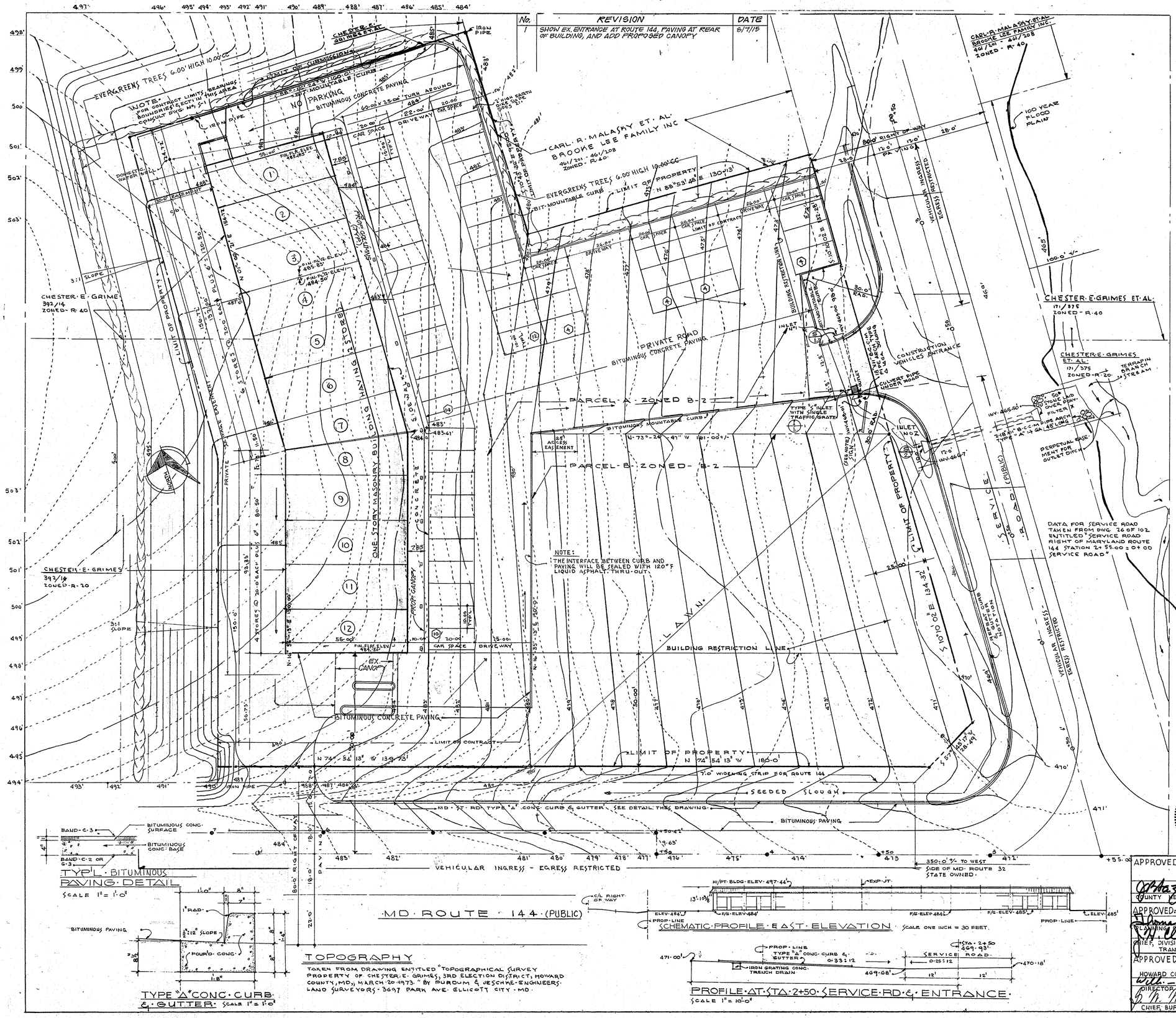
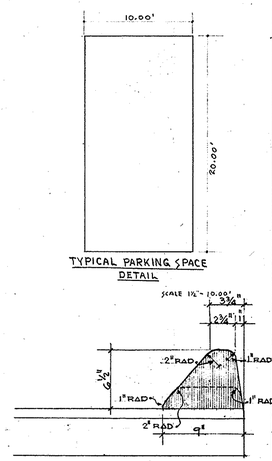
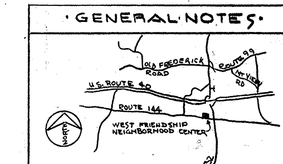
No.	REVISION	DATE
1	SHOW EX. ENTRANCE AT ROUTE 144, PAVING AT REAR OF BUILDING, AND ADD PROPOSED CANOPY	8/7/15







DETAIL · BITUMINOUS · MOUNTABLE · CURB ·

SCALE 1 1/2" = 1'-0"

GENERAL NOTES

PARKING

FLOOR AREA ---------- 13,200' TOTAL
50% AREA FOR SALES SPACE ---- 6,600'
1 CAR SPACE PER 200'
6,600' ÷ 200' EQUALS 33 CAR SPACES REQUIRED
SPACES PROVIDED ---- 52
SURPLUS ---------- 18 CAR SPACES
SPACE PROVIDED 10'x 20' PER CAR.

FACILITY	I-1.	S-1.	S-2.
FINISH GRADE	470.90'	470.90'	468.80'
INVERT ELEVATION IN	470.90'	469.00'	466.70'
INVERT ELEVATION OUT	469.00'	468.01'	465.50'
TYPE INLET	S-SINGLE GRATE		
TYPE ENDWALLS		STANDD. "F"	MODIFIED "F" SEE NO. 2
ENDWALL LENGTH		2'-3"	4'-0"
WINGWALL LENGTH		2'-3"	2'-3"
SIZE	2' X 4'	18"H ARCH	2-18"H ARCHES
LENGTH		22.0'	48.0'
MATERIAL	CAST IRON	B.C.C.M. 14 GA	B.C.C.M. 14 GA

NOTE

THE ABOVE ARE SPECIFIED PER HOWARD COUNTY ROAD CONSTRUCTION CODE & STANDARD SPECS DATED 11/27/62.
PRECAST CONSTRUCTION MAY BE USED IF EQUIVALENT TO THOSE SPECIFIED & APPROVED BY HOWARD COUNTY DEPT. OF PUBLIC WORKS

SIGN NOTE

SIZE AND LOCATION OF SIGN TO BE DETERMINED AT TIME OF SIGN PERMIT APPLICATION, IN ACCORDANCE WITH HOWARD COUNTY SPEC. INSTRUCTION BY MJ. MARY BOLTE 3/19/74 4PM.

