

Definition

Filter cloth installed around inlets in the form of a fence or across an opening, thereby reducing sediment content of sediment laden water.

Purpose

To prevent sediment laden water from entering a storm drain system through

Conditions Where Practice Applies

This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a sediment trapping device and watertight blocking of inlets is not advisable. It is not to be used in place of sediment trapping devices. This practice may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with a low slope angle.

Construction Specifications

Materials

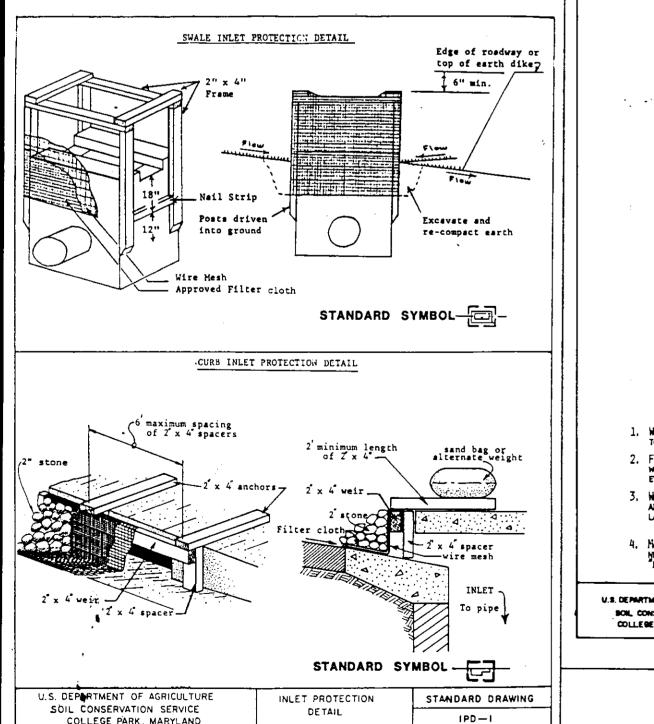
- A. Wooden frame is to be constructed of 2" x 4" construction grade
- B. Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
- C. Filter cloth must be of a type approved for this purpose; resistant to sunlight with sieve size, EOS, 40-85, to allow sufficient passage of water and removal of sediment.
- 4. Stone is to be 2" in size and clean, since fines would clos the

II. Procedure

- A. A swale, ditchline or yard inlet protection.
- 1. Excavate completely around inlet to a depth of 18" below north
- Drive 2 x 4 post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2 x 4 frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to
- 3. Stretch wire mesh tightly around frame and fasten securely. Ends wust meet at post.
- 4. Stretch filter cloth tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet notch elev. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down
- 5. Backfill around inlet in compacted 6" layers until layer of earth is even with notch elevation on ends and top elevation
- 6. If the inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
- 7. This structure must be inspected frequently and the filter fabric replaced when clogged.

B. Curb Inlet Protection

- Attach a continuous piece of wire mesh (30" min. width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
- 2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
- 3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart)
- 4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight
- 5. The assembly shall be placed so that the end spacers are a minimum l' beyond both ends of the throat opening.
- 6. Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
- 7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet



STANDARD AND SPECIFICATIONS SILT FENCE

Definition

A temporary barrier of geotextile fabric (filter cloth) used to intercept sediment laden runoff from small drainage areas of disturbed soil. Purpose

The purpose of a silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Limits imposed by ultraviolet stability of the fabric will dictate the maximum period the silt fence may

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

Maximum allowable slope lengths contributing runoff to a silt fence

Slope Steepness	Maximum Slope Length (Ft)
2:1	50
3:1	75
4:1	125
5:1	175
Flatter than 5:1	200

- 2. Maximum drainage area for overland flow to a silt fence shall not exceed a acre per 100 feet of fence; and
- 3. Erosion would occur in the form of sheet erosion; and
- 4. There is no concentration of water flowing to the barrier.

Design Criteria

Design computations are not required. All silt fences shall be placed as close to the contour as possible, and the area below the fence must be

A detail of the silt fence shall be shown on the plan, and contain the following minimum requirements

- . The type, size, and spacing of fence posts. 2. The size of woven wire support fences.
- 3. The type of filter cloth used.
- 4. The method of anchoring the filter cloth. 5. The method of fastening the filter cloth to the fencing support.

Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

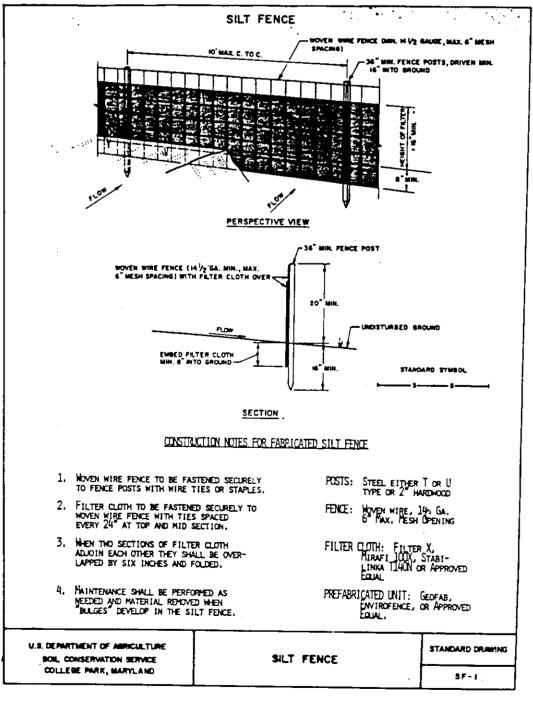
See Standard Drawing SF-1 for details.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance. Statewide acceptability shall depend on in-field and/or laboratory observations and evaluations.

Fabric Properties	Minumum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	90	ASTM D1682
Elongation at Failure (I)	50	ASTM D1682
Mullen Burst Strength (PSI)	190	ASTM D3786
Puncture Strength (1bs)	40	ASTM D751 (modified)
Slurry Flow Rate (gal/min/sf)	0.3	Virginia DOT VTM-51
Equivalent Opening Size	40-80	US Std Sieve CW-02215
Ultraviolet Radiation Stability %	-90	ASTM-G-26
Tence Posts (for fabricant to)		

- Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.0 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per
- 3. Wire Fence (for fabricated units): Wire fencing shall be a minimum 14k gage with a maximum 6" mesh opening, or as approved.
- 4. Prefabricated Units: Envirofence or approved equal may be used in lieu of the above method providing the unit is installed per



APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

HOWARD COUNTY HEALTH PEPARTMENT

Criteria for Filter Cloth

The filter cloth shall be a woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the properties of the following table:

Fabric Properties 3/	Light Duty 1/ Roads Grade Subgrade	Heavy Duty 2/ Haul Roads Rough Graded	Test Method
Grab Tensile Strength (1bs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTH D1682
Mullen Brust Strength (1bs)	190	430	ASTH D3786
Puncture Strength (1bs)	40	125	ASTM D751 modified
Equivalent Opening Size	40~80	40-80	US Std Sie CW-022!5
Aggregate Depth (in)	6	10	_

1/ Light Duty Road: Are sites that have been graded to subgrade and whefe most travel would be single axle vehicles and an occasional multi-axle truck. Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

2/ Heavy Duty Road: Are sites with only rough grading, and where most travel would be multi-axle vehicles. Trevira Spunboad 1135, Miraft 600X, or equivalent 3/ Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth

STANDARD AND SPECIFICATIONS STABILIZED CONSTRUCTION ENTRANCE

Definition

A stabilized pad of aggregate underlain with filter cloth located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk or parking area.

Purpose

the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies A stabilized construction entrance shall be used at all points of

Design Criteria

Aggregate Size - Use 2" stone, or reclaimed or recycled concrete equivalent. Thickness - Not less than six (6) inches.

ingress or egress occurs. residence lot where a 30 foot minimum would apply). aggregate. Filter cloth will not be required on a single

If piping is impossible, a mountable berm with 5:1 slopes will be

See Standard Drawing SCE-1.

of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, of washed onto public rights-of-way must be removed immediately.

area stabilized with aggregate which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses,

STABILIZED CONSTRUCTION ENTRANCE not to scale STANDARD SYMBOL EXIST!NG PAVEMENT PROFILE MOUNTABLE BERM Existing ground EXISTING PAVEMENT PLAN VIEW CONSTRUCTION SPECIFICATIONS

- Stone Size Use 2" stone, or reclaimed or recycled concrete equivalent. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
- 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.
- prevent tracking or flowing of sediment onto public rights-of-way. This ray require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All
- Washing Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area
- U. S. DEPARTMENT OF AGRICULTURE | STABILIZED CONSTRUCTION SOIL CONSERVATION SERVICE College Park, Md.

