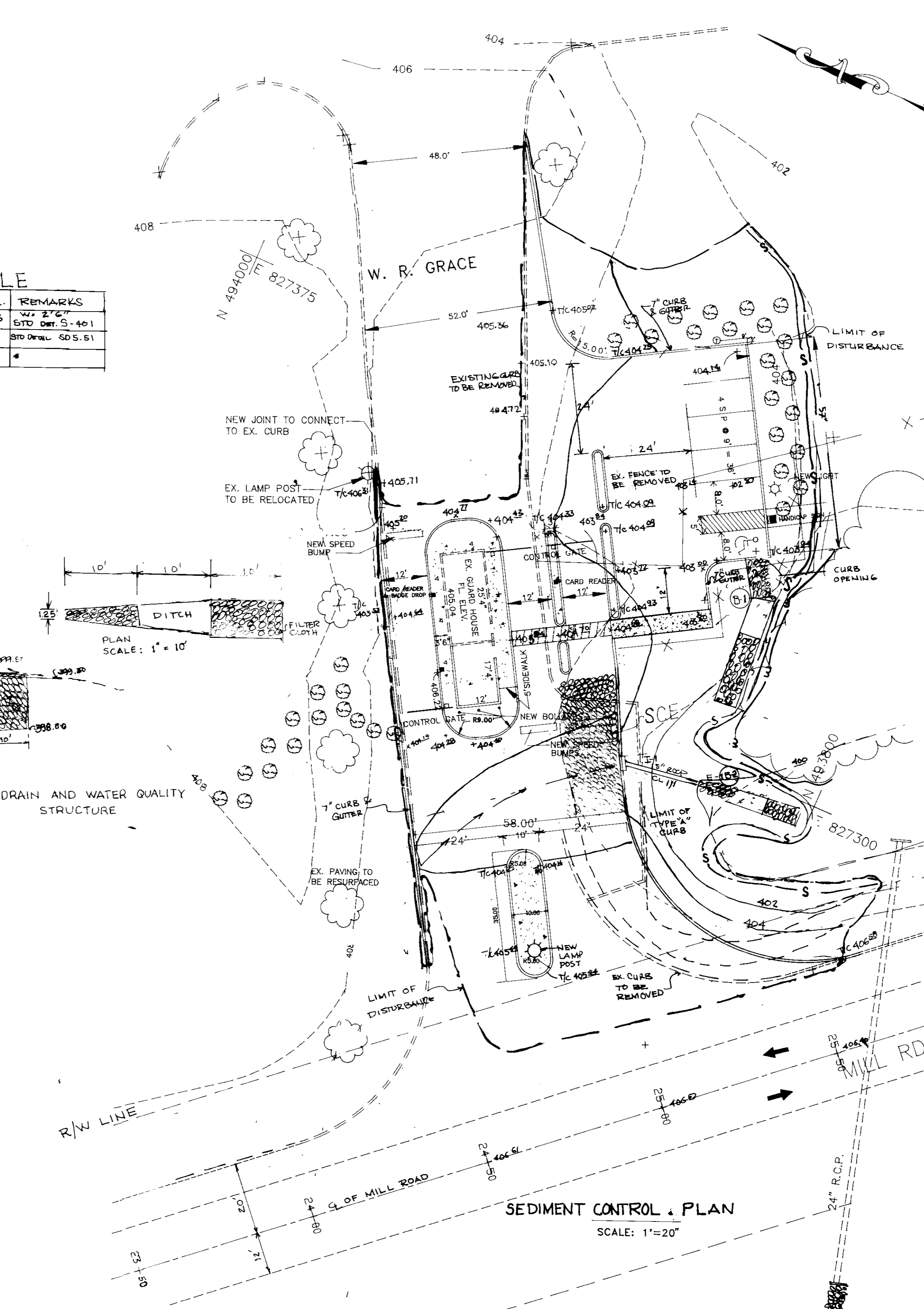
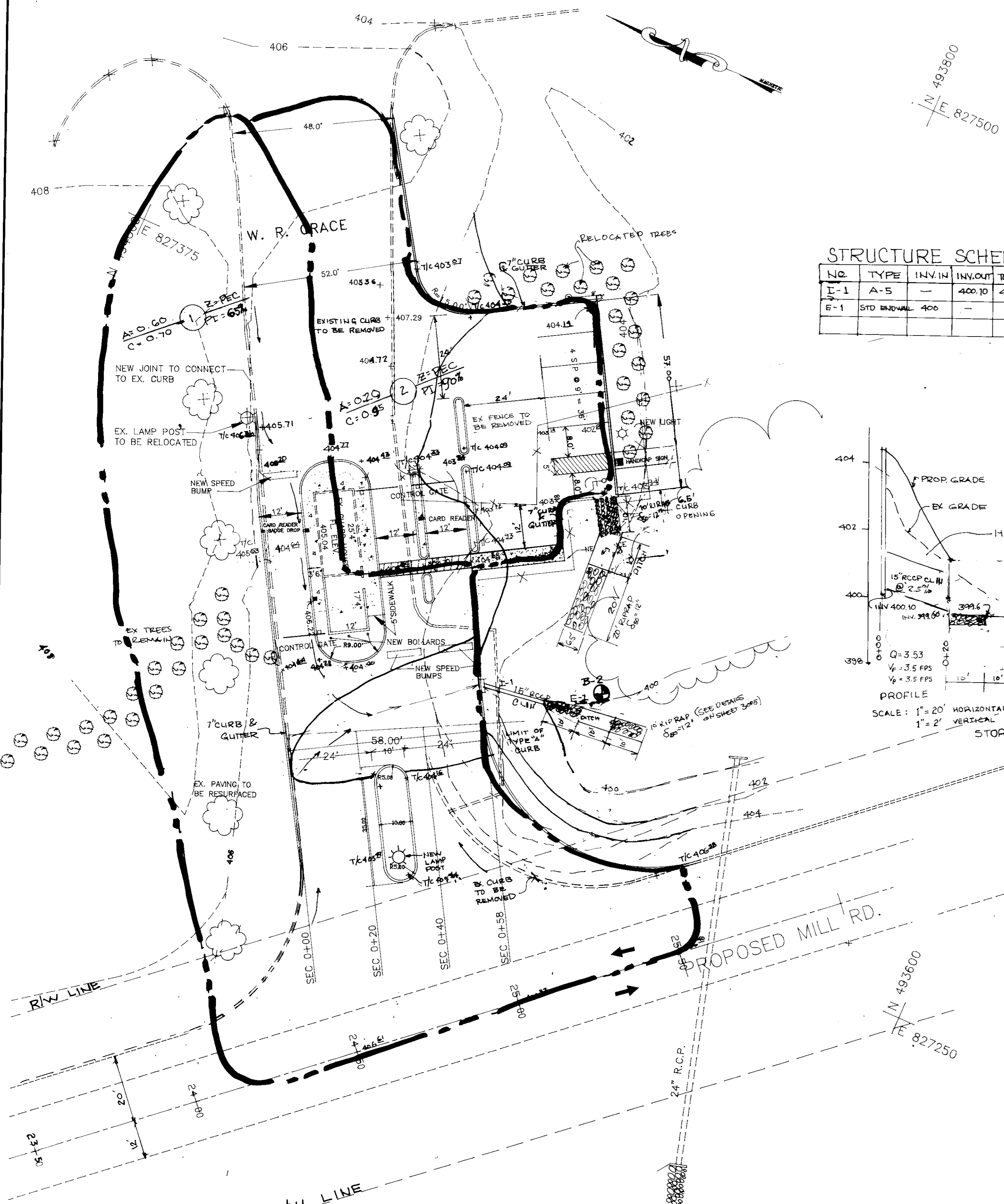
LEGEND:	
EXISTING	PROPOSED
GRADES	404
CURBS	404.20
SPOT ELEVATION	404.20
TOP OF CURB ELEV.	TIC 404.20
DRAINAGE FLOW ARROW	→
AREA TO BE REPAVED	////
FINISH	---

