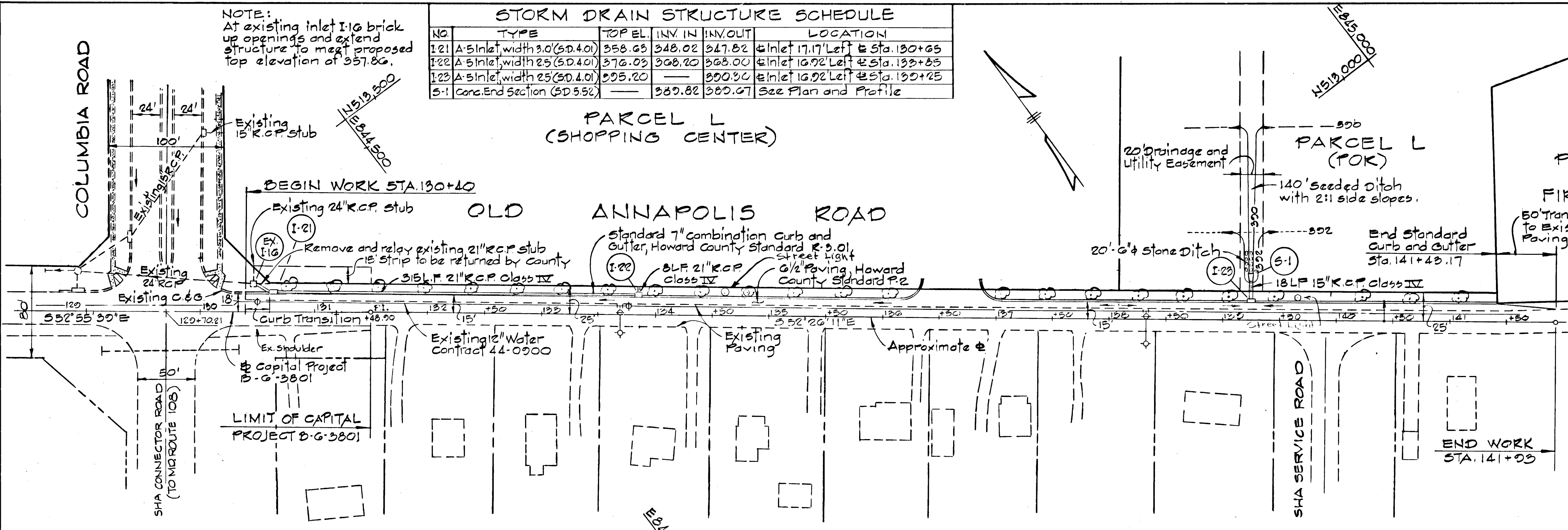


STORM DRAIN STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	LOCATION
I-21	A 5" Inlet, width 3.0 (S.D. 4.0)	358.03	348.02	347.82	Inlet 17.17' Left of Sta. 130+65
I-22	A 5" Inlet, width 25 (S.D. 4.0)	376.03	368.20	368.00	Inlet 16.92' Left of Sta. 133+85
I-23	A 5" Inlet, width 25 (S.D. 4.0)	375.20	—	360.30	Inlet 16.92' Left of Sta. 135+25
S-1	Conc. End Section (S.D. 5.52)	—	360.82	360.67	See Plan and Profile

DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING / DATE 5-15-87
 OFFICE OF PLANNING & ZONING
 ACTING *John F. ...* / DATE 5-13-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION



5/1/87 1 AS per Planning and Zoning, D.P.W. and S.C.D. Comments
 REVISION NO. REVISION DESCRIPTION

DORSEY HALL
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
 SECTION 2 AREA 4
 PARCELS L AND M

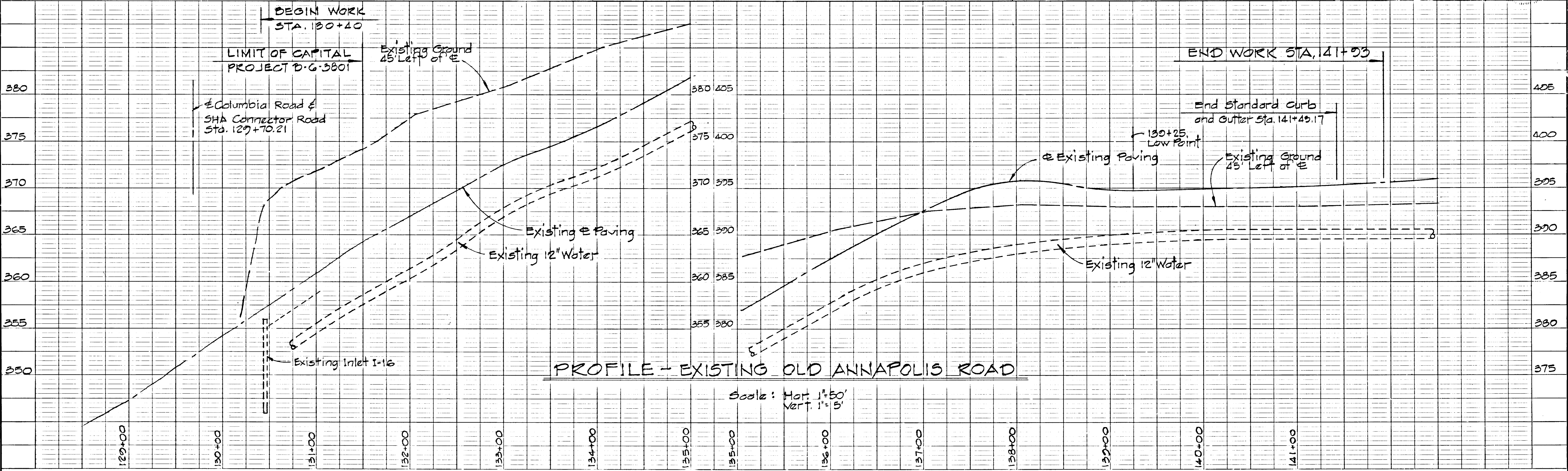
PROJECT TITLE
 OLD ANNAPOLIS ROAD
 STATION 130+40 TO STATION 141+43.17

SCALE: AS SHOWN DATE:
 WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

NOTE:
 FOR EXISTING COLUMBIA ROAD AND OLD ANNAPOLIS ROAD INTERSECTION SEE ROAD CONSTRUCTION DRAWINGS F85-16.