CONSULTANT'S CERTIFICATE:

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED UPON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT AND "THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL". I HAVE REVIEWED THIS EROSION

AND SEDIMENT CONTROL PLAN WITH THE OWNER / DEVELOPER. SIGNATURE: KICHARD L. BEALL, ARCHITECT

DATE: 7-3-91 MD. REG. # 7975-A

STANDARD AND SPECIFICATIONS TOPSOILING

Definition

Purpose

Conditions Where Practice Applies

The texture of the exposed subsoil or parent material is not

3. The original soil to be vegetated contains material toxic to plant

4. The soil is so acid that treatment with limestone is not feasible.

SPECIFICATIONS

practices such as diversions, grade stabilization structures.

Grading: Grades on the areas to be topsoiled which have been

heavy clays, ground limestone shall be spread at the rate of 4-8

grade, and immediately prior to dumping and spreading the topsoil,

depth of at least 3 inches to permit bonding of the topsoil to the

surface area of the slope to create horizontal erosion check slots

subsoil. Pack by passing a bulldozer up and down over the entire

Topsoil salvaged from the existing site may often be used but it

specifications. The depth of topsoil to be salvaged shall be no

more than the depth described as a representative profile for that

particular soil type as described in the soil survey published by

loam, sandy clay loam, loamy sand or other soil as approved by an agronomist or soil scientist. It shall not have a mixture of

contrasting textured subsoil and contain no more than 5 percent by

volume of cinders, stones, slag, coarse fragment, gravel, sticks,

roots, trash or other extraneous materials larger than 14 inches is

thistles, or others as specified. All topsoil shall be tested by a

salts. A pH of 6.0 to 7.5 and an organic content of not less than

1.5 percent by weight is required. If pH value is less than 6.0,

lime shall be applied and incorporated with the topsoil to adjust

the pH to 6.5 or higher. Topsoil containing soluble salts greater

No sod or seed shall be placed on soil which has been treated with

soil sterilants or chemicals used for weed control until sufficient

qualified agronomist or soil scientist, may be used

to a minimum of four (4) inches. Spreading shall be performed in

such a manner that sodding or seeding can proceed with a minimum of

additional soil preparation and tillage. Any irregularities in the

corrected in order to prevent the formation of depressions or water

surface resulting from topsoiling or other operations shall be

placed while in a frozen or muddy condition, when the subgrade is

excessively wet, or in a condition that may otherwise be

As an option to applying the full amounts of lime and commercial fertilizer, apply Composted Sludge as specified below, a potassium fertilizer at the

Composted sludge for use as a soil amendment or conditioner shall conform to

permitted (at the time of acquisition of the compost) by the

If compost does not meet these requirements, the appropriate

Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1,

SITE DATA:

TOTAL DISTURBED AREA:

AREA TO BE ROOFED AND/OR PAVED:

OFFSITE WASTE/BORROW LOCATION:

HOWARD S.C.D. REVIEW / APPROVAL:

AREA TO BE VEGETATIVELY STABILIZED

Cooperative Extension Service, University of Maryland and Virginia

Maryland Department of Health and Mental Hygiene under Regulation

Shall contain at least 1 percent nitrogen, 1.5 percent phosphorus

constituents must be added so that the requirements are met prior

1. Be supplied by or orginate from a person or persons that are

and .2 percent potassium and have a pH of 7.0 and 8.0.

3. Be applied at a rate of 2,000 pounds per 1,000 square feet.

detrimental to proper grading and seedbed preparation.

rate of 4 pounds per 1,000 square foot and 1/3 the normal lime applica-

B. Grading: The topsoil shall be uniformly distributed and compacted

time has elapsed to permit dissipation of toxic materials.

Note: Topsoil substitutes or amendments as approved by a

than 500 parts per million shall not be used.

lieu of natural topsoil.

pockets. Top soil shall not be

Alternative for Permanent Seeding

Composted Sludge Material

the following requirements:

to use of the compost.

Polytechnic Institutes. Revised 1973.

STORM INLET SEDIMENT TRAP ST-III

recognized laboratory for organic matter content, pH and soluble

diameter. Topsoil must be free of plants or plant parts of

bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy,

USDA-SCS in cooperation with Maryland Agricultural Experimental

A. Materials: Topsoil shall be a loam, sandy loam, clay loam, silt

the subgrade shall be loosened by discing or by scarifying to a

tons/acre (200-400 pounds per 1,000 square feet). Lime shall be

distributed uniformly over designated areas and worked into the

soil in conjunction with tillage operations as described in the

A. When topsoiling, maintain needed erosion and sediment control

C. Liming: Where the subsoil is either highly acid or composed of

D. Tilling: After the areas to be topsoiled have been brought to

to prevent topsoil from sliding down the slope.

should meet the same standards as set forth in these

The soil material is so shallow that the rooting zone is not deep

enough to support plants or furnish continuing supplies of moisture

To provide a suitable soil medium for vegatative growth on areas with low

moisture, low nutrient levels, low pH, or the presence of other materials

This practice is recommended for sites of 2:1 or flatter slones where

suitable to produce adequate vegetative growth.

Section I - Site Preparation (Where Topsoil is to be added)

erms, dikes, waterways and sediment basins

eviously established shall be maintained

toxic to plants.

and plant nutrients

following procedures.

Section II - Topsoil Material and Application.

Placement of topsoil over a prepared subsoil prior to establishment of

and fabric strength.

The purpose of a stabilized construction entrance is to reduce or eliminate

Width - 10 foot minimum but not less than the full width of points where Length - As required, but not less than 50 feet (except on a single Filter cloth - To be placed over the entire area to be covered with

family residence lot (see 14.02 for criteria). Piping of surface water under entrance shall be provided as required

construction ingress and egress.

The entrance shall be maintained in a condition which will prevent tracking

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an

- Thickness Not less than six (6) inches.
- Width Ten (10) foot minimum, but not less than the full width at
- . Surface Water All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted. Maintenance - The entrance shall be maintained in a condition which will
- sediment spilled, dropped, washed or tracked onto public rights-of-way more
- stabilized with stone and which drains into an approved sediment trapping Periodic inspection and needed maintenance shall be provided after each rain-Standard

The sediment crap shall be removed and the area stabilized when the 6. All cut slopes shall be 1:1 or flatter. Maximum Drainage Area: 3 Acres U.S. DEPARTMENT OF AGRICULTURE STORM INLET STANDARD DRAWING
SEDIMENT TRAP ST-TIT

CROSS SECTION

CONSTRUCTION SPECIFICATION FOR ST-III

Sediment shall be removed and the trap restored to its original dimensio when the sediment has accumulated to by the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

The volume of sediment storage shall be 1800 cubic feet per acre of

The structure shall be inspected after each rain and repairs made as

Construction operations shall be carried out in such a manner that erosion and vater pollution shall be minimized.

STRAW BALE DIKE

STANDARD AND SPECIFICATIONS

Definition A temporary barrier of straw or similar material used to intercept sediment laden runoff from small drainage areas of disturbed soil.

The purpose of a bale dike is to reduce runoff velocity and effect deposition of the transported sediment load. Straw bale dikes are to be used for no more than three (3) months.

Conditions Where Practice Applies The straw bale dike is used where:

- 1. No other practice is fessible.
- 2. There is no concentratration of water in a channel or other drainage way above the barrier.
- 3. Erosion would occur in the form of sheet erosion.

4. Length of slope above	the straw bale dike	does not exceed these limits
Constructed Slope	Percent Slope	Slope Length Feet
2:1	50	25
2 ¹ 5:1	40	50
3:1	33	75
34:1	30	100

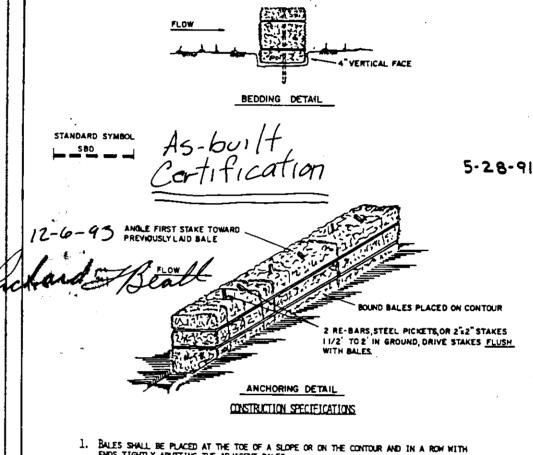
Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike. The practice may also be used for a single-family lot if the slope is less than 15 percent. The contributing drainage area in this instance shall be

Design criteria

less than one acre and the length of slope above the dike shall be less than

STRAW BALE DIKE

A design is not required. All bales shall be placed on the contour with cut edge of bale adhering to the ground. See Standard Drawing SBD-1 for details.



- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL PE DRIVEN FLUSH WITH THE BALE.
- 4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS 5. BALES SHALL BE REPOVED WEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK

OR IMPEDE STORM FLOW OR DRA	AINAGE.	,,,
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	STRAW BALE DIKE	STANDARD DRAWING
COLLEGE PARK, MARYLAND	STRAN BALE DIKE	\$80-i

1.79

1.74

FILL: 2,650

PREDOMINANT SOILS TYPES: Nd Manmade
C+182 GLENELG LOAM, 3-8-70 Moderate Eroded
MID3 MANDE LOAM, 15-2590 Severe Eroded

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

1.17

OWNER / DEVELOPER CERTIFICATE: I / WE HEREBY CERTIFY THAT I HAVE REVIEWED THIS SEDIMENT AND EROSION CONTROL PLAN, AND THAT ALL CLEARING, GRADING. CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION. OBTAINED BEFORE THE BEGINNING OF THE PROJECT. FURTHER

I AUTHORIZE PERIODIC ON-SIZE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT DEVELOPER'S NAME: Shell ON Company, Michele Sorapur: TITLE: Fraject Engineer PHONE: 301-921-45a 15200 Shady Grove Road

Rockville, Md. 20850

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT, LONG-LIVED VEGETATIVE COVER IS

SEEDBED PREPARATION:

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING 1.PREFERRED -- APPLY 2 TONS / AC (92 LBS / 1000 SF) OF DOLOMITIC LIMESTONE AND 600 LBS / AC (14 LBS / 1000 SF) OF 10-10-10 FERT!LIZER BEFORE SEEDING. HARROW OR DISK UPPER THREE (3") INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS / AC (9 LBS / 1000 SF) OF 30-0-0 UREAFORM

FERTILIZER.

2.ACCEPTABLE- APPLY 2 TONS / AC (92 LBS / 1000 SF) OF DOLOMITIC LIMESTONE AND 1000 LBS / AC (23 LBS / 1000 SF) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE (3") OF SOIL.

KENTUCKY 31, TALL FESCUE AND MULCH WITH 2 TONS / AC

FOR THE PERIODS OF MARCH 1st THRU APRIL 30th, AND AUGUST 1st THRU OCTOBER 15th, SEED WITH 60 LBS / AC (1.4 LBS / 1000 SF OF KENTUCKY 31. TALL FESCUE. FOR THE PERIODS OF MAY 1st THRE JULY 31st, SEED WITH 60 LBS / AC (1.4 LBS / 1000 SF) AND 2 LBS / AC (0.05 LBS / 1000 SF) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16th THRU FEBRUARY 28th, PROTECT THE SITE OPTION 1: 2 TONS / AC OF WELL ANCHORED STRAW MULCH, AND SEED AS SOON AS POSSIBLE, ON THE SPRING. OPTION 2: USE SOD. OPTION 3. SEED WITH 60 LBS / ACRE (1.4 LBS / 1000 SF) OF

(92 LBS / 1000 SF) OF WELL ANCHORED STRAW. MULCHING:

APPLY 11 TO 2 TONS / AC (70-90 LBS / 1000 SF) OF UNROTTED, SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS / AC (5 GAL / SF) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES OF 8 FEET OR HIGHER, USE 348 GALLONS / AC (8

MAINTENANCE:
INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A LOOSEN UPPER THREE (3") INCHES OF SOIL BY RAKING, DISKING OR

SOIL AMENDMENTS:
APPLY 60 LBS / AC (1.4 LBS / 1000 SF) OF 10-10-10 FERTILIZER. SEEDING:
FOR PERIODS OF MARCH 1st THRU APRIL 30th AND FROM AUGUST 15th THRU OCTOBER 15th, SEED WITH 21 BUSHELS / AC (3.2 LBS / 1000 FOR THE PERIOD OF MAY 1st THRU AUGUST 14th, SEED WITH 3

LBS / AC (0.07 LBS / 1000 SF). FOR THE PERIOD OF NOVEMBER

16th THRU FEBRUARY 28th, PROTECT THE SITE BY APPLYING 2 TONS

/ AC (92 LBS / 1000 SF) OF WELL ANCHORED STRAW MULCH, AND SEED

OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY

AS SOON AS POSSIBLE IN THE SPRING; OR USE SOD. APPLY 14 TO 2 TONS / AC (70-90 LBS / 1000 SF) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS / AC (5 GAL / 1000 SF) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES OF 8 FEET OR HIGHER, USE 348 GALLONS /

REFER TO THE 1983 " MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR RATES AND METHODS NOT COVERED.

SEDIMENT CONTROL NOTES

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. (1-

ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL ". 1983 EDITION OF LATER REVISIONS

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 3:1; B.) 14 CALENDAR DAYS, AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE

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

ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIODS SPECIFIED ON THESE PLANS AND IN ACCORDANCE WITH THE 1983 EDITION OF THE " MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL " FOR PERMANENT SEEDING (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. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS

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

PROCEED WITHOUT FIRST OBTAINING THIS APPROVAL. OTHER BUILDING AND OR GRADING INSPECTIONS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS. RIGHTS OF WAY (AND PROOF OF SAME) THAT MAY BE REQUIRED FOR THE DISCHARGE

ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., APPROVAL OF THE

OF PERIMETER EROSION AND SEDIMENT CONTROLS. NO OTHER CONSTRUCTION CAN

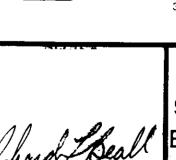
NSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF THE INSTALLATION

OF RUNOFF WATER FROM SEDIMENT AND EROSION CONTROL PRACTICES. STORM WATER MANAGEMENT PRACTICES AND FROM STORM DRAINAGE SYSTEMS ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES AFFECTED BY THIS PLAN.

THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION (AND PROOF OF SAME) OF ALL EASEMENT RIGHTS AND/OR RIGHTS OF WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES AFFECTED BY THIS PLAN