PROPOSED ENTRANCE IMPROVEMENT

SITE DEVELOPMENT PLAN

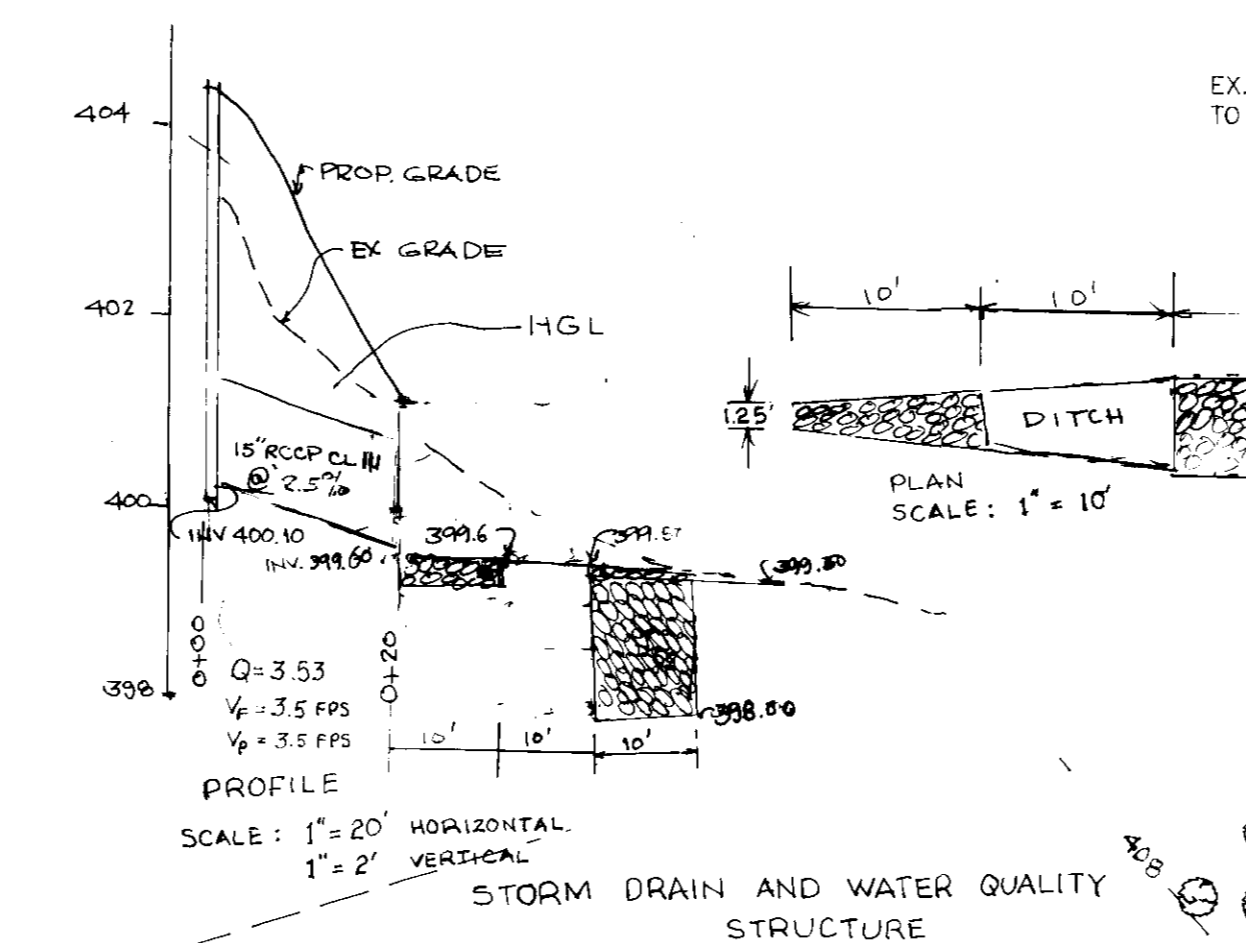
SCALE: 1"=20'	DATE: 0915/94	SHEET: 2 OF 5
DESIGNED: MJL	DRAWN: JER	CHECKED: MJL

SOP-95-17



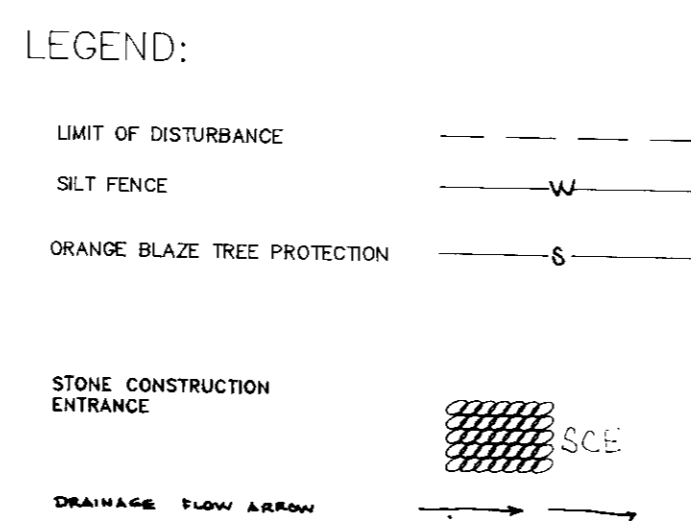
STRUCTURE SCHEDULE

NO	TYPE	IN. IN	IN. OUT	TOP EL.	REMARKS
I-1	A-5	-	400.10	404.5	W. 2' C. STD. DIST. S. 401
E-1	STD. ENH. WALL	400	-	-	STD. DIST. S. 401 STD. DIST. S. 401