175-Watt "Modern" mercury vapor lamp on 12-foot bronze 2" bronze pole.
 PLAN
 Scale: 1" = 50'

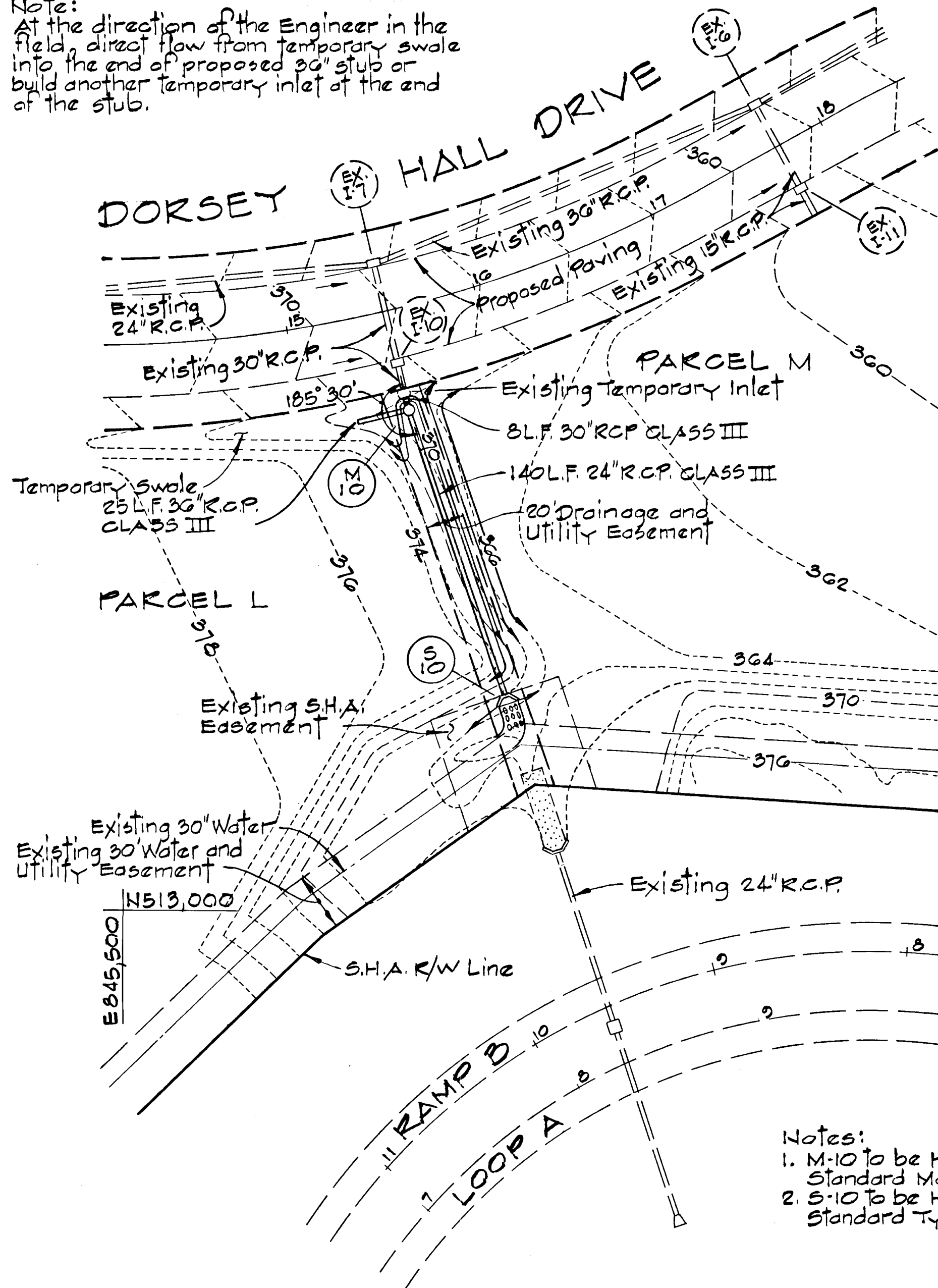
Street Trees, see Note on Sheet 1.



PLAN
 NOTE BOOK
 NO.

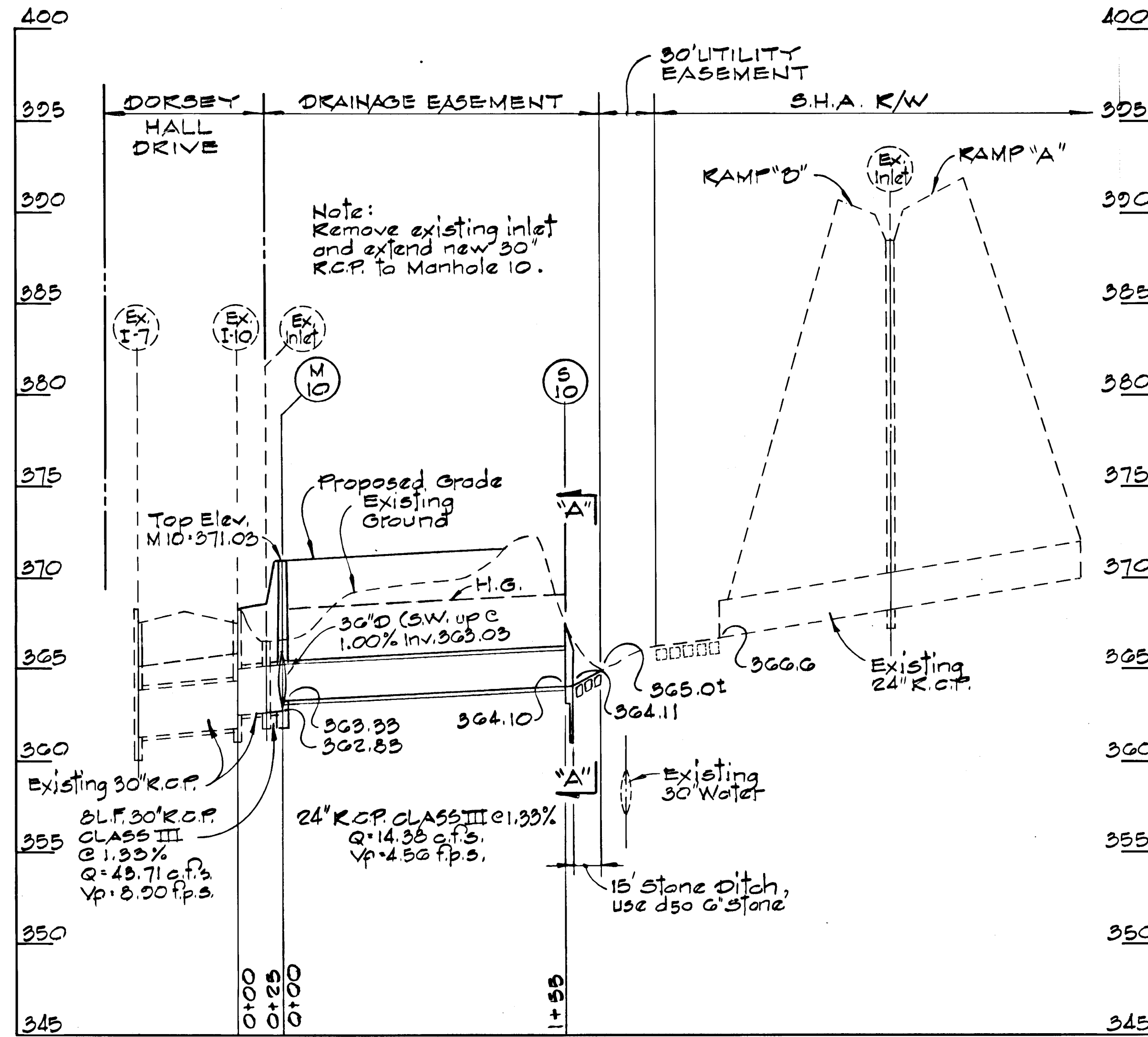
PROFILE
 NOTE BOOK
 NO.