PAVING NOTE:

PAVING WITHIN THE MD. S.H.A. R/W TO CONSIST:
NINE (9) INCH COMPACTED BITUMINOUS CONCRETE (6" BASE - 3" SURFACE) ON
4" CRUSHER RUN.

REFERENCE DRAWINGS:

FOR SANITARY SEWERAGE DISPOSAL SYSTEM ---- SEE DWG. S-3
FOR EROSION CONTROL ---- SEE DWG. S-4
FOR ON SITE DRAINAGE AREA MAP ---- SEE DWG. S-5
FOR OFF SITE DRAINAGE ---- SEE DWG. S-6
FOR FLOOR PLAN SCHEDULE & DETAILS ---- SEE DWG. A-1
FOR BUILDING ELEVATIONS ---- SEE DWG. A-2
FOR DETAILS ---- SEE DWG. A-3
FOR MECH'L & ELECT'L ---- SEE DWG. ME-1 & ME-2
FOR ELECTRICAL ---- SEE DWG. E-1
FOR SERVICE ROAD DATA SEE S.R.C. DWG. RIGHT OF WAY PLAT NO. 41737. SHEET NO. 26 OF 102

LEGEND

BITUMINOUS PAVING & CURB & GUTTER ---- SEE PAVING NOTE
PROPERTY LINE ----
EXISTING CONTOURS ---- 475'
RELOCATED CONTOURS ---- 475'
SPOT GRADES ---- +485.88'
STORE NUMBERS ---- (6)
5 CARS PER ROW ---- (5)

3RD ELECTION DISTRICT
ZONED B-2

APPROVED
DIVISION OF LAND DEVELOPMENT & TRANSPORTATION PLANNING
H.C.D.P.W.
DATE 4/15/74

AREA:
PARCEL - A - = 1.27 ACRES
DO - B - = 0.59 ACRES
TOTAL EMPLOYEES PER STORE = 3 PERSONS PER STORE (12X3 OR 36)
SEPTIC TANK CALCULATED ON 36 PERSONS X 35 GAL. PER PERSON PER DAY

STATE OF MARYLAND — HARRY M. HARRISON JR. — NO. 10998 — REGISTERED PROFESSIONAL ENGINEER

STATE OF MARYLAND — PAUL M. SILL — NO. 32025 — PROFESSIONAL ENGINEER — FOR RAWSON #9 ONLY

DATE	REVISIONS
4-29-74	REVISED PER HOWARD CO. COMMENTS 4-26-74
4-4-74	REVISIONS PER HOWARD COUNTY COMMENTS 3-21-74
3-15-74	REVISIONS PER HOWARD COUNTY COMMENTS
9-20-73	MACADAM PAVING & C/G ADDED RD. PROFILE AT STA. 2+50 ADDED CURB & GUTTER DETAIL ADDED

Wilbur E. Harrison — REVISIONS

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5/16/74

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR — DATE 5-17-74
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING — DATE 5/17/74

APPROVED: FOR PRIVATE WATER, PRIVATE SEWERAGE AND STORM DRAINAGE SYSTEMS AND ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR — DATE 5/17/74
CHIEF, BUREAU OF HIGHWAYS — DATE 5/14/74

WEST FRIENDSHIP NEIGHBORHOOD CENTER FOR MR. CHESTER E. GRIMES

WEST FRIENDSHIP
ROUTE MD. 144
HOWARD COUNTY, MARYLAND.

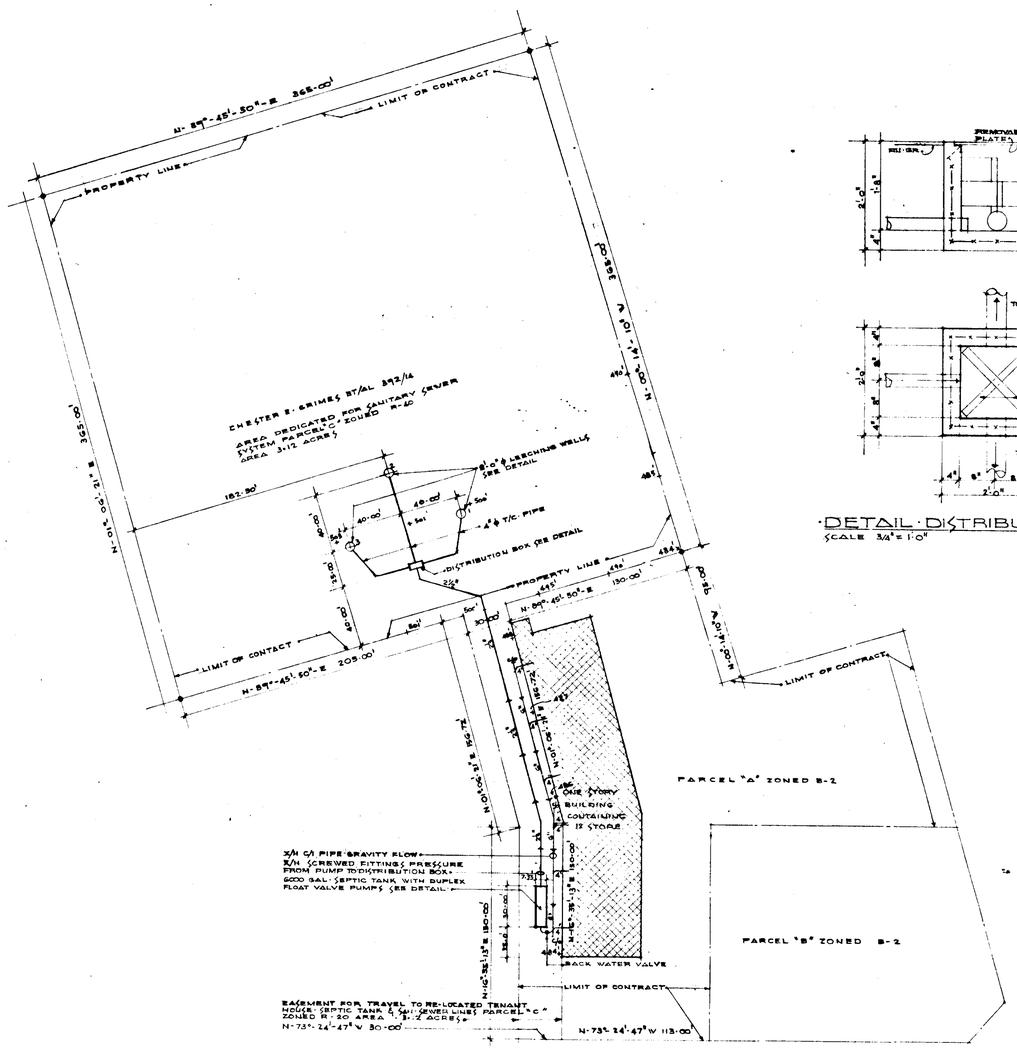
HARRISON ASSOCIATES, INC.
25 SUTTON AVE. BALTO. MD. 21228

