

# AGENDA

**Three Rivers Community Plan Update  
Community Meeting  
Monday March 14, 2016 6:00 P.M.  
Three Rivers Veterans Memorial Building  
43490 Sierra Drive  
Three Rivers, CA**



*... service with pride.*

Resource Management Agency

1. Welcome and Introduction.
2. Project Status, Information and Discussion of Special Topics Review Schedule.
  - (a) Special Topics Review Schedule 2015-16.
  - (b) February 8, 2016 Summary Meeting Notes.
  - (c) Agenda Information.
3. Discussion of Special Topics.
  - (a) Water Quality and Quantity.

**During the Three Rivers Community Plan Update Process, it is not the intent of the County to initiate or add additional water policies or regulations, as that is the purview of the State policy makers. The intent of this special topics discussion is to better inform the public regarding water quality and quantity policies and procedures associated with the review and permitting of new development.**

- (b) Noise.

**The Tulare County General Plan 2030 Update adopted in 2012 incorporates Noise Standards from the State Office of Noise Control in the State Department of Health Services which developed criteria and guidelines for local governments to use when setting standards for human exposure to noise and for preparing noise elements for General Plans. Please see General Plan Table 10.1 Land Use Compatibility for Community Noise Environments attached as exhibit 3 (b) 3 in the agenda materials. Table 1 clearly dictates the range of acceptable levels of exposure to noise in the community. Staff does not anticipate creation of new noise ordinances as part of the community plan update process, however, former RMA Director and now CAO Mike Spata has stated that the Three Rivers Draft EIR will evaluate community noise which may result in possible recommendations.**

4. Other Topics as Related.
5. Topics for the Next Meeting.
  - (a) CEQA Considerations
6. Next Steps.
7. Adjournment: Next Meeting April 11, 2016 at 6:00 P.M.

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Three Rivers Community Plan Website address:  
<http://www.tularecounty.ca.gov/rma/index.cfm/planning/three-rivers-community-plan-update/>

## 2. Project Status, Information and Discussion of Special Topics Review Schedule.

(a) Special Topics Review Schedule 2015-16.

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Special Topics Review Schedule  
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Resource Management Agency

**December 2015- April 2016 (Meetings 6:00 P.M. to 8:00 P.M.)**

In order to address key special review topics, we have set a strict schedule to review the following topics to facilitate the preparation of the Draft Three Rivers Community Plan Update. Discussion materials associated with each special review topic will be posted in advance of each meeting. As with all of our community plans, public input is of paramount importance. Comments received from the community will be considered while developing local planning policies for the Three Rivers Community Plan Update.

**December 14, 2015**

Land Use Plan Update  
Transportation and Circulation Plan Update

**January 11, 2016**

Flooding (FEMA/Zoning)  
Emergency Preparedness and Access

**February 8, 2016**

Development on Slopes  
Development Standards

**March 14, 2016**

Water Quality and Quantity  
Noise

**April 11, 2016**

CEQA Appendix G Considerations

Three Rivers Community Plan Website address:

<http://www.tularecounty.ca.gov/rma/index.cfm/planning/three-rivers-community-plan-update/>

(b) February 8, 2016 Summary Meeting Notes.

## **Three Rivers Community Plan Update Meeting Notes-February 8, 2016**

Staff appreciated the excellent feedback that we got from the community members who attended the meeting. The following is a summary of some of the major points that were discussed and information that was communicated to staff during the meeting:

### **M375A Mineral King Bridge Project (Oak Grove Bridge)**

- A brief presentation was made regarding the M375A Mineral King Bridge Project (Oak Grove Bridge) project by Jason Vivian, Tulare County RMA Engineer and consultants assisting the County on the project. Alternatives are currently being evaluated to rehabilitate the existing bridge or construct a new bridge in the vicinity of the existing bridge.
- The community members attending the meeting expressed interest in preserving the existing structure and concerns regarding public use around the bridge due to slope related concerns.
- Staff and the consultants indicated that a meeting is scheduled for February 23, 2016 to provide additional information regarding the project.

### **Development on Slopes**

- Interest was expressed regarding defining feasible, reasonable, and to the extent allowed by law in regards to policy statements.
- There was interest expressed in designating South Fork Drive as a scenic route.
- There were concerns expressed about the potential designation of a PCA within the Three Rivers UDB.
- Interest was expressed in the protection of viewshed areas as being important to the community.

### **Development Standards**

- An interest was demonstrated by the community in establishing dark sky standards.
- A continuing interest was expressed regarding context sensitive standards to promote compatibility between land use types and intensities, and to ensure that future development is compatible with existing development and the natural environment.

### **Bear proof and animal resistant solid waste containers**

- There is an interest expressed in regards to analyzing the feasibility of utilizing bear proof containers for solid waste collection.
- Staff indicated that it would contact Bryce Howard, County Solid Waste Director regarding recommendations expressed by the community to examine other agencies who have implemented bear proof type container programs and determine whether it would be feasible to implement a program in Three Rivers.

(c) Agenda Information.

## AGENDA INFORMATION

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### **3. Discussion of Special Topics.**

#### **(a) Water Quality and Quantity.**

1. General Plan Policies Regarding Water Quality, Quantity, and Implementation.
2. Draft Three Rivers Community Update Regarding Water Quality.
3. Tulare County Ordinance Code Chapter 13. Wells.
4. Tulare County Ordinance Code Chapter 1. Subdivision of Land.
5. Tulare County Improvement Standards.
6. Three Rivers CSD LAFCo Inventory Overview.
7. State Department of Water Resources Classification of Water Systems.

**During the Three Rivers Community Plan Update Process, it is not the intent of the County to initiate or add additional water policies or regulations, as that is the purview of the State policy makers. The intent of this special topics discussion is to better inform the public regarding water quality and quantity policies and procedures associated with the review and permitting of new development.**

#### Background/Overview:

*The Tulare County General Plan and Draft Three Rivers Community Plan Update contain numerous policies addressing Water quality and quantity. In addition the Tulare County Ordinance Code and Tulare County Improvement Standards include health and infrastructure standards for new wells and water supply systems. The Three Rivers CSD includes the following active powers related to water quality, monitoring of potable water sources and Monitoring of individual septic systems.*

*The Environmental Health Services Division (EHSD) of the Tulare County Health and Human Services Agency (HHSA) works closely with the California Department of Public Health (CDPH) and the California Regional Water Quality Control Board (RWQCB) regarding water quality issues in Tulare County. The California Department of Water Resources Division of Drinking Water provides direct regulatory oversight of all public water systems having 5 or more service connections. The EHSD's water program provides a periodic inspection of the water source, usually a well. The water program oversees the sampling and analysis of water for bacteriological, inorganic, and organic chemical contamination. Additionally, the EHSD requires sampling and analysis of all new individual domestic water wells in the county. Analysis for bacteria, nitrates, and DBCP are required*

*for wells installed on the valley floor. Analysis for bacteria, nitrates, and radiological constituents are required for wells installed in foothill or mountain locations.*

Discussion.

**3. Discussion of Special Topics.**

**(b) Noise.**

1. Draft Three Rivers Community Plan Update Policies Noise
2. General Plan Policies: Noise
3. General Plan Table 10.1 Land Use Compatibility for Community Noise Environments

**The Tulare County General Plan 2030 Update adopted in 2012 incorporates Noise Standards from the State Office of Noise Control in the State Department of Health Services which developed criteria and guidelines for local governments to use when setting standards for human exposure to noise and for preparing noise elements for General Plans. Please see General Plan Table 10.1 Land Use Compatibility for Community Noise Environments attached as exhibit 3 (b) 3 in the agenda materials. Table 1 clearly dictates the range of acceptable levels of exposure to noise in the community. Staff does not anticipate creation of new noise ordinances as part of the community plan update process, however, former RMA Director and now CAO Mike Spata has stated that the Three Rivers Draft EIR will evaluate community noise which may result in possible recommendations.**

*Background/Overview: The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. The Noise Element lists and maps current and projected noise levels for existing and planned land uses and levels for freeways, airports, and railroads. The projected noise levels are used to guide future land use decisions to limit noise and its effects on the community. The Noise Element contains policies and standards for limiting the noise generated from future projects as well as means to abate existing noise problems.*

*Government Code Section 65302(f) states that a general plan shall include a Noise Element which identifies and appraises noise problems in the community. The Noise Element shall recognize the guidelines established by the Office of Noise Control in the California State Department of Health Services and shall analyze and quantify, to the extent practical, current and projected noise levels for all of the following sources: ♦ Highways and freeways. ♦ Primary arterials and major local streets. ♦ Passenger and freight on-line railroad operations and ground rapid transit systems. ♦ Commercial, general aviation, heliport, and military airport operations, aircraft overflights, and jet engine test stands. ♦ Stationary noise sources, including local industrial plants. ♦ Other ground stationary noise sources identified by local agencies as contributing to the community noise environment.*

*The predominant community noise rating scale used in California for land use compatibility assessment is the Community Noise Equivalent Level (CNEL). The CNEL rating represents the average of equivalent noise levels, known as Leq's, for a 24 hour period based on an A-weighted decibel with upward adjustments added to account for increased noise sensitivity in the evening and night periods. These adjustments are +5 dBA for the evening, 7:00 p.m. to 10:00 p.m., and +10 dBA for the night, 10:00 p.m. to 7:00 a.m. CNEL may be indicated by "dBA CNEL" or just "CNEL".*

*Another commonly used method is the day/night average level or Ldn. The Ldn is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the Leq. The Ldn is calculated by averaging the Leq's for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 p.m. to 7:00 a.m.), by 10 dBA to account for the increased sensitivity of people to noises that occur at night.*

*The Office of Noise Control in the State Department of Health Services has developed criteria and guidelines for local governments to use when setting standards for human exposure to noise and preparing noise elements for General Plans. These guidelines include noise exposure levels for both exterior and interior environments. In addition, Title 25, Section 1092 of the California Code of Regulations sets forth requirements for the insulation of multiple-family residential dwelling units from excessive and potentially harmful noise. The State indicates that locating units in areas where exterior ambient noise levels exceed 60 CNEL is undesirable.*

#### Discussion.

### **3. Discussion of Special Topics.**

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##### **(a) Water Quality and Quantity.**

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#### **3. Discussion of Special Topics.**

##### **(b) Noise.**

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### 3. Discussion of Special Topics.

#### (a) Water Quality and Quantity.

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1. General Plan Policies Regarding Water Quality, Quantity, and Implementation.

**TULARE COUNTY GENERAL PLAN WATER POLICY AND  
IMPLEMENTATION SUMMARY**

**WATER QUALITY**

**Plans/Programs/Funding**

**PF-2.2 Modification of Community UDB**

1. The County may consider modification to a community UDB under any of, but not limited to the following circumstances:
  - The location of the UDB shall be evaluated during preparation or update of a community plan.
  - All community UDBs should be reviewed on a five-year cycle to reflect changes in growth and development patterns.
  - A request for expansion of the UDB boundary can be applied for as part of a General Plan Amendment to the Land Use Diagram.
  - At the request of a special district or the community.
  - A UDB should be considered for expansion at such time as land for infill becomes limited. This condition is considered satisfied when 80 percent of the non-Williamson Act land within the UDB is developed for urban uses.
  - UDBs should not be expanded onto Prime Farmland if Farmland of Statewide Importance or of lesser quality is available and suitable for expansion.

Prior to approval of a UDB boundary expansion, the County shall ensure that infrastructure can be provided to serve the new areas added to the UDB and that sufficient water supplies are also available. This may require preparation of an infrastructure master plan that includes methods of financing of improvements and maintenance, as well as representation/documentation of availability and sufficiency of long-term water supplies.

**PF-3.2 Modification of HDB - Hamlet**

1. The County may consider modification of a HDB under any of the following circumstances:
  - All HDBs should be reviewed on a five-year cycle to reflect changes in growth and development patterns.
  - A request for expansion can be applied for as part of a subdivision or specific plan proposal, or at the request of a special district or Hamlet. A request for expansion of the HDB can be applied for as part of a General Plan Amendment to the Land Use Diagram.

- An HDB should be considered for expansion at such time as land for infill becomes limited. This condition is considered satisfied when 80 percent of the non-Williamson Act land within the HDB is developed.
  - HDBs should not be expanded onto Prime Farmland if Farmland of Statewide Importance or of lesser quality is available and suitable for expansion.
2. Prior to approval of a HDB expansion, the County shall ensure that appropriate infrastructure can be provided to serve the new areas added to the HDB and that sufficient water supplies are available. If the expansion pushes the hamlet towards a community classification, an infrastructure master plan for the hamlet should be prepared to plan and finance community water and sewer services, and representation/documentation of availability and sufficiency of long-term water supplies should be provided.

**PF-4.6 Orderly Expansion of City Boundaries**

When the County is considering outward expansion of County adopted city UDBs, the following criteria shall be encouraged:

- The city has demonstrated a need for additional territory after documenting a good faith effort to implement programs for infill development and/or increased efficiency of development and minimize conversion of agricultural lands.
- UDBs should not be expanded onto Prime Farmland if Farmland of Statewide Importance or of lesser quality is available and suitable for expansion.

Emphasis shall be placed upon reasonable expectations for the provision of urban services within the next twenty years as reflected in LAFCo's Municipal Service Reviews when determining the location of UDBs.

