

GRADING NOTES:

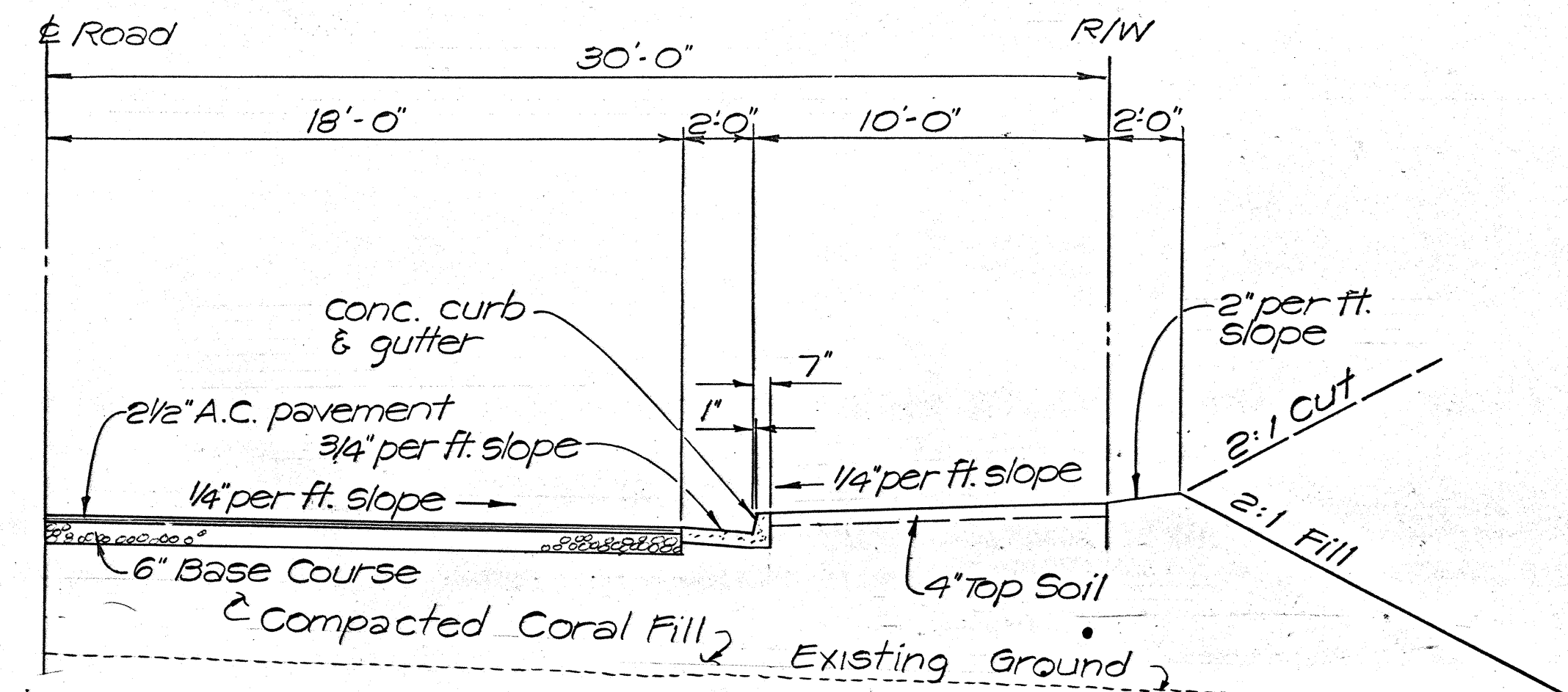
1. All grading work shall conform to Chapter 23, Revised Ordinances of Honolulu 1969, as amended (Ordinance Nos. 5968, 4294, and 4538).
2. The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways, and other areas. The cost incurred for any remedial action by the Chief Engineer shall be payable by the Contractor.
3. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health.
4. All grading operations shall be performed in conformance with the applicable provisions of the Water Pollution Control and Water Quality Standards.
5. The City shall be informed of the location of the disposal site for the excess material from the project when the application for a grading permit is made. The disposal site must also fulfill the requirements of the grading ordinance.
6. No grading work shall be done on Saturdays, Sundays, and holidays at any time without prior notice to the Chief Engineer.
7. The limits of the graded area shall be flagged before commencement of the grading work.
8. Prior to application for a grading permit, temporary erosion control procedures shall be submitted for approval.
9. The underground pipes, cables, or ductlines known to exist by the engineer from his search of records are indicated on the plans. The Contractor shall verify the location and depth of the facilities and exercise proper care in excavating in the area.
10. All slopes and exposed areas shall be sodded or planted immediately after the grading work has been completed.