SITE DEVELOPMENT PLAN.

SCALE 1 INCH = 20 FEET.

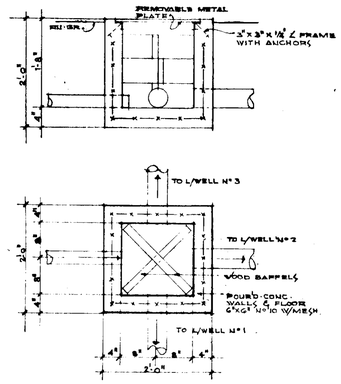
DATE 8-27-1973 | COMM. 7312 | DWN. BY L.E.F. | CH'K'D BY W. | S-2

SDP 74-73



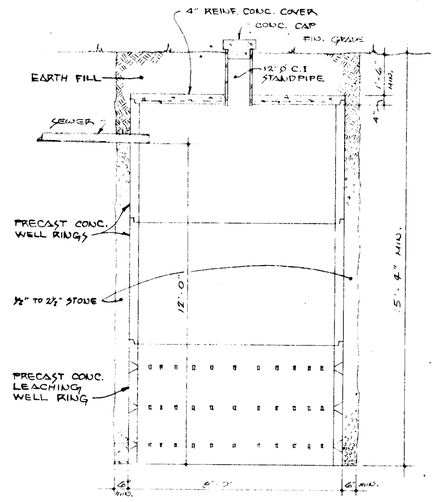
·PLAN·OF·SANITARY·SYSTEM·

SCALE 1 INCH = 50 FEET



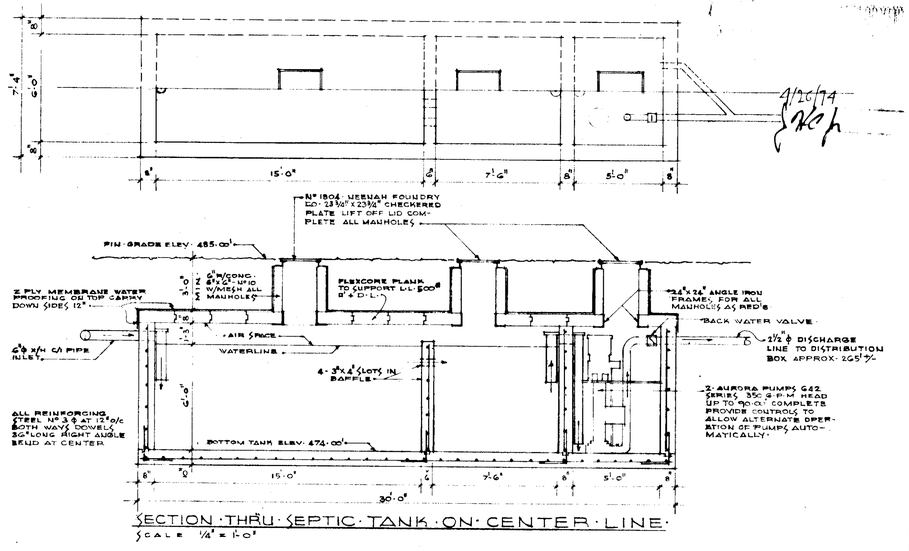
·DETAIL·DISTRIBUTION·BOX·

SCALE 3/4"=1'-0"



·DETAIL·THRU·LEACHING·WELL·

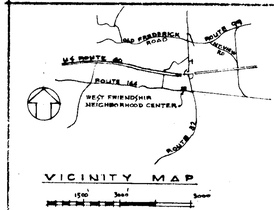
SCALE: 3/8"=1'-0"



4/26/74

SECTION·THRU·SEPTIC·TANK·ON·CENTER·LINE·

SCALE 1/4"=1'-0"



VICINITY MAP

1500' 3000' 5000'

AUTHORIZED·SEWAGE·FLOW

.0·093 X 13,200 SQ·FT·BLDG·AREA = 1,228 G·P·D

APPROVED: FOR PRIVATE WATER & PRIVATE SEWAGE SYSTEMS HOWARD CO. HEALTH DEPT.

