

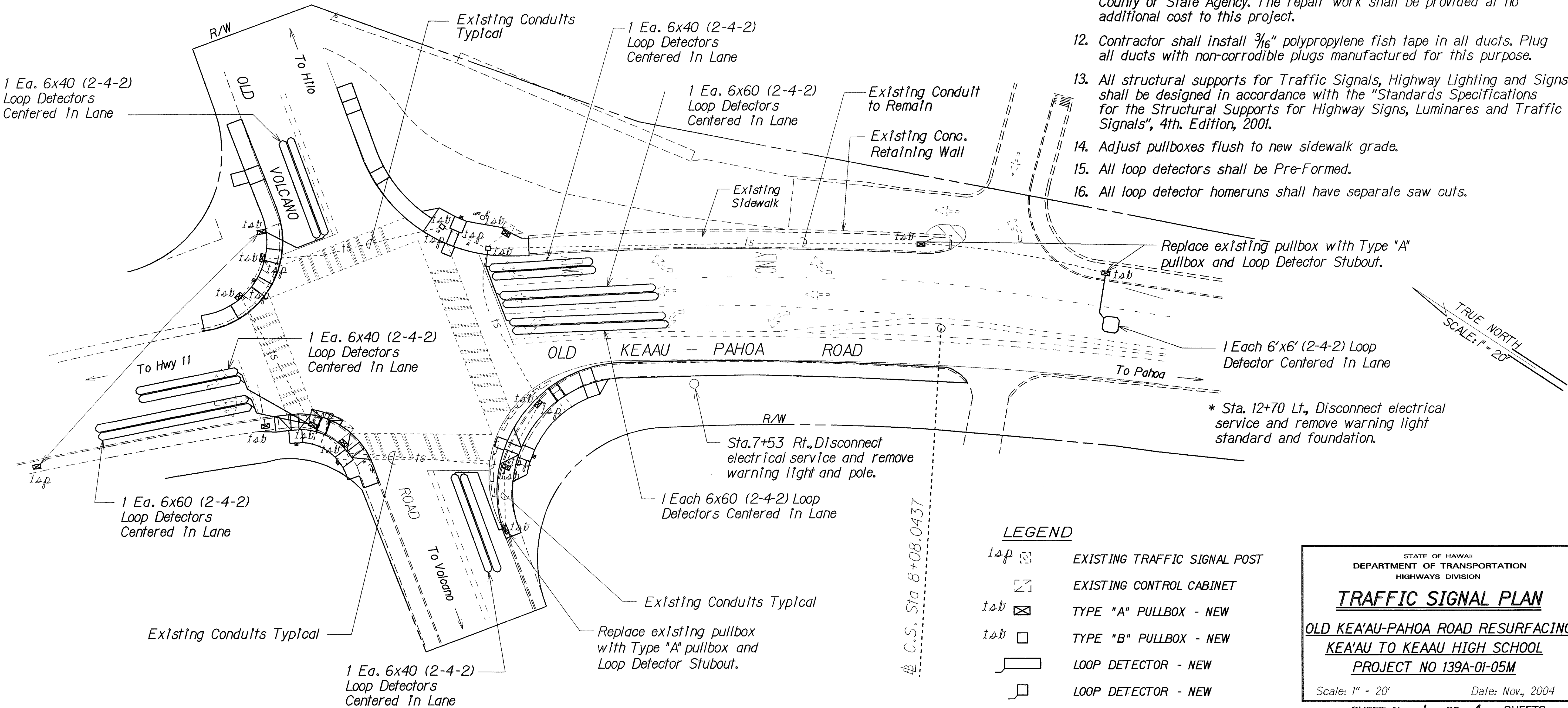
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	139A-01-05M	2007	103	106

**GENERAL NOTES - ELECTRICAL :**

- The scope of work for this project shall consist of installing Pull Boxes and Detector Loops.
- The Contractor is reminded of the requirements of Subsection 108.01 - Subletting of Contract, which requires him to perform work amounting to not less than 50 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
- The Contractor's attention is directed to the following Sections of the Special Provisions : Subsection 107.13 - Public Convenience and Safety; Subsection 107.21 - Contractor's Responsibility For Utility Property And Services; and Section 645 -Traffic Control.
- All necessary permits shall be obtained by the Contractor at his own cost.
- The Contractor shall comply with the State of Hawaii Occupational Safety and Health Law (DOSH).
- Traffic Signal System to remain operational at all times.

- Locations of existing underground structures and utilities such as pipelines, conduits, cables, manholes, monuments, and structures shown on the plans are approximate only. It is not the intent of these plans to show the exact location of all underground utilities and structures. It is the responsibility of the Contractor to verify the location of existing utilities with the respective owners. Existing utilities damaged by the Contractor shall be repaired by the Contractor at his own cost.
- Extend Conduit from existing pullbox (to be removed) to New Pullbox and Install New Cables.
- All work shall be constructed in accordance with the following Construction Standards and Specifications.
  - General Order No. 6 and No. 10 Public Utilities Commission State of Hawaii, Current Edition.
  - Construction Standards of the Department of Transportation, State of Hawaii.
  - Current Standard Specifications for Road, Bridge, and Public Works Construction, State of Hawaii.
  - Standard Details for Public Works Construction, Department of Public Works, County of Hawaii.

- (Continued)
  - Construction Standard and Specifications of GTE, Hawaiian Telephone Company, Inc. (Verizon).
  - Construction Standards and Specifications of the Hawaii Electric Light Company.
- It is not the intent of these plans and specifications to indicate that all existing utilities are shown on the plans. The information on the existing utilities are based on available plans. The locations are approximate only and the Contractor shall verify the location and depth of the facilities and exercise proper care in excavating in this area. All existing utilities whether or not show on the plans shall be protected at all times by the Contractor unless specified on the plans to be abandoned or demolished. The Contractor shall be responsible for any damages to the facilities whether shown or not shown on plans. Any repair work shall be provided at no additional cost to this project.
- The Contractor shall exercise proper care when excavating in areas with existing underground facilities, damages to the existing facilities shall be immediately reported to the respective utility companies, County or State Agency. The repair work shall be provided at no additional cost to this project.
- Contractor shall install  $\frac{3}{16}$ " polypropylene fish tape in all ducts. Plug all ducts with non-corrodible plugs manufactured for this purpose.
- All structural supports for Traffic Signals, Highway Lighting and Signs shall be designed in accordance with the "Standards Specifications for the Structural Supports for Highway Signs, Luminaires and Traffic Signals", 4th. Edition, 2001.
- Adjust pullboxes flush to new sidewalk grade.
- All loop detectors shall be Pre-Formed.
- All loop detector homeruns shall have separate saw cuts.