**PF-6.4 UDBs and Interagency Coordination**

The County shall use UDBs to provide a definition of an urban area for other planning programs, such as:

- The area within the UDB should be considered as the same area for which water and sewer system planning may be needed and to be a consideration in the determination of an area required to adequately assess the availability and sufficiency of water supplies.
- UDBs should be used to define traffic analysis zones in the Regional Transportation Plan program.
- The UDBs shall be used to provide a framework for inventories on growth and development, as well as socio-economic data.

**AG-1.17 Agricultural Water Resources**

The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

**PFS-1.5 Funding for Public Facilities**

The County shall implement programs and/or procedures to ensure that funding mechanisms necessary to adequately cover the costs related to planning, capital improvements, maintenance, and operations of necessary public facilities and services are in place, whether provided by the County or another entity.

**PFS-1.6 Funding Mechanisms**

The County shall use a wide range of funding mechanisms, such as the following, to adequately fund capital improvements, maintenance, and on-going operations for publicly-owned and/or operated facilities:

- Establishing appropriate development impact fees,
- Establishing assessment districts, and
- Pursuing grant funding.

**PFS-1.8 Funding for Service Providers**

The County shall encourage special districts, including community service districts and public utility districts to:

- Institute impact fees and assessment districts to finance improvements,
- Take on additional responsibilities for services and facilities within their jurisdictional boundaries up to the full extent allowed under State law, and
- Investigate feasibility of consolidating services with other districts and annexing systems in proximity to promote economies of scale, such as annexation to city systems and regional wastewater treatment systems.

**PFS-3.7 Financing**

The County shall cooperate with special districts when applying for State and federal funding for major wastewater related expansions/upgrades when such plans promote the efficient solution to wastewater treatment needs for the area and County.

**Infrastructure/Public- Private Facilities**

**PFS-2.1 Water Supply**

The County shall work with agencies providing water service to ensure that there is an adequate quantity and quality of water for all uses, including water for fire protection, by, at a minimum, requiring a demonstration by the agency

providing water service of sufficient and reliable water supplies and water management measures for proposed urban development.

**PFS-3.1 Private Sewage Disposal Standards**

The County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health.

**PFS-3.4 Alternative Rural Wastewater Systems**

The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

**PFS-3.5 Wastewater System Failures**

The County shall require landowners to repair failing septic tanks, leach field, and package systems that constitute a threat to water quality and public health or connect to an existing community system through applicable County and/or Regional Water Quality Control Board standards and requirements.

**PFS-3.6 Care of Individual Systems**

The County shall promote and support programs to educate homeowners on the care and maintenance of private sewage disposal systems.

**Development Requirements/Enforcement/Regulations**

**ERM-1.13 Pesticides**

The Tulare County Agricultural Commissioner/Sealer will cooperate with State and Federal agencies in evaluating the side effects of new materials and techniques in pesticide controls to limit effects on natural.

**HS-4.4 Contamination Prevention**

The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination

**HS-4.6 Pesticide Control**

The County shall monitor studies of pesticide use and the effects of pesticide on residents and wildlife and require mitigation of the effects wherever feasible and appropriate.

**PFS-2.3 Well Testing**

The County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs.

**PFS-2.4 Water Connections**

The County shall require all new development in UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing water district service areas, or zones of benefit, to connect to the community water system, where such system exists. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the water system when service becomes readily available.

**PFS-2.5 New Systems or Individual Wells**

Where connection to a community water system is not feasible per PFS-2.4: Water Connections, service by individual wells or new community systems may be allowed if the water source meets standards for quality and quantity.

**PFS-3.2 Adequate Capacity**

The County shall require development proposals to ensure the intensity and timing of growth is consistent with the availability of adequate wastewater treatment and disposal capacity.

**PFS-3.3 New Development Requirements**

The County shall require all new development, within UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing wastewater district service areas, or zones of benefit, to connect to the wastewater system, where such systems exist. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the wastewater system when service becomes readily available.

**PFS-4.7 NPDES Enforcement**

The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.

**Implementation**

**Implementation WR # 11** The County shall identify and evaluate conditions within established watersheds which are causing deterioration of the water quality, water supply, or declining water yields. The County shall institute the necessary revisions to regulatory documents (Zoning Ordinance, Subdivision Ordinance, etc.) to mitigate these issues.

**Implementation WR # 25** The County shall amend County ordinances to include development standards which protect groundwater basins and surface water drainage areas and provide incentives for use of conservation techniques.

**Implementation PFS # 5** The County shall conduct a study to evaluate alternatives for rural wastewater systems. Alternatives that could be evaluated include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units and holding tanks. For larger generators or group of users, alternative systems include communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment.

**Implementation PFS # 6** The County shall prepare and distribute information on the care and maintenance of private sewage disposal systems.

**Implementation PFS # 7** The County shall consider amendments to the Subdivision Ordinance to restrict the number of lots allowed with septic tank and leach line systems, and review and upgrade the standards for such systems .

**Implementation WR # 2** Solid waste disposal areas shall not be located where there is possibility of ground or surface water contamination. Solid waste facilities shall be sited in accordance with the Tulare County Siting Element and California Code of Regulations Titles 14 & 27, Division 2.

**Implementation WR # 4** Where feasible, the County shall participate in coordinated local, regional, and Statewide groundwater monitoring and planning programs.

**Implementation WR # 5** The County shall encourage active participation by local stakeholders and develop groundwater-monitoring partnerships with local groundwater users and developers .

**Implementation WR # 6** The County shall avoid destruction of established recharge sites through such means as clustering development to leave such areas in open space, avoidance of lining channels and streams, alteration of existing agricultural practices, or substitutions made of drainage methods that will transport polluted waters away from such sites.

**Implementation WR # 7** The County shall work with federal, State, local and regional agencies to improve local groundwater pollution detection and monitoring .

**Implementation WR # 8** The County shall encourage responsible agencies and organizations to install and monitor additional groundwater monitoring wells in areas where data gaps exist .

**Implementation WR # 9** The County will research the development of an education program to inform homeowners in the Valley and Mountain areas regarding water quality concerns .

**Implementation WR # 12** Development projects involving drainage alterations shall be constructed to minimize soil erosion and silt transport.

**Implementation WR # 13** During preliminary and final road location surveys, roads (excluding bridges and culverts) shall be planned away from natural drainage channels. Stream crossing points should involve a minimum disturbance to banks and existing channels and excessive cuts and accumulations of waste soil near natural drainages avoided.

**Implementation WR # 14** Groundwater and soil conditions shall be identified prior to subdividing or road and building construction and such development properly engineered to control or avoid potential land slides in areas of unstable soil, as well as to prevent unnecessary substantial amounts of soil erosion.

**Implementation WR # 16** The County shall consider expanding the role of the Water Commission to examine contaminant management in cooperation with the agricultural community and industrial interests .

**Implementation WR # 17** The County shall amend the well ordinance to require deeper seals in areas of known contaminants .

**Implementation WR # 18** The County will participate in Integrated Regional Water Management Plans .

## WATER QUANTITY

### Plans/Programs/Funding

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**PF-6.4 UDBs and Interagency Coordination**

The County shall use UDBs to provide a definition of an urban area for other planning programs, such as:

- The area within the UDB should be considered as the same area for which water and sewer system planning may be needed and to be a consideration in the determination of an area required to adequately assess the availability and sufficiency of water supplies.
- UDBs should be used to define traffic analysis zones in the Regional Transportation Plan program.
- The UDBs shall be used to provide a framework for inventories on growth and development, as well as socio-economic data.

**AG-1.17 Agricultural Water Resources**

The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture .

**PFS-1.5 Funding for Public Facilities**

The County shall implement programs and/or procedures to ensure that funding mechanisms necessary to adequately cover the costs related to planning, capital improvements, maintenance, and operations of necessary public facilities and services are in place, whether provided by the County or another entity .

**PFS-1.6 Funding Mechanisms**

The County shall use a wide range of funding mechanisms, such as the following, to adequately fund capital improvements, maintenance, and on-going operations for publicly-owned and/or operated facilities:

- Establishing appropriate development impact fees,
- Establishing assessment districts, and
- Pursuing grant funding .

**PFS-1.8 Funding for Service Providers**

The County shall encourage special districts, including community service districts and public utility districts to:

- Institute impact fees and assessment districts to finance improvements,

- Take on additional responsibilities for services and facilities within their jurisdictional boundaries up to the full extent allowed under State law, and
- Investigate feasibility of consolidating services with other districts and annexing systems in proximity to promote economies of scale, such as annexation to city systems and regional wastewater treatment systems .

### **Infrastructure/Public-Private Facilities**

#### **HS-5.4 Multi-Purpose Flood Control Measures**

The County shall encourage multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the County's streams, creeks, and lakes. Where appropriate, the County shall also encourage the use of flood and/or stormwater retention facilities for use as groundwater recharge facilities.

#### **PFS-1.7 Coordination with Service Providers**

The County shall work with special districts, community service districts, public utility districts, mutual water companies, private water purveyors, sanitary districts, and sewer maintenance districts to provide adequate public facilities .

#### **PFS-1.9 New Special Districts**

When feasible, the County shall support the establishment of new special districts, including community service districts and public utility districts, to assume responsibility for public facilities and services .

#### **PFS-1.16 Joint Planning Efforts**

The County will promote joint planning efforts between communities, hamlets, and cities within proximity of each other so that services and infrastructure planning can be complementary .

#### **PFS-2.1 Water Supply**

The County shall work with agencies providing water service to ensure that there is an adequate quantity and quality of water for all uses, including water for fire protection, by, at a minimum, requiring a demonstration by the agency providing water service of sufficient and reliable water supplies and water management measures for proposed urban development .

#### **PFS-4.4 Stormwater Retention Facilities**

The County shall require on-site detention/retention facilities and velocity reducers when necessary to maintain existing (pre-development) storm flows and velocities in natural drainage systems. The County shall encourage the multi-purpose design of these facilities to aid in active groundwater recharge .

**PFS-4.6 Agency Coordination**

The County shall work with the Army Corps of Engineers and other appropriate agencies to develop stormwater detention/retention facilities and recharge facilities that enhance flood protection and improve groundwater recharge .

**Development Requirements/Enforcement/Regulations**

**PF-1.4 Available Infrastructure**

The County shall encourage urban development to locate in existing UDBs and HDBs where infrastructure is available or may be established in conjunction with development. The County shall ensure that development does not occur unless adequate infrastructure is available, that sufficient water supplies are available or can be made available, and that there are adequate provisions for long term management and maintenance of infrastructure and identified water supplies .

**PF-4.22 Reuse of Abandoned Improvements in a CACUDB**

In accordance with other policies in this General Plan, the County may work with a city to provide that any alternative land uses within a CACUDB not otherwise allowed under a particular zoning classification but which are allowed by County policies due to the existence of abandoned structures or improvements with no other available, viable economic uses on the parcel will be reviewed in light of impacts on such regional concerns as water and sewage disposal availability and preservation of transportation and utility corridors .

**PF-4.23 Reuse of Abandoned Improvements in a CACUAB**

In accordance with other policies in this General Plan, the County may work with a city to provide that any alternative uses within a CACUAB not otherwise allowed under a particular zoning classification but which are allowed by County policies due to the existence of abandoned structures or improvements with no other available, viable economic uses on the parcel will be reviewed in light of impacts on such regional concerns as water and sewage disposal availability and preservation of transportation and utility corridors .

**PF-5.2 Criteria for New Towns (Planned Communities)**

When evaluating proposals for New Town development, the County shall require all of the following:

1. That a New Town be a planned community as defined by the Tulare County Zoning Ordinance. The planned community may take the form of a Specific Plan, Community Plan, or Master Development Plan.

2. That a reimbursement agreement, memorandum of understanding, and investment agreement for the project be established prior to submittal of a planned community proposal.
3. That the applicant demonstrate the project will have a fiscally neutral or positive impact on the County and special districts impacted by the project.
4. That an infrastructure master plan for the installation, operation, management and funding, and ongoing maintenance and replacement of infrastructure required to support growth, including but not limited to: State, local, and private transportation; sewage; water quality and quantity; drainage; parks and open space; and any other infrastructure or public services, appropriate regulations, programs or public works projects, be prepared to ensure that each of the development projects "pay their fair share". That a water assessment be completed to evaluate the availability and sufficiency of water to meet anticipated demands. That funding mechanisms are set up to cover initial capital costs as well as long-term operations and maintenance for the facilities including but not limited to the ones listed above.
5. That an outreach and community involvement process be conducted as will be defined in the work program/memorandum of understanding for the project.
6. That the planning program include joint meetings with all stakeholder agencies involved in infrastructure or services provision for the project by forming an intergovernmental advisory committee, as well as one-on-one consultations, to help guide the process, including preparation of the environmental impact report (EIR), water supply assessment, and infrastructure master plan. Regular participants on this committee should include but not be limited to any: applicable local planning committee established by the Board of Supervisors or Planning Commission; redevelopment project advisory committee; special use district; TCAG; Caltrans District 6; and school districts. Other participants may, from time to time include: Fire Chief; Cal Fire; County Sheriff; water conservation district; Department of Conservation; Fish & Wildlife; Department of Fish & Game; California State Parks; phone company; and utility companies.
7. The applicant shall enter into a reimbursement agreement requiring deposits into a planning trust fund with Tulare County Resource Management Agency. The reimbursement agreement shall insure that the cost of all or an agreed upon portion of General Plan amendment, EIR preparation, infrastructure master plan, peer review, and all other technical studies and reports shall be paid by the developer or otherwise recovered by the County.
8. The preparation and approval of a Community Plan or Master Plan and a Specific Plan for the project.