Note:
At the direction of the Engineer in the field, direct flow from temporary swale into the end of proposed 30" stub or build another temporary inlet at the end of the stub.



STORM DRAIN PLAN
SCALE: 1" = 30'

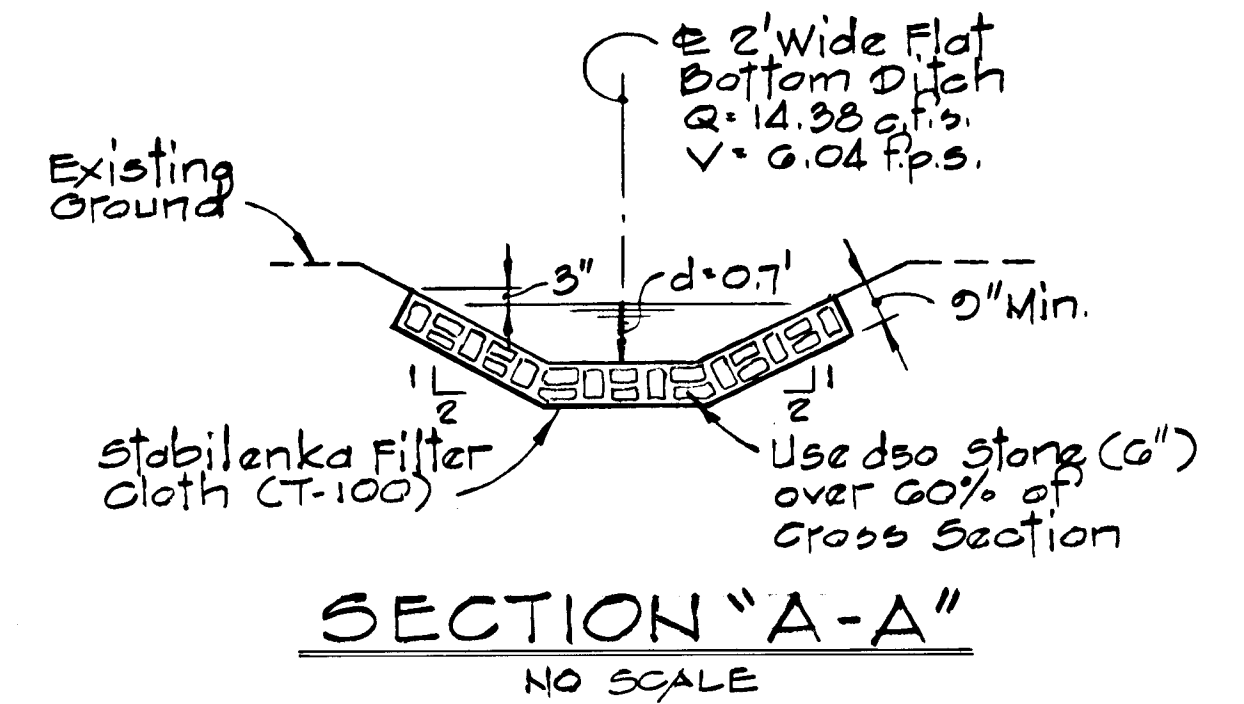
N512,750
E846,000



STORM DRAIN PROFILE

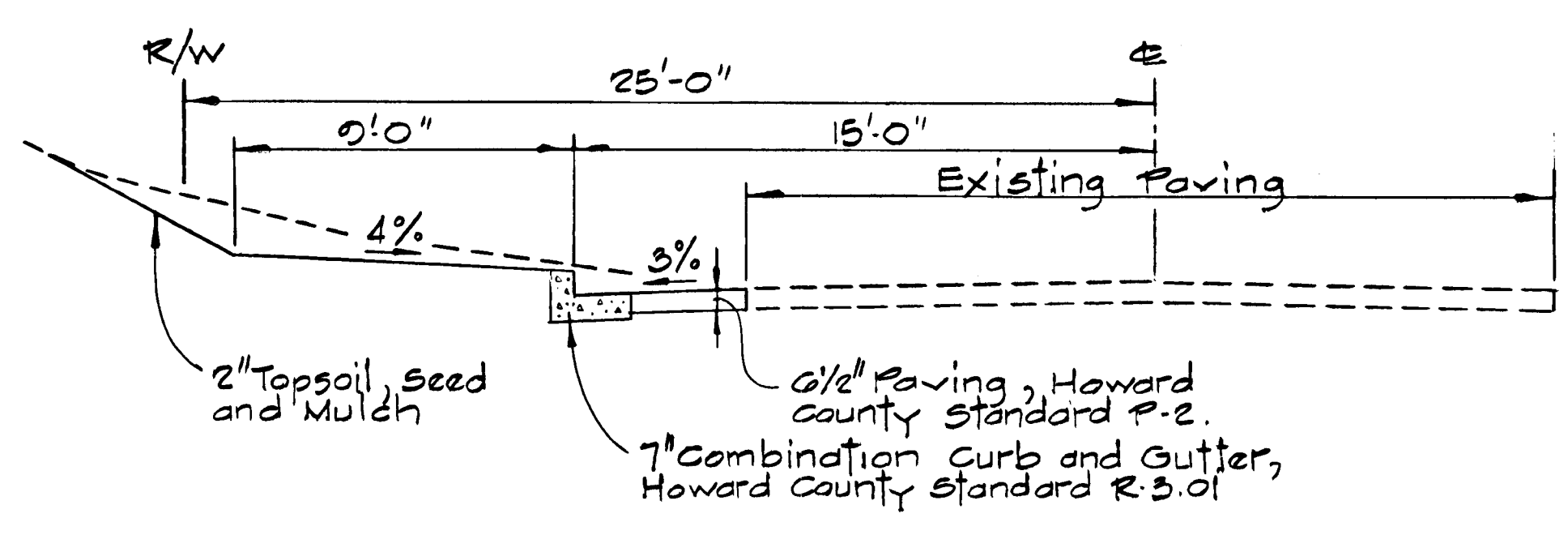
NOTE:
FOR EXISTING DORSEY HALL DRIVE AND STORM DRAIN SEE ROAD CONSTRUCTION DRAWINGS F86-102.

DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING
OFFICE OF PLANNING & ZONING
DATE: 5/13/87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

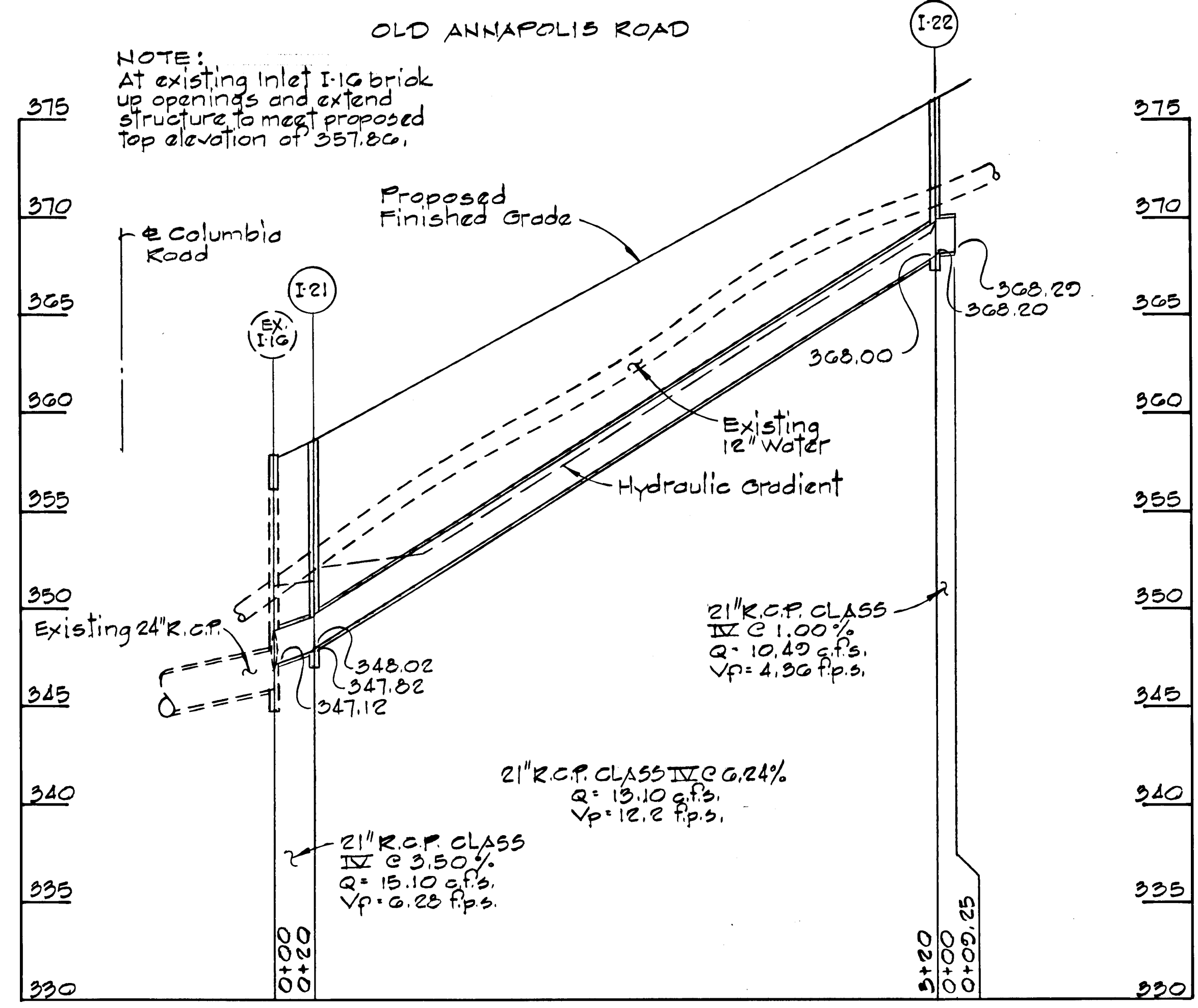


Note:
Type of bedding used for storm drain pipes shall be class "C" shaped subgrade. If rock is encountered the trench invert should be overexcavated 6 inches and the overexcavation of 6 inches refilled with granular material.

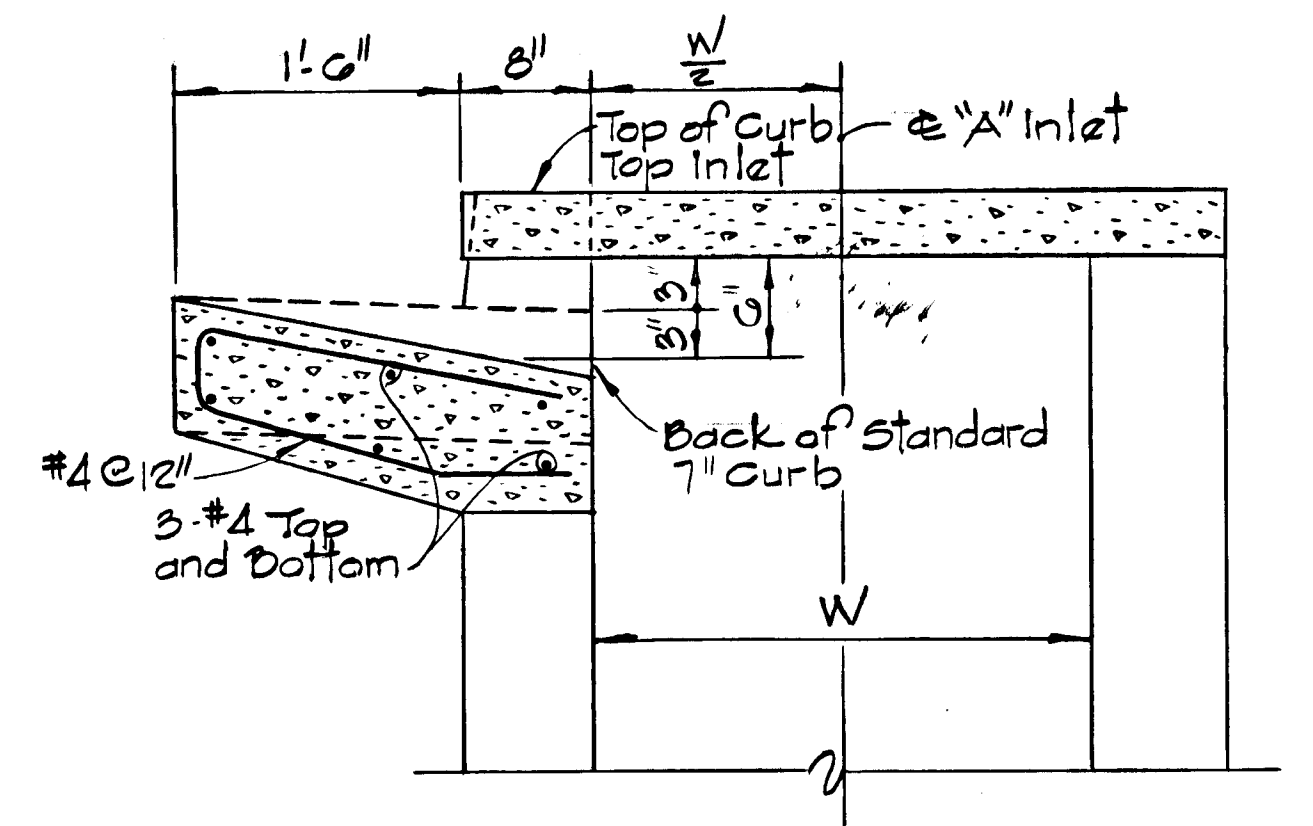
5/1/87	1	As per Planning and Zoning, D.P.W. and S.C.S. Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION
DORSEY HALL 2ND ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY PROJECT AREA		
SECTION 2 AREA 4 PARCELS L AND M		
PROJECT TITLE STORM DRAIN PLAN AND PROFILE		
SCALE: AS SHOWN DATE:		
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
 KENNETH A. MCCORD REGISTERED ENGINEER NO. 1074		