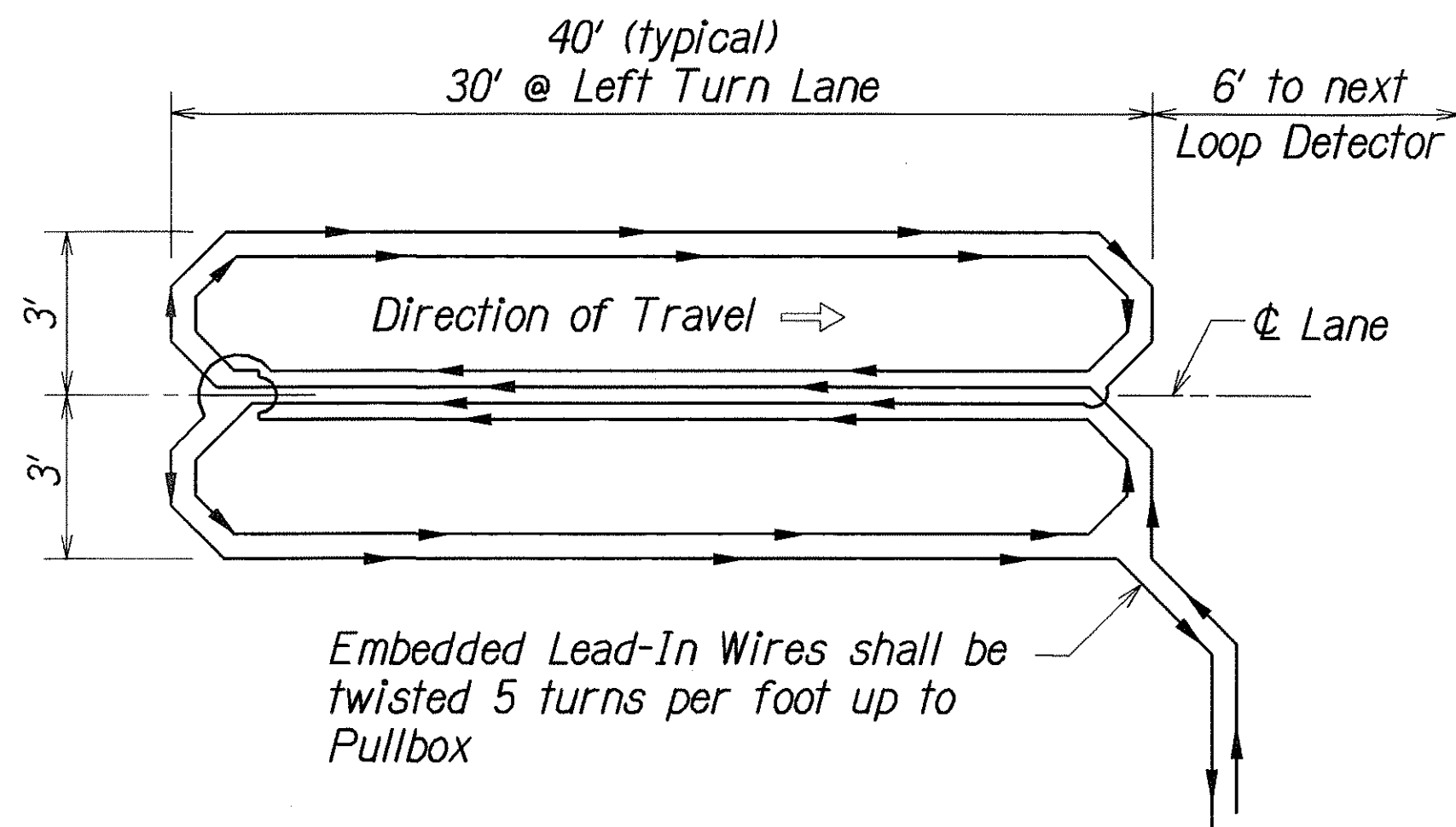


STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

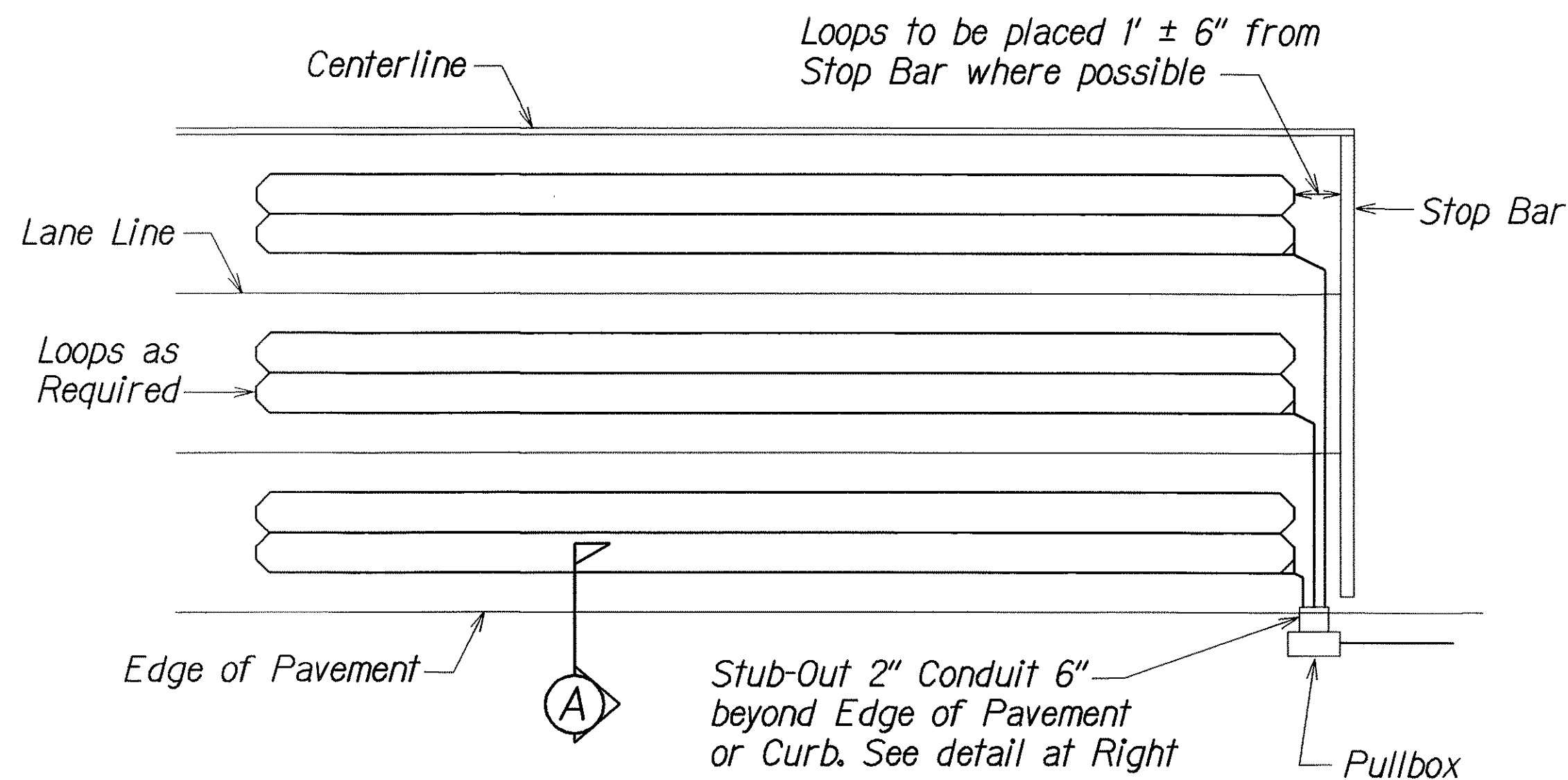
**TRAFFIC SIGNAL PLAN**  
**OLD KEA'AU-PAHOA ROAD RESURFACING**  
**KEA'AU TO KEAAU HIGH SCHOOL**  
**PROJECT NO 139A-01-05M**  
Scale: 1" = 20'      Date: Nov., 2004  