COUNTY HEALTH OFFICER — DATE 5/10/74

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

PLANNING DIRECTOR — DATE 5-17-74

CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING — DATE 5/17/74

APPROVED: FOR STORM DRAINAGE & PUBLIC ROADS HOWARD CO. DEPT. OF PUBLIC WORKS

DIRECTOR — DATE 5/14/74

CHIEF, BUREAU OF HIGHWAYS — DATE 5/14/74

REFERENCE·DRAWINGS·

FOR EXISTING & FINISH GRADES SEE DWG- S-2
FOR EROSION CONTROL SEE DWG------ S-4
FOR ON SITE DRAINAGE AREA MAP SEE DWG- S-5
FOR SANITARY SEWERAGE DISPOSAL SYSTEM SEE DWG-S-3
OFF SITE DRAINAGE MAP ------SEE DWG-S-6
FLOOR PLAN·SCHEDULES & DETAILS- SEE DWG·A-1
FOR BUILDING ELEVATIONS ----SEE DWG-A-2
FOR DETAILS ----------SEE DWG-A-3
FOR MECH'L & ELECT'L -------SEE DWG-M-E-1 & M-E-2
ELECTRICAL SEE DWG- E-1

STATE OF MARYLAND — WILLARD E. HARRISON — REGISTERED PROFESSIONAL ENGINEER

DATE SIGN	SIGNATURE BLOCKS ADDED

WEST·FRIENDSHIP·NEIGHBORHOOD·CENTER

FOR MR·CHESTER·E·GRIMES

WEST FRIENDSHIP
ROUTE·MD·144
HOWARD COUNTY MARYLAND

V·PRIVATE SANITARY·SEWAGE·DISPOSAL SYSTEM

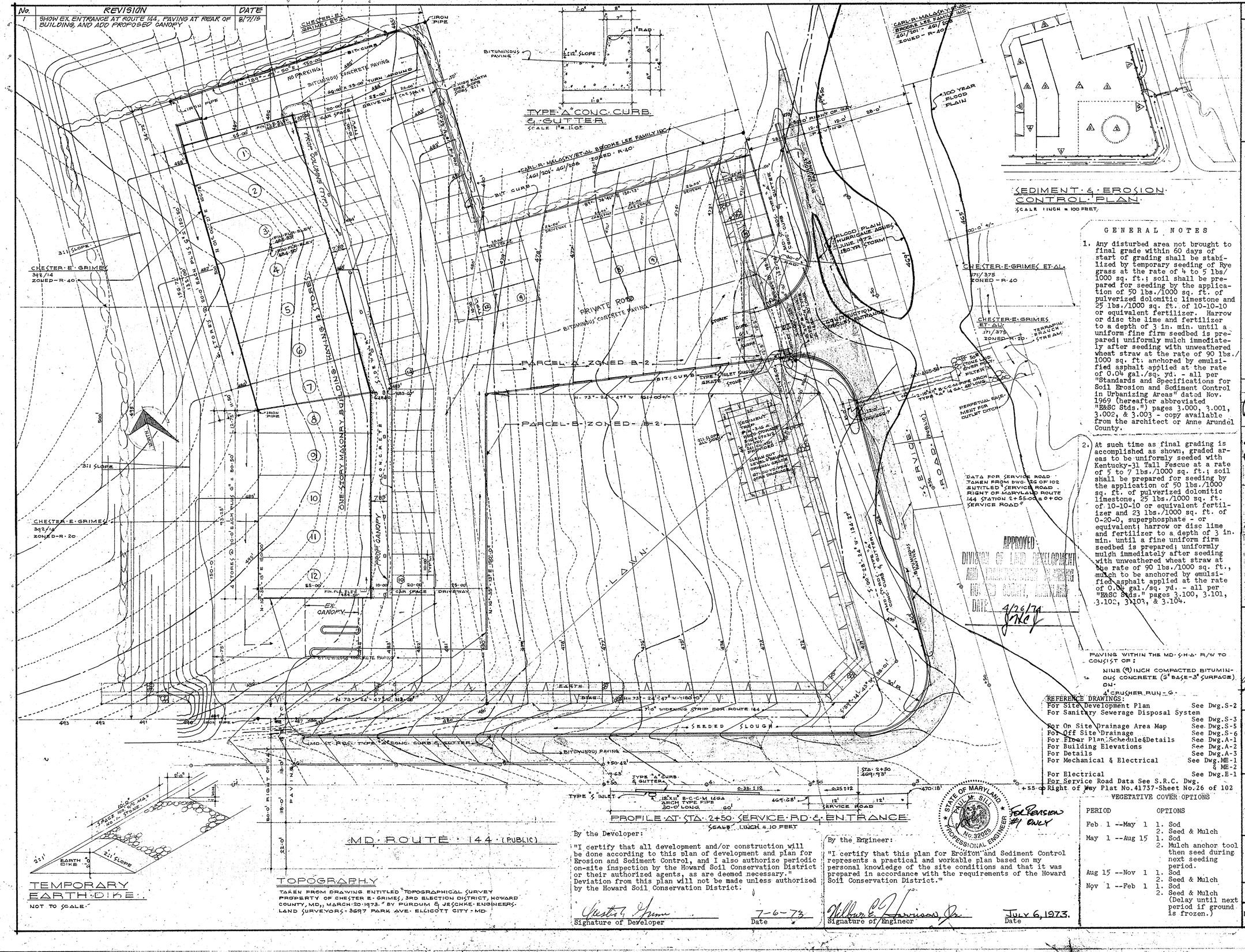
SCALE: AS NOTED

HARRISON·ASSOCIATES·INC·
25 DUTTON·AVE·BALTO. MD. 21228

10-17-73 COMM. 7312 S-3

SDP 74-73

No.	REVISION	DATE
1	SHOW EX. ENTRANCE AT ROUTE 144, PAVING AT REAR OF BUILDING, AND ADD PROPOSED CANOPY	8/7/15



GENERAL NOTES

1. Any disturbed area not brought to final grade within 60 days of start of grading shall be stabilized by temporary seeding of Rye grass at the rate of 4 to 5 lbs/1000 sq. ft.; soil shall be prepared for seeding by the application of 50 lbs./1000 sq. ft. of pulverized dolomitic limestone and 25 lbs./1000 sq. ft. of 10-10-10 or equivalent fertilizer. Harrow or disc the lime and fertilizer to a depth of 3 in. min. until a uniform fine firm seedbed is prepared; uniformly mulch immediately after seeding with unweathered wheat straw at the rate of 90 lbs./1000 sq. ft. anchored by emulsified asphalt applied at the rate of 0.04 gal./sq. yd. - all per "Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas" dated Nov. 1969 (hereafter abbreviated "ESSC Stds.") pages 3.000, 3.001, 3.002, & 3.003 - copy available from the architect or Anne Arundel County.
2. At such time as final grading is accomplished as shown, graded areas to be uniformly seeded with Kentucky-31 Tall Fescue at a rate of 5 to 7 lbs./1000 sq. ft.; soil shall be prepared for seeding by the application of 50 lbs./1000 sq. ft. of pulverized dolomitic limestone, 25 lbs./1000 sq. ft. of 10-10-10 or equivalent fertilizer and 23 lbs./1000 sq. ft. of 0-20-0, superphosphate - or equivalent; harrow or disc lime and fertilizer to a depth of 3 in. min. until a fine uniform firm seedbed is prepared; uniformly mulch immediately after seeding with unweathered wheat straw at the rate of 90 lbs./1000 sq. ft., mulch to be anchored by emulsified asphalt applied at the rate of 0.04 gal./sq. yd. - all per "ESSC Stds." pages 3.100, 3.101, 3.102, 3.103, & 3.104.

PAVING WITHIN THE MD. S.H.A. R/W TO CONSIST OF:
NINE (9) INCH COMPACTED BITUMINOUS CONCRETE (6" BASE-3" SURFACE) ON
4" CRUSHER RUN - G.

REFERENCE DRAWINGS:	
For Site Development Plan	See Dwg. S-2
For Sanitary Sewerage Disposal System	See Dwg. S-3