- SEQUENCE OF CONSTRUCTION**
- OBTAIN GRADING PERMIT. - 1 WEEK
 - INSTALL BLAZE ORANGE PLASTIC WIRE MESH TREE PROTECTION. - 1 DAY
 - INSTALL ALL SEDIMENT CONTROL STRUCTURES AS SHOWN ON THIS PLAN SUCH AS SILT FENCE, STONE CONSTRUCTION ENTRANCE, ETC. - 2 DAYS
 - GRADE THE AREA AS SHOWN, CONSTRUCT PARKING LOTS & PROPOSED DRAINAGE SYSTEMS. - 16 WEEKS
 - STABILIZE ALL DISTURBED AREAS. - 1 WEEK
 - REMOVE ALL SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE HOWARD COUNTY SEDIMENT CONTROL REQUIREMENTS. - 2 DAYS

DRAINAGE AREA MAP
SCALE: 1"=20'



DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan, and that any responsible personnel involved in the construction will have a Certificate of Attendance at the Department of the Environment Approved Training Program for the Control of Sediment before beginning the project. I also authorize periodic inspection by the Howard Soil Conservation Service.

[Signature]
BUILDER/DEVELOPER
11/15/94
DATE

ENGINEER'S CERTIFICATE

I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site and conditions and it was prepared in accordance with the requirements of Howard Soil Conservation District.

[Signature]
SIGNATURE OF ENGINEER
11/27/94
DATE

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for the Soil and Sediment Control.

[Signature] 11/27/94
U.S. Soil Conservation Service
DATE

These plans for Soil and Sediment Control meet the requirements of the Howard County Soil Conservation District.

[Signature] 11/27/94
Howard County Soil Conservation District
DATE

ADDRESS CHART

PARCEL NUMBER	STREET ADDRESS
P 145	7379 GUILFORD ROAD

PLAT NUMBER	BLOCK NUMBER	ZONE	TAX/ZONE MAP	ELECTION DISTRICT	DENSUS TRAC
273/186	22	P E C	35	5th	6053.01

WATER CODE: N/A
SEWER CODE: 6440000

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

[Signature] 12-8-94
COUNTY HEALTH OFFICER
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 12/15/94
PLANNING DIRECTOR
DATE

[Signature] 12/14/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
DATE

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

[Signature] 11/16/94
DATE

[Signature] 11/3/94
CHIEF, BUREAU OF ENGINEERING
DATE

Orion Engineering Inc.
CONSULTING ENGINEERS
5307 MAIN STREET
FLOUBERT, MD, MARYLAND 21043
TEL: (410) 465-0400