SHEET No. 1 OF 4 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTED BY	DRAWN BY	
DESIGNED BY	CHECKED BY	
APPROVED BY		

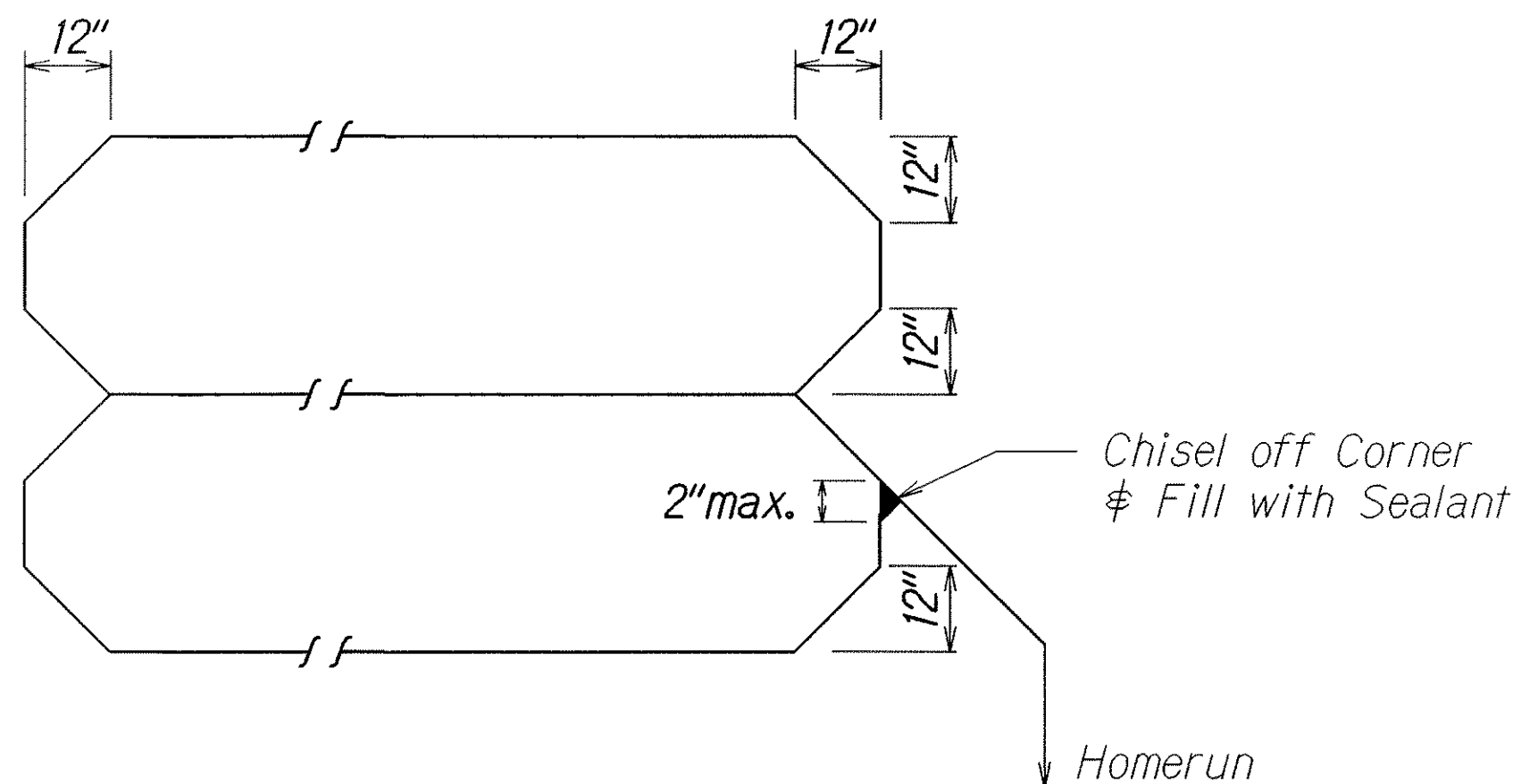
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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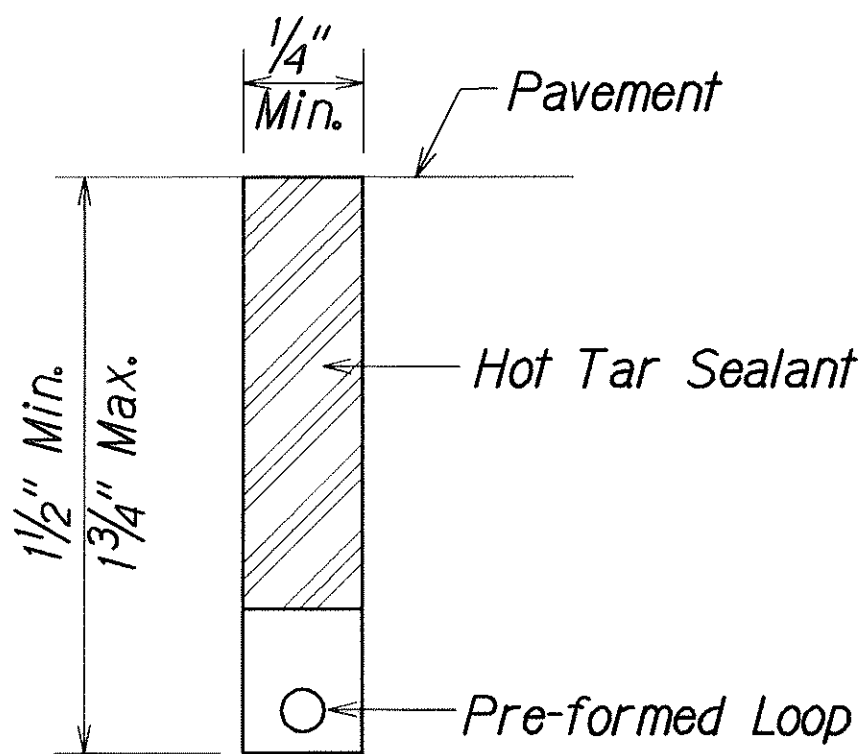
WIRING DIAGRAM  
Not to Scale