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

SEDIMENT AND EROSION CONTROL DETAILS



580-1

RICHARD L. BEALL, INC., A.I.A. ARCHITECT AND PLANNER 360 JONES STATION ROAD, ARNOLD, MARYLAND 21012 (301) 544-2010

9075 BALT. NAT'L. PIKE, US RTE.40 WEST ELLICOTT CITY, HOWARD CO., MARYLAND 2nd ELECTION DISTRICT, TAX MAP #24

SHELL OIL COMPANY

REVISIONS BY APP DATE JOB. NO. As-built Certification PB

PARCEL A

MARCH, 30 199 SHEET 5 OF 1

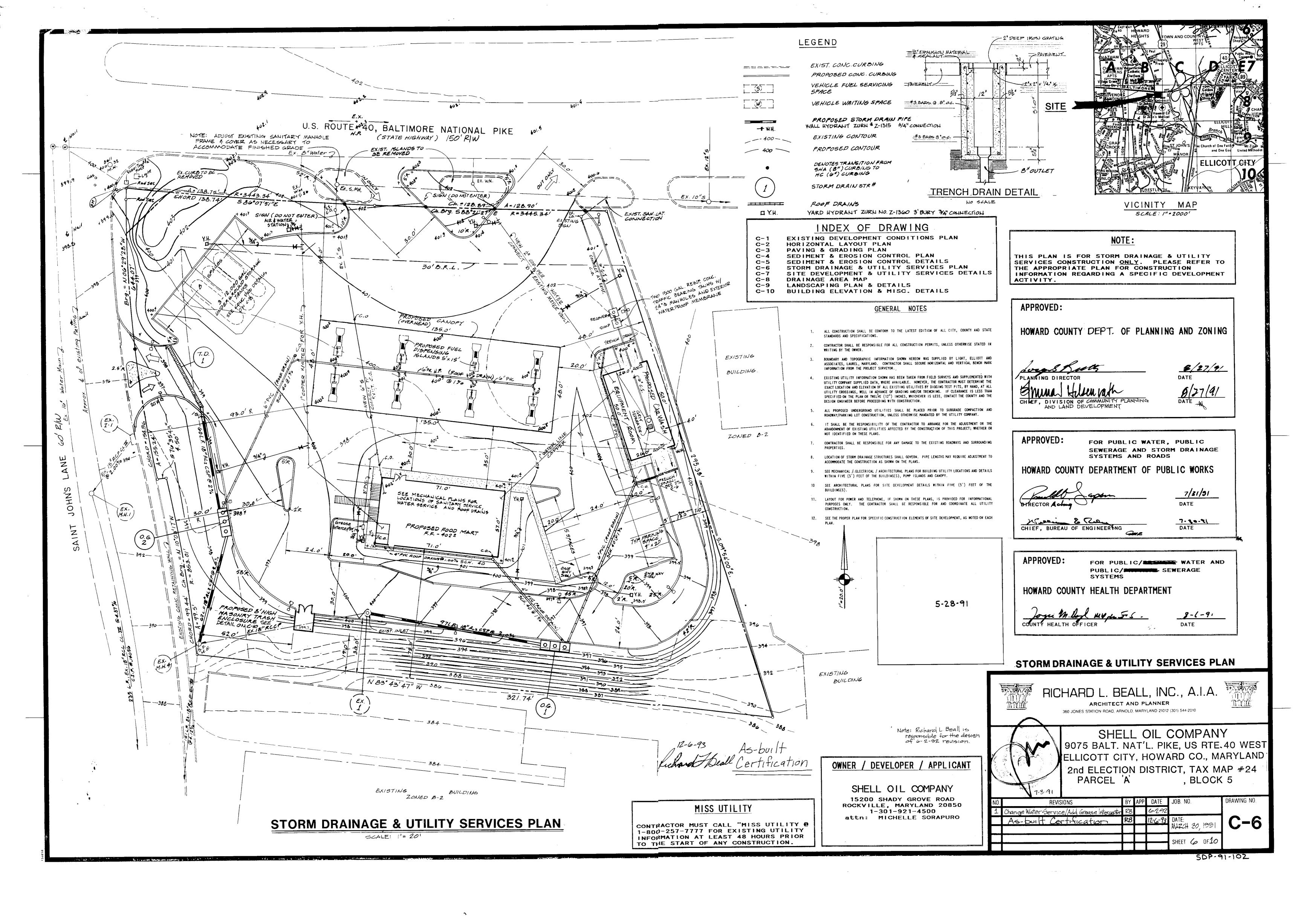
BLOCK 5

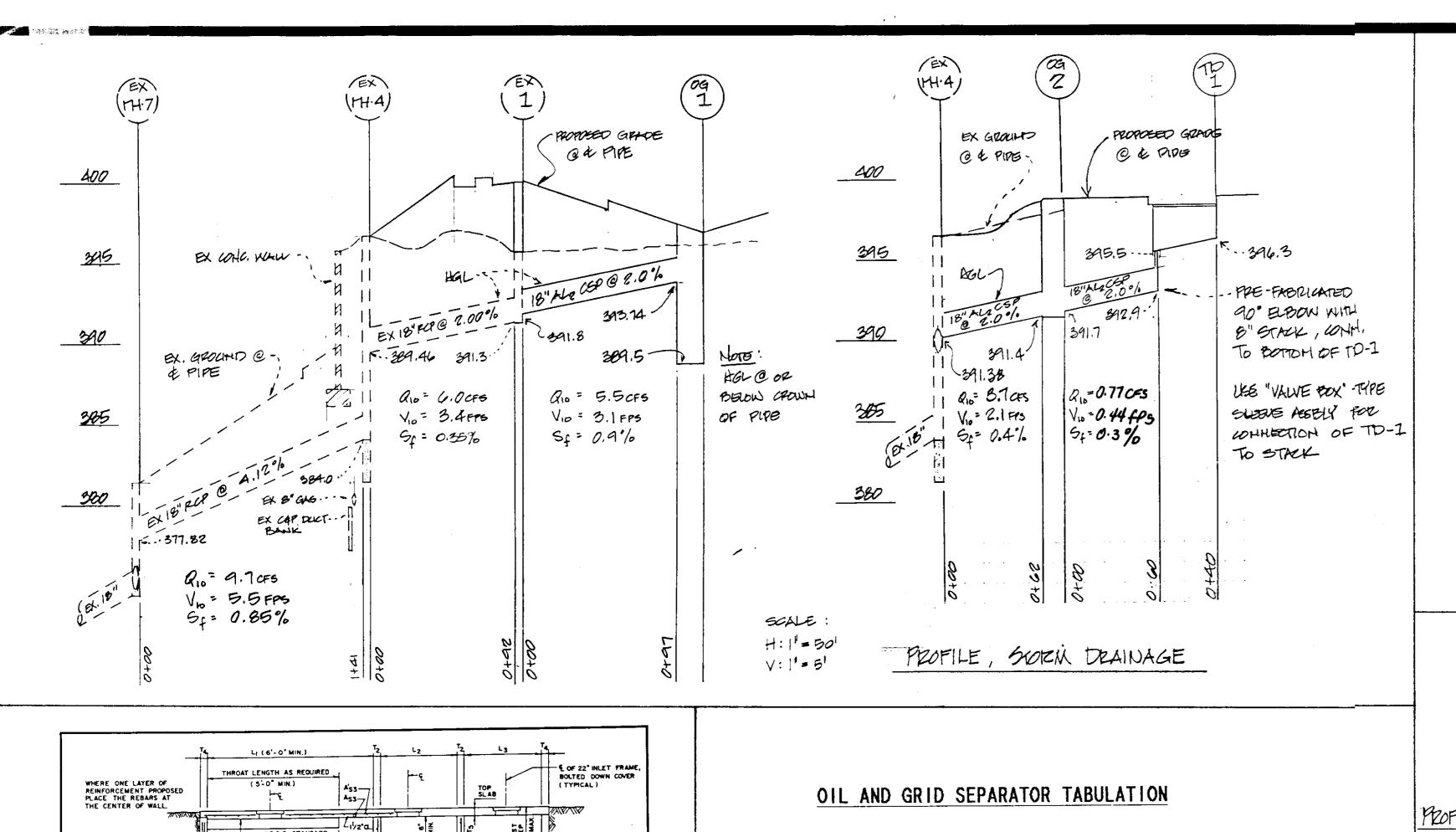
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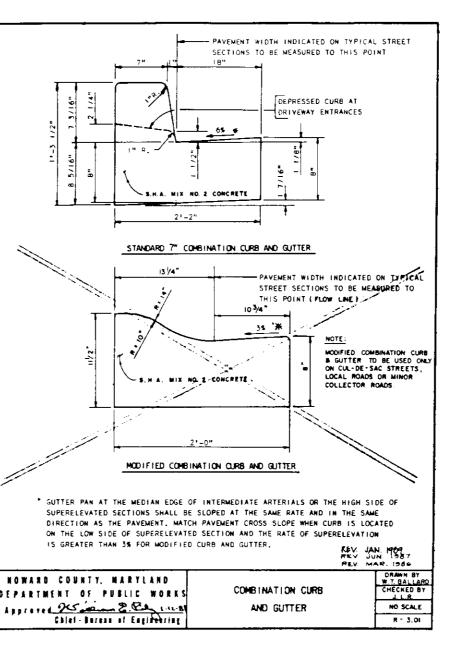
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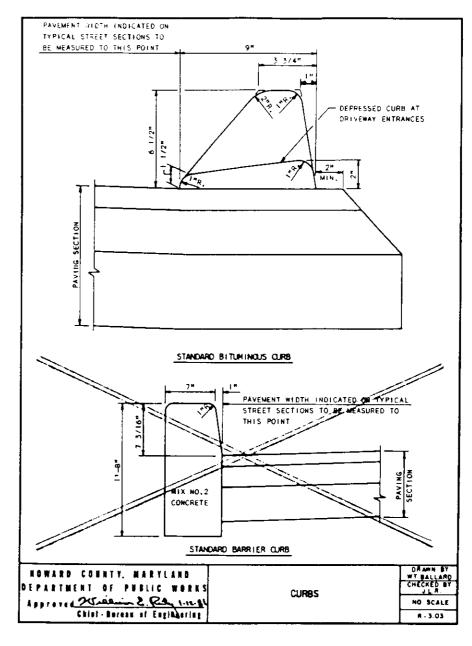
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