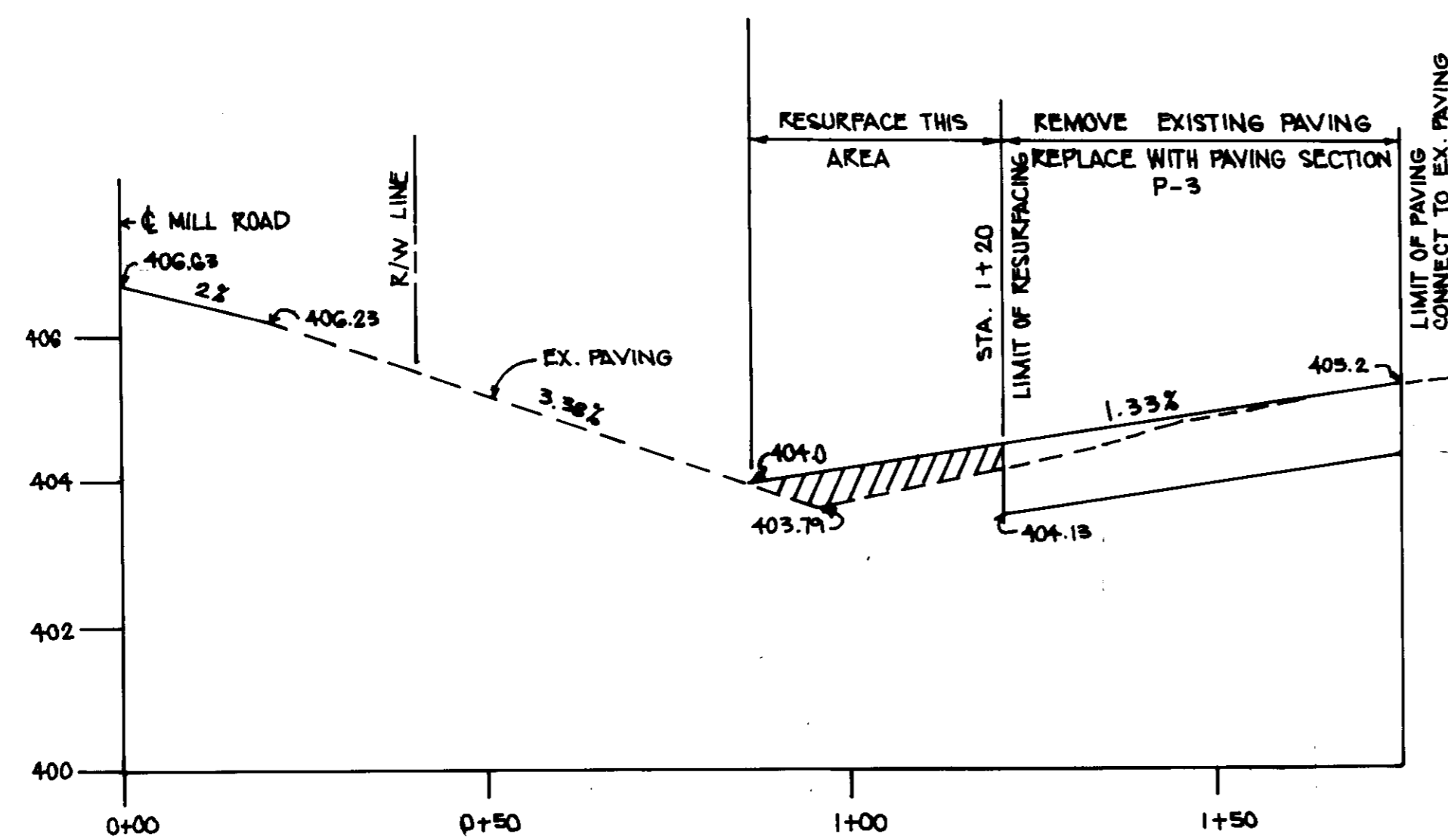
GRACE

W.R. GRACE & CO. - CONN.
WASHINGTON RESEARCH CENTER
7379 ROUTE 32
COLUMBIA, MARYLAND 21044

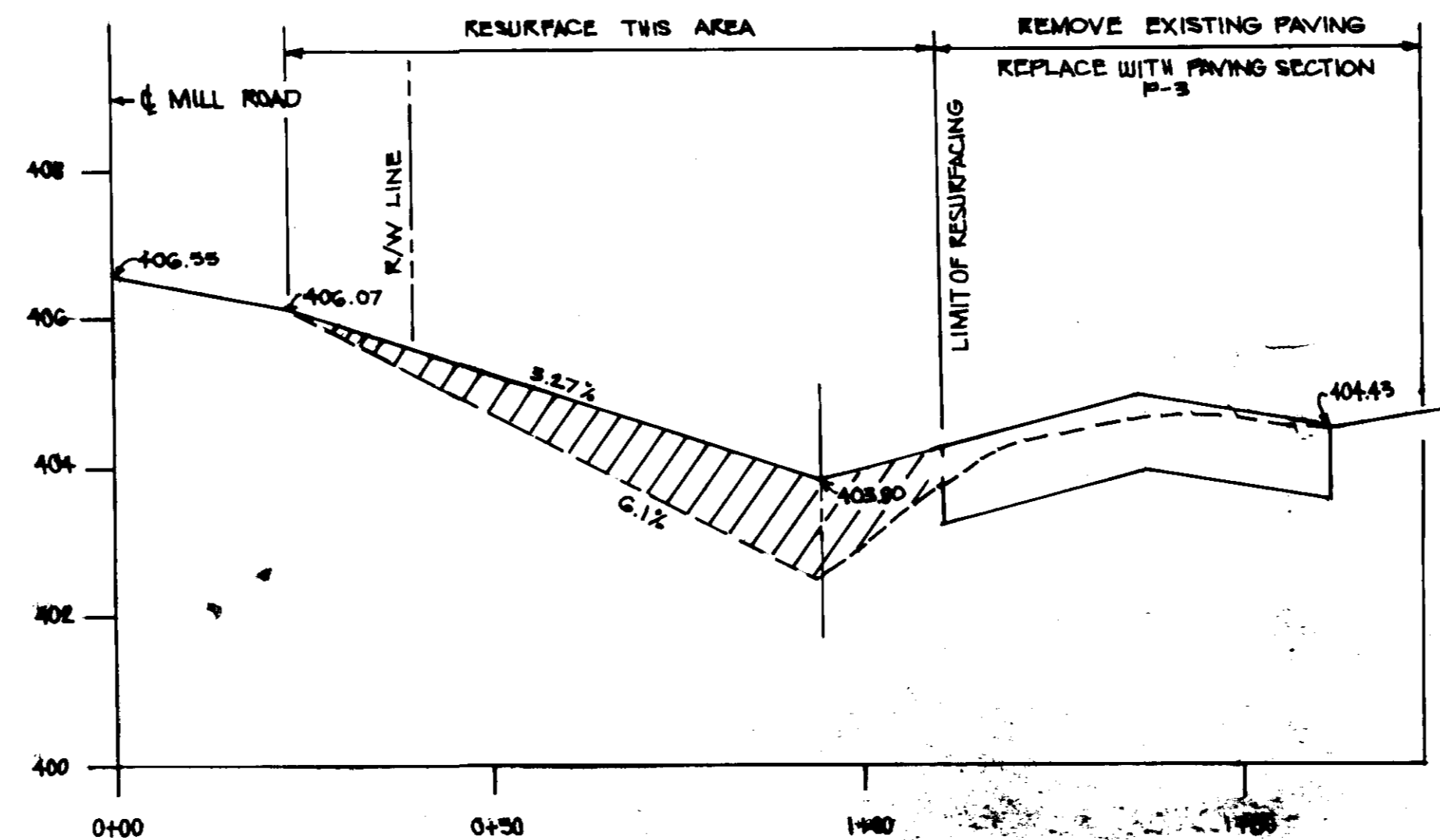
PROPOSED ENTRANCE IMPROVEMENT

**DRAINAGE AREA MAP
SEDIMENT CONTROL PLAN**