9. That adequate and sustainable water supplies be documented.
10. That the project strives to provide a balance mix of land uses and densities, including residential, commercial, employment generating, and public facilities.
11. That the project provides a full range of needed infrastructure and public services, including:
  - a. Appropriate on-site and off-site circulation and improvements,
  - b. Adequate community water and sewer facilities, and
  - c. Fire protection, law enforcement, parks, library, community center, and other necessary public facilities.
12. Planned communities should not cause any conversion of Prime Farmland if Farmland of Statewide Importance or of lesser quality is available and suitable for development.
13. That the planned communities be consistent with the policies of the associated Area Plan (Part II) .

**LU-7.16 Water Conservation**

The County shall encourage the inclusion of “extra-ordinary’ water conservation and demand management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development.

**HS-6.7 Water Supply System**

The County shall require that water supply systems be adequate to serve the size and configuration of land developments, including satisfying fire flow requirements. Standards as set forth in the subdivision ordinance shall be maintained and improved as necessary.

**HS-6.8 Private Water Supply**

The County shall require separately developed dwellings with individual private water supply to provide an acceptable guaranteed minimum supply of water for fire safety, in addition to the amount required for domestic needs .

**PFS-2.2 Adequate Systems**

The County shall review new development proposals to ensure that the intensity and timing of growth will be consistent with the availability of adequate production and delivery systems. Projects must provide evidence of adequate system capacity prior to approval .

**Implementation**

**Implementation PF # 11.** Performance measures shall be included in all community plans to be used to measure and evaluate the success of the plan in achieving its goals. Such measures may derive from Census data (percent ownership of housing, average

household income, crime statistics), community service districts (CSD) statistics (average wastewater discharge per household as an indicator of occupancy rates), or land use parameters (acres of parkland or miles of sidewalk within the UDB per resident). Such data can be used in the annual General Plan review, as applicable, and will provide information to help the Board of Supervisors evaluate the effectiveness of the community plan program over the long term .

**Implementation PFS # 1** The County shall prepare capital improvement programs for all County-owned and operated facilities and services to ensure consistency with the General Plan in order to maintain an adequate level of service .

**Implementation PFS # 2** The County shall annually review fees related to County-owned and operated facilities and County-provided services to ensure funding levels are both affordable and adequate to sustain these facilities/services long-term .

**Implementation PFS # 3** The County shall develop and adopt an impact fee program for new development to provide financing mechanisms to ensure the provision, operation, and on-going maintenance of appropriate public facilities and services .

**Implementation WR # 1** County staff shall develop an ordinance that will regulate the permanent extraction and exportation of groundwater from Tulare County. The ordinance will set up a permit process for groundwater export. Conditions considered for this permit will include:

- Find and determine that the extraction will not substantially increase the overdraft of the groundwater underlying the County;
- Will not adversely affect the long-term ability for storage or transmission of groundwater within the aquifer;
- Will not (together with other extractions) exceed the safe yield of the groundwater underlying the County unless the safe yield is exceeded only by extractions in connection with a conjunctive use program approved by the County;
- Will not otherwise operate to the injury of the reasonable and beneficial uses of overlying groundwater users;
- Will not result in an injury to a water replenishment, storage, or restoration project operating in accordance with statutory authorization; and

Find that the applicant has provided for mitigation which will offset any adverse effect that is determined to exist .

**Implementation WR # 3** The County shall assure that all watershed planning is done on a complete regional and watershed basis, and that such planning considers a balance between urban and agricultural demands.

**Implementation WR # 10** The County shall incorporate provisions, including evaluating incentives, for the use of reclaimed wastewater, water conserving appliances, drought tolerant landscaping, and other water conservation techniques into the County's building, zoning, and subdivision ordinances.

**Implementation WR # 15** Designs, which respect natural topography and vegetation, can usually achieve effective flood control while retaining the dynamic flow and functional integrity of a natural waterway. Further channeling, straightening and lining waterways should be evaluated until alternative multipurpose modes of treatment such as wider berms and landscaped levees in combination with recreation amenities are provided.

**Implementation WR # 18** The County will participate in Integrated Regional Water Management Plans .

**Implementation WR # 19** The County shall adopt an ordinance to require new development proposals to provide a Will-Serve letter as part of the application process and suitable evidence of long-term water availability prior to approval of the tentative map or other entitlement. For subdivisions proposing to use well water, the new ordinance shall evaluate current waiver provisions and evaluate well pump test requirements to demonstrate water supply capabilities .

**Implementation WR # 20** The County will support TCAG's Regional Blueprint efforts to provide an adequate, cost-efficient, and realizable water supply to sustain a high quality of life .

**Implementation WR # 21** The County shall maintain and implement its water efficient landscape ordinance consistent with the Department of Water Resources Model Water Efficient Landscape Ordinance .

**Implementation WR # 22** As part of the County's Emergency Water Conservation Plan, a priority of consumptive uses for various water sources shall be developed to ensure availability of adequate supplies to meet public health and safety needs, and for resource protection. Suggested priority:

- Potable water supply, fire protection, domestic uses,
- Resource protection and preservation,
- Industrial, irrigation, and commercial uses,
- Water oriented or water enhanced recreation, and

Air conditioning.

**Implementation WR # 23** The County shall develop an education program to inform residents of water conservation techniques and the importance of water quality and adequate water supplies. Programs may include informational flyers, community workshops, technology transfer fairs, and other various means of education and information dissemination.

**Implementation WR # 24** The County shall protect groundwater recharge areas in the County by carefully regulating the type of development within these areas. Regulations may include, but are not limited to, the limitation of structural coverage and impervious

surfaces and prohibition of uses with the potential to discharge harmful pollutants, increase erosion, or create other impacts degrading water quality or affecting groundwater supply.

**Implementation WR # 26** The County shall establish development or design standards for the protection of groundwater recharge areas, such as placing limitation on the amount of impervious surfaces, or other planning and zoning techniques .

**Implementation WR # 27** The County shall identify a system of critically inadequate water supply, water transfer facilities, and groundwater recharge areas on a map, incorporating existing canals, creeks and rivers, groundwater recharge basins; proposed sites for regional recharge basins; and needed water transfer facilities. The County shall, in conjunction with stakeholders, draft an ordinance relating to the care and maintenance of this system, such as: discouragement of piping or alteration; encouraging of multi-use as trails and recreational facilities, etc., wherever feasible.

2. Draft Three Rivers Community Update  
Policies Regarding Water Quality.

2015 DRAFT  
THREE RIVERS COMMUNITY PLAN UPDATE  
WATER QUANTITY AND QUALITY POLICIES

4-13-15

**1.3.15 PF-2.7 Improvement Standards in Communities**

The County shall require development within the designated UDBs to meet standards for improvements as determined reasonable and appropriate by requiring that development respond to its context, be compatible with the traditions and character of the community, and develop in an orderly fashion which is compatible with the scale of surrounding structures. Typical improvements may include infrastructure such as streets, and community wastewater and water systems as determined to the extent feasible to be reasonable and appropriate by the affected decision makers.

**1.5.7 PF-2.2 Modification of Community UDB**

1. The County may consider modification to a community UDB under any of, but not limited to the following circumstances:

a. The location of the UDB shall be evaluated during preparation or update of a community plan.

b. All community UDBs should be reviewed on a five-year cycle to reflect changes in growth and development patterns.

c. A request for expansion of the UDB boundary can be applied for as part of a General Plan Amendment to the Land Use Diagram.

d. At the request of a special district or the community.

e. A UDB should be considered for expansion at such time as land for infill becomes limited. This condition is considered satisfied when 80 percent of the non-Williamson Act land within the UDB is developed for community uses.

f. UDBs should not be expanded onto Prime Farmland if Farmland of Statewide Importance or of lesser quality is available and suitable for expansion.

2. Prior to approval of a UDB boundary expansion, the County shall ensure that infrastructure can be provided to serve the new areas added to the UDB and that sufficient water supplies are also available. This may require preparation of an infrastructure master plan that includes methods of financing of improvements and maintenance, as well as representation/documentation of availability and sufficiency of long-term water supplies.

3. Preservation of productive agricultural lands shall be the highest priority when considering modifications. Expansion of a UDB to include additional agricultural land shall only be allowed when other non-agricultural lands are not reasonably available to the community or are not suitable for expansion.

**1.7.2** Base density regulations on suitability of the soils to provide for proper disposal of septic tank effluent and the land's capacity to provide water.

**1.8.1** Require existing and new large-scale developments or subdivisions within the Community Services District to sponsor their share of certain needed public services. New development shall apply for water and wastewater services as reasonable, feasible and appropriate, and these services shall be provided on a service area basis as applicable under jurisdictional authority, ie (Mutual Water Company, County Service Area, or Improvement District under the auspices of the Community Services District).

a. Require that engineered disposal systems for new residential, commercial and light industrial development are consistent with the standards of the State Water Quality Control Board, the Tulare County Environment Health Division and Three Rivers Community Services District and be approved by the necessary authorities with respect to the protection of all existing waterways, including but not limited to seasonal and perennial creeks, manmade ditches, and ponds greater than 30' in diameter.

**2.3.3** Require that new development does not interfere with established agricultural water rights.

**4.1.2** Consistent with CEQA, protect water quality and wildlife including sensitive and critical habitat in Three Rivers by prohibiting, to the extent feasible and appropriate, land use activities that endanger water quality and/or wildlife as a result of pollution and/or sedimentation.

a. Prohibit, to the extent allowed by law, commercial and industrial development with excessive BOD (Biochemical Oxygen Demand) and COD (Chemical Oxygen Demand) waste water discharge characteristics as described by the State Water Quality Control Board and Army Corps of Engineers.

b. Consistent with CEQA, to the extent feasible and appropriate, the Mitigation and Monitoring Program in the Community Plan EIR will provide advanced mitigation planning to protect water quality and wildlife including sensitive and critical habitat in Three Rivers.

**4.2.5** Building improvements (homes, fences, etc.) and septic tank/leach line systems or other activities associated with construction (grading) shall not be permitted within 50' of an intermittent watercourse or 100' of a perennial watercourse.

**5.3.1** Ensure that the provision of public services (water and wastewater) are consistent with the Three Rivers Community Plan (map and text).

**5.3.2** Provide an adequate, reliable and safe water supply, storage, and distribution system.

**5.3.5** Require commercial areas to form Improvement Districts under the auspices of the Community Services District when community water and wastewater systems are required.

3. Tulare County Ordinance Code Chapter 13.  
Wells.

**CHAPTER 13. WELLS****ARTICLE 1. GENERAL PROVISIONS****4-13-1000 LEGISLATIVE AUTHORITY:**

This Chapter is enacted pursuant to authority granted by sections 13800 to 13806 of the Water Code of the State of California.

**4-13-1005 POLICY:**

It is the purpose of this Chapter to assure that water produced by wells in Tulare County will be of high quality and to protect and preserve the quality of underground waters by regulating the entry of substances from the surface into well shafts and regulating the interchange through well shafts of water between underground strata.

**4-13-1010 APPLICATION OF ORDINANCE:**

(a) The provisions of this Chapter are applicable to all individuals, firms, partnerships, associations, corporations, estates and trusts.

(b) The provisions of this Chapter are also applicable to the United States, the State of California, cities and all political subdivisions of the State of California, and to all officers, employees and departments of the United States, the State of California, cities and other political subdivisions when they drill a well, or perform any of the other acts covered by this Chapter, within the unincorporated territory of Tulare County.

**4-13-1015 ADMINISTRATIVE VARIANCE:**

The Health Officer may permit construction, deepening, reconstruction and destruction of wells without strict compliance with the standards established by this Chapter when he determines that strict compliance would impose an unreasonable burden on the permittee and that the variance will not endanger the health or safety of the water user or the public generally.

**4-13-1020 RETROACTIVITY:**

Except as specifically provided in sections 4-13-1580, 4-13-1590 and 4-13-1595 of this Chapter, this Chapter shall apply only to construction, reconstruction, deepening or destruction of a well when such work is commenced after the effective date of this Chapter.

**4-13-1025 DEFINITIONS:**

The definitions set forth in the following sections shall apply throughout this Chapter.

**4-13-1030 "ABANDONED WELL":**

A well whose use has been permanently discontinued.

**4-13-1035 "AGRICULTURAL WELL":**

A well used exclusively to supply water for irrigation, livestock operation or other agricultural purposes.

**4-13-1040 "AIR CONDITIONING WELL":**

A well used exclusively to return to the ground, well water which has been used as a coolant in air conditioning processes.

**4-13-1045 "ANNULAR SPACE":**

The area between the bore and the well casing. If a conductor casing is used, this includes the area between the bore and the conductor casing and between the conductor casing and the well casing.

**4-13-1050 "ANNULAR SEAL":**

The impervious material placed in the annular space.

**4-13-1055 "CATHODIC PROTECTION WELL":**

Any artificial excavation in excess of fifty (50) feet deep constructed by any means for the purpose of installing equipment for the protection of metallic equipment in contact with the ground.

**4-13-1060 "CONSTRUCTION":**

The fashioning of the shaft of a well and includes, but is not limited to, excavation, installation of casing, placing gravel, perforation of casing in place, installation of annular seal, and sealing off strata.

**4-13-1065 "CONTAMINATION":**

An impairment of the quality of the waters to a degree which creates a hazard to the public health through poisoning or the spread of disease.

**4-13-1070 "DESTRUCTION OF WELL":**

The complete filling and sealing of the well shaft and/or annular space in such a manner as to protect persons and animals from the danger of physical harm and prevent surface waters, waste, debris and contaminants from entering the well.