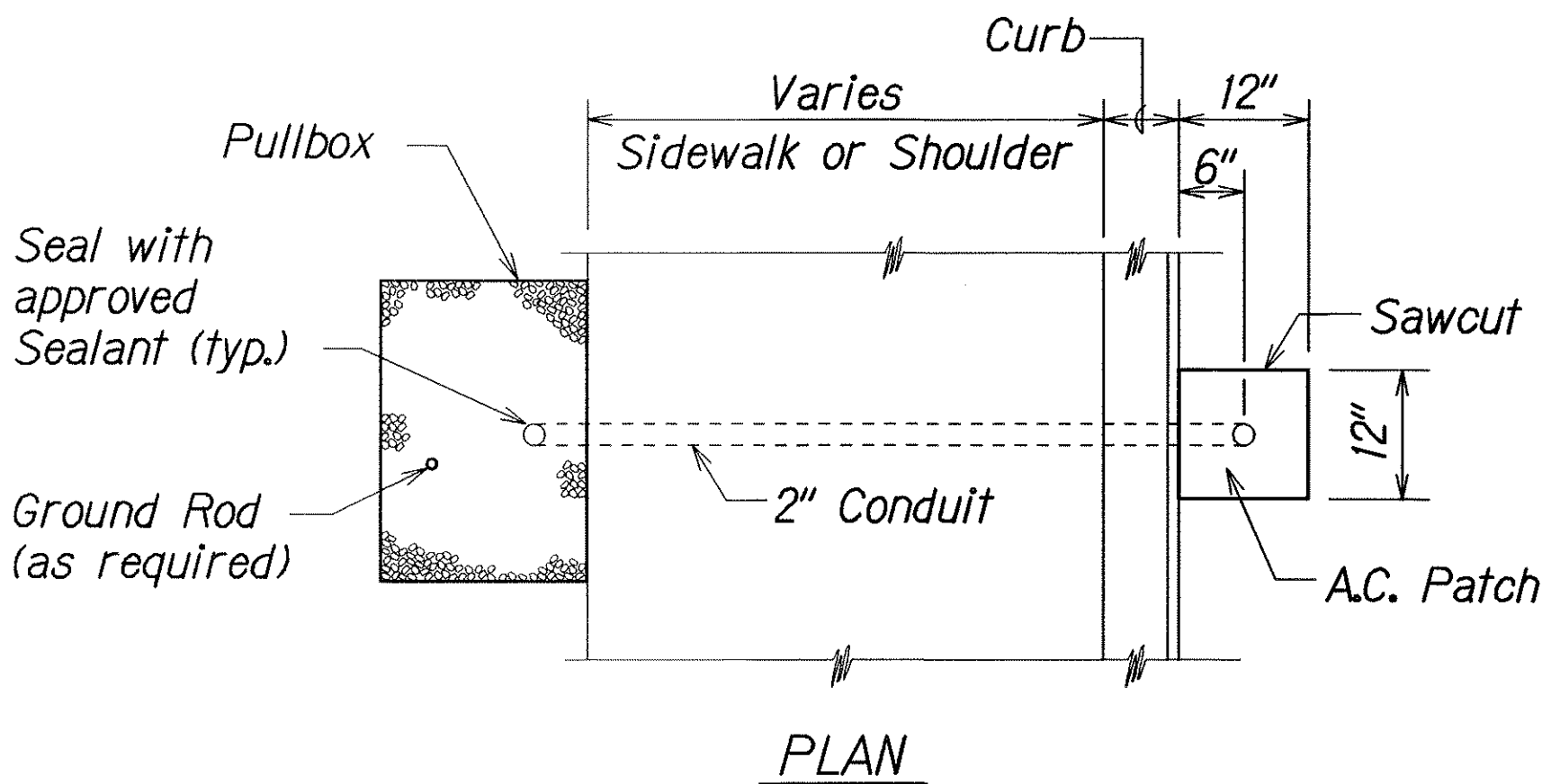
TYPICAL LOOP DETECTOR LAYOUT  
Not to Scale