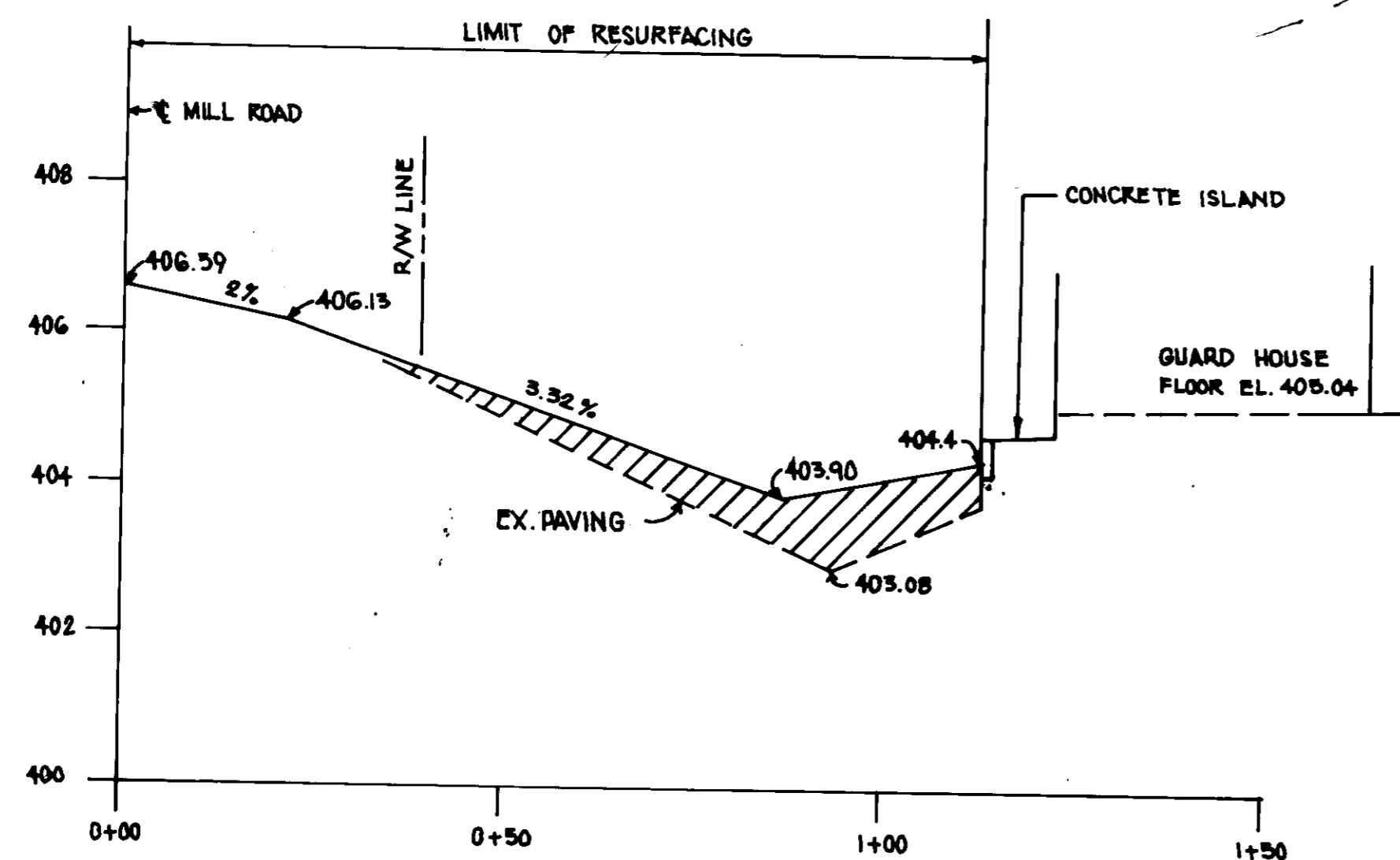
SCALE: 1"=20'
DESIGNED: MLL
DATE: 09/15/94
DRAWN: JER
SHEET: 3 OF 5
CHECKED: MLL



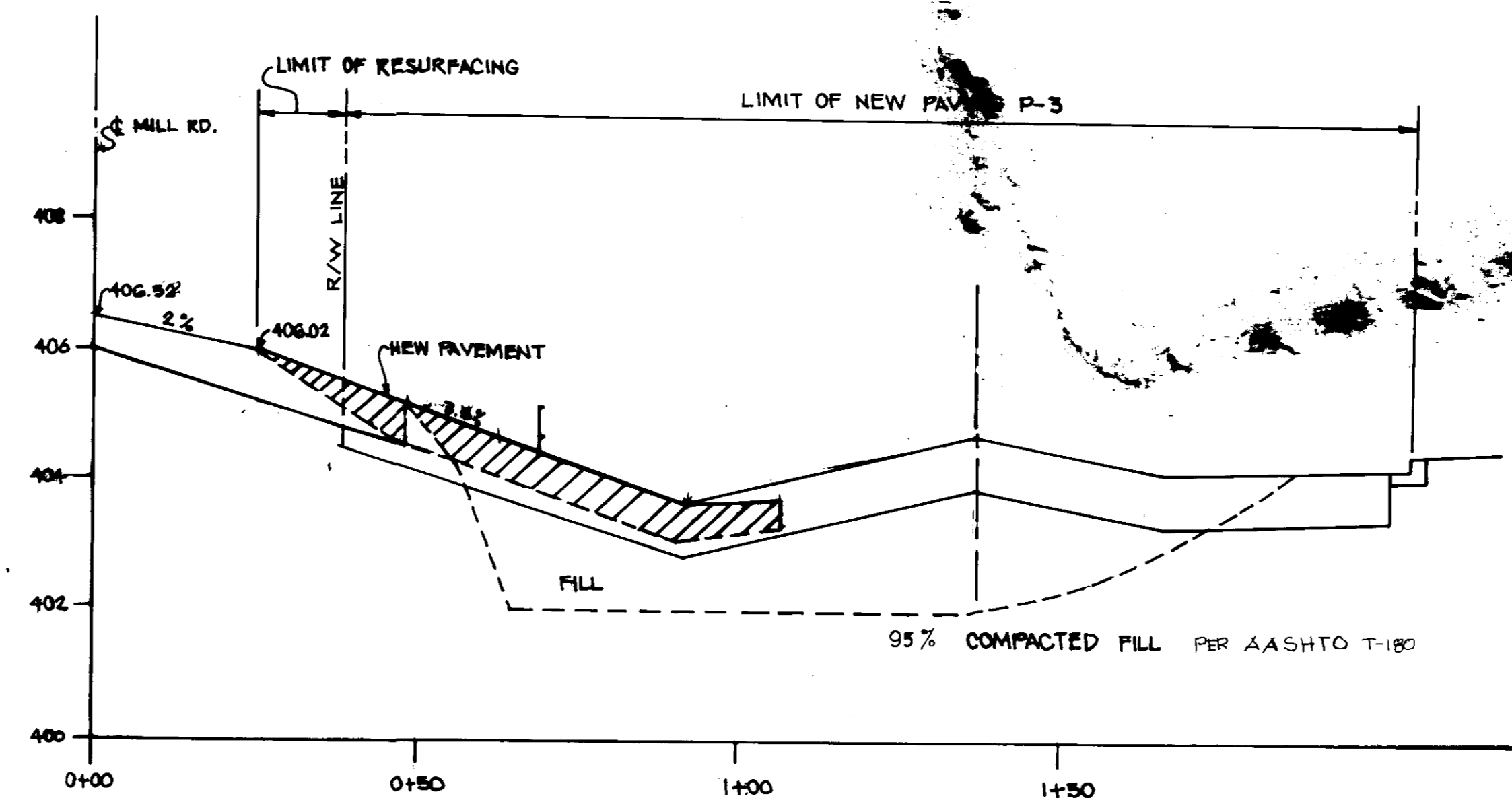
SECTION 0+00
SCALE 1" = 20' HOR.
1" = 2' VER.