**4-13-1075 "DISPOSAL WELL":**

A well into which liquid or solid substances are deposited.

**4-13-1080 "DOMESTIC WATER":**

Water used for drinking, food preparation, dish washing, bathing and swimming.

**4-13-1085 "HARDROCK WELL":**

A well in which the water bearing strata occurs in crystalline rock.

**4-13-1090 "HEALTH OFFICER":**

The Health Officer of the County of Tulare or his duly authorized representative.

**4-13-1095 "HORIZONTAL WELL":**

A water well drilled horizontally or at an angle with the horizon.

**4-13-1100 "INACTIVE WELL":**

A well not routinely operated but capable of being made an operating well with a minimum of effort.

**4-13-1105 "INDIVIDUAL DOMESTIC WELL":**

A water well which is used to supply the domestic needs of no more than one (1) individual residence or one (1) duplex.

**4-13-1110 "INDUSTRIAL WELL":**

A well used exclusively to supply water for industrial purposes. If any water from such a well is used for domestic purposes, the well shall be deemed to be a public domestic well.

**4-13-1115 "INJECTION WELL":**

A well used to introduce water into the underground as a means of replenishing ground water basins.

**4-13-1120 "MONITORING WELL":**

A well for the purpose of monitoring ground water levels, water quality, or water contamination.

**4-13-1125 "PERMITTEE":**

The person who makes a permit application or a person on whose behalf such an application is made.

**4-13-1130 "PERSON":**

An individual, trust, firm, corporation, partnership, association, government entity, city, or municipality.

**4-13-1135 "POINT DRIVEN WELL":**

A well constructed by driving into the ground a pipe fitted with a well point.

**4-13-1140 "POLLUTION":**

An alteration of the quality of water by waste to a degree which adversely affects such water for beneficial uses.

**4-13-1145 "PUBLIC DOMESTIC WELL":**

A water well which is used to supply domestic water which is not an individual domestic water well.

**4-13-1150 "RECONSTRUCTION":**

The alteration, repair or restoration of a well shaft.

**4-13-1155 "RIVER WELL":**

A dug well located in or near a watercourse which draws water from that watercourse.

**4-13-1160 "SANITARY SEAL":**

A water tight gasket between the well casing and the pump base.

**4-13-1165 "SOIL BORING":**

An uncased temporary excavation to determine the hydrologic conditions at a site.

**4-13-1170 "TEST WELL":**

A cased well constructed for the purpose of gathering information regarding subterranean conditions preparatory to commencement of a well construction project.

**4-13-1175 "WATER QUALITY":**

The chemical, physical, bacteriological, radiological and other properties of water.

**4-13-1180 "WELL":**

Any excavation constructed for the purpose of extracting water from, or injecting water or any other substance into the underground, or for the purpose of cathodic protection, except that this definition shall not include:

(a) Oil and gas wells, or geothermal wells constructed under the jurisdiction of the Department of Conservation of the State of California, except those wells converted to use as water wells.

(b) Wells used for the purpose of dewatering excavations during construction or stabilizing hillsides or earth embankments.

**4-13-1185 "WELL CONTRACTOR":**

A person licensed pursuant to the Business and Professions Code of the State of California to engage in well drilling who possess an active C-57 contractor's license.

**4-13-1190 "WELL DEVELOPMENT":**

The use of one or more of a variety of techniques, including, but not limited to, over pumping, surging, introduction of chemicals and explosions, which are intended to increase the flow of water from underground sources into the well shaft through perforations or through the bottom of the shaft.

**4-13-1195 "WELL REDEVELOPMENT":**

The development of a previously existing well.

**ARTICLE 3. WELL PERMITS****4-13-1245 WELL PERMIT:**

Except as otherwise provided in sections 4-13-1250 and 4-13-1255 of this Article it shall be unlawful for any person to construct, deepen, reconstruct or destroy any well, or soil boring, or cause any of those acts to be done, unless a permit has first been issued to him or to the person on whose behalf the work is undertaken. The Health Officer may prescribe conditions if he determines that they are required to prevent contamination or pollution of underground waters. Permit conditions are appealable pursuant to section 4-13-1275 of this Article. A well permit shall be valid for six (6) months from the date of issuance.

**4-13-1250 EMERGENCY WORK:**

Persons or property threatened by a sudden unforeseen impairment in the quantity or quality of water may construct, deepen or reconstruct a well without prior issuance of a permit. All work done under such emergency conditions shall comply with the requirements of this Chapter. In all such cases, the person who caused the work to be done shall, within forty eight (48) hours after such work is begun, file for a permit and provide a statement with the Health Officer indicating the reason for the emergency work. The Health Officer shall inspect the well and order the person who caused the emergency work to be done to perform such other work as shall be necessary to bring the well into conformity with the requirements of this Chapter. The terms of such an order shall be deemed permit conditions within the meaning of section 4-13-1275 of this Article.

**4-13-1255 PERMIT NOT REQUIRED:**

- (a) No permit is required to install, replace or repair a pump on an existing well or to redevelop an existing well.
- (b) No permit is required by this Chapter for the construction of a seepage pit constructed pursuant to Article 11 (commencing with section 7-15-1555) of Chapter 15 of Part VII of this Code. The foregoing provisions shall not be construed to allow disposal of sewage, contaminants, toxic materials or other substances in such a seepage pit in a manner forbidden by section 4-13-1680 of this Chapter.
- (c) No permit shall be required to install a surface seal or annular seal.

**4-13-1260 PERMIT APPLICATION:**

- (a) Application for a permit required by section 4-13-1245 of this Article shall be made to the Health Officer. Such application shall be on forms furnished by the Health Officer and shall provide all information pertaining to the project required by the Health Officer. Every application shall be signed by the owner or his authorized designee.
- (b) The following information shall be furnished:
  - (1) Owner's name, address, and phone number.
  - (2) Type of well.
  - (3) Location of well by street address, nearest streets or crossroads, and city.
  - (4) Township-Range-Section.
  - (5) Well drilling contractor's name, address, phone number, contractor's license number, and license classification.
  - (6) Type of work to be done and the method of well construction.
  - (7) Assessor's Parcel Number (APN).
  - (8) Casing information.
  - (9) Well information.
- (c) The Health Officer may require further information relevant to the project as he may deem necessary to determine whether the public health and safety require the denial of the permit or the imposition of further conditions.

(d) A permit may be denied for failure to supply any information required by this section.

**4-13-1265 WELL PERMIT FEE:**

Each application for a well permit shall be accompanied by a fee as set forth by resolution by the Tulare County Board of Supervisors.

**4-13-1270 DENIAL OF PERMIT:**

(a) Except as otherwise specifically provided in this section and in section 4-13-1260, no permit shall be denied unless it appears that the project for which the permit is requested poses a substantial threat of pollution to the underground waters.

(b) No permit shall be issued for the construction, deepening or reconstruction of a water well in a location in which sources of pollution or contamination are known to exist which may cause a well complying with the provisions of Article 9 of this Chapter to become polluted or contaminated; provided, however, that if no other source of potable water is available and if the Health Officer determines that such water may be rendered potable by appropriate treatment, a permit conditioned on the provision of facilities for such treatment may be issued.

(c) No permit shall be issued for the construction of a point driven public domestic water well; provided, however, that where no water is available at a depth of greater than fifty (50) feet a permit may be issued for construction of a point driven well less than fifty (50) feet deep. Any permit for the construction of a point driven public domestic water well shall be conditioned upon provision of purification facilities adequate to insure that water produced will be and will remain potable.

**4-13-1275 APPEAL OF DENIAL OR CONDITIONS:**

If the Health Officer denies an application for a permit, or issues a permit subject to conditions which the applicant believes to be unreasonable, the applicant may appeal to the Board of Supervisors. The applicant must file notice of such appeal with the Board of Supervisors within ten (10) days of the Health Officer's decision on the application or such appeal will be deemed waived. The Board of Supervisors shall, within twenty (20) days after receipt of a written appeal, hold a hearing to determine whether the permit shall be issued to the applicant and, if a permit is to be issued, the terms and conditions under which it shall be issued. Such a hearing shall be conducted in accordance with section 4-13-1440 of this Chapter and may be continued from time to time by the Board. The decision of the Board of Supervisors shall be rendered within seven (7) days after the conclusion of the hearing and the decision shall be final as to all matters determined.

**4-13-1280 JUDICIAL REVIEW OF DECISION:**

Judicial review of a decision of the Board of Supervisors made after a hearing pursuant to this Article, if the decision denies the permit, shall be made pursuant to section 1094.6 of the Code of Civil Procedure of the State of California. The method of judicial review, the time limits for judicial review, and all of the other provisions of said section 1094.6 shall govern such judicial review. When giving written notice to the applicant that the permit has been denied, the Board of Supervisors shall provide notice to the applicant that the time within which judicial review must be sought is governed by said section 1094.6.

**ARTICLE 5. INSPECTIONS, REPORTS AND ENFORCEMENT**

**4-13-1330 INSPECTIONS:**

Every project for which a permit is required by this Chapter may be inspected by the Health Officer at such times as he deems advisable.

**4-13-1335 MANDATORY INSPECTIONS ON CERTAIN PROJECTS:**

The Health Officer may prescribe mandatory inspections of public domestic water well projects, and of projects on which he deems it likely that strata seals will be required pursuant to section 4-13-1565 of this Chapter. The stage at which each such inspection is required shall be set forth in the permit. It shall be unlawful for any person to continue work on a project past the stage at which an inspection has been prescribed until such inspection by

the Health Officer has been completed, except that a permittee, or one acting on his behalf, may make an appointment with the Health Officer, to have the inspection carried out at a time agreed upon at which it is contemplated the inspection stage will have been reached, but not less than twenty four (24) hours following the time the appointment is made.

**4-13-1340 PUBLIC DOMESTIC WELL INSPECTION:**

It shall be unlawful to use a public domestic water well constructed, reconstructed or deepened until the Health Officer has inspected it and determined that the water produced meets the standard prescribed by Chapter 15 of Title 22 of the California Code of Regulations. An adverse determination shall be subject to review pursuant to section 4-13-1275 of this Chapter.

**4-13-1345 WELL DRILLER'S LOG:**

Any person who has constructed, deepened or reconstructed a well shall, within thirty (30) days after completion of the work, furnish the Health Officer with a log of the well containing the following information:

- (a) A description of the strata encountered.
- (b) The depth of the well.
- (c) Depth of the first water encountered.
- (d) Depth of the casing or casings including type and location of perforations or well screen.
- (e) Depth of annular seal and type of grout material used.
- (f) Depths of strata sealed.

**4-13-1350 WELL DEVELOPER'S REPORTS:**

Any person who installs pumping equipment and develops a well for public domestic supply shall, within thirty (30) days after completion, file a written report with the Health Officer containing the following information:

- (a) Depth of water after developing the well.
- (b) The yield in gallons per minute with number of feet of drawdown after five (5) or more continuous hours of pumping. The pumping time may be reduced if the Health Officer determines that a problem exists for the disposal of water.

**4-13-1355 CONFIDENTIALITY OF REPORTS:**

Information reported pursuant to section 4-13-1345 or section 4-13-1350 of this Article shall not be divulged except on written request of the person reporting such information or the owner of the property.

**4-13-1360 FAILURE TO REPORT:**

It shall be unlawful for any person to fail to file the reports required by sections 4-13-1345 or 4-13-1350 of this Article.

**4-13-1365 STOP ORDER:**

Whenever any well construction, destruction, pump installation or repair work is being done contrary to the requirements of this Chapter or the permit, the Health Officer may order the work stopped by posting a notice to stop at the well site. It shall be unlawful to do further work after such notice has been posted. A stop order shall be subject to review pursuant to section 4-13-1275.

**4-13-1370 PERMIT CONDITIONS:**

It shall be unlawful to perform any work for which a permit has been granted pursuant to this Chapter without complying with the conditions of such permit.

**ARTICLE 7. NUISANCE**

**4-13-1420 DECLARATION OF NUISANCE:**

Wells constructed, reconstructed, deepened, or destroyed which are not constructed, reconstructed, deepened, or destroyed in accordance with the terms of this Chapter, including permit conditions added by the Health Officer, and wells which are defective within the meaning of section 4-13-1735 of this Chapter are hereby declared public nuisances which may be abated in accordance with the provisions of this Article. The owner may abate the nuisance described hereinabove at any time prior to commencement of actual abatement by or at the direction of the Health Officer.

**4-13-1425 NOTICE:**

Whenever the Health Officer determines that a nuisance described in section 4-13-1420 of this Article exists, he shall deliver to the owner of the land upon which the nuisance has been determined to exist a written notice informing the owner of the determination of such nuisance. The notice shall state that unless the owner abates the nuisance within a time, following completion of service of the notice, therein stated, determined by the Health Officer to be a reasonable time to accomplish such abatement, but not less than two (2) weeks, or within such time files a notice of appeal with the Clerk of the Board of Supervisors, the Health Officer will abate the nuisance. It shall also state that the cost of such abatement may be added to the County assessment roll as a lien on the real property or placed on the unsecured tax roll.

**4-13-1430 PERSONAL DELIVERY:**

The notice required by section 4-13-1425 of this Article shall be served by delivering it personally to the owner, or if he cannot be personally served, sending it by certified mail, addressed to the owner as his address appears on the records of the County Clerk/Recorder/ Assessor. If service cannot be accomplished by personal delivery or by mail, notice may be given by posting a copy at the well site. Notice by posting shall be deemed complete one (1) week after posting.