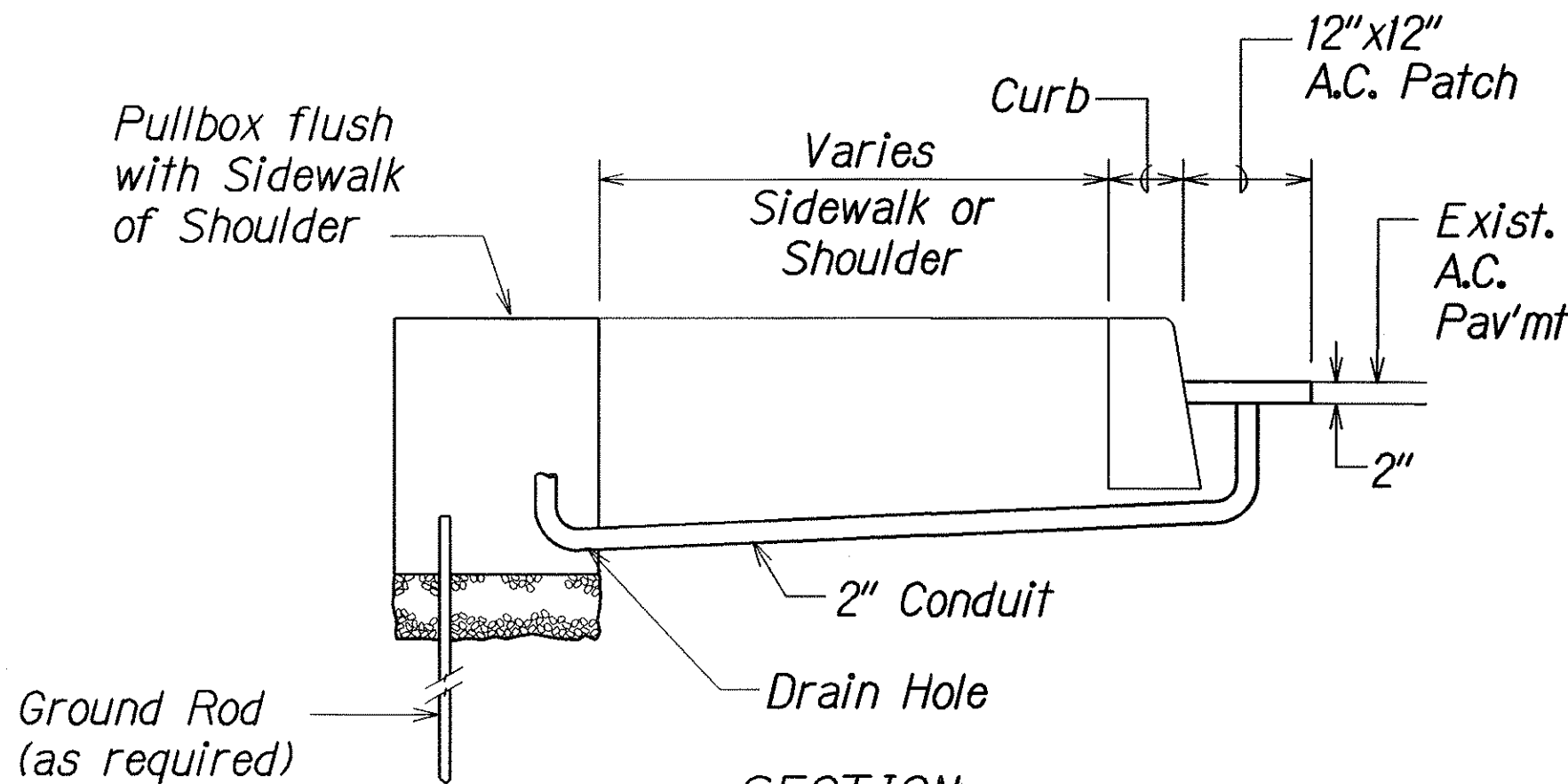
TYPICAL LOOP DETECTOR  
SAWCUT PLAN  
Not to Scale



SECTION A  
Not to Scale



PLAN



SECTION

LOOP DETECTOR STUB OUT  
Not to Scale

#### GENERAL NOTES :

1. If abandoned in place, all existing loop detectors shall be saw cut completely through every 15' to prevent inductive coupling.
2. All loop detector lead in cables shall be identified in the cabinet with its appropriate loop detector assignment number.
3. When hot sealants are used, only polyester insulation with a minimum 400° melting point will be premitted.

#### TRAFFIC SIGNAL NOTES :

1. All Traffic Signal Equipment shall be completely wired in the cabinet and shall control the Traffic Signals.
2. The Loop Detector Amplifier Units supplied for this project shall be capable of operating the loop detector configurations.
3. Restoration of existing pavements and improvements unavoidably damaged shall be incidental to the various contract items. Restoration shall be equal to original or better than original condition.
4. All Traffic Signal Work shall conform to the requirements of the "Manual On Uniform Traffic Control Devices For Street And Highways," Federal Highway Adminstration (2000) and Amendments.
5. Maintenance of Traffic through the Construction Area shall be in accordance with Part VI of the "Manual On The Uniform Traffic Control Devices For Street And Highways," Federal Highway Administration (2000) and as specified in the Special Provisions. The Contractor shall furnish and maintain adequate Barricades, Blinkers, Construction Signs, Etc., for the safety of the motoring public.
6. The Contractor shall provide Off-Duty Police Officer(s) to control the flow of traffic as required by the Engineer.
7. Should any defect be encountered during the warranty period the Contractor will be notified and shall promptly correct such defect. Service call (By Factory Qualified Representative) during the warranty period for repairs or other maintenance shall be answered immediately and shall be done at no expense whatsoever to the State.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LOOP DETECTORS &**  
**DUCT DETAILS**  
OLD KEA'AU PAHOA ROAD RESURFACING  
KEA'AU TO KEAAU HIGH SCHOOL  
PROJECT NO 139A-01-05M  
Scale: Not to Scale Date: Nov., 2004