For On Site Drainage Area Map	See Dwg. S-5
For Off Site Drainage	See Dwg. S-6
For Floor Plan, Schedule & Details	See Dwg. A-1
For Building Elevations	See Dwg. A-2
For Details	See Dwg. A-3
For Mechanical & Electrical	See Dwg. ME-1 & ME-2
For Electrical	See Dwg. E-1
For Service Road Data See S.R.C. Dwg.	
Right of Way Plat No. 41737 - Sheet No. 26 of 102	

By the Developer:

"I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary." Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

Chester E. Grimes — Signature of Developer — 7-6-73 — Date

By the Engineer:

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

Wilbur E. Harrison Jr. — Signature of Engineer — July 6, 1973. — Date

APPROVED
DIVISION OF LAND DEVELOPMENT AND PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE 4/26/74

STATE OF MARYLAND — PAUL M. SILL — No. 32025 — PROFESSIONAL ENGINEER — For Revision #1 Only

VEGETATIVE COVER OPTIONS

PERIOD	OPTIONS
Feb 1 --May 1	1. Sod 2. Seed & Mulch
May 1 --Aug 15	1. Sod 2. Mulch anchor tool then seed during next seeding period.
Aug 15 --Nov 1	1. Sod 2. Seed & Mulch
Nov 1 --Feb 1	1. Sod 2. Seed & Mulch (Delay until next period if ground is frozen.)

GENERAL NOTES

VICINITY MAP

PARKING

FLOOR AREA ---------- 13,200' TOTAL
50% AREA FOR SALES SPACE ---------- 6,600'
1 CAR SPACE PER 200 SQ'
6,600' ÷ 200' EQUALS 33 CAR SPACES REQUIRED
SPACES PROVIDED--- 52
SURPLUS---------- 18 CAR SPACES
SPACE PROVIDED 10'x 20' PER CAR.

3RD. ELECTION DISTRICT

ZONED: B-2

SEDIMENT & EROSION CONTROL SEQUENCE OF OPERATION

1. CLEAR & GRUB ENTIRE SITE. CONSTRUCT CONTINUOUS EARTH & GRAVEL BERM SEE DETAIL THIS DRAWING.
2. STRIP ALL TOPSOIL & STOCK PILE WHERE DIRECTED & STABILIZE BY SEEDING.
3. EXCAVATE & ROUGH GRADE ANY SURPLUS EARTH SHALL BE REMOVED. PROVIDE ANY REQUIRED EARTH BERMS FOR EACH DAYS GRADING.
4. INSTALL CRUSHER RUN PAVING.
5. STABILIZE SLOPES WITH MULCH & PLANTING.
6. REMOVE EARTH BERMS IN WAY OF ITEMS 7 & 8.
7. FINISH GRADE & INSTALL BITUMINOUS PAVING & BITUMINOUS CURBS
8. FINISH GRADE SPREAD TOP SOIL FERTILIZE & SEED LAWN AREAS.

REVIEWED FOR HOWARD SOIL CONSERVATION DIST. & MEETS TECHNICAL REQUIREMENTS
SIGNATURE — DATE 5-7-74
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED Robert W. Zellhm — DATE 5-7-74
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING & ZONING
Thomas J. Hamm — 5-17-74
DIRECTOR — DATE
J. H. Clewurn — 5/17/74
APPROVED: DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE AND STORM DRAINAGE SYSTEMS AND ROADS
Wilbur O. Otto — 5/14/74
DIRECTOR — DATE
HOWARD COUNTY DEPT. OF PUBLIC WORKS
S. H. Mohler — 5/14/74
CHIEF BUREAU OF HIGHWAYS — DATE

LEGEND
SPOT GRADES ---------- +485.88'
STORE NUMBERS ---------- (5)
5 CARS PER ROW ---------- (5)
EARTH & GRAVEL DIKE ---------- 2% 2%
PROPERTY LINE ----------
EXISTING CONTOURS ---------- 475'
RELOCATED CONTOURS ---------- 475'

DATE	REVISED PER HOWARD COUNTY COMMENTS
4-29-74	
DATE 5-15-74	REVISIONS PER HOWARD COUNTY'S COMMENTS
DATE 9-19-73	CURB DET. ADDED PROFILE SERVICE RD & ENTRANCE. MACADAM & C/CURB ON RT-144 & SERVICE RD CT. RD. MACADAM TYPE ADDED

REVISIONS

STATE OF MARYLAND — WILBUR E. HARRISON JR. — NO. 5086 — REGISTERED PROFESSIONAL ENGINEER
Wilbur E. Harrison Jr.