AND LAND DEVELOPMENT

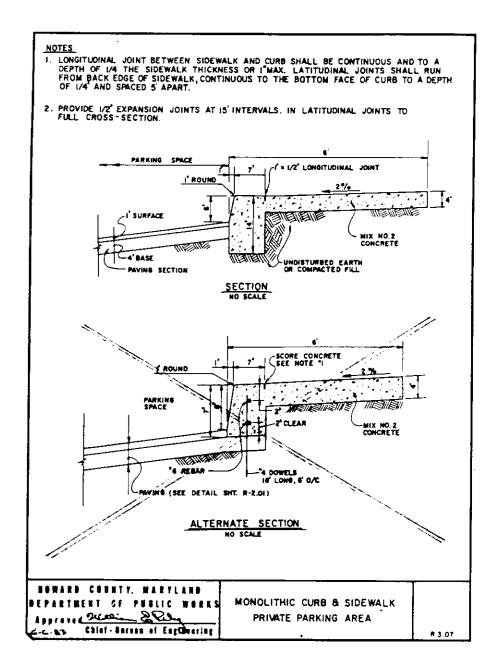


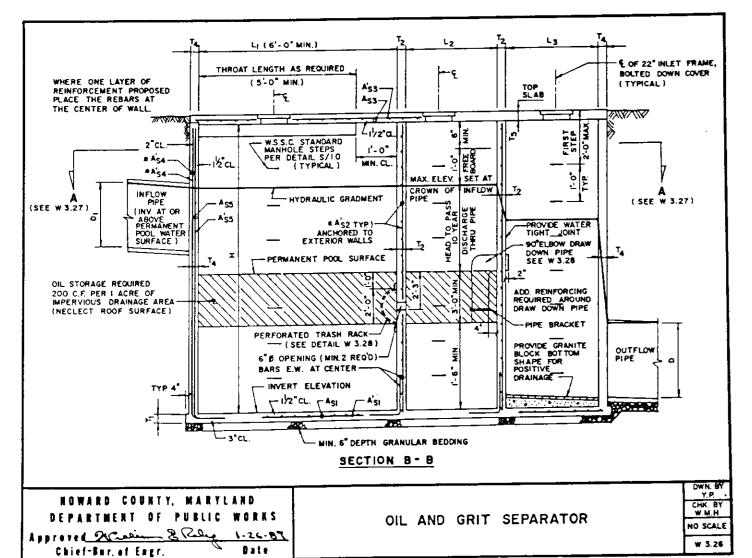






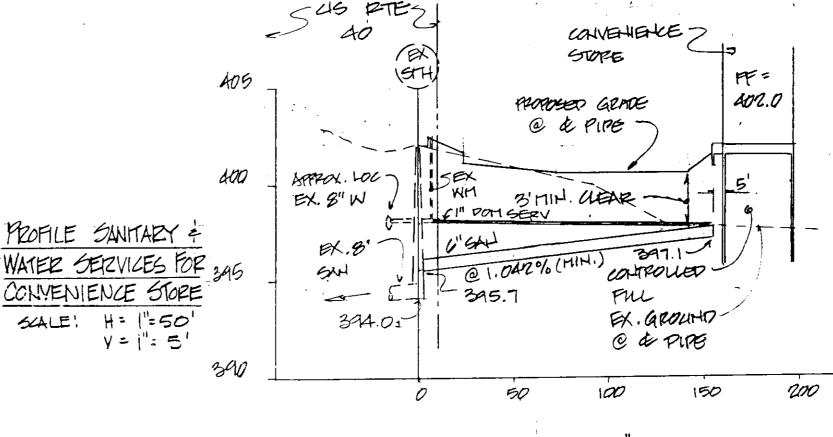
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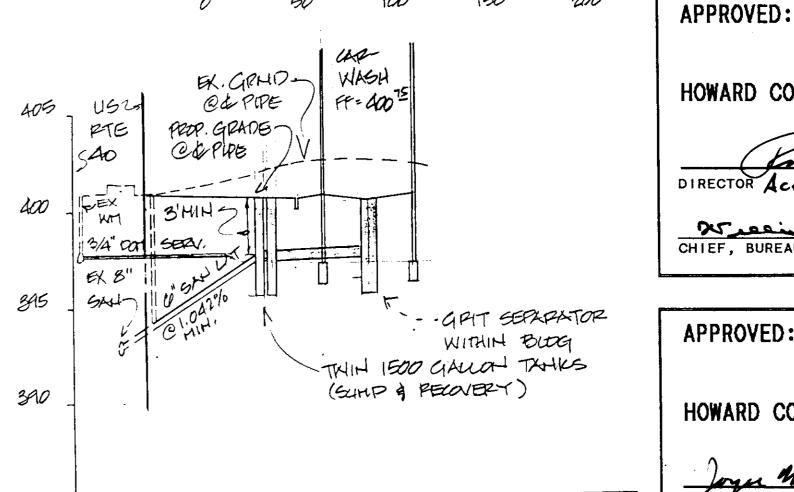




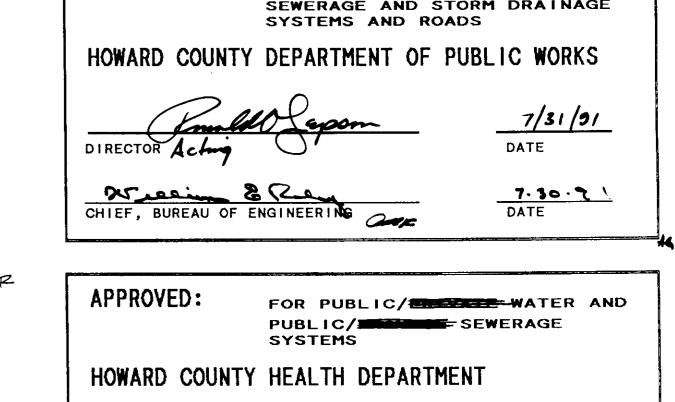
DIMENSION	OG-1	OG-2
L1 (THROATED)	8.0 FT.	8.0 FT.
L2	4.0 FT.	4.0 FT.
L3	4.0 FT.	4.0 FT.
В	3.5 FT.	5.C FT.
Н	7.0 FT.	7.0 FT.
TOP: UPPER : LOWER	397.4 397.0	399.1 389.9
воттом	389.5	391.4
90° ELBOW SIZE	15"	12"
90° ELBOW INV.	394.0	396.4
TRASH RACK ORIFICES	TWIN 12"	TWIN 10"
PIPE INVERT OUT	393.74	391.4

INSPECTED





PROFILE SANITARY & WATER SERVICES FOR CARWASH



HOWARD COUNTY DEPT. OF PLANNING AND ZONING

FOR PUBLIC WATER, PUBLIC

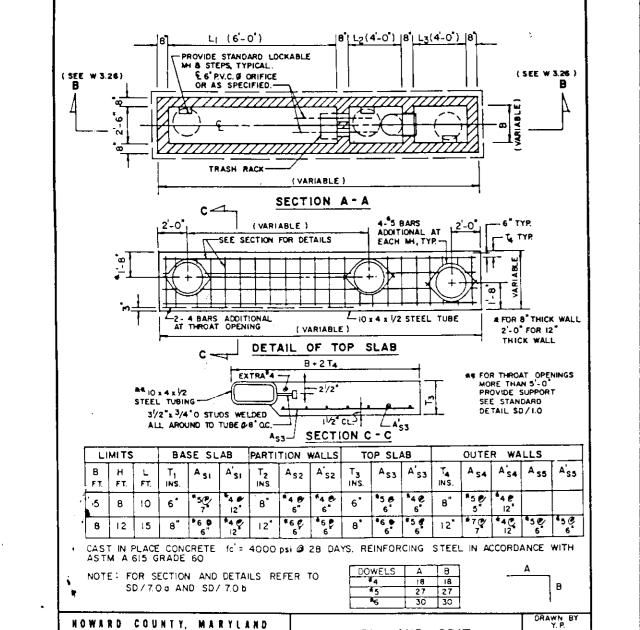
, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

8/27/91

8-6-91

DATE

DATE



CHECKED BY W.M.H.

W 3.27

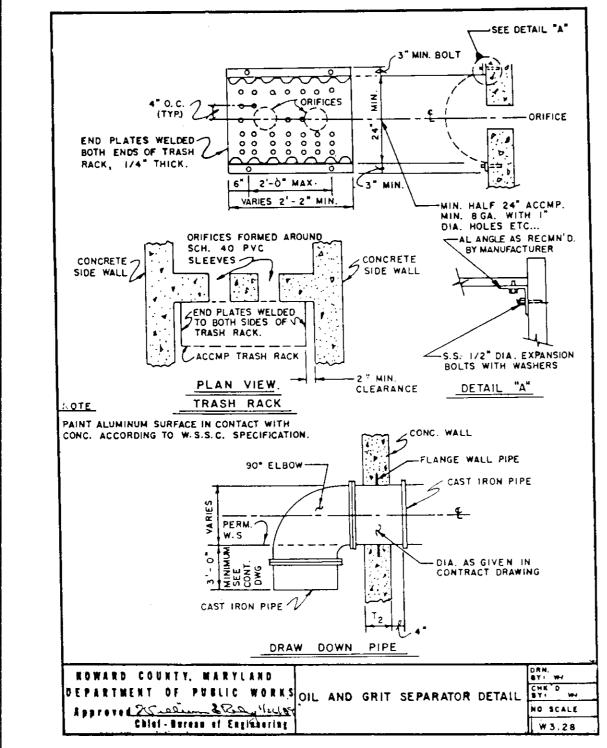
OIL AND GRIT

SEPARATOR/DETAIL

ALL DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS.

DEPARTMENT OF PUBLIC WORKS

Approved Marine & Constitute Chief-Bureau et Engliseering



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	TD-1	TRENCH D						
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SONDED &			PI	PE S	CHEDI	JLE		
INSPECTED By:	FROM	1 TO	SIZE		TYF	PE	!	LENGTH
	0G-1	EX-1	18"	AL	CSP			97
		EXMH-4		AL	CSP	-		62
	FARR	+	4"	PVC/	DR-216	ASTM D-2	241)	105
	CANOP							
	CARH							
	T.D-1	06-2	18	AL	CSP			60
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				1				

STRUCTURE SCHEDULE

OGI OIL & GRIT SEP. (SEE TAB THIS SHEET)

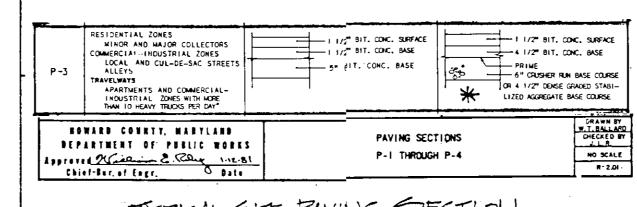
MH (MODIFIED) NOTE: REMOVE GRATE

DIA. ELEV. ELEV.

WIDTH TOP INV. STD. DTL.