TYPICAL SECTION - OLD ANNAPOLIS ROAD
 STATION 130+40 TO STATION 141+43.17
 NO SCALE

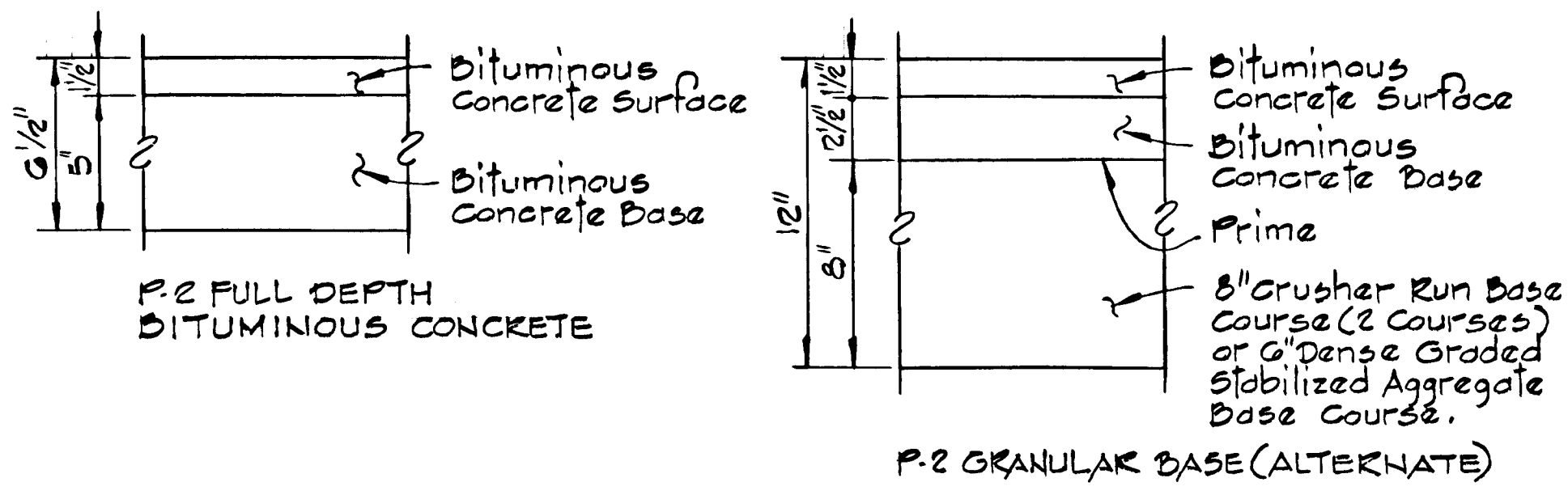


STORM DRAIN PROFILE
 SCALE: HOR. 1"=50'
 VERT. 1"=5'