WEST FRIENDSHIP NEIGHBORHOOD CENTER
FOR MR. CHESTER E. GRIMES
WEST FRIENDSHIP
ROUTE MD 144
HOWARD COUNTY MARYLAND

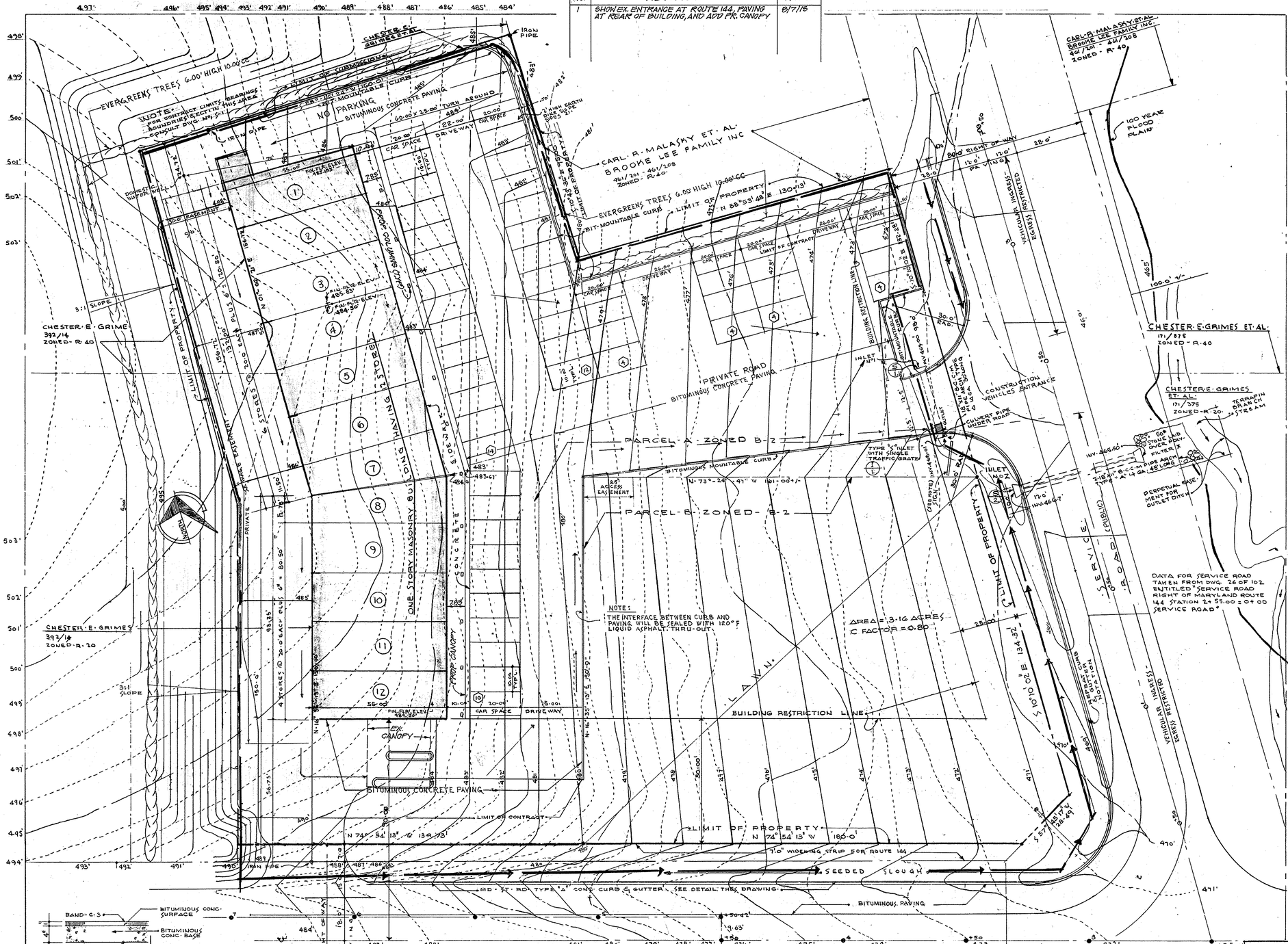
HARRISON ASSOCIATES INC.
25 BUTTON AVE. BALTO. MD 21228

SITE GRADING & EROSION CONTROL PLAN
SCALE 1 INCH = 20 FEET

DATE 7-5-1973 — COMM. 7312 — S-4
DWN BY J.H.W — CH'K'D BY H.

SDP 74-73

No.	REVISION	DATE
1	SHOW EX. ENTRANCE AT ROUTE 144, PAVING AT REAR OF BUILDING, AND ADD PR. CANOPY	8/7/15



TOPOGRAPHY

TAKEN FROM DRAWING ENTITLED "TOPOGRAPHICAL SURVEY PROPERTY OF CHESTER E. GRIMES, 3RD ELECTION DISTRICT, HOWARD COUNTY, MD., MARCH 20 1973." BY PURDUM & JESCHKE-ENGINEERS-LAND SURVEYORS- 3697 PARK AVE. ELLICOTT CITY - MD.

DATA FOR SERVICE ROAD TAKEN FROM DWG. 26 OF 102 ENTITLED "SERVICE ROAD RIGHT OF MARYLAND ROUTE 144 STATION 2+55.00 = 0+00 SERVICE ROAD"

PARKING

FLOOR AREA ---------- 13,200' TOTAL
50% AREA FOR SALES SPACE ------ 6,600'
1 CAR SPACE PER 200'
6,600' ÷ 200' EQUALS 33 CAR SPACES REQUIRED
SPACES PROVIDED ---- 52
SURPLUS ---------- 18 CAR SPACES
SPACE PROVIDED 10'x 20' PER CAR.