SECTION 0+40
SCALE 1" = 20' HOR.
1" = 2' VER.



SECTION 0+20
SCALE 1" = 20' HOR.
1" = 2' VER.



SECTION 0+58
SCALE 1" = 20' HOR.
1" = 2' VER.

ADDRESS CHART					
PARCEL NUMBER		STREET ADDRESS			
P 145		7379 GUILFORD ROAD			
SUBDIVISION NAME		SECTION/AREA	LOT	PARCEL	
W.R. GRACE & CO.				P. 145	
PLAT NUMBER	BLOCK NUMBER	ZONE	TAX/ZONE MAP	ELECTION DISTRICT	CENSUS TRAC
273/186	22	P E C	35	5th	6053.01
WATER CODE			SEWER CODE		
N / A			6440000		

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

James M. ... 12-8-94
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Frank S. ... 12/15/94
PLANNING DIRECTOR DATE

Gina ... 12/14/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

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

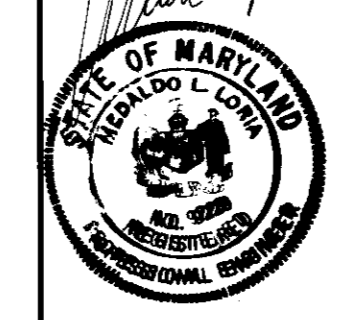
James P. ... 11/2/94
DIRECTOR DATE

William ... 11/3/94
CHIEF, BUREAU OF ENGINEERING DATE

Orion Engineering Inc.
CONSULTING ENGINEERS
8307 MAIN STREET
ELLCOTT CITY, MARYLAND 21043
TEL. (410) 465-0400

GRACE
W.R. GRACE & CO. - CONN.
WASHINGTON RESEARCH CENTER
7379 ROUTE 32
COLUMBIA, MARYLAND 21044

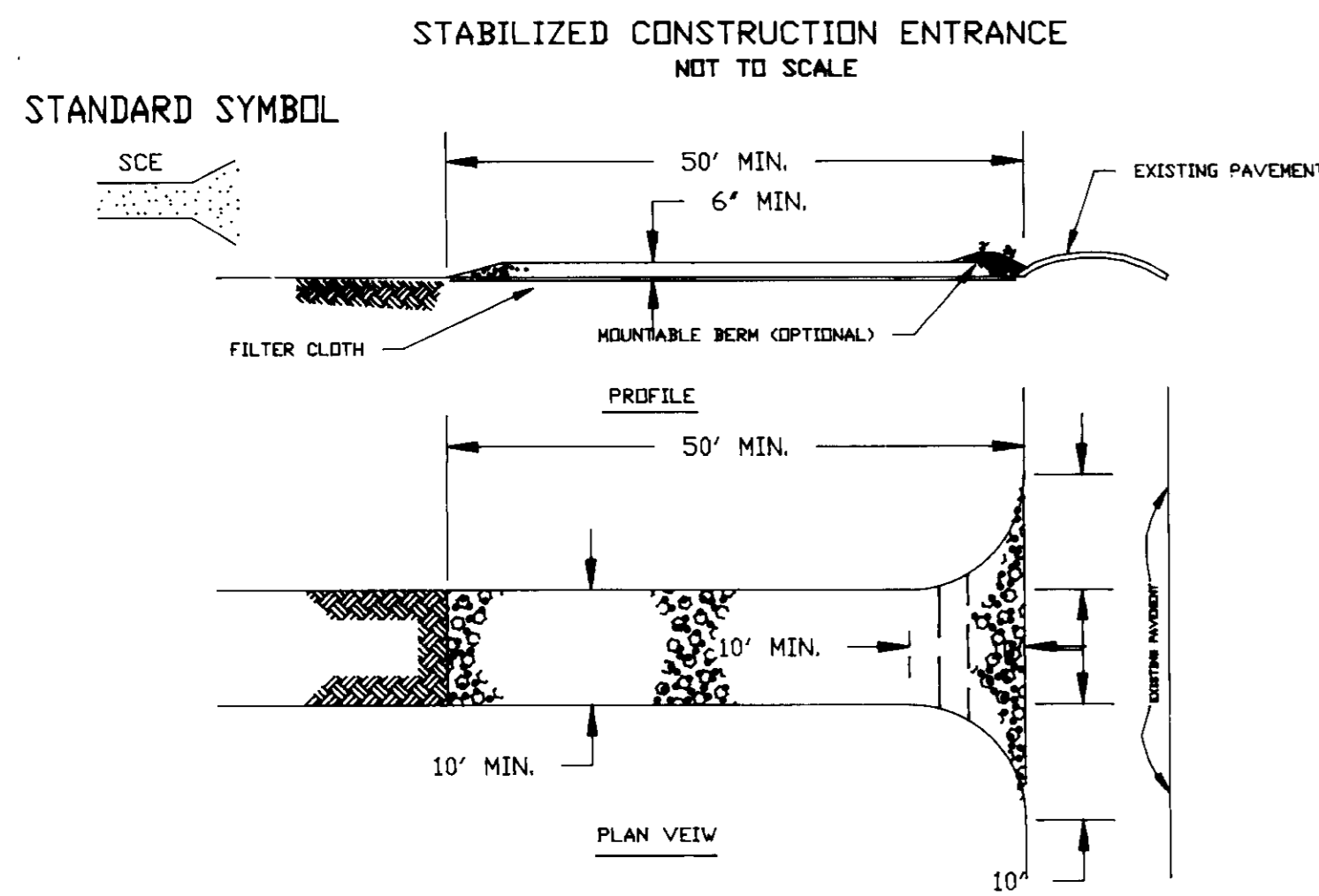
PROPOSED ENTRANCE IMPROVEMENT



PROFILES

SCALE: AS SHOWN	DATE:	SHEET 4 OF 5
DESIGNED: M.L.L.	DRAWN: J.E.R.	CHECKED: M.L.L.