**4-13-1435 HEARING REQUEST:**

The owner of property upon which the Health Officer has determined that a nuisance described in section 4-13-1420 of this Article exists may request a hearing before the Board of Supervisors for review of such determination within the time specified in section 4-13-1425 of this Article by filing a written request with the Clerk of the Board of Supervisors. The request shall describe the property on which the nuisance has been determined to exist by street name and number and give the name of the owner and his address. The Clerk shall set a date and time for hearing and send a notice thereof by regular mail at least ten (10) days before such date to the owner at the address set forth on his request and shall notify the Health Officer of such hearing.

**4-13-1440 HEARING CONDUCT:**

At the date and time set, a hearing shall be held by the Board of Supervisors. The hearing shall be open to the public. The owner may be represented by counsel. The Board of Supervisors shall hear all pertinent evidence offered by all interested persons. The technical rules of evidence shall not be applicable to the hearing. All persons giving evidence shall be sworn before testifying. The owner may employ a shorthand reporter to report the hearing. The Board may continue said hearing from time to time.

**4-13-1445 HEARING DECISION:**

At the conclusion of the hearing if the Board of Supervisors determines that a public nuisance exists, it shall thereupon order the nuisance abated no sooner than thirty (30) days following the mailing by the Clerk of notice of the Board's decision. The Board shall determine whether the nuisance is to be abated by correction or destruction.

**4-13-1450 JUDICIAL REVIEW OF DECISION:**

Judicial review of a decision of the Board of Supervisors made after a hearing pursuant to section 4-13-1445 of this Article shall be made pursuant to sections 1094.5 and 1094.6 of the Code of Civil Procedure of the State of California. When giving written notice to the owner of the order of the Board of Supervisors to abate the nuisance, the Clerk of the Board shall include a statement that the time within which judicial review must be sought is governed by said section 1094.6.

**4-13-1455 ABATEMENT-ENTERING PRIVATE PROPERTY:**

If a nuisance is not corrected or a hearing sought within the time specified pursuant to section 4-13-1425 of this Article or if, after hearing, a nuisance is not abated pursuant to, and in the time required by, section 4-13-1445 of this Article, the Health Officer shall cause the nuisance to be abated and for that purpose he, and others at his direction, may enter the property where the nuisance exists.

**4-13-1460 ACCOUNTING NOTICE:**

The Health Officer shall keep an account of the cost of abatement and render a report in writing to the Board of Supervisors showing such cost. Upon receipt of the account of the Health Officer, the Clerk of the Board of Supervisors shall deposit a copy of the account in the mail addressed to the owner and include therewith a notice informing the owner that, at a date and time selected by the Clerk, but not less than ten (10) days after the date of mailing of the notice, the Board of Supervisors will review the account and that the owner may appear at said time and be heard.

**4-13-1465 HEARING ON ACCOUNTING:**

At the time fixed, the Board of Supervisors shall meet to review the report of the Health Officer. The owner may appear at said time and be heard on the questions whether the accounting is accurate and the amounts reported reasonable. The report of the Health Officer shall be admitted into evidence. The owner shall bear the burden of proving that the accounting is not accurate and reasonable. The hearing shall be conducted in the manner prescribed in section 4-13-1440 of this Article. The Board of Supervisors shall make such modifications in the accounting as it deems necessary and thereafter shall confirm the report by resolution.

**4-13-1470 SPECIAL ASSESSMENT AND LIEN:**

The Board of Supervisors may order that the cost of abating nuisances pursuant to this Chapter be placed upon the County tax roll by the County Auditor as special assessments against the land, or placed on the unsecured roll, in accordance with the provisions of section 25845 of the Government Code of the State of California.

**ARTICLE 9. WATER WELL STANDARDS**

**4-13-1520 LOCATION OF WELLS:**

(a) No well hereafter constructed shall be located closer than from the following:

|                              |         |
|------------------------------|---------|
| Front property line          | 25 ft.  |
| Other property line          | 5 ft.   |
| Septic tank                  | 100 ft. |
| Leach line or disposal field | 100 ft. |
| Sewer line                   | 50 ft.  |
| Storm drain                  | 50 ft.  |
| Seepage pit                  | 150 ft. |
| Animal or fowl enclosure     | 100 ft. |

(b) No domestic well hereafter constructed shall be located within fifty (50) feet of another well.

(c) When the Health Officer determines that an extraordinary danger of pollution or contamination exists, the Health Officer may increase the setback requirements specified in this section.

(d) The setback restrictions contained in this section are not violated when the location of a septic tank, leach or disposal field, solid sewer line, or seepage pit on property of another is not known to the permittee and could not by the exercise of reasonable diligence have been discovered.

(e) Cathodic protection wells are not subject to the setback from property line provisions of this section.

**4-13-1525 CASING:**

The well casing shall extend not less than one half (1/2) inch above the top of the concrete base. At the time of completion of the well, the top of the casing shall be sealed with a weatherproof plate or cap, securely fastened in place.

**4-13-1530 CASING MATERIALS:**

Subsection A of section 12 of Part II of Chapter II of State of California Department of Water Resources Bulletin No. 74-81 are hereby referred to, adopted and made a part of this Chapter with the same effect as if fully set forth herein. Any casing manufactured in accordance with the standards therein established may be used in the construction or reconstruction of wells. All casing shall be watertight, except for perforations.

**4-13-1535 CASING THICKNESS:**

Where steel casing is used it shall be not less than the thickness set forth in the following table:

| Diameter         | Gauge | Thickness in inches |
|------------------|-------|---------------------|
| 6 in.            | 12    | 0.1046              |
| 8 in.            | 12    | 0.1046              |
| 10 in.           | 12    | 0.1046              |
| 12 in.           | 12    | 0.1046              |
| 14 in.           | 10    | 0.1345              |
| more than 14 in. | 8     | 0.1644              |

**4-13-1540 CASING PERFORATIONS:**

The casing of domestic water wells shall not be perforated within fifty (50) feet of the ground surface if the depth of the well is greater than fifty (50) feet. When possible, the uppermost perforations shall be below an impervious stratum in an aquifer of good quality water. If a domestic water well with perforations fifty (50) feet or less from the ground surface is deepened, the perforations fifty (50) feet or less in depth shall be sealed off to prevent commingling of water from that level with deeper water.

**4-13-1545 CASING PERFORATIONS--SHALLOW WELLS:**

Where an individual domestic well has a depth of sixty five (65) feet or less, only the bottom one-fourth (1/4) of the casing shall be perforated. Wherever possible, the perforations shall be kept below an impervious stratum.

**4-13-1550 ANNULAR SEAL--PUBLIC DOMESTIC WELLS:**

Public domestic wells shall have an annular seal. The space between the wall of the bore and the well casing or the conductor casing, if the conductor casing is left in place, shall be grouted to a depth of not less than fifty (50) feet from the ground surface except as follows:

(a) In the event the space between the wall of the bore and the conductor casing cannot be grouted to a depth of fifty (50) feet, that space shall be grouted to the greatest depth possible and the space between the well casing and the conductor casing shall be grouted to a depth of not less than fifty (50) feet from the ground surface in such a manner that the grout will be forced out into the space between the wall of the bore and the conductor casing at the fifty (50) foot level. In such cases, a gravel fill pipe may be installed through the annular seal on gravel packed wells.

(b) Public domestic wells extending into hard rock shall be grouted no less than one (1) foot into the first hard rock encountered.

**4-13-1555 ANNULAR SEAL DEPTH:**

The annular seal depth for water wells shall be as set forth in the following table:

|                      |        |
|----------------------|--------|
| Public Domestic Well | 50 ft. |
|----------------------|--------|

|                          |        |
|--------------------------|--------|
| Individual Domestic Well | 20 ft. |
| Industrial Well          | 50 ft. |
| Agricultural Well        | 20 ft. |
| Air Conditioning Well    | 50 ft. |

**4-13-1560 ANNULAR SEAL THICKNESS:**

The annular seal shall be a minimum of two (2) inches in radial thickness. The borehole diameter shall thus be at least four (4) inches larger than the outside diameter of the well casing.

**4-13-1565 SEALING OFF STRATA:**

(a) Whenever a well penetrates one or more aquifers containing water the quality of which is such that the quality of water produced by the well, or the quality of water in other aquifers, will be significantly reduced if the waters are allowed to intermingle, the aquifer containing the low quality water shall be sealed so as to prevent such intermingling. Whenever an aquifer is required to be sealed, a ten (10) foot annular seal shall be formed in the confining formations, except that where the well shaft ends in the aquifer to be sealed, the seal need not be extended into the lower confining formation so long as the bottom of the shaft is sealed. There shall be no casing perforations in the aquifer to be sealed.

(b) When drilling a well, if the driller drills through a layer of clay which is twenty (20) feet or more in thickness, the casing shall not be perforated both above and below the clay if both of the following conditions occur:

(1) The difference in water quality above and below the clay is more than five hundred (500) micromhos as specific electrical conductance or more than three hundred (300) milligrams per liter as total dissolved solids.

(2) The well is located in an area, which is designated by the Health Officer as a salinity problem area on a current map of the known salinity problem areas in the County prepared by, and on file in the office of, the Health Officer. Said map shall be revised by the Health Officer from time to time to show the areas in the County where salinity problems are known to exist after consultation with well drillers and other interested groups and individuals.

**4-13-1570 GROUTING MATERIAL:**

All annular seals shall be of neat cement grout, sand cement grout, concrete, bentonite-cement grout, or bentonite clay the composition of which shall conform to requirements of State of California Department of Water Resources Bulletin No. 74-81 which is hereby referred to, adopted and made a part of this Chapter with the same effect as if fully set forth herein. All annular seals shall be poured in one continuous process unless otherwise specified on the permit. The annular seal shall be a minimum of two (2) inches thick at all depths. The annular seal for hardrock wells shall be a minimum of two (2) inches thick at all depths. In no event shall the thickness of an annular seal be less than three (3) times the diameter of the largest aggregate used in the sealing material.

**4-13-1575 SURFACE SEAL:**

All water wells shall be provided with a watertight concrete base poured in a single, continuous operation on thoroughly compacted earth. Except for individual domestic wells, the base shall have a minimum total thickness of fourteen (14) inches of which at least ten (10) inches shall extend above the ground level at the casing. The base of individual domestic wells shall have a minimum total thickness of four (4) inches. The base shall extend horizontally in all directions at least one (1) foot from the outside of the well casing or the wall of the bore hole on gravel packed wells. The concrete base shall be adequately sloped so as to drain water away from the well casing.

**4-13-1580 SURFACE SEAL--PUBLIC DOMESTIC WELLS:**

All public domestic water wells shall be provided with a concrete base, which meets the requirements of section 4-13-1575 of this Article and shall comply with the requirements of section 4-13-1590 and 4-13-1595 of this Article. The joint between the concrete base and the annular seal and the joint between the base and the casing

shall be water tight. A public domestic well which does not meet all of the requirements of this section shall be deemed a public nuisance within the meaning of section 4-13-1420 of this Chapter. It shall be unlawful to maintain such a nuisance.

**4-13-1585 SAMPLE SPIGOT:**

Public domestic wells shall be provided with a sample spigot on the pump discharge line as close to the pump as practical. The sample spigot shall be on the discharge side of the check valve when a check valve is installed. The spout of the spigot shall not be threaded unless the pump has a check valve.

**4-13-1590 BACKFLOW PREVENTION:**

(a) All wells shall have a check valve or air gap, which will prevent water from the discharge line from flowing back into the well.

(b) All existing public domestic wells shall have a device of the type described in subsection (a) of this section and it shall be unlawful and a public nuisance to maintain a well without such a device.

(c) The devices of the type required to be installed under subsection (a) of this section shall be placed as close to the pump as practicable.

(d) It shall be unlawful to inject any herbicide, chemical or any other pollutant into the discharge line of a well which is not equipped with a device of the type described in subsection (a) of this section.

**4-13-1595 ACCESS PIPE AND AIR VENT:**

All wells shall be provided with an access pipe and/or drain plug by which disinfectants can be introduced into the well or the depth of the well may be measured. The pipe shall be extended to a height three (3) inches above the concrete base, be kept sealed, and be provided with a threaded cap. On public domestic wells the pipe shall also serve as an air relief vent, terminate downward, and be covered with sixteen (16) per inch or finer wire mesh screen to protect against contamination by material entering the pipe.

**4-13-1600 DISINFECTION OF WELLS:**

After the pump has been installed, all domestic wells shall be disinfected with a solution containing at least fifty (50) parts per million available chlorine, which shall remain in the well for a period of not less than twenty four (24) hours. This procedure shall be repeated on all public domestic wells as necessary to produce water which will yield negative results on two (2) consecutive biological samples tested in the manner prescribed in section 4-13-1665 of this Chapter. The gravel used in domestic gravel packed wells shall be disinfected by mixing one half (1/2) pound of tablets containing seventy (70) percent available chlorine with each ton of gravel introduced to the well. The chlorine tablets shall be evenly distributed throughout the volume of gravel used.

**4-13-1605 PUMP INSTALLATION:**

All pumps and pump motors installed or reinstalled directly over the casing of any well shall be provided with a sanitary seal between the pump base and the concrete base or between the well casing and the pump column pipe. Wells on which a submersible pump or a pump offset from the casing is installed or reinstalled shall have a steel plate fitted over the top of the casing with a watertight seal between the plate and the casing and between the casing and any pipes or conduits which enter the well through the steel plate. No pipe or conduit shall enter the casing from the side except access, air vent, and pump discharge pipes as required by this Chapter. Holes in the base of the pump which open into the well shall be sealed.