FACILITY	I-1.	S-1.	S-2.
FINISH GRADE	470.90'	470.90'	468.80'
INVERT ELEVATION IN	470.90'	469.00'	466.70'
INVERT ELEVATION OUT	469.00'	468.01'	465.50'
TYPE INLET	S (SINGLE GRATE)	—	—
TYPE ENDWALL	—	STANDD. "A"	MODIFIED "A" CASE NO 2
ENDWALL LENGTH	—	2'-3"	4'-0"
WINGWALL LENGTH	—	2'-3"	2'-3"
SIZE	2' X 4'	18"ø ARCH	2-18"ø ARCHES
LENGTH	—	26'-0"	48'-0"
MATERIAL	CAST IRON	B.C.C.M. 16GA	B.C.C.M. 16GA

NOTE

THE ABOVE ARE SPECIFIED PER HOWARD COUNTY ROAD CONSTRUCTION CODE & STANDARD SPECS DATED 11/27/62. PRECAST CONSTRUCTION MAY BE USED IF EQUIVALENT TO THOSE SPECIFIED & APPROVED BY HOWARD COUNTY DEPT. OF PUBLIC WORKS

ON-SITE-DRAINAGE-DATA

COMPUTATIONS BASED ON 10 YR. FREQUENCY STORM
TOTAL SITE DRAINAGE AREA --- A = 3.16 ACRES
RUN-OFF COEFFICIENT (0.80X0.95+0.20X0.12=C OR 0.78

RAINFALL INTENSITY ------ I = 6.2" / HOUR
Q = CIA = 0.78 X 6.2 X 3.16 = 15.28 C.F.S.
ASSUME 2 EA. 18" SPAN X 11" RISE BCCMP ARCH
WITH A MINIMUM SLOPE OF 0.025
WATERWAY AREA ---------- = 1.1.58 SQ. FT.
WETTED PERIMETER = π X 15/12 = 3.925
R ---------- 1.1/3.925 = 0.28
VELOCITY ---------- V = 7.05 FPS (MANNINGS FORMULA)
Q = 7.05 X 1.1 X 2 = 15.51 C.F.S.

PAVING NOTE:

PAVING WITHIN THE MD. S.H.A. R/W TO CONSIST:
NINE (9) INCH COMPACTED BITUMINOUS CONCRETE (6" BASE - 3" SURFACE) ON
4" CRUSHER RUN.

REFERENCE DRAWINGS:

FOR SANITARY SEWERAGE DISPOSAL SYSTEM	SEE DWG. S-3
FOR EROSION CONTROL	SEE DWG. S-4
FOR OFF SITE DRAINAGE	SEE DWG. S-6
FOR FLOOR PLAN SCHEDULE & DETAILS	SEE DWG. A-1
FOR BUILDING ELEVATIONS	SEE DWG. A-2
FOR DETAILS	SEE DWG. A-3
FOR MECH'L. & ELECT'L.	SEE DWG. ME-1 & ME-2
FOR ELECTRIAL	SEE DWG. E-1
FOR SERVICE ROAD DATA SEE S.R.C. DWG. RIGHT OF WAY PLAT NO. 41737. SHEET No 26 OF 102	
FOR SITE DEVELOPMENT PLAN ---	SEE DWG. S-2

LEGEND

BITUMINOUS PAVING & CURB & GUTTER	SEE PAVING NOTE
PROPERTY LINE	
EXISTING CONTOURS	475'
RELOCATED CONTOURS	475'
SPOT GRADES	+485.88'
STORE NUMBERS	(5)
5 CARS PER ROW	(5)

3RD ELECTION DISTRICT
ZONED B-2
LIMITS OF ON-SITE DRAINAGE

APPROVED
DIVISION OF LAND DEVELOPMENT & TRANSPORTATION
HOWARD COUNTY, MARYLAND
DATE 4/26/74

AREA:
PARCEL - A - = 1.27 ACRES
DO - B - = 0.59 ACRES
TOTAL EMPLOYEES PER STORE = 3 PERSONS PER STORE = 12X3 OR 36
SEPTIC TANK CALCULATED ON 36 PERSONS X 35 GAL. PER PERSON PER DAY

STATE OF MARYLAND — MELVIN E. HARRISON, JR. — No. 9866 — REGISTERED PROFESSIONAL ENGINEER

STATE OF MARYLAND — FREDERICK SITE — No. 32025 — PROFESSIONAL ENGINEER

FOR REVISION #1 ONLY

DATE	REVISIONS
4-29-74	REVISED PER HOWARD CO. COMMENTS 4-26-74
4-4-74	REVISIONS PER HOWARD COUNTY'S COMMENTS 3-27-74
3-15-74	REVISIONS PER HOWARD COUNTY'S COMMENTS
9-20-73	MACADAM PAVING & S/G ADDED. RD. PROFILE AT STA. 2+50 ADDED. CURB & GUTTER DETAIL ADDED

REVISIONS

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5/10/74

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR — DATE 5-17-74
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING — DATE 5/17/74

APPROVED: FOR PRIVATE WATER, PRIVATE SEWERAGE AND STORM DRAINAGE SYSTEMS AND ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR — DATE 5/14/74
CHIEF, BUREAU OF HIGHWAYS — DATE 5/14/74

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS DATED 11/27/62.
2. ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
3. ALL DISTURBED AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
4. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED WITHIN 7 CALENDAR DAYS AFTER FINAL GRADING.
5. ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED DAILY.
6. ALL SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING.
7. ALL SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER ALL DISTURBED AREAS ARE STABILIZED.
8. ALL SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE SOIL CONSERVATION DISTRICT.
9. ALL SEDIMENT CONTROL MEASURES SHALL BE APPROVED BY THE SOIL CONSERVATION DISTRICT.
10. ALL SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED PRIOR TO ANY GRADING.

WEST FRIENDSHIP NEIGHBORHOOD CENTER FOR MR. CHESTER E. GRIMES
WEST FRIENDSHIP
ROUTE MD. 144
HOWARD COUNTY, MARYLAND

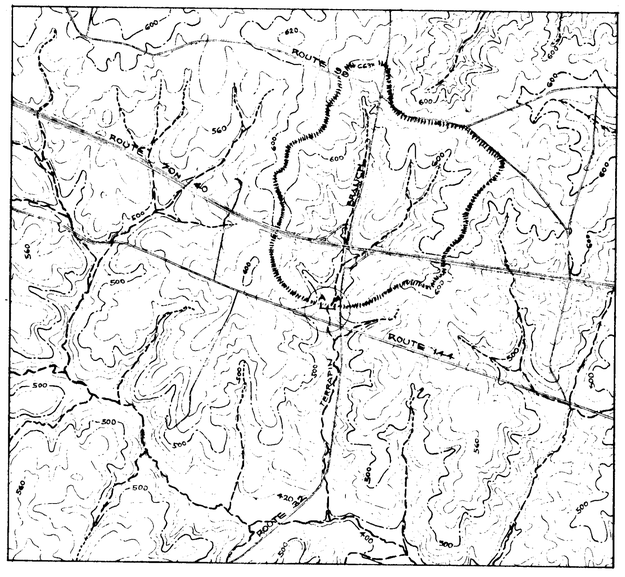
HARRISON-ASSOCIATES, INC.
25 SUTTON AVE. BALTO. MD. 21228

ON-SITE DRAINAGE AREA MAP
SCALE 1" INCH = 20 FEET

DATE 8-27-1973 | COMM. 7312 | S-5
DWN BY L.E.F. | CHK'D BY W.