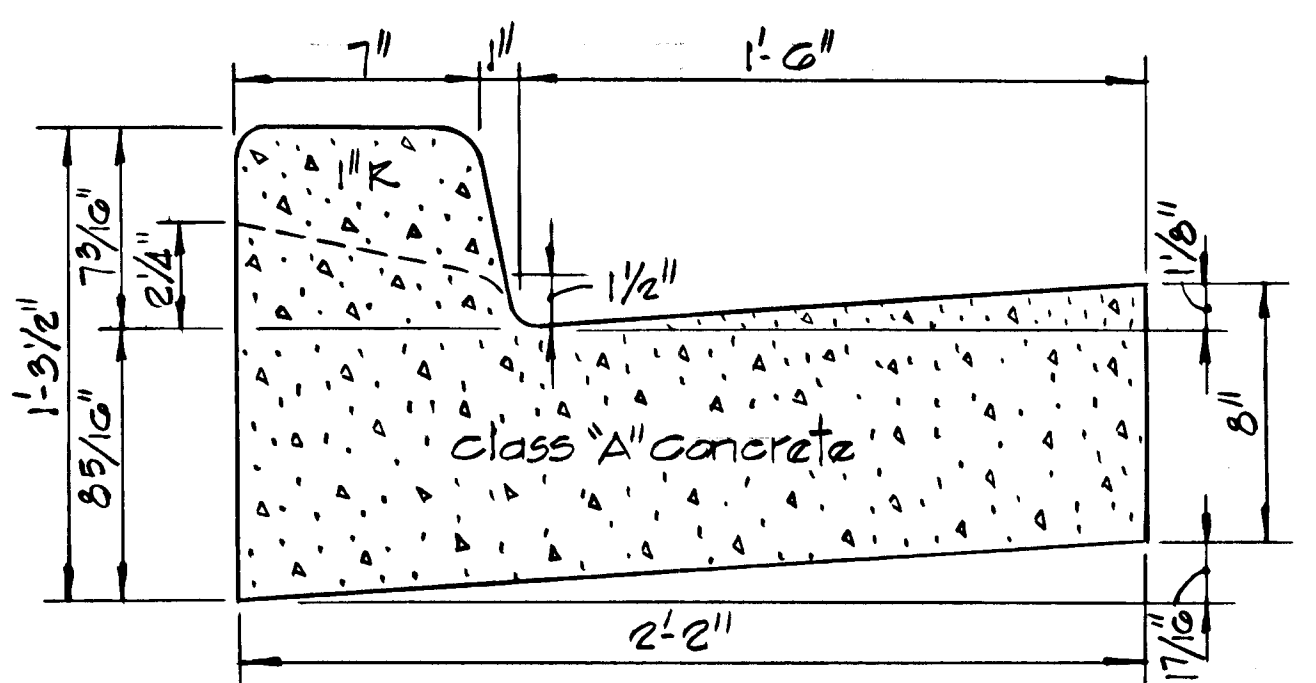


"A" INLET - STANDARD CURB
 NO SCALE

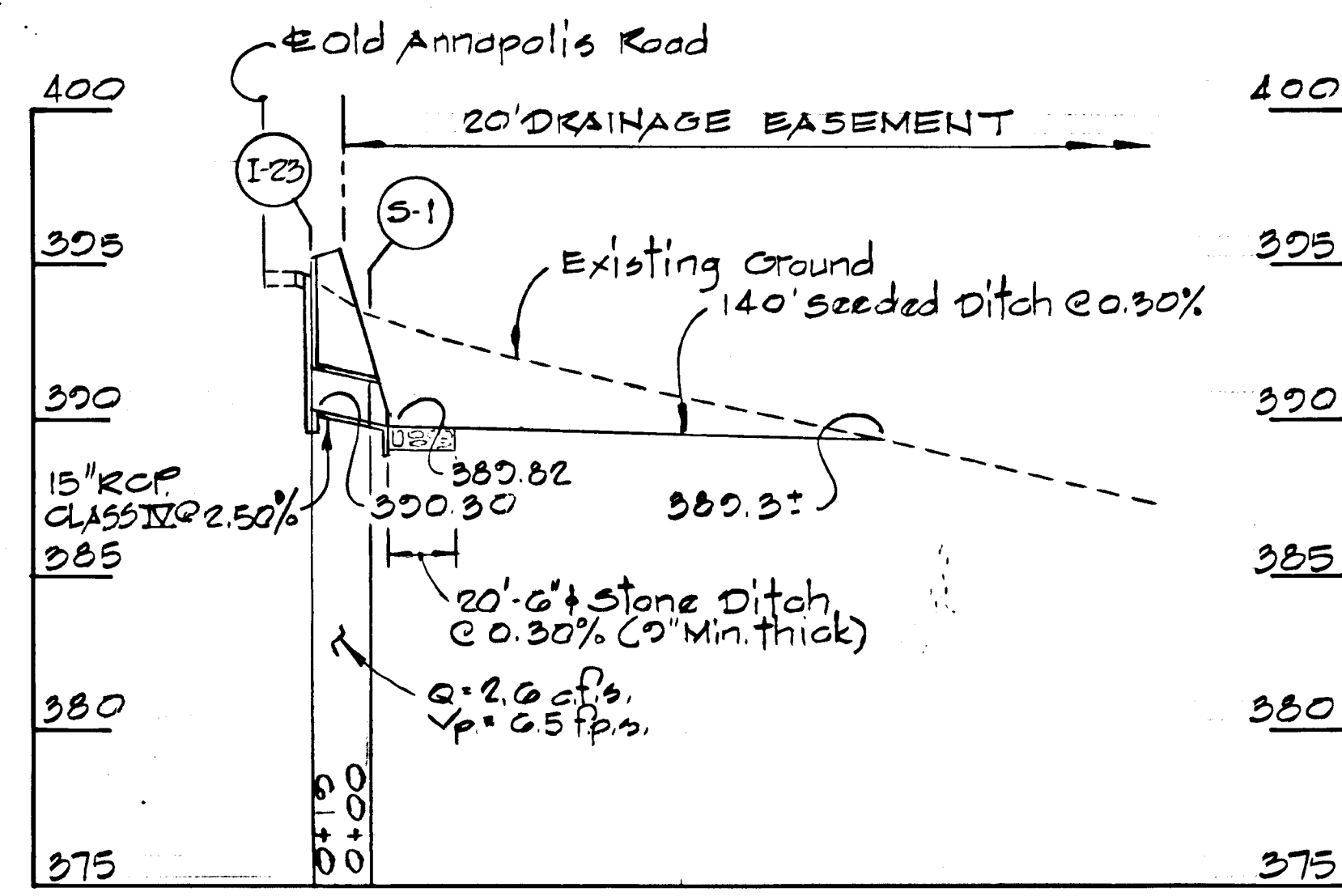
Note:
 Type of bedding used for storm drain pipes shall be class "c" shaped subgrade. If rock is encountered the trench invert should be overexcavated 6 inches and the overexcavation of 6 inches refilled with granular material.