CONSTRUCTION NOTE:

1. All construction work shall be done in accordance with the STANDARD DETAILS, August 1976, and the STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, May 1975, of the Department of Public Works, City and County of Honolulu.
2. Upon authorization to proceed with construction the Contractor shall immediately verify the locations, sizes and invert elevations of the Standard Oil Company's (Chevron U.S.A., Inc.) fuel oil lines directly south of Drain Lines 1, 2 and 3. No work on Drain Lines 1, 2 and 3 shall commence without authorization of the Engineer who shall determine whether revisions to the drain line invert grades are required. Trenching and backfilling of the existing fuel oil lines will be done by Standard Oil Company (Chevron U.S.A., Inc.) and paid for by the Contractor. The Contractor shall coordinate exposure of the fuel oil lines with the Chief Engineer, Chevron U.S.A., Inc., P.O. Box 22789, Honolulu, Hawaii 96820.

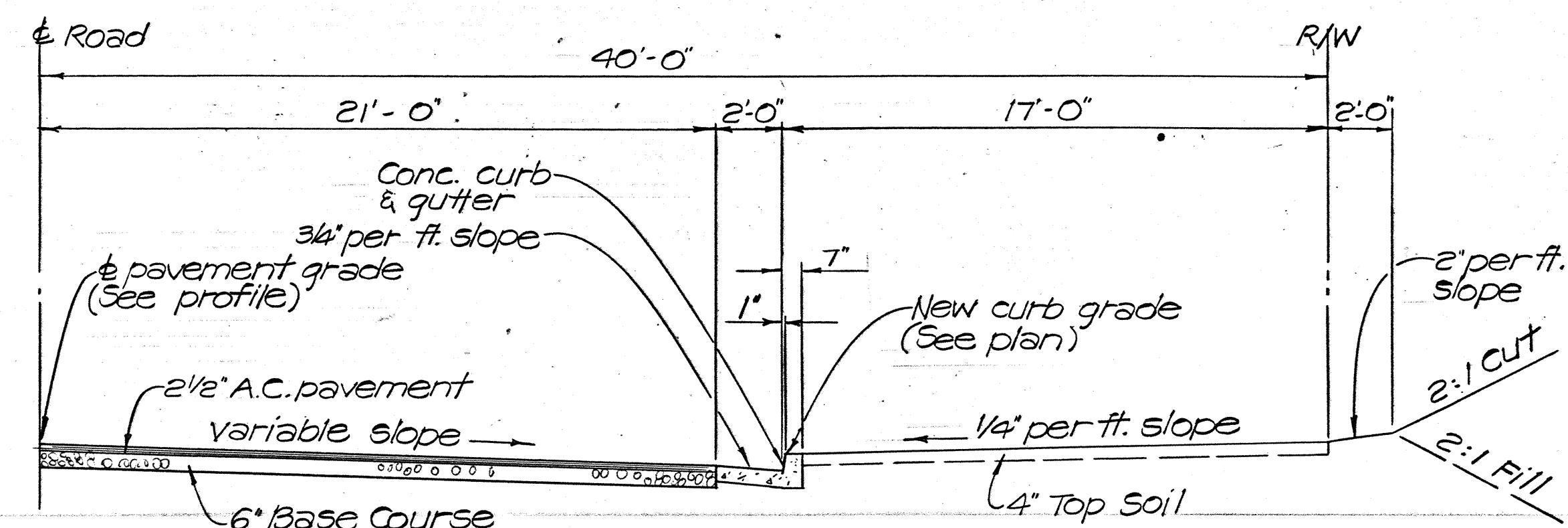
WATER NOTES:

1. Unless otherwise specified, all material and construction of water system facilities and appurtenances shall be in accordance with the Honolulu Board of Water Supply's WATER SYSTEM STANDARDS dated March 1977, and all subsequent amendments and additions.
2. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features such as lines, grades, fittings, etc. shall be the responsibility of the engineer who prepared the plans. Drainage and other features of the improvement shall not be the responsibility of the Board of Water Supply.
3. Unless otherwise specified, connections to existing water mains and chlorination of new mains shall be done by the Contractor, with the Board of Water Supply Inspector coordinating the work. For details, contact the Board of Water Supply's Engineering Division, Construction Section.
4. Prior to excavating for new drain, sewer or other utility lines, the contractor shall verify in the field the location of existing water mains and appurtenances. Where the installation of new drain, sewer, or other utility lines are to cross over or under existing water mains, the Contractor shall expose the existing water mains prior to trenching. Excavation around water mains shall be done by hand.
5. The Contractor shall notify the Board of Water Supply in writing one week prior to commencing work on the main.
6. In the event that water mains other than ductile iron is to be used, the plans shall be resubmitted for approval.
7. Test pressure shall be 150 p.s.i.
8. All cast iron water mains and fittings shall be enclosed in plastic material in accordance with ANSI Specifications A 21.5-1972 or AWWA Specifications C105-72 "Polyethylene Encasement for Gray and Ductile Cast Iron Piping for Water and Other Liquids."
9. Valve I.D. tags shall be affixed on the underside of all new manhole and valve box covers. See detail 1.
10. Reapproval shall be required if this project is not under construction within a period of one year. (See Rules and Regulations of the Board of Water Supply.)
11. Fire hydrants shall be East Bay Model 5 as specified in the Water System Standards, James-Jones Model J-3740, or approved equal.
12. Water pipeline easements shall be granted to the Board of Water Supply for all lines to be conveyed to the BWS which are located within private property and roadways that will not be dedicated to the City.



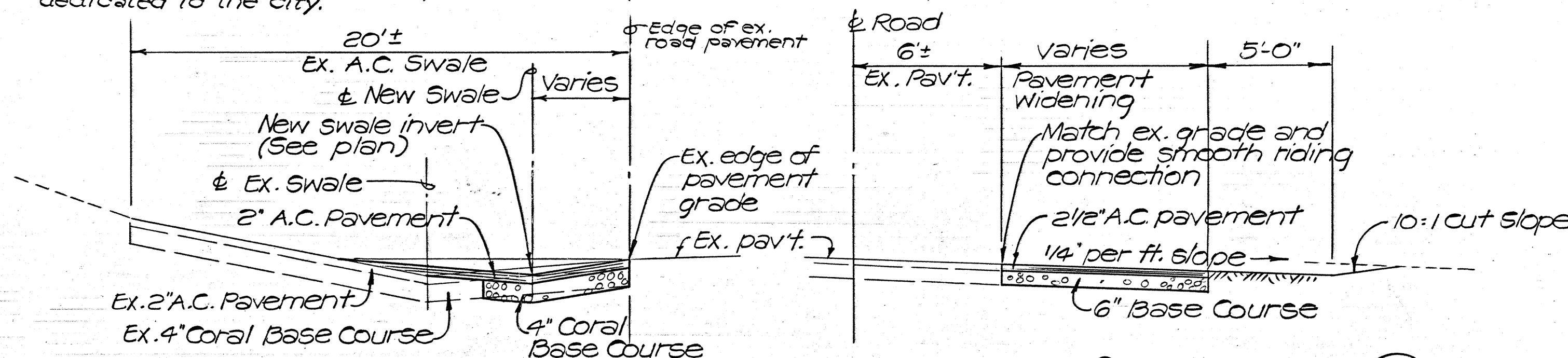
TYPICAL HALF SECTION - MALAKOLE RD.

Scale: 1/4" = 1'-0"



TYPICAL HALF SECTION - HANUA ST.

Scale: 1/4" = 1'-0"



TYPICAL SECTION - A.C. SWALE
MALAKOLE ROAD

15+82.84 To 16+36±

Not to Scale

TYPICAL SECTION -
PAVEMENT WIDENING

MALAKOLE ROAD -

15+82.84 To 17+30

Scale: 1/4" = 1'-0"

1/4" = 1'-0" 4' 2' 0' 4' 8'

Graphic Scale

ENGINEER KYS	REVISION	DATE	BRIEF	BY	APPROVED
DRAFTSMAN CS					
CHECKED BY ACY					
R. M. TOWILL CORPORATION PLANNERS, ENGINEERS, SURVEYORS, PHOTOGRAMMETRISTS 1810 Kapiolani Boulevard Honolulu Hawaii 96814 JAMES CAMPBELL INDUSTRIAL PARK MALAKOLE ROAD IMPROVEMENT BETWEEN HANUA ST. & KALAELOA BLVD. AT HONOLULU, EWA, OAHU, HAWAII DEVELOPER: CAMPBELL ESTATE					
NOTES & TYPICAL ROAD SECTIONS					
APPROVED: <i>[Signature]</i> 3/14/78 CHIEF, DIV. OF ENGINEERING, DATE DEPT. OF PUBLIC WORKS, BOARD OF WATER SUPPLY APPROVED: <i>[Signature]</i> 8-10-77 DIRECTOR, DEPT. OF TRANSP. SERVICES, DATE					