**4-13-1610 WELL DEVELOPMENT CLEANING:**

Before being placed in service, all wells developed or redeveloped shall be thoroughly cleaned of all foreign substance.

**4-13-1615 WELL ENCLOSURE:**

All public domestic water wells shall be located in a locked enclosure to exclude access by unauthorized persons.

## ARTICLE 11. PARTICULAR TYPES OF WELLS

**4-13-1666 RIVER WELLS:**

The Board of Supervisors hereby finds that, because of the great variation of conditions existing along rivers, it is not practical or desirable to establish general standards for public domestic river well construction, deepening or reconstruction. Accordingly, any river well, when used as a public domestic water well, shall meet the design criteria and the filtration and disinfection requirements established by the Health Officer with regard to that particular well. Such criteria and filtration and disinfection requirements shall be conditions of the permit. All public domestic river wells shall meet the water quality standards prescribed in Chapter 15 of Title 22 of the California Code of Regulations which are hereby referred to, adopted and made a part of this Chapter with the same effect as if fully set forth herein. The Health Officer may inspect and take samples from such wells from time to time to determine whether the water produced meets said standards. If the water produced fails to meet said standards, the Health Officer shall require an engineering evaluation which shall set forth and design criteria filtration, and disinfection requirements necessary to bring the well water into compliance with such standards. If he finds that it is not possible to bring the well water into conformity with such standards, he shall order that the well no longer be used as a source of public domestic water supply. It shall be unlawful to supply water to the public from the well after receipt of such an order unless the order is reversed by the Board of Supervisors. An appeal may be taken from such an order pursuant to section 4-13-1275 of this Chapter.

**4-13-1670 HARDROCK WELLS:**

Every public domestic hardrock well may be subject to continuous disinfection. The Health Officer shall prescribe the method of disinfection to be used as a condition of the permit.

**4-13-1675 CATHODIC PROTECTION WELLS:**

Cathodic protection wells shall be constructed in conformance with the cathodic well standards set forth in the State of California Department of Water Resources Bulletin No. 74-90 which is hereby referred to, adopted and made a part of this Chapter with the same effect as if fully set forth herein.

**4-13-1680 INJECTION, DISPOSAL AND AIR CONDITIONING WELLS:**

Injection, disposal and air conditioning wells are subject to the requirements of sections 4-13-1520 to 4-13-1535, inclusive, 4-13-1555, 4-13-1570, that portion of 4-13-1575 applicable to individual domestic wells, and that portion of 4-13-1605 applicable to wells having submersible pumps. In addition, disposal water injected into any water bearing formation through a disposal, injection or air conditioning well shall not cause the temperature of the adjacent ground water at any point greater than fifty (50) feet in a horizontal direction from such well to increase more than eight (8) degrees Fahrenheit. Disposal water which so heats the ground water is a contaminant. It shall be unlawful to introduce into a disposal well greater than forty (40) feet in depth or penetrating a water bearing formation, sewage, contaminants, toxic materials or other substances which will alter the existing ground water quality or cause the existing ground water in the disposal area to be contaminated. A sampling tap shall be provided on all disposal and injection wells.

**4-13-1685 MONITORING WELLS:**

Monitoring wells shall be constructed in conformance with the monitoring well standards set forth in the State of California Department of Water Resources Bulletin No. 74-90 which is hereby referred to, adopted and made a part of this Chapter with the same affect as if fully set forth herein.

## ARTICLE 13. DEFECTIVE, INACTIVE, AND WELL DESTRUCTION STANDARDS

**4-13-1735 DEFECTIVE WELLS:**

It is the duty of every owner of land on which there exists a well which impairs, or allows the impairment of, the quality of the underground water or water bearing formations or constitutes a health or safety hazard to correct the defective conditions or to destroy the well. Whenever a well test hole is corrected pursuant to this section, that correction shall be deemed a reconstruction and shall be performed pursuant to the requirements of this Chapter. This section shall not be construed to require a permit for installation of a surface seal and annular seal pursuant to section 4-13-1580 of the Chapter.

**4-13-1740 INACTIVE WELLS:**

It is the duty of every owner of land on which there is a well or which is not being used to cap the well or with a watertight seal and keep the well site free of trash, weeds and debris. Any well, which has been placed inactive for a period of more than one (1) year shall be deemed abandoned and be required to properly destroy said well unless the owner provides evidence of his intentions for continued use. An owner who wilfully fails to perform the duties imposed by this section or who introduces or knowingly allows sewage or other pollutants to flow into an inactive well shall be guilty of a misdemeanor.

**4-13-1745 WELL DESTRUCTION:**

The following well destruction procedures shall be followed:

- (a) The well shaft shall be cleared of any obstructions.
- (b) A hole shall be excavated around the well casing to a depth of six feet (6') below the ground surface. This top six feet (6') of well casing shall be removed.
- (c) The shaft shall be filled to within twenty feet (20') of the top of the remaining shaft with inorganic fill material.
- (d) The top twenty feet (20') of the remaining shaft shall be filled with impervious material. Such impervious material shall be allowed to spill over into the excavation to form an effective seal. After such impervious material has set, the excavation shall be backfilled with native soil.

**4-13-1750 WELL DESTRUCTION--SEALING STRATA:**

Where a well penetrates one or more aquifers containing water the quality of which is such that water in other aquifers will be significantly reduced if the waters are allowed to intermingle, in addition to the impervious seal, the Health Officer shall require that the shaft be sealed at such depths that no such intermingling of waters will occur through the shaft or through the annular space.

**4-13-1755 WELL DESTRUCTION--INORGANIC FILL:**

Material which may be used as suitable inorganic fill include clay, sand, silt, native soil, and impervious material.

**4-13-1760 WELL DESTRUCTION--IMPERVIOUS MATERIAL:**

Suitable impervious materials include neat cement, cement grout, concrete, and bentonite clays.

**4-13-1765 WELL DESTRUCTION LICENSE:**

Any person responsible for the destruction of a water well, monitoring well, and cathodic protection well shall possess a water well contractor's license (C-57).

**4-13-1770 WELL DESTRUCTION--GRAVEL PACKED WELLS:**

In destroying gravel packed wells, the casing shall be perforated opposite the area to be sealed. The sealing material shall then be placed within the casing, completely filling the portion adjacent to the area to be sealed and then forced out under pressure into the gravel envelope.

**ARTICLE 15. VIOLATIONS****4-13-1820 VIOLATIONS:**

- (a) Any person violating any of the provisions of sections 4-13-1665, 4-13-1680 and 4-13-1740 of this Chapter which are declared to be unlawful shall be guilty of a misdemeanor and shall be punishable as provided in section 125 of the Tulare County Ordinance Code.
- (b) Any person violating any of the provisions of this Chapter shall be guilty of a misdemeanor and shall be punishable by a fine of not more than One Thousand Dollars (\$1,000).

Mobile Version.

4. Tulare County Ordinance Code Chapter 1.  
Subdivision of Land.

**CHAPTER 1. SUBDIVISION OF LAND**

**ARTICLE 1. GENERAL PROVISIONS**

**7-01-1000 PURPOSES:**

This Chapter is adopted to regulate the subdivision of land and to require the provision of certain prescribed improvements which are needed as a consequence of the subdivision of land, and in order to achieve the following purposes:

- (a) To implement the General Plan of Tulare County, hereinafter referred to as the General Plan, which has been adopted by the Board of Supervisors as a long range, comprehensive guide to the physical development of the County.
- (b) To provide lots of sufficient size and appropriate design for the purposes for which they are to be used.
- (c) To provide streets of adequate capacity for the anticipated traffic, which will utilize them and to insure that they are designed so as to minimize safety hazards to vehicles and pedestrians.
- (d) To preserve the natural assets of the County and to create new beauty through skilled subdivision design, and to provide a means for encouraging orderly development of hillsides and mountainous areas in the County by relating the number and distribution of dwelling units to the topographical, geological, and hydrological conditions so that the terrain will suffer minimum disfigurement by scarring and that the danger to life and property by the hazards of fire, flood, water pollution, soil erosion and land slippage will be minimized.
- (e) To provide for water supply, sewage disposal, storm drainage and other utilities needed for the public health, safety and convenience.
- (f) To insure that the costs of providing rights of way and improvements for vehicular and pedestrian movement, utilities and public areas needed to serve new developments are borne by the subdivider rather than by the property owners of the County at large.
- (g) To insure that land is subdivided in a manner which will promote the public health, safety, convenience and general welfare.

**7-01-1005 SUBDIVISION MAP ACT:**

The provisions of this Chapter are supplemental to the provisions of the Subdivision Map Act (66410 et seq. of the Government Code of the State of California) hereinafter referred to as the Subdivision Map Act.

**7-01-1010 ADVISORY AGENCIES:**

- (a) For the subdivisions for which tentative and final maps are required to be recorded under the Subdivision Map Act, the Planning Commission of the County of Tulare, herein referred to as the Planning Commission, is designated as the advisory agency referred to in the Subdivision Map Act.
- (b) For the subdivisions for which parcel maps are required to be submitted under the Subdivision Map Act and Article 15 of this Chapter, the Site Plan Review Committee, as established by 16.2 of Tulare County Ordinance 352, as amended, is designated as the advisory agency referred to in said requirements.

**7-01-1015 OFFICERS: GENERAL AREAS OF RESPONSIBILITY:**

(a) The Planning and Development Director shall be responsible for processing subdivisions, for notifying and furnishing information to interested persons and agencies; for coordination of review and decision making and the provision of information regarding the status of all applications and permits for residential developments, as required by Government Code 65913.3; for coordination, accumulation, and presentation of data to the appropriate advisory agencies and the Board of Supervisors; for making recommendations relating to the overall design of subdivisions; for assuring compliance with the provisions of this Chapter and the Subdivision Map Act; and for making recommendations with regard to soil conditions that may lead to structural damage to buildings.

(b) The Public Works Director shall be responsible for making recommendations pertaining to road and utility locations and improvements, drainage improvements necessary to protect roads, easements, lots and adjacent properties; and making recommendations pertaining to the grading, stability, and erosion control of soil.

(c) The County Health Officer shall be responsible for making recommendations pertaining to water supply, solid and liquid waste disposal, and other matters affecting the general health of the public.

(d) The County Fire Warden shall be responsible for making recommendations pertaining to fire prevention and means for protection from fire.

(e) The Public Works Director, County Health Officer, and County Fire Warden shall submit their recommendations to the Planning and Development Director for submission to the appropriate advisory agency and Board of Supervisors. Each of said officers shall be responsible for making necessary inspections, with regard to the matters for which they are responsible, to assure compliance with the requirements of this Chapter, the Subdivision Map Act, and the conditions of approval.

**7-01-1020 DEFINITIONS:**

The definitions set forth in the following shall supplement the definitions set forth in the Subdivision Map Act and shall apply throughout this Chapter.

**7-01-1025 "ALLEY":**

"Alley" means a way permanently reserved primarily for vehicular service access to the rear or side of properties which also abut on a street.

**7-01-1030 "BLOCK":**

"Block" means a parcel of subdivided land bounded by streets or by streets and rights of way, unsubdivided lands, drainage channels or watercourses.

**7-01-1035 "CUL DE SAC":**

"Cul de sac" means a street which connects with another street only at one end and has a turnaround at the other end.

**7-01-1040 "DRIVEWAY":**

"Driveway" means a private vehicular access that serves no more than two buildings, with no more than three (3) dwelling units on one parcel, and any number of accessory buildings.

**7-01-1045 "FLOODWAY":**

"Floodway" means the same as that term is defined in 7-27-1010 of Chapter 27 of this Part.

**7-01-1050 "FRONTAGE STREET":**

"Frontage street" means a street which is parallel to and adjacent to a limited access highway or freeway, and which provides access to abutting properties while relieving them of the effects of heavy volumes of fast, through traffic.

**7-01-1055 "FUEL BREAK":**

"Fuel break" means a strip of land, varying in width depending on the fire hazard condition, that separates a community or cluster of structures from the native vegetation. All of the vegetation in such a strip need not be removed but may be thinned out or landscaped to reduce the volume of fuel so that a fire burning into the strip can be more readily controlled.

**7-01-1060 "GREENBELT":**

"Greenbelt" means any facility or land use, designed for a use other than fire protection, which will slow or resist the spread of a wildfire and includes maintained parking lots, irrigated or landscaped areas, golf courses, parks, playgrounds, maintained vineyards, orchards or farmed fields where annual crops do not cure in the field or any other similar use which the body which takes final action on the tentative map determines to be sufficiently resistant to the spread of wildfire.

**7-01-1065 "HAMMERHEAD 'T'":**

"Hammerhead 'T'" means a street or road that provides a "T" shaped three-point turnaround space for emergency equipment, being no narrower than the street or road that serves it.

**7-01-1070 "LOT":**

"Lot" means a parcel of subdivided land under one ownership used or susceptible of being used in accordance with the regulations of this Chapter and in accordance with the regulations of the applicable zoning ordinances of the County.

**7-01-1075 "MOUNTAINOUS AREA":**

"Mountainous area" means any area which is above 1,500 feet elevation according to United States Geological Survey Datum and any area below 1,500 feet elevation if more than fifty percent (50%) of the area included in the tentative map is composed of natural terrain having slopes in excess of twenty percent (20%).