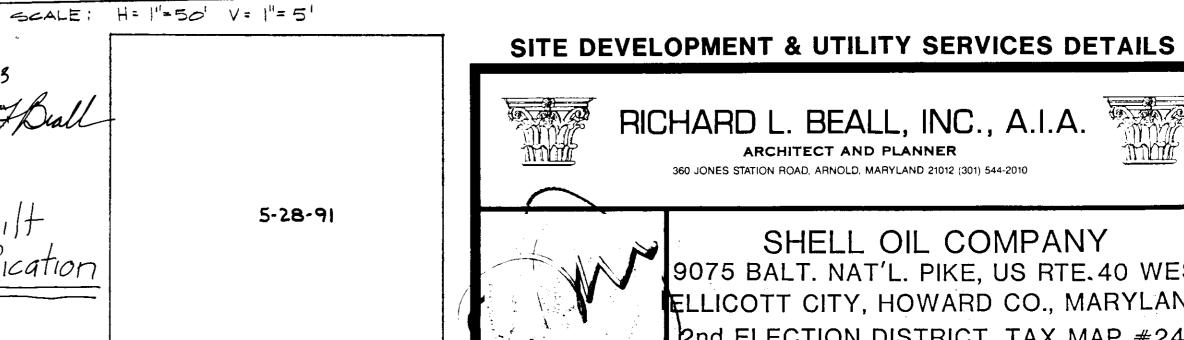
W-3.26, .27, .28

1 11 11 1



TYPICAL SITE PAVING SECTION NOTED *

OWNER / DEVELOPER / APPLICANT MISS UTILITY SHELL OIL COMPANY 15200 SHADY GROVE ROAD ROCKVILLE, MARYLAND 20850 1-301-921-4500 CONTRACTOR MUST CALL "MISS UTILITY @ 1-800-257-7777 FOR EXISTING UTILITY attn: MICHELLE SORAPURO INFORMATION AT LEAST 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.



SHELL OIL COMPANY 9075 BALT. NAT'L. PIKE, US RTE. 40 WEST ELLICOTT CITY, HOWARD CO., MARYLAND 2nd ELECTION DISTRICT, TAX MAP #24 PARCEL A BLOCK 5

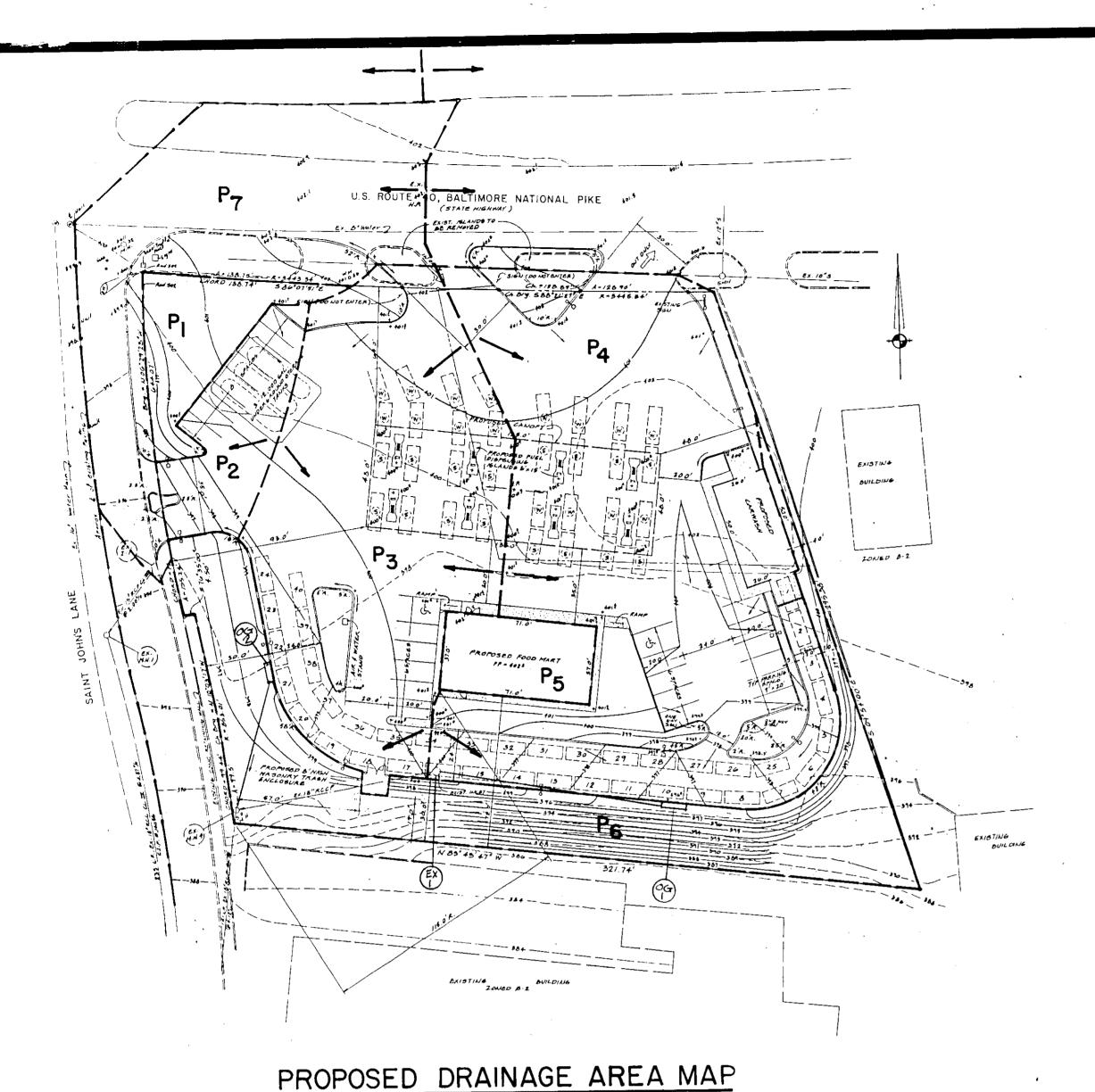
REVISIONS	BY	APP	DATE	JOB. NO.	DRAWING NO.
As-built Certification	12B		12-6-93		
				DATE: MARCH 30 1991	C-7
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				SHEET 7 OF10	

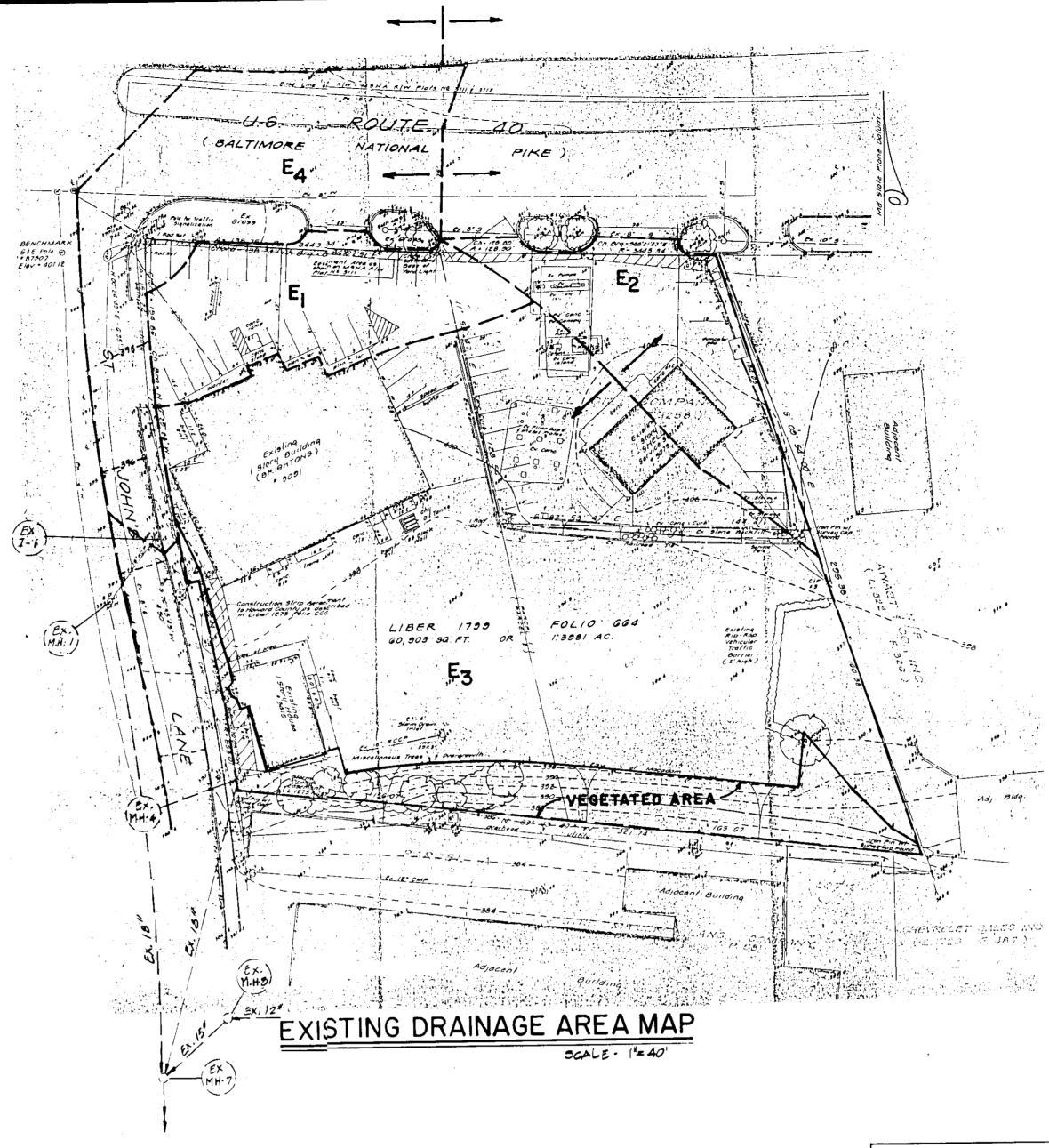
RICHARD L. BEALL, INC., A.I.A.