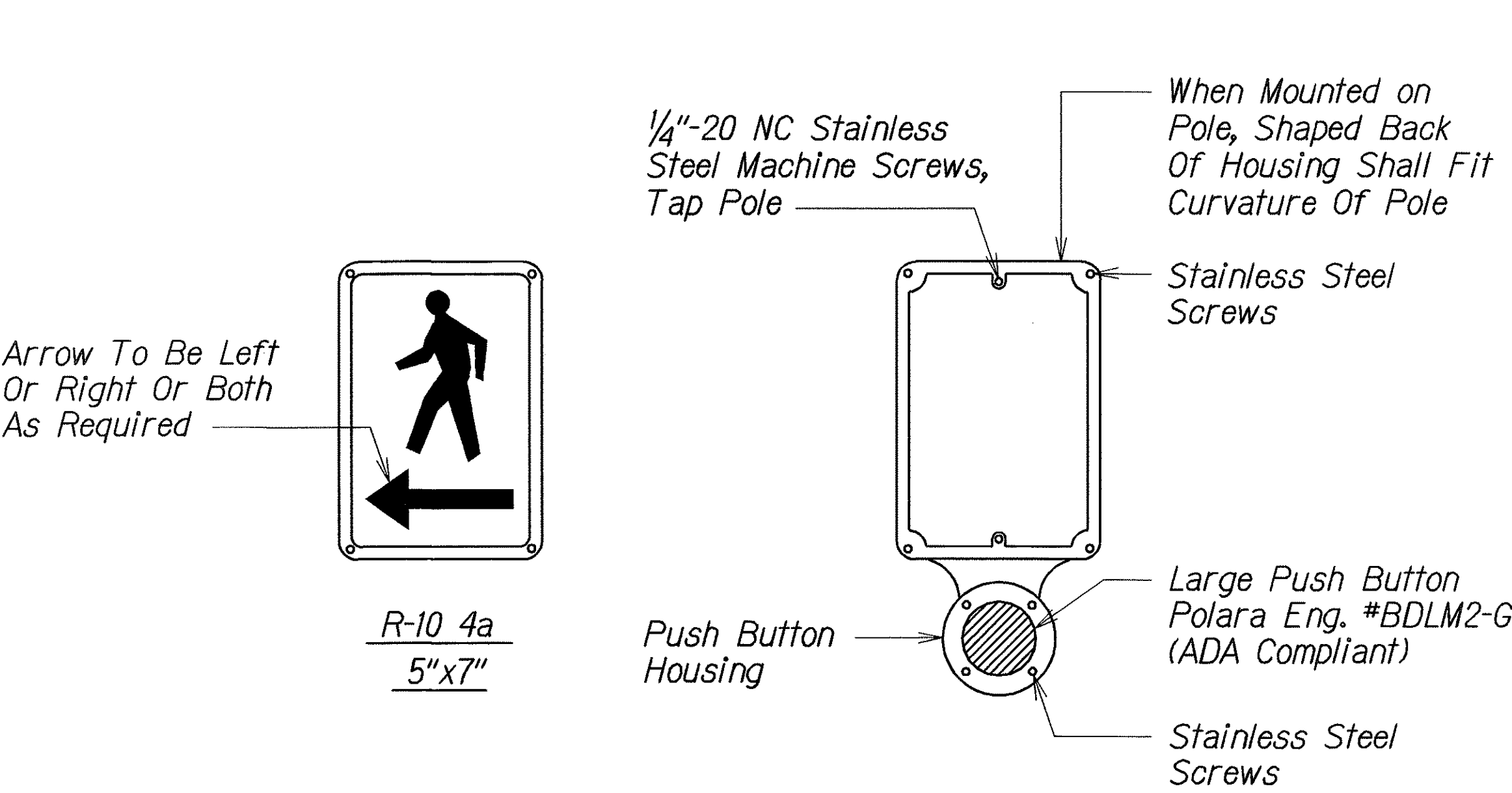
SHEET No. 2 OF 4 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
5/17/02/01/01	DESIGNED BY	
N. (not signed)	CHECKED BY	