SDP 74-73

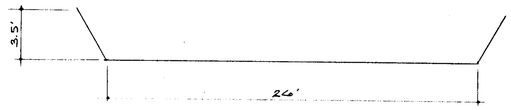
TAKEN FROM UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY
SYKESVILLE QUADRANGLE MARYLAND 1953
PHOTOREVISED 1971



SCALE: 1" = 2,000'

HYDRAULIC DESIGN

MAXIMUM FLOOD DISCHARGE = 1220 c.f.s.
FOR 100 YEAR FREQUENCY.



SECTION A-A OF CHANNEL EXISTING

SCALE: 1" = 5'-0"

AREA OF CHANNEL = 103.26 SQ. FT.
HYDRAULIC MEAN DEPTH
R = 3.00 FT.
SLOPE = 0.01 , n = 0.03 FOR EARTHEN CHANNEL
VELOCITY V = 10.30 FT/SEC. FROM HYDRAULIC TABLES PER. MANNINGS FORMULA.

DISCHARGE Q = AV
= (103.265 SQ. FT.)(10.30 FT/SEC.)
= 1064 c.f.s. < 1220 c.f.s. OF 100 YEARS FREQUENCY

SLIGHTLY LESS THAN 100 YEARS DISCHARGE
HENCE THE WATER OVERFLOWS THE BANKS.

CALCULATIONS & ASSUMPTIONS

DRAINAGE AREA = 6.80 SQ. IN.
(AVERAGE) = (6.80 SQ. IN.) × (0.14 SQ. MILE/SQ. IN.
= 0.952 SQ. MILE
= 609 ACRES. USE 610 ACRES.

FROM DESIGN MANUAL, ASSUME PIEDMONT ZONE FOR YMD (MAX) 3.5 AS WORST CASE

∴ Q 2.33 = 200 c.f.s. FROM GRAPH.
Q FOR 100 YEAR STORM FREQ. 3.1 = MULTIPLICATION FACTOR

∴ Q = (Q 2.33) (3.1) = 200 c.f.s. × 3.1 = 620 c.f.s.

Q DESIGN = Q (1 + RF + UF + WF − LF)

WHERE RF = RISK FACTOR = 1.0 FOR GREAT DAMAGE
UF = URBANIZATION FACTOR = 0.2
WF = WOOD FACTOR = 0
LF = LIMESTONE FACTOR = 0

∴ Q DESIGN = 620 (1 + 1 + 0.2 + 0 + 0)
= (620) (2.2
= 1364 c.f.s.

CHANNEL AREA, A = 103.26 SQ. FT. (SEE CHANNEL PROFILE)
HYDRAULIC MEAN DEPTH, R = 3.00 FT.

SLOPE = 0.01
COEFFICIENT OF ROUGHNESS n = 0.03
VELOCITY, V = 10.30 f.p.s. (FROM MANNINGS FORMULA HYDRAULIC TABLES)

DISCHARGE Q = A V
= (103.26 SQ. FT.) (10.30 FPS)
= 1064 c.f.s. WHICH IS LESS THAN THE 1364 c.f.s. CALCULATED FOR A 100 YEAR STORM.

THEREFORE, A 100 YEAR STORM OVERFLOWS THE BANKS OF TERRAPIN BRANCH. SEE THE ON SITE DRAINAGE AREA MAP FOR THE 100 YEAR FLOOD PLAN AND THE AQUES (180 YEAR STORM) FLOOD PLAIN.

REFERENCE · DRAWINGS

FOR SITE DEVELOPMENT PLAN ----- SEE DWG - S-2
FOR SANITARY SEWERAGE DISPOSAL SYSTEM -- SEE DWG - S-3
FOR EROSION CONTROL ---------- SEE DWG - S-4
FOR ON SITE DRAINAGE AREA MAP ---- SEE DWG - S-5

STATE OF MARYLAND
WILBUR E. HARRISON, JR.
NO. 3686
REGISTERED PROFESSIONAL ENGINEER

Wilbur E. Harrison Jr.

DATE 5-15-74 | SIGNATURE BLOCKS ADDED

4/26/74
J H C J

WEST · FRIENDSHIP
NEIGHORHOOD · CENTER
FOR MR · CHESTER · E · GRIMES
WEST FRIENDSHIP
HOWARD · COUNTY
MARYLAND

HARRISON · ASSOCIATES · INC ·
25 DUTTON AVE BALTO · MD 21228

APPROVED: FOR PRIVATE WATER & PRIVATE SEWAGE SYSTEM HOWRD COUNTY HEALTH DEPT.
J. B. Lazar M.D. — COUNTY HEALTH OFFICER — 5/10/74 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANING AND ZONING
Thomas G. Harris Jr. — PLANNING DIRECTOR — 5-17-74 DATE
J. H. Clawson Jr. — CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING — 5/17/74 DATE

APPROVED: FOR STORM DRAINAGE & PUBLIC ROADS · HOWARD COUNTY DEPT. OF PUBLIC WORKS
Willis O. Altman — DIRECTOR — 5/14/74 DATE
J. N. Melleand — CHIEF, BUREAU OF HIGHWAYS — 5/14/74 DATE

OFF SITE DRAINAGE AREA MAP
SCALE: AS NOTED

REVISED		
8-7-73	7312	S-6
DATE	COMM	

SDP 74-73