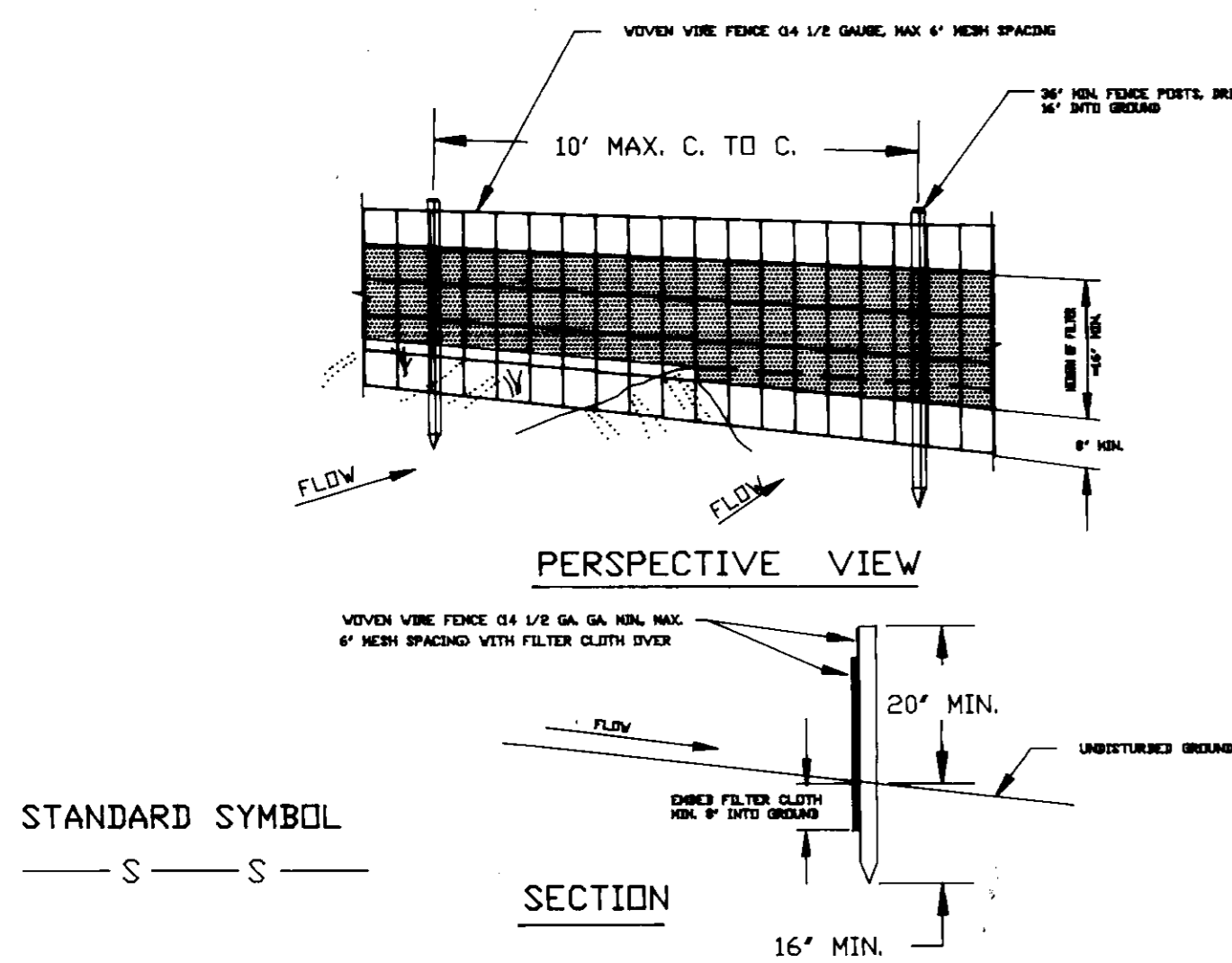
SOP-95-17



CONSTRUCTION SPECIFICATION

- STONE SIZE - USE 2" STONE OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TEN (10) FOOT MINIMUM, BUT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIRECTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5% SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT INTO PUBLIC RIGHTS - OF - WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS - OF - WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS - OF - WAY. WHEN IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

SILT FENCE



CONSTRUCTION NOTES FOR FABRICATION SILT FENCE

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FILLED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

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, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, UNLESS PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES

- PREFERRED - APPLY 2 TONS PER ACRE DOLLOMITIC 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 UREAFORM FERTILIZER (9 LBS/1000 SQ FT).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (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 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 UNROTTED 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 SEEDED 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, UNLESS 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 NOVEMBER 15, SEED WITH 2 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 (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 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 UNROTTED 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.

STANDARD AND SPECIFICATION FOR VEGETATIVE STABILIZATION WITH SOD

- CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD.
- SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH. AT THE TIME OF CUTTING, MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH.
- STANDARD SIZE SECTIONS OF SOD SHALL 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 SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
- SOD SHALL NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO ITS INSTALLATION.

1. SITE PREPARATION

FERTILIZER AND LIME APPLICATION RATES SHALL 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 UNDER B, BELOW.

- PRIOR TO SODDING, THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES, AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
- WHERE THE SOIL IS ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 2 TONS/ACRE OR 100 POUNDS PER 1000 SQUARE FEET. IN ALL SOILS 1000 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT SHALL BE UNIFORMLY APPLIED AND MIXED INTO THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME.
- ALL AREAS RECEIVING SOD SHALL BE UNIFORMLY FINE GRADED. HARD-PACKED EARTH SHALL BE SCARIFIED PRIOR TO PLACEMENT OF SOD.

1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (992-2437)

2) 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.

3) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, 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 3/4, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:	
TOTAL AREA OF SITE	126.28 ACRES
AREA DISTURBED	0.35 ACRES
AREA TO BE ROOFED OR PAVED	0.25 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.10 ACRES
TOTAL CUT	0 CU. YDS
TOTAL FILL	40.5 CU. YDS
OFFSITE WASTE/BORROW AREA LOCATION	FROM GRACE PROPERTY

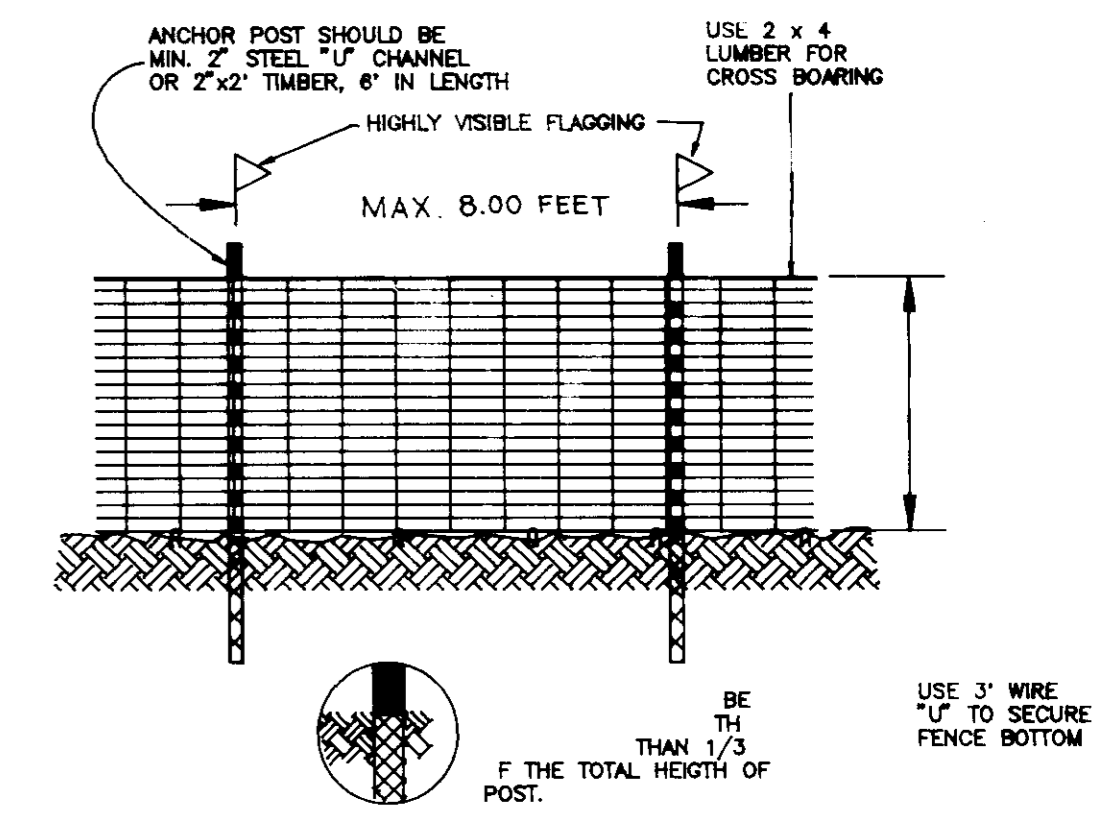
8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.

10) 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.

GENERAL NOTES

- REFER TO 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN.
- WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, MINOR FIELD ADJUSTMENTS CAN AND WILL BE MADE TO INSURE THE CONTROL OF ANY SEDIMENT. CHANGES IN SEDIMENT CONTROL PRACTICES REQUIRE PRIOR APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE COUNTY SOIL CONSERVATION DISTRICT.
- AT THE END OF EACH WORKING DAY, ALL SEDIMENT CONTROL PRACTICES WILL BE INSPECTED AND LEFT IN OPERATIONAL CONDITION.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A) SEVEN CALENDAR DAYS AS 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 (B) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ANY CHANGE TO THE GRADING PROPOSED ON THIS PLAN REQUIRES RE-SUBMISSION TO COUNTY SOIL CONSERVATION DISTRICT FOR APPROVAL.
- DUST CONTROL WILL BE PROVIDED FOR ALL DISTURBED AREAS. REFER TO 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PP 62:01 AND 62:02 FOR ACCEPTABLE METHODS AND SPECIFICATIONS FOR DUST CONTROL.
- ANY VARIATION FROM THE SEQUENCE OF OPERATIONS STATED ON THIS PLAN REQUIRES THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE COUNTY SOIL CONSERVATION DISTRICT PRIOR TO THE INITIATION OF THE CHANGE.
- EXCESS CUT OR BORROW MATERIAL SHALL GO TO OR COME FROM, RESPECTIVELY, A SITE WITH AN APPROVED SEDIMENT CONTROL PLAN.
- THE FOLLOWING ITEM MAY BE USED AS APPLICABLE:
- REFER TO "MARYLAND'S GUIDELINES TO WATERWORKS CONSTRUCTION" BY THE WATER RESOURCES ADMINISTRATION (WRA), DATED JANUARY, 1986 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.



- NOTES:
- FOREST PROTECTION DEVICE ONLY
 - RETENTION AREA WILL BE SETAS PART OF THE REVIEW PROCESS
 - BOUNDARIES OF RETENTION AREA SHOULD BE STAKE AND FLAGGED PRIOR TO INSTALLING DEVICE
 - ROOT DAMAGE SHOULD BE AVOIDED
 - PROTECTIVE SIGNAGE MAY ALSO BE USED
 - DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

BLAZE ORANGE PLASTIC MESH

NOT TO SCALE

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

[Signature] 12-8-94
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 11/17/94
PLANNING DIRECTOR DATE

[Signature] 12/14/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

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

[Signature] 11/4/94
DATE

[Signature] 11/5/94
DATE

Coria Engineering Inc.
CONSULTING ENGINEERS

8307 MAIN STREET
ELLCOTT CITY, MARYLAND 21043
TEL. (410) 465-0400

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for soil and sediment control

[Signature] 10/21/94
S.S. Soil Conservation Service DATE

These plans for soil and sediment control meet the requirements of the Howard Soil Conservation District.

[Signature] 10/21/94
Howard Soil Conservation District DATE

ENGINEER'S CERTIFICATE

I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site and conditions and it was prepared in accordance with the requirements of Howard Soil Conservation District.

[Signature] _____
SIGNATURE OF ENGINEER DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan, and that any responsible personnel involved in the construction will have a Certificate of Attendance at the Department of the Environment Approved Training Program for the Control of Sediment before beginning the project. I also authorize periodic inspection by the Howard Soil Conservation Service.

[Signature] _____
BUILDER/DEVELOPER DATE

GRACE

W.R. GRACE & CO. - CONN.
WASHINGTON RESEARCH CENTER
7379 ROUTE 32
COLUMBIA, MARYLAND 21044

**PROPOSED ENTRANCE IMPROVEMENT
SEDIMENT AND EROSION CONTROL NOTES**

owner: _____

SCALE AS SHOWN DATE: 08/29/94 SHEET 5 of 5
DESIGNED: JER DRAWN: JER CHECKED: MLL
SDP-9517