ARCHITECT AND PLANNER

360 JONES STATION ROAD, ARNOLD, MARYLAND 21012 (301) 544-2010

SDP-91-102

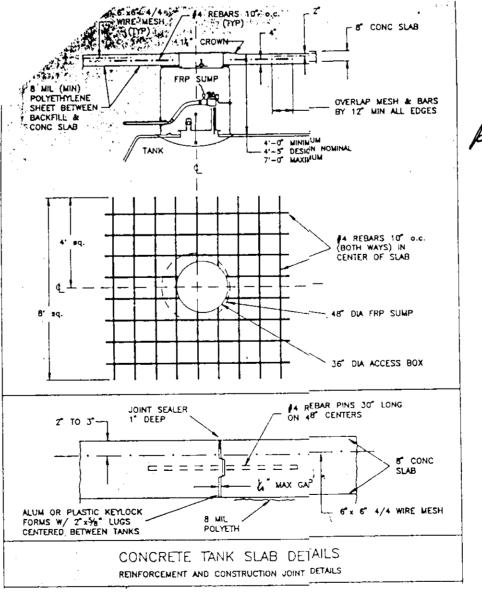




DRAINAGE AREA TABULATION

SCALE - 1"= 40"

		ONSITE		OFFSIT	<u>E</u>
	DA#	DESCRIPTION	AREA	DESCRIPTION	AREA
EXISTING	E1	PAVED	0.21 Ac.		
DEVELOPMENT	E2	PAVED	0.21 Ac.		
	E3	PAVED VEGETATED	1.18 Ac. 0.19 Ac.		
	E 4			PAVED VEGETATED	0.20 Ac. 0.03 Ac.
		TOTAL	1.79 Ac.		0.23 Ac.
PROPOSED	Р1	VEGETATED	0.08 Ac.		
DEVELOPMENT	P2	PAVED	0.10 Ac.		
	Р3	PAVED VEGETATED	0.46 Ac. 0.03 Ac.	PAVED	0.01 Ac.
	P4	PAVED VEGETATED	0.60 Ac. 0.10 Ac.	PAVED VEGETATED	0.035 Ac. 0.035 Ac.
	Р5	BUILDING	0.06 Ac.		
	Р6	VEGETATED	0.36 Ac.		
	Р7			PAVED VEGETATED	0.20 Ac. 0.03 Ac.
		TOTAL	1.79 Ac.		0.31 Ac.



MISS UTILITY

CONTRACTOR MUST CALL "MISS UTILITY @ 1-800-257-7777 FOR EXISTING UTILITY INFORMATION AT LEAST 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.

INDEX OF DRAWING

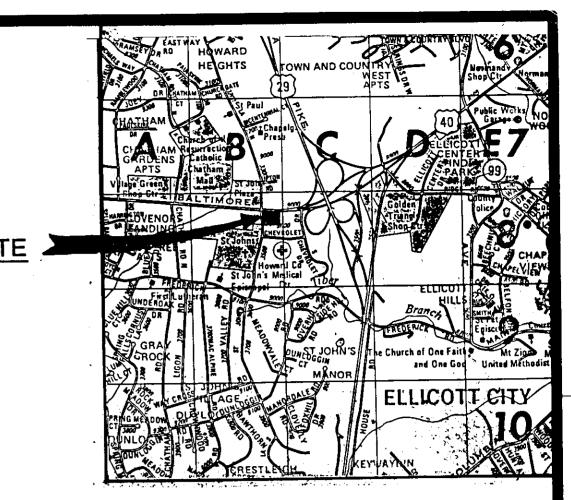
EXISTING DEVELOPMENT CONDITIONS PLAN
HORIZONTAL LAYOUT PLAN
PAVING & GRADING PLAN
SEDIMENT & EROSION CONTROL PLAN
SEDIMENT & EROSION CONTROL DETAILS SEDIMENT & EROSION CONTROL DETAILS
STORM DRAINAGE & UTILITY SERVICES PLAN
SITE DEVELOPMENT & UTILITY SERVICES DETAILS
DRAINAGE AREA MAP C-7 LANDSCAPING PLAN & DETAILS BUILDING ELEVATION & MISC. DETAILS

OWNER / DEVELOPER / APPLICANT

SHELL OIL COMPANY

5-28-91

15200 SHADY GROVE ROAD ROCKVILLE, MARYLAND 20850 1-301-921-4500 attn: MICHELLE SORAPURO



VICINITY MAP

NOTE:

THIS PLAN IS FOR DRAINAGE AREA DELINEATIONS ONLY. PLEASE REFER TO THE APPROPRIATE PLAN FOR CONSTRUCTION INFORMATION REGARDING A SPECIFIC DEVELOPMENT ACTIVITY.

APPROVED:

HOWARD COUNTY DEPT. OF PLANNING AND ZONING

8/27/91

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND ROADS

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

7/31/31 DATE

7.80.%(DATE

APPROVED:

FOR PUBLIC/ PUBLIC/ SEWERAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT

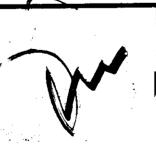
8 -6 -9/ DATE

DRAINAGE AREA MAPS



RICHARD L. BEALL, INC., A.I.A. ARCHITECT AND PLANNER

360 JONES STATION ROAD, ARNOLD, MARYLAND 21012 (301) 544-2010

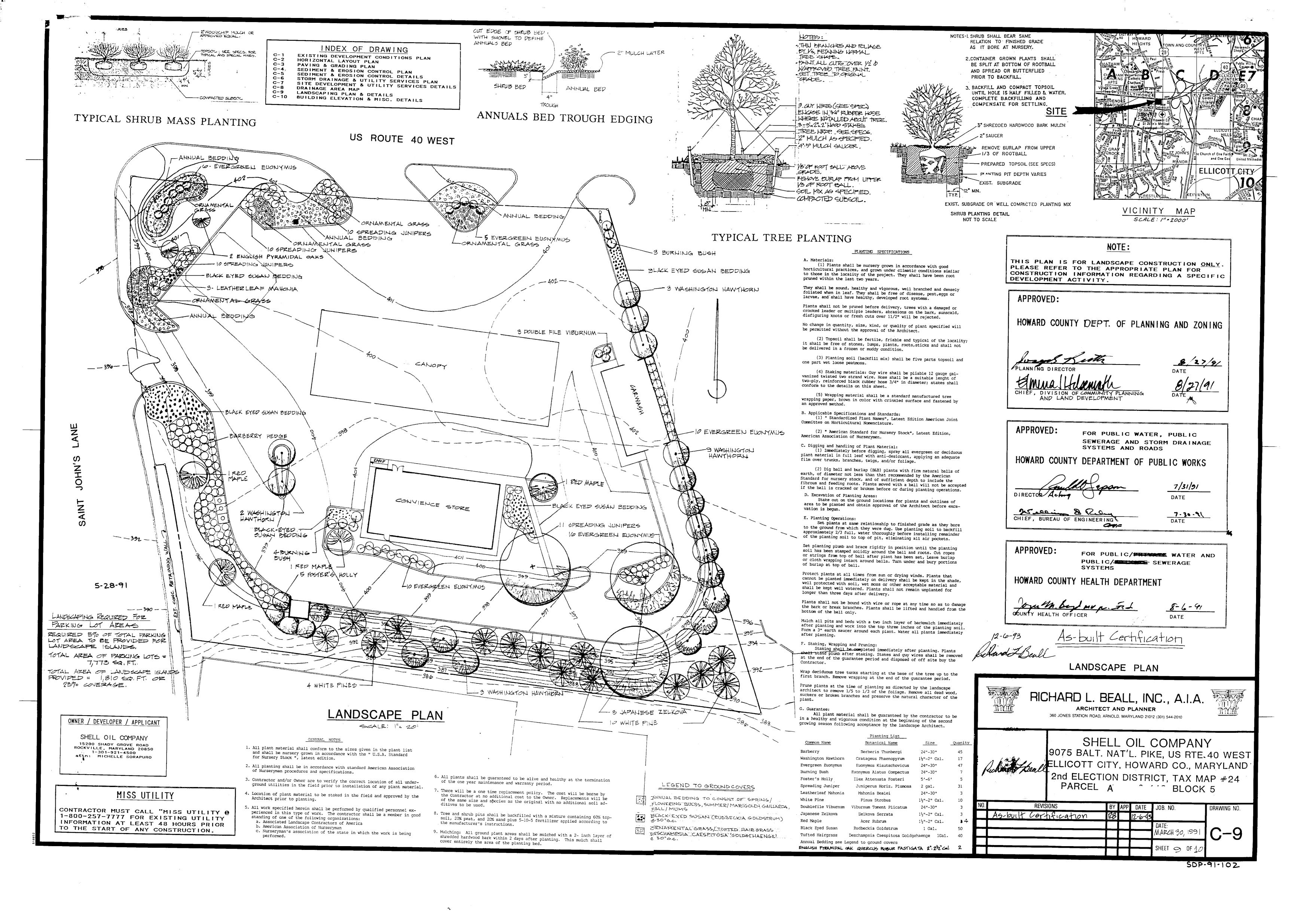


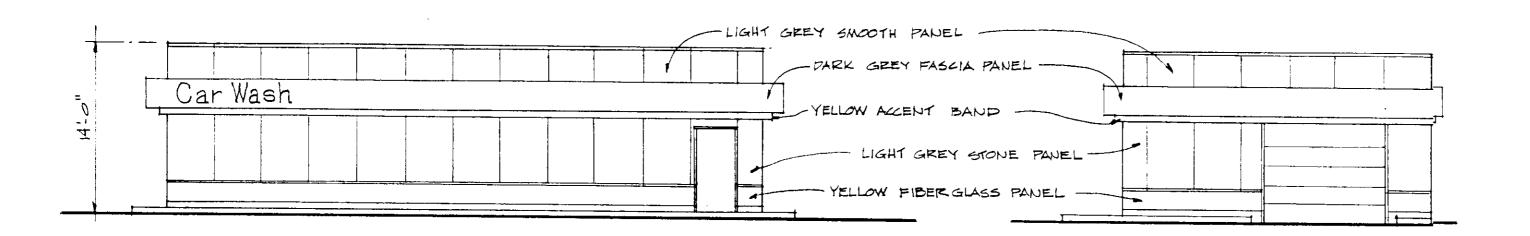
SHELL OIL COMPANY 9075 BALT. NAT'L. PIKE, US RTE. 40 WEST ELLICOTT CITY, HOWARD CO., MARYLAND 2nd ELECTION DISTRICT, TAX MAP #24 / PARCEL A BLOCK 5

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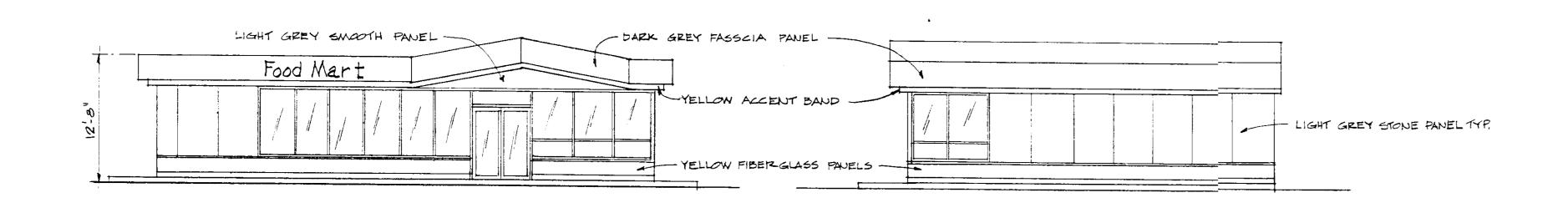
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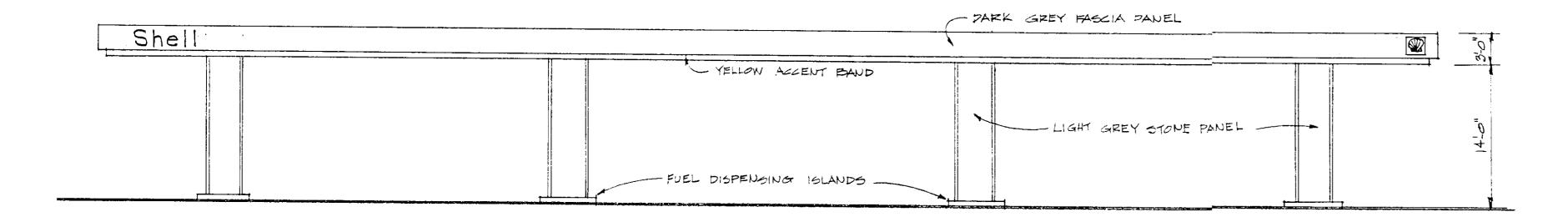




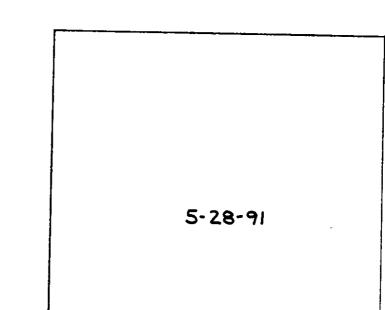
CAR WASH BUILDING ELEVATIONS SCALE: 18"=1-0"

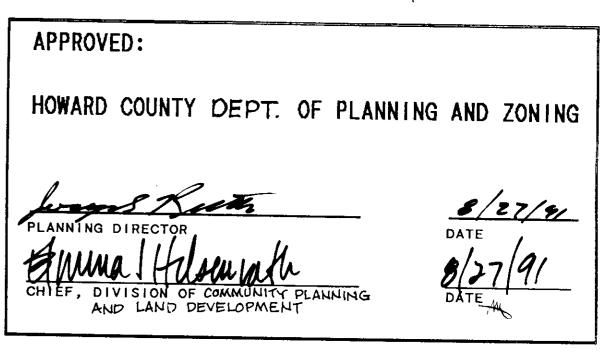


FOOD MART BUILDINDING ELEVATIONS SCALE: 18"= 1-0"

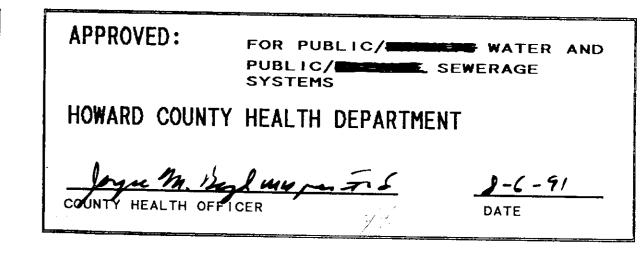


PUMP ISLAND CANOPY ELEVATION SCALE: 18"= 1-0"

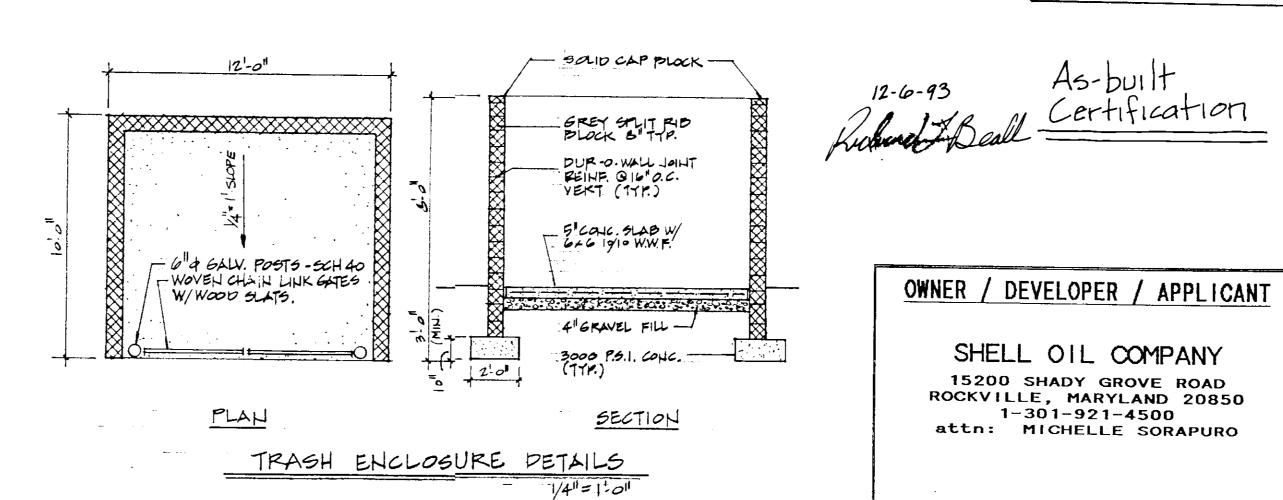




APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 7/31/91 DATE CHIEF, BUREAU OF ENGINEERING 7.30-81 DATE



SITE BUILDINGS ELEVATIONS



RICHARD L. BEALL, INC., A.I.A. ARCHITECT AND PLANNER 360 JONES STATION ROAD, ARNOLD, MARYLAND 21012 (301) 544-2010 PARCEL A

SHELL OIL COMPANY 9075 BALT. NAT'L. PIKE, US RTE.40 WEST Ruhard Head ELLICOTT CITY, HOWARD CO., MARYLAND 2nd ELECTION DISTRICT, TAX MAP #24 , BLOCK 5

REVISIONS	ВҮ	APP	DATE	JOB. NO.	DRAWING NO.
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