**7-01-1080 "OPEN SPACE":**

"Open space" means any land designated for use for public or private recreational activities such as parks, playgrounds, golf courses, camping or picnic grounds, water courses or lakes, and forest preserves, or any other similar use which the body which takes final action on the tentative map determines to be sufficiently similar to such uses. Land shall not constitute "open space" unless the body which takes final action on the tentative map has satisfactory assurance of the continued use of the property as open space for a reasonable period of time, but not less than twenty (20) years, by reason of the fact that fee title, or an easement, leasehold or managerial interest, has been or will be conveyed to the Federal or State Government or any agency or political subdivision thereof, or to an association of home owners.

**7-01-1085 "PEDESTRIANWAY":**

"Pedestrianway" means a way designed for use by pedestrians which is not intended for use by automotive vehicles and which is not located within a street right of way.

**7-01-1090 "PLANTING STRIP":**

"Planting strip" means a strip between the sidewalk, where provided, and the street right of way line, or between the pavement of a frontage street and the limited access highway or freeway which it parallels, which is intended to be planted with trees or otherwise landscaped.

**7-01-1095 "REVERSED CORNER LOT":**

"Reversed corner lot" means a corner lot the side line of which is substantially the continuation of the front property line of the first lot to its rear.

**7-01-1100 "ROAD":**

"Road" means a vehicular access to more than one parcel; vehicular access to any commercial or industrial occupancy on one or more parcels; or vehicular access to a single parcel with more than two buildings or four or more dwelling units.

**7-01-1105 "ROADWAY":**

"Roadway" means any surface designed, improved, or ordinarily used for vehicular access or travel.

**7-01-1110 "SAFETY AREA":**

"Safety area" means an area or block of land on which the flammable fuel has been removed or permanently modified so as to make the area safe from fire. Open spaces, centrally located within a subdivision, such as parks, golf courses, green meadows, lakes with landscaped shorelines or other similar recreation or green belt areas may constitute a "safety area."

**7-01-1115 "SELECTED FLOOD LINE":**

"Selected flood line" means any one or more of the following flood lines, as they exist on September 29, 1986, and as they may be amended from time to time:

(a) The flood line established pursuant to the Zoning Ordinance, designating that portion of the flood plain area of a river or stream which is within the F I Zone.

(b) The flood line established on the Flood Insurance Rate Map (FIRM), the official map on which the Federal Emergency Management Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to Tulare County pursuant to the National Flood Insurance Act.

(c) The flood line established on the Flood Boundary Floodway Map, the official map on which the Federal Emergency Management Administration has delineated both the areas of flood hazard and the floodway pursuant to the National Flood Insurance Act.

(d) The flood line established on the Designated Floodway Map, the official map adopted by the Reclamation Board of the State of California when acting within its jurisdiction. Where there is conflict between flood lines so established, the line which encompasses the most area shall be deemed the "Selected Flood Line" for the purpose of this Chapter.

**7-01-1120 "SIDEWALK":**

"Sidewalk" means a way designed for use by pedestrians which is located within a street right of way.

**7-01-1125 "STATE RESPONSIBILITY AREA":**

"State Responsibility Area" means that area or those areas within the definition of a "State Responsibility Area" as set forth in the Zoning Ordinance of Tulare County, Tulare County Ordinance No. 352, as amended from time to time.

**7-01-1130 "STREET":**

"Street" means a road as defined in this article.

**7-01-1135 "STUBBED STREET":**

"Stubbed street" means a street which connects with another street only at one end and is intended to be extended or continued to serve future subdivisions on adjacent lands.

**7-01-1140 "THOROUGHFARE":**

"Thoroughfare" means a roadway except a driveway as defined in this Article.

**7-01-1145 "TURNAROUND":**

"Turnaround" means a street or road, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment.

**7-01-1150 "TURNOUT":**

"Turnout" means a widening in a street or road to allow vehicles to pass.

**7-01-1155 STREETS AND ROADS: DEFINITIONS:**

The following definitions shall apply to the streets and roads referred to in this Chapter:

(a) "Class 1 Road" means a cul de sac or minor residential street so designed that it cannot serve more than fifty (50) lots, and the primary function of which is to provide access to abutting property.

(b) "Class 2 Road" means a minor residential street so designed that it cannot serve more than one hundred twenty (120) lots, and the primary function of which is to provide access to abutting property.

(c) "Class 3 Road" means a minor residential collector street that has, or is expected to have, the dual purpose of providing access to abutting property and of carrying traffic from Class 1 and Class 2 Roads to Select System roads.

(d) "Select System Road" means a State Highway, Federal Aid Secondary Route, or an arterial or collector road which is existing or proposed, which has been designated for inclusion in the Select System by the Board of Supervisors with the approval of the State Division of Highways.

**7-01-1160 DETERMINING ACREAGE AND AREA:**

Unless otherwise stated, all acreage and lot area figures used in this Chapter refer to gross acreage or lot area, which includes the entire parcel being considered, including all areas subject to easements for roads or other purposes. In any section where net acreage or lot area is referred to, any portion of the property which is subject to public or private easements that limit the free use of the property including, but not limited to, public and private road easements, and easements for irrigation and storm drainage ditches and pipelines, shall be excluded when determining the acreage or lot area.

**ARTICLE 3. DESIGN AND IMPROVEMENT REGULATIONS**

**7-01-1210 ZONING ORDINANCES:**

A subdivision map shall conform to all zoning ordinances set forth in this Ordinance Code and Ordinance No. 352, with respect to uses of land, lot sizes and dimensions, space for off-street parking and off street loading areas and all other applicable regulations.

**7-01-1215 REMAINDER PARCELS:**

Except as otherwise expressly provided, all of the provisions and requirements of this Article shall be applicable to designated remainder parcels as well as to other lots in a subdivision.

**7-01-1220 IMPROVEMENTS: SUPPLEMENTAL SIZE, CAPACITY OR NUMBER:**

Pursuant to section 66485 of the Government Code of the State of California, a subdivider may be required to install improvements for the benefit of the subdivision which contain supplemental size, capacity or number for the benefit of property not within the subdivision and required to dedicate such improvements to the County. In such cases an agreement between the County and the subdivider shall be entered into pursuant to section 7-01-2065 of this Chapter.

**7-01-1225 STREETS: RIGHTS OF WAY AND IMPROVEMENTS:**

Rights of way for streets, cul de sacs and alleys shall be provided, and all street improvements shall be constructed, in accordance with the requirements of this Chapter and the improvement standards referred to in section 7-01-2025 of this Chapter. Rights of way and improvements may be required inside and outside the subdivision.

**7-01-1230 SAME: INDUSTRIAL STREETS:**

The geometric design of roads in areas zoned for industrial uses shall be based upon the specific traffic requirements of the area served, but shall have the following minimums:

|                     |         |
|---------------------|---------|
| Travel lane widths  | 12 feet |
| Parking lane widths | 10 feet |
| Border widths       | 8 feet  |

The design velocity, maximum grade, maximum super-elevation and minimum right of way widths shall not be less than those specified for Select System Roads in the improvement standards referred to in section 7-01-2025 of this Chapter.

**7-01-1235 SAME: CURBS AND GUTTERS:**

In subdivisions which are not in mountainous areas, curbs and gutters shall be required on all lots if a majority of the lots in the subdivision contain less than two and one half (2 1/2) acres and/or have average widths of less than two hundred (200) feet.

**7-01-1240 SAME: SIDEWALKS:**

If all or any portion of the subdivision is located within the boundaries of an urban improvement area, as established by the General Plan, the subdivider shall provide sidewalks along all Select System Roads and Class 3 Roads in the subdivision. In addition, the body which takes final action on the tentative map may require sidewalks along any County road in a subdivision, including subdivisions located outside of said urban improvement areas, if sidewalks are found to be desirable for access to schools, playgrounds, shopping centers, or other community facilities. Sidewalks shall have a minimum width of four (4) feet and shall be contiguous to the curb unless the Public Works Director approves a different location. Sidewalks shall be constructed in accordance with the standards referred to in section 7-01-2025 of this Chapter.

**7-01-1245 SAME: ROAD WIDTHS:**

Road widths shall comply with the applicable geometric sections shown in the improvement standards referred to in section 7-01-2025 of this Chapter.

**7-01-1250 SAME: DESIGN SPEEDS AND SUPER ELEVATIONS:**

(a) The minimum design speed for streets shall comply with the applicable design velocities shown in the improvement standards referred to in section 7-01-2025 of this Chapter.

(b) Superelevations of subdivision streets shall comply with the criteria in the improvement standards referred to in section 7-01-2025 of this Chapter.

**7-01-1255 SAME: GRADES:**

(a) In mountainous areas which are above three thousand (3,000) feet in elevation, the maximum grades on Class 1, 2 and 3 Roads shall be ten percent (10%). However, in very difficult terrain, grades may be allowed up to a maximum of twelve percent (12%) for short distances on Class 1 Roads with the approval of the County Road Commissioner.

(b) In mountainous areas which are below three thousand (3,000) feet in elevation, the maximum grades shall be fifteen percent (15%) for Class 1 Roads, twelve percent (12%) for Class 2 Roads, and ten percent (10%) for Class 3 Roads.

(c) In subdivisions which are not in mountainous areas, the maximum grades shall be as shown in the improvement standards referred to in section 7-01-2025 of this Chapter. The minimum grades shall not be less than fifteen one hundredths of one percent (0.15%).

**7-01-1260 SAME: CORNERS:**

Property line return radii shall be a minimum of ten (10) feet except in mountainous areas where the minimum radii shall be twenty (20) feet.

**7-01-1265 STREETS: DESIGN:**

(a) Street intersections shall be as near right angles as practicable and in no case shall the angle of intersection be less than seventy (70) degrees.

(b) Streets located on opposite sides of an intersecting street shall have their center lines directly opposite each other where physically possible; otherwise the center lines shall be separated by not less than one hundred fifty (150) feet.

(c) Subdivision streets which constitute continuations of streets in contiguous territory shall be aligned so that their center lines coincide. In cases where straight continuations are not physically possible, center lines shall be continued by curves.

(d) The bottom surface of the base course of any street located within selected flood lines which is necessary to provide access to the subdivision shall be at least one (1) foot above the elevation of the selected flood unless flood control devices approved by the Tulare County Flood Control District will provide protection for such streets or unless, in the opinion of the County Public Works Director, such streets are adequately protected from appreciable flood damages or there is no necessity for flood protection.

(e) In mountainous areas, if a Class 1 or Class 2 Road intersects a Class 3 Road, and adequate signs for a full stop will be provided by the subdivider, the radius of curvature and the sight distance for the Class 1 or Class 2 Road may be fifty (50) feet and eighty five (85) feet, respectively, within one hundred fifty (150) feet of the intersection.

(f) The centerline grades of intersecting streets shall not exceed six percent (6%) for a distance of fifty (50) feet from the point of intersection on Class 1 and 2 Roads and seventy (70) feet on Class 3 Roads.

**7-01-1270 STREETS IN SUBDIVISIONS ADJOINING UNSUBDIVIDED LAND:**

(a) If a subdivision adjoins unsubdivided land, streets which may be extended in the event of the subdivision of the adjoining land shall be provided to the boundary line of the subdivision. On the final map, a single lot shall be shown across the end of such street, contiguous and parallel to the unsubdivided land, and said lot shall be one (1) foot wide and run the full width of the street. Fee title to said lot shall be conveyed to the County at the time the final map is recorded. The deed conveying said lot to the County shall be in a form approved by the County Counsel which shall be adequate to prevent the person owning the unsubdivided land adjoining the subdivision from having access to said street until the land required to extend said street is acquired by the County. Said deed shall also provide for the automatic transfer of the County's interest in said lot, except for an easement for street purposes, to the appropriate lot owners in the subdivision when the land required to extend said street is acquired.

(b) If a street is located adjacent and parallel to the boundary line of a subdivision, the subdivider may dedicate one half (1/2) of the right of way and install all required improvements in the right of way dedicated. On the final map the subdivider shall designate a single lot running the entire length of such street, contiguous and parallel to the unsubdivided land, which shall be one (1) foot in width. Fee title to said lot shall be conveyed to the County at the time the final map is recorded. The deed conveying said lot to the County shall be in a form approved by the County Counsel which shall be adequate to prevent the person owning the unsubdivided land adjoining the subdivision from having access to said street until the land required to widen said street is acquired by the County. Said deed shall also provide for the automatic transfer of the County's interest in said lot, except for an easement for street purposes, to the appropriate lot owners in the subdivision when the land required to widen said street is acquired by the County.

(c) None of the other provisions of this Chapter which govern the size or shape of lots, or are otherwise applicable to lots, shall apply to the lots to be conveyed to the County pursuant to this section. Said lots shall be lettered consecutively commencing with the letter "A."

**7-01-1275 RESERVE STRIPS:**

Reserve strips controlling access to and from streets, alleys and pedestrianways shall not be permitted except as provided in section 7-01-1270 of this Chapter.

**7-01-1280 CUL DE SACS:**

(a) In subdivisions which are not in mountainous areas, cul de sacs shall not exceed six hundred sixty (660) feet in length and shall terminate with a circular turnaround constructed in accordance with the improvement standards referred to in section 7-01-2025 of this Chapter.

(b) In mountainous areas, cul de sacs shall not exceed one thousand (1,000) feet in length. The minimum radius of the right of way of the cul de sac shall be forty five (45) feet and the minimum radius of the paved portion shall be thirty seven (37) feet. The minimum distance from the centerline of the road to the edge of the right of way shall be twenty (20) feet. The sight distance shall be a minimum of eighty five (85) feet within one hundred fifty (150) feet of the center of the bulb.