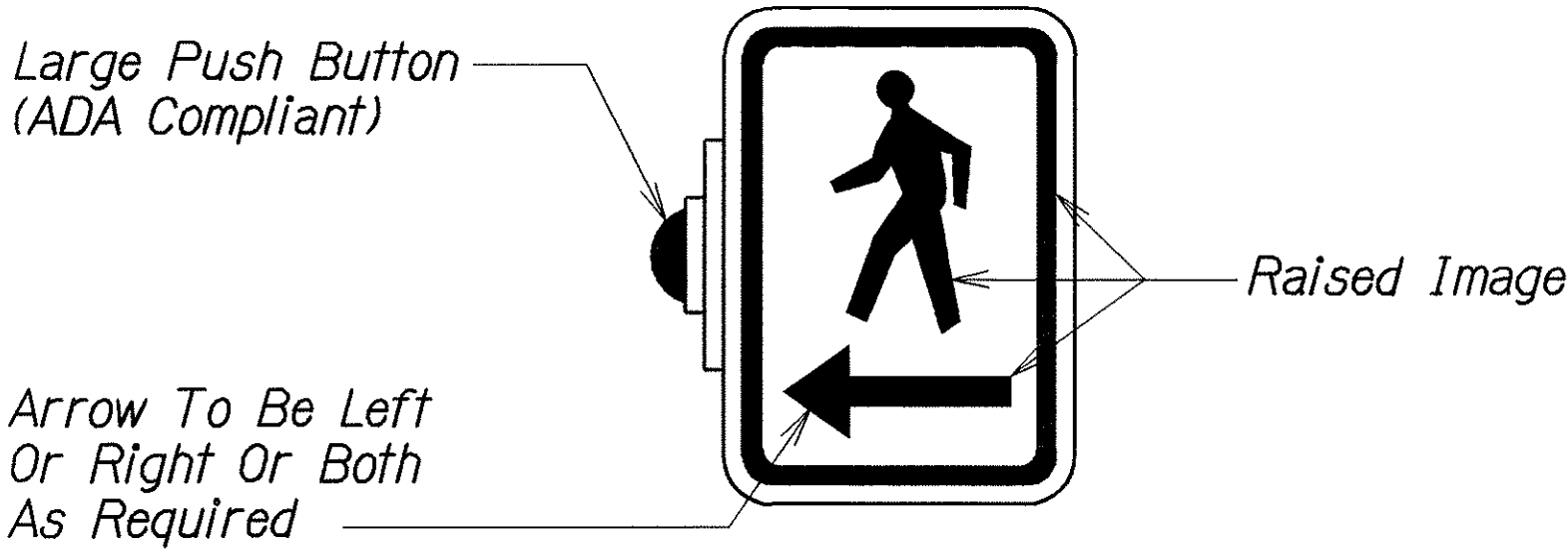




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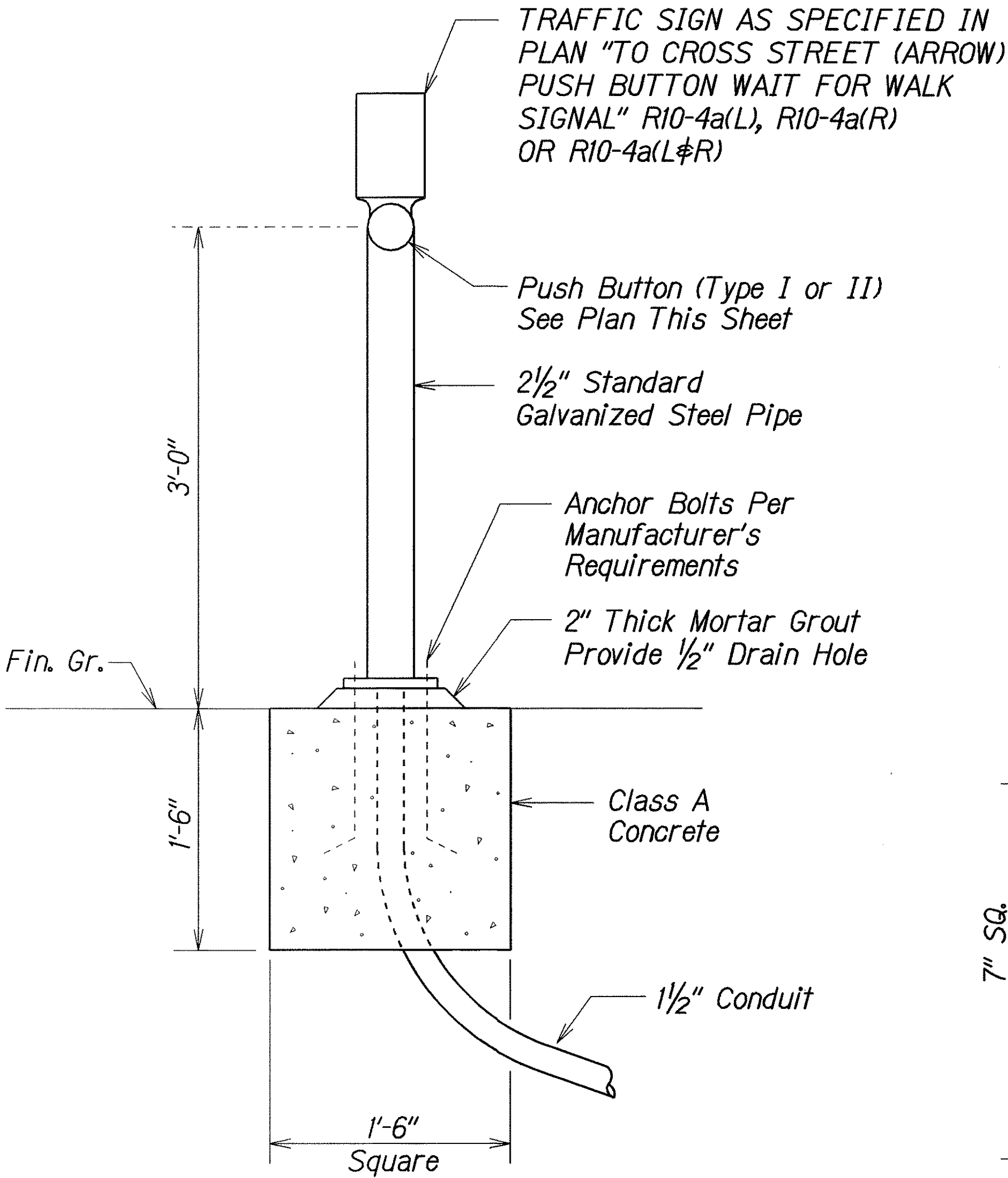
**TYPE I PEDESTRIAN PUSH BUTTON**  
N.T.S.