TYPICAL PAVING SECTION
 NO SCALE

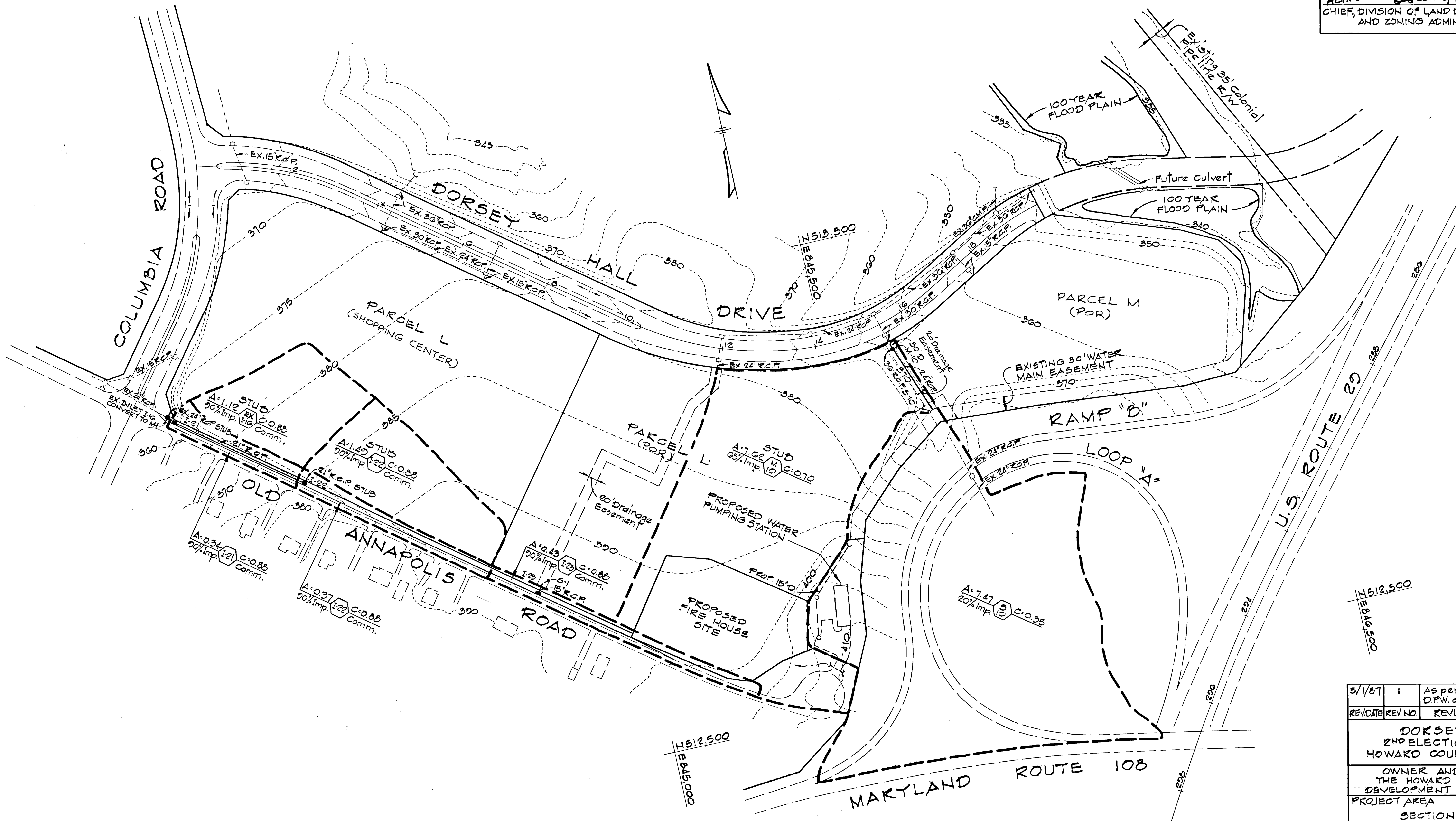


STANDARD 7" COMBINATION CURB & GUTTER
 NO SCALE

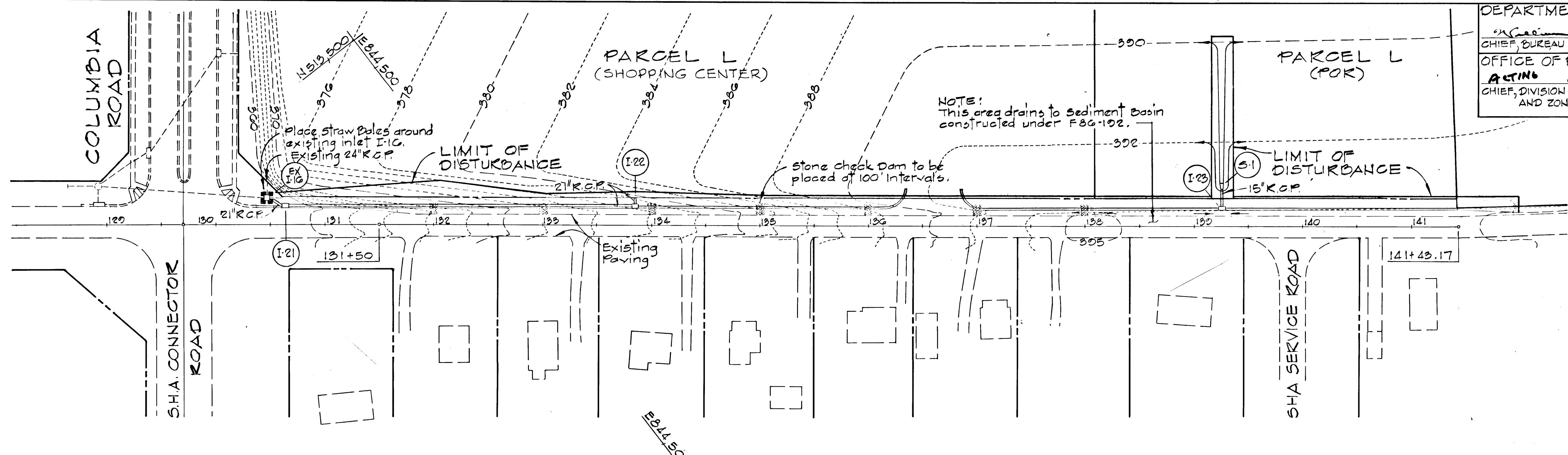


STORM DRAIN PROFILE
 SCALE: HOR. 1"=50'
 VERT. 1"=5'

5/1/87	1	As per Planning and Zoning, D.P.W. and S.C.S. Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION
		DORSEY HALL 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY
		PROJECT AREA SECTION 2 AREA 4 PARCELS LAND M
		PROJECT TITLE ROADWAY DETAILS STORM DRAIN DETAILS STORM DRAIN PROFILES
		SCALE: AS SHOWN DATE:
		WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21216
		<i>Kenneth A. McCorko</i> KENNETH A. MCCORKO REGISTERED ENGINEER NO. 1074



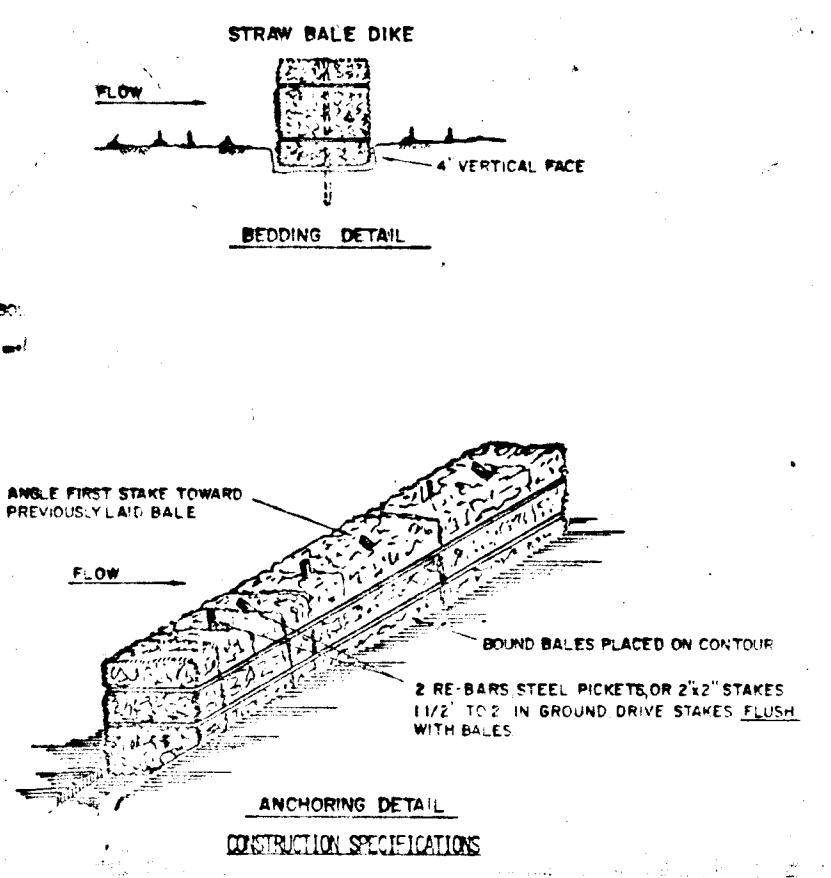
5/1/87	1	As per Planning and Zoning, D.P.W. and S.C.S. Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION
DORSEY HALL 2ND ELECTION DISTRICT HOWARD COUNTY MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY PROJECT AREA SECTION 2 AREA 4 PARCELS LANDM PROJECT TITLE DRAINAGE AREA MAP SCALE: 1"=100' DATE: WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218 Kenneth A. McCord KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974		



NOTE:
 INLETS I-21, I-22 AND I-23 TO HAVE
 INLET PROTECTION, SEE
 DETAIL THIS SHEET.