(c) The maximum paved slope across the bulb of a cul de sac shall be six percent (6%).

**7-01-1285 STUBBED STREETS:**

Stubbed streets shall be completely improved to the boundary of the subdivision. The boundaries of the subdivision shall not be distorted for the purpose of eliminating stubbed streets. In State Responsibility Areas, temporary turnabouts with a pavement radius of forty (40) feet shall be constructed on stubbed streets which are more than one (1) lot in length. In all other areas, temporary turnabouts with a pavement radius of thirty (30) feet shall be constructed on stubbed streets which are more than one (1) lot in length.

**7-01-1290 FRONTAGE STREETS:**

Parallel to a limited access highway or freeway, a frontage street, separated from the limited access highway or freeway by a planting strip, shall be required for access to a contiguous subdivision. Such frontage streets will not be required when the lots of the subdivision adjacent to the limited access highway or freeway are oriented so as to back into said highway or freeway and a waiver of access rights to said highway or freeway has been acquired by a public agency or such access rights are waived in an appropriate certificate on the final map.

**7-01-1295 PRIVATE STREETS AND ALLEYS:**

Private streets and alleys shall be improved by the subdivider to the same standards as public streets and alleys, in accordance with the standards referred to in section 7-01-2025 of this Chapter.

**7-01-1300 PRIVATE STREETS AND ALLEYS: MAINTENANCE:**

When required by the General Plan or any specific or community plan, the subdivider shall make provision through recorded covenants running with the land, irrevocable trusts, or other method approved by the Board of Supervisors, for the future maintenance and repair of all private streets, alleys, and other private vehicular access easements required by this Chapter. Such maintenance and repair shall be in accordance with the standards applied at the time the subdivision was approved. If the method used requires agreement or acceptance by the Board of Supervisors, the Board may, by resolution, authorize the Public Works Director and duly authorized employees in his office to execute such agreement or signify such acceptance. The Board of Supervisors shall approve a form agreement or acceptance for this purpose.

**7-01-1305 STREET NAMES AND NUMBERS:**

Street names and numbers shall conform to the Specific Plan of Street Names and Numbers and House Numbers.

**7-01-1310 ALLEYS:**

(a) Alleys of thirty (30) feet or more in width may be required at the rear of lots in areas zoned for commercial or industrial use.

(b) In subdivisions not zoned for commercial or industrial use, alleys of twenty (20) feet or more in width may be required.

(c) Alleys shall be constructed in accordance with the standards referred to in section 7-01-2025 of this Chapter.

(d) If two (2) alleys intersect, the corners shall be cut either on a twenty (20) foot radius to which the lot boundaries are tangent or on a straight line connecting points on both lot lines fifteen (15) feet from the corner of the lot at the intersection of the alleys.

**7-01-1316 BICYCLE PATHS:**

In accordance with section 66475.1 of the Government Code of the State of California, if any subdivision contains two hundred (200) or more lots, and if the subdivider is required to dedicate roadways to the public, he may also be required to dedicate such additional land as may be necessary and feasible to provide bicycle paths for the use and safety of the residents of the subdivision.

**7-01-1320 GENERAL REQUIREMENTS FOR LOTS:**

- (a) No lot shall be divided by the boundary line of a county, city, school district, or any other taxing district.
- (b) In a subdivision in which the lots may be resubdivided at some future time, the location of lot lines and other details of layout shall be such that resubdivision may readily take place without violating the requirements of this Chapter or the Zoning Ordinance and without interfering with the orderly extension of adjacent streets.
- (c) All lots shall be adequately drained and sloped in such a manner that surface water is conducted to underground drains, drainage channels or gutters approved by the Public Works Director.
- (d) Double frontage lots shall not be permitted except where necessary to prevent residential development from fronting on a major street, a limited access highway or a freeway or where necessitated by topographic or other physical conditions.
- (e) Reversed corner lots shall not be permitted except when they contribute to the proper design and function of a subdivision or when necessary because of topographies or other physical conditions.

**7-01-1325 LOTS: SIZE AND SHAPE: GENERAL PROVISIONS:**

In addition to the other provisions of this Article governing the size and shape of lots, the following general provisions shall be complied with:

- (a) The size and shape of lots shall be appropriate for the locality in which the subdivision is situated, the topography of the land and the proposed use. The body which takes final action on the tentative map, pursuant to section 7-01-1745 of this Chapter, may require the size and shape of lots to be adjusted if said body determines that the above criteria have not been complied with.
- (b) When computing the required minimum area of lots, any portion of a lot which is within an F I Zone which is not combined with another zone shall not be included.
- (c) If sewage disposal is to be provided by individual septic systems, regardless of the means of providing water to the lots, the net acreage or area shall be used when computing the acreage or area of the lot.

**7-01-1330 LOTS: SIZE: MOUNTAINOUS AREAS:**

The minimum lot sizes for single family dwelling units for subdivisions in mountainous areas shall be based on the Slope Area Diagram (Plate 1).

When computing the minimum lot sizes pursuant to the Slope-Area Diagram (Plate 1), the subdivision shall be divided into separate areas which have generally similar soil characteristics and generally similar slopes. Then the determination of soil type, pursuant to section 7-01-1335 of this Article, and the computation of the percentage of slope, pursuant to section 7-01-1340 of this Article, shall be computed separately for each of said areas and the Slope-Area Diagram (Plate 1) shall then be applied separately to each area to determine the lot size applicable within that area. If the entire subdivision has generally similar soil characteristics and slope, then the entire subdivision may be considered as a single area for the purpose of making such computations. If the Director of Planning determines that the subdivider is not making a proper division of the subdivision into areas, he may direct the subdivider to make a different division of areas.

**7-01-1335 SAME: DEFINITIONS FOR SLOPE AREA DIAGRAM:**

The following definitions shall govern the use of the diagram set forth in section 7-01-1330 of this Article:

- (a) The term "acceptable soils" means soils having the following characteristics:

- (1) Percolation test results whose rates are between five (5) minutes and sixty (minutes per inch, said percolation tests to be conducted in accordance with procedures and standards established by the Manual of Septic Tank Practice, Public Health Service Publication No. 526 of the Department of Health, Education and Welfare.
  - (2) An average depth of soil mantle of seven (7) feet above bedrock or any underlying saturated zone. The saturated zone is the highest expected water table.
  - (3) The area to be utilized for a disposal field shall not be subject to flooding or ponding by a ten (10) year flood or storm or one of a greater magnitude.
- (b) The term "poor soils" means soils having the following characteristics:
- (1) Percolation test results whose rates are between sixty (60) and one hundred twenty (120) minutes per inch, based on the procedures and standards referred to in subsection (a) above.
  - (2) An average depth of soil mantle of three (3) to five (5) feet and/or excessive amounts of clay or critically expansive soils.
- (c) The term "questionable soils" means all soils which do not come within the definition of "acceptable soils" or "poor soils."

**7-01-1340 SAME: DIAGRAM: PERCENTAGE OF SLOPE:**

To determine the percentage of slope, for use in the diagram set forth in section ~~7-01-1330~~ of this Article, the contour measurement method shall be used. The following formula shall be used to determine the average terrain slope of a given area:

$$S = \frac{2.29 \times 10^{-3} IL}{A}$$

- S = Average slope of terrain in percent.
- A = Total number of acres in given area.
- L = Length of contour lines in scaled feet.
- I = Vertical distance of contour interval in feet.

**7-01-1345 SAME: DIAGRAM: COMMUNITY SEWAGE SYSTEMS:**

When a community sewage system is to be provided in a subdivision in a mountainous area, the minimum lot size may be reduced down to, but not beyond, the minimum lot area prescribed by Line No. 1 in the diagram set forth in section ~~7-01-1330~~ of this Article.

**7-01-1350 LOTS: SIZE: NON MOUNTAINOUS AREAS:**

For subdivisions which are not in mountainous areas, the lot sizes shall not be less than the minimums specified in the Zoning Ordinance and they shall comply with the minimum requirements in this section as well. The minimum lot area shall be eight thousand square feet (8,000) if water is provided by individual wells and sewage disposal is provided by a community system. The minimum lot area shall be twelve thousand five hundred (12,500) square feet if sewage disposal is provided by individual systems on the lots and water is provided by a community system. If both water and sewage disposal are provided by individual systems on the lots, the minimum lot area shall be one (1) acre. If both water and sewage disposal are provided by means of community systems, the minimum lot area shall be six thousand (6,000) square feet for interior lots and seven thousand (7,000) square feet for corner lots. These minimum lot areas are based on the subdivision having an adequate soil mantle depth and soil permeability, and larger lots shall be required when the subdivision does not meet any of these qualifications.

**7-01-1355 LOT WIDTHS AND DEPTHS:**

(a) The average width of each lot shall conform to the requirements of the Zoning Ordinance in zoned areas. If the average lot width is not specifically stated in the Zoning Ordinance, the average width of each interior residential lot shall be not less than sixty (60) feet and the average width of each corner residential lot shall be not less than seventy (70) feet.

(b) The average depth of each residential lot shall be not less than one hundred (100) feet. The average depth of each residential lot shall be not more than one hundred fifty (150) feet if the area of the lot is less than eight thousand (8,000) square feet.

(c) Each residential lot shall have a minimum of forty (40) feet frontage on a street.

(d) In mountainous areas, the average lot width shall be at least one fourth (1/4) of the average lot depth. In all other areas, the average lot width shall be at least one-third (1/3) of the average lot depth. The requirements of this subsection shall not be applicable to any lot which is ten (10) acres or more in size.

(e) Lots of the type commonly known as "panhandle," "flag" and "dumbbell" lots, and other lots with extreme variances in width or depth, shall not be permitted unless they are proper under subsection (a) of section 7-01-1325 of this Article. However, panhandle lots shall be allowed in mountainous areas if all of the following requirements are complied with:

(1) One (1) or more of the side or rear lot lines, having a total length of fifty (50) feet or more, are adjacent to an area of open space, as defined in section 7-01-1080 of this Chapter, and said area of open space has a depth of at least three hundred (300) feet measured at right angles from an adjacent lot line.

(2) The subdivider constructs a private access road on the panhandle portion of the lot, which need not be paved, having a minimum width of fifteen (15) feet if serving one (1) lot and a minimum width of twenty (20) feet if serving two (2) or more lots. If there is evidence of excessive clay soils and/or the proposed finished access road will have grades of fifteen percent (15%) or more, the subdivider shall construct a paved surface having a minimum width of ten (10) feet if serving one (1) lot and a minimum width of sixteen (16) feet if serving two (2) or more lots.

(3) Additional fire hydrants will be installed by the subdivider, if found necessary by the County Fire Warden, to provide adequate fire protection to the panhandle lots.

(4) Sufficient evidence is presented to the body that takes final action on the tentative map to establish to their satisfaction that there is no other practical way to develop or use the land involved and that, because of the nature of the topography or extreme irregularities in the boundaries of the subdivision, failure to allow the panhandle lot would deprive the subdivider of beneficial use of the property.

**7-01-1360 LOTS: SIDE LINES:**

The side lines of lots shall run at right angles to the street upon which the lot faces, as far as practicable. However, in mountainous areas, the side lines of lots may be adjusted in order to provide adequate access to lots if approved by the Planning and Development Director.

**7-01-1365 BLOCKS:**

(a) Blocks shall not exceed one thousand three hundred twenty (1,320) feet in length except where necessitated by topographic or other physical conditions. Long blocks shall be provided adjacent to four lane streets in order to reduce the number of intersections.

(b) The depth of blocks shall be sufficient to allow two (2) tiers of lots with rear easements as required, but blocks shall not exceed three hundred (300) feet in depth except where necessitated by topographic or other physical conditions.

**7-01-1370 RAILROADS AND GRADE CROSSINGS:**

(a) If a subdivision adjoins a railroad right of way and the General Plan or the Zoning Ordinance designates the property for industrial use, the streets nearest to and having the same general alignment as the railroad shall be as nearly parallel thereto as practicable and at a sufficient distance therefrom to provide suitable depth for industrial sites between the street and the railroad.

(b) If a subdivision adjoins a railroad and the street layout involves a railroad grade crossing, the possibility of a grade separation or other treatment shall be considered, and the plan of the subdivision may be required to conform to prescribed conditions in anticipation of a grade separation or other treatment.

**7-01-1375 DRAINAGE:**

(a) The subdivider shall provide structures with storm sewers and drainage channels necessary for adequate drainage of surface and storm waters generated by the subdivision or flowing across the subdivision. Disposal of surface and storm waters into drainage wells, drainage lines or into leaching lines of individual sanitary sewage disposal systems shall not be permitted. Except in areas located within selected flood lines, the design of drainage facilities shall be based on the ten (10) year storm and approved by the Public Works Director prior to the commencement of construction.

(b) If the subdivision is traversed by watercourses, channels, streams or creeks for which floodways or selected flood lines have not been established, the subdivider shall dedicate rights of way or easements for storm drainage purposes conforming substantially with the lines of such watercourses, channels, streams or creeks, if he has sufficient title to make such conveyances, and shall dedicate such additional rights of way as shall be required by the Public Works Director for structures or channel changes or both to dispose of surface and storm waters.

(c) If all or a portion of the subdivision is located within the boundaries of a PD F, Planned Development Foothill Zone, established pursuant to the Zoning Ordinance, and