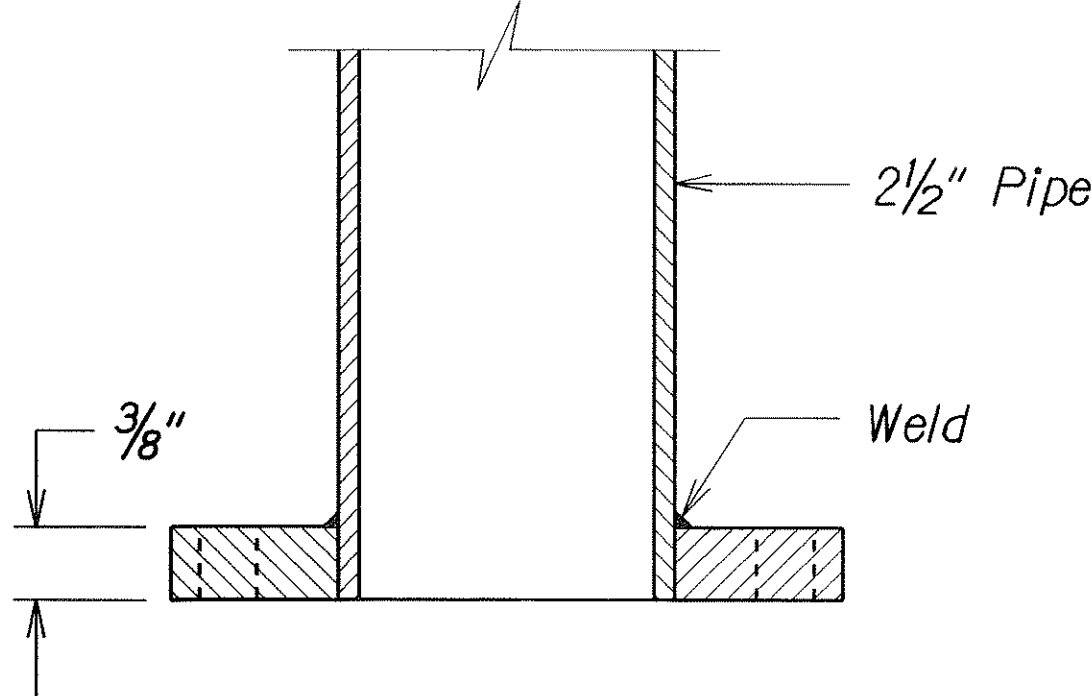
**CAST PUSH BUTTON SIGN**  
5"x7 3/4"

**NOTE:**  
Type II Ped. Push Button (Housing) Shall Be DCC H Series With DCC Series 500 Push Button Assembly By Campbell Co. or Approved Equal.

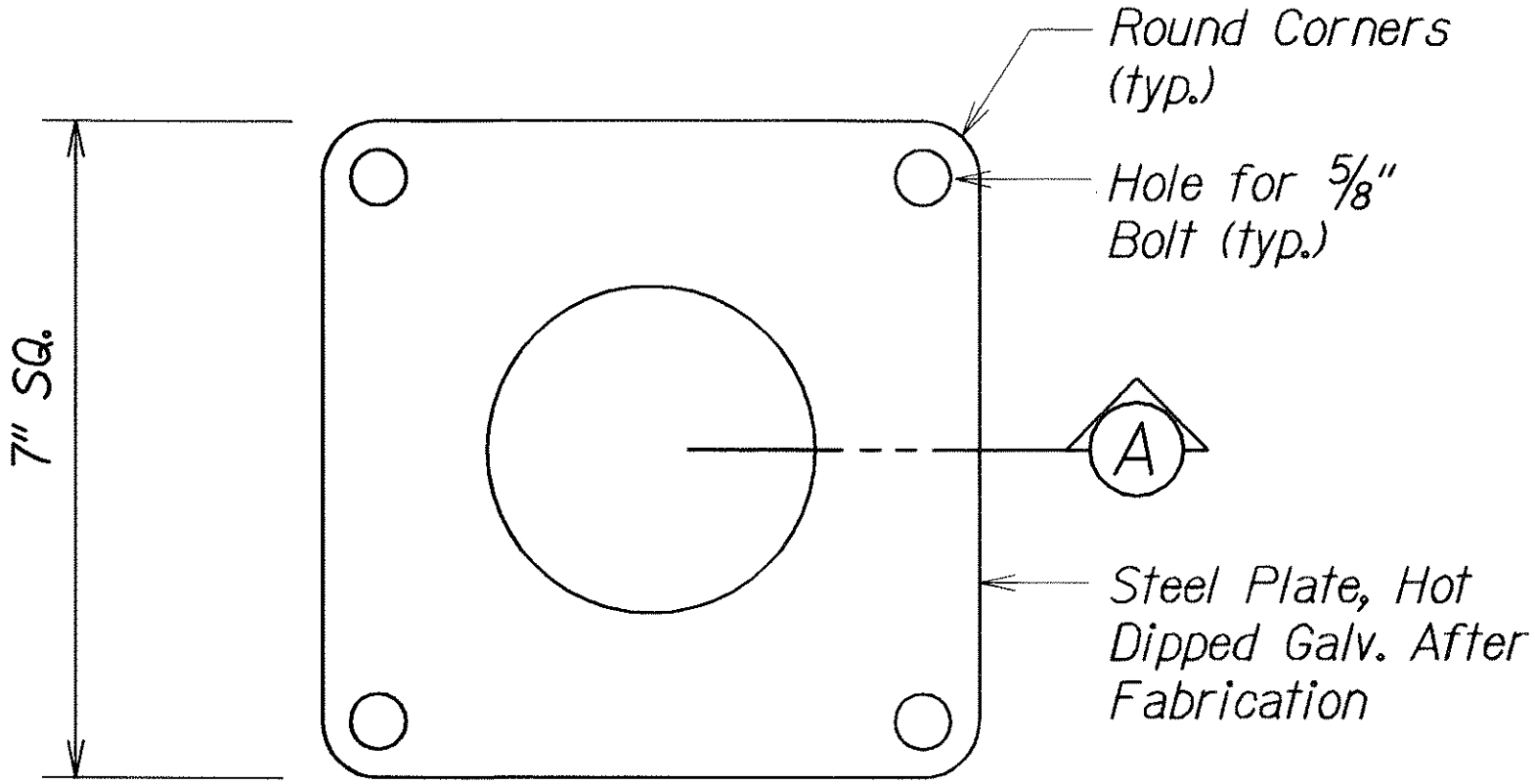
**TYPE II PEDESTRIAN PUSH BUTTON**  
N.T.S.



**SECTION**



**SECTION A**



**PLAN - BASE PLATE**

### PEDESTRIAN PUSH BUTTON POLE DETAIL

**NOTE:** Install Type I Pedestrian Push Button When Type Is Not Called Out On Plan.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**PEDESTRIAN PUSH BUTTON  
DETAILS**  
OLD KEA'AU-PAHOA ROAD RESURFACING  
KEA'AU TO KEAAU HIGH SCHOOL  
PROJECT NO 139A-01-05M  
Scale: As Shown Date: Nov., 2005  
SHEET No. 4 OF 4 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
507/00/00/00	DESIGNED BY	
507/00/00/00	CHECKED BY	
507/00/00/00	CHECKED BY	

tcl/usr2/traffic/std/ppbdef.dgn

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