SEDIMENT CONTROL PLAN
 SCALE: 1" = 50'

- SEDIMENT CONTROL NOTES**
- 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. (892-2437)
 - 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 3:1, 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) and (Sec. 54), temporary seedings (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: 0.6 Acres
 Area Disturbed: 0.6 Acres
 Area to be roofed or paved: 0.1 Acres
 Area to be vegetatively stabilized: 0.5 Acres
 Total Cut: 800 Cu. yds.
 Total Fill: 800 Cu. yds.
 Offsite waste/borrow area location: _____
 - 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.



1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY BUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMPLOYED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. 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 BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT IS ALL MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPERF STORM FLOW OR DRAINAGE.

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.

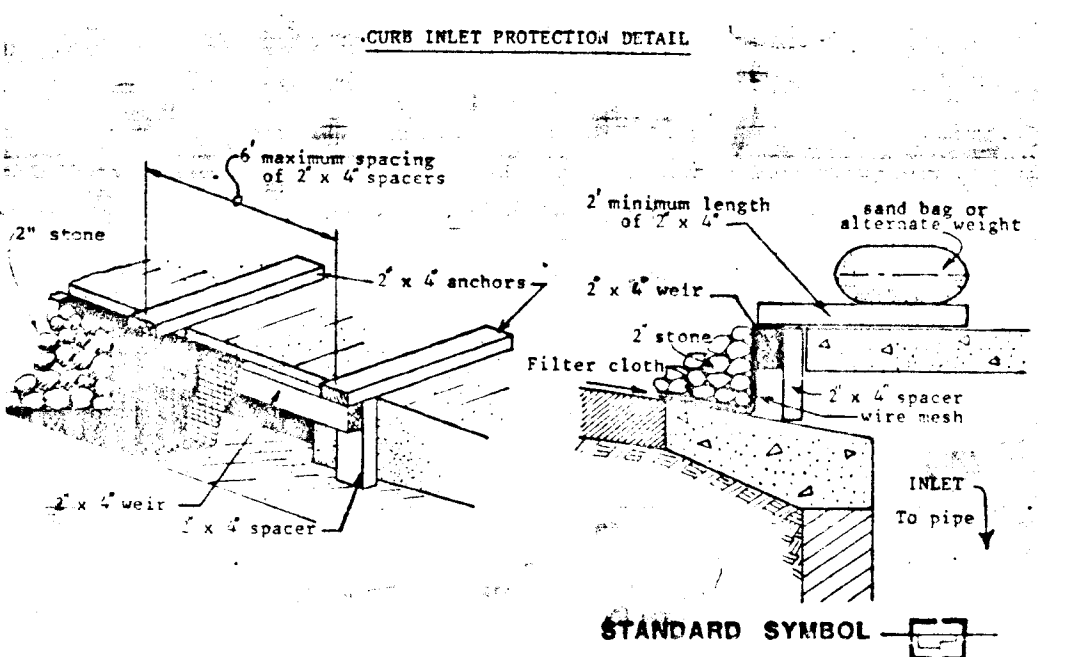
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

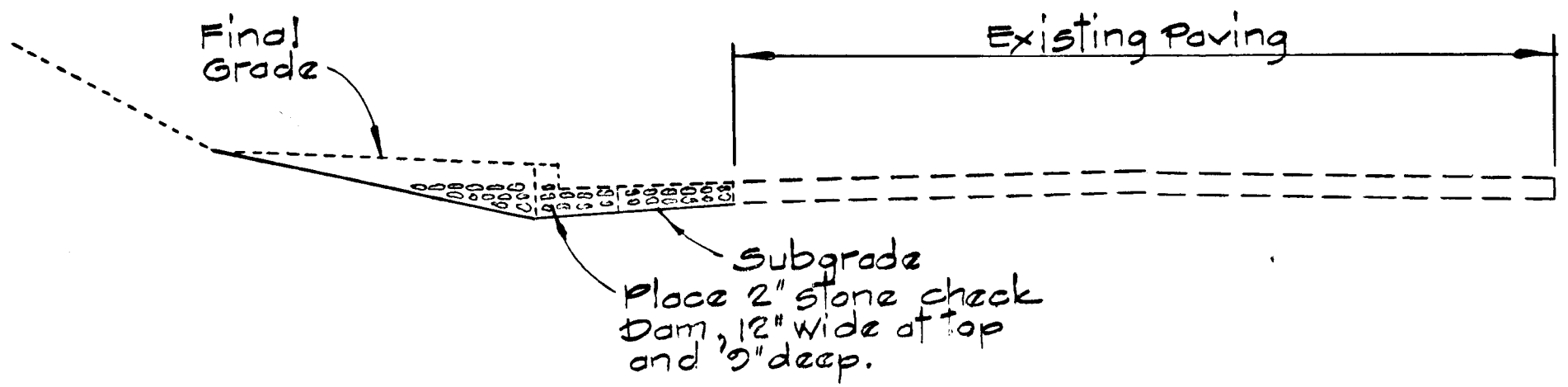
Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 50 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1/4 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of untreated 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.



- Curb Inlet Protection.**
1. Attach a continuous piece of wire mesh (30" wts. 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.



SECTION - STONE CHECK DAM
 NO SCALE

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. PLACE STRAW BALES AROUND EXISTING I-I.G.
3. STRIP AND ROUGH GRADE LIMITS OF CONSTRUCTION. (1 DAY)
4. PLACE STONE CHECK DAM AT LOCATIONS SHOWN ON PLAN. (1 DAY)
5. CONSTRUCT STORM DRAIN SYSTEM. (1 WEEK)
6. FINE GRADE ROAD, CONSTRUCT CURB AND GUTTER AND SEED DISTURBED AREAS. (3 DAYS)
7. PAVE ROAD. (1 DAY)
8. REMOVE STRAW BALES AFTER GRASS IS ESTABLISHED.

By the Developer:
 "I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
Arthur E. Woodbridge 2-20-87
 Date

Reviewed for HOWARD S.C.D. and meet Technical Requirements
John M. Hales 5-13-87
 U.S. Soil Conservation Service Date
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Stephen L. Hales 5/13/87
 Howard S.C.D. 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."
Kenneth A. McCord 2-20-87
 Date

5/1/87	1	AS per Planning and Zoning, D.P.W. and S.C.S. Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION
		DORSEY HALL 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY
		PROJECT AREA SECTION 2 AREA 4 PARCELS LANDM
		PROJECT TITLE SEDIMENT CONTROL PLAN AND DETAILS
		SCALE: AS SHOWN DATE:
		WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218
		<i>Kenneth A. McCord</i> KENNETH A. MCCORD REGISTERED ENGINEER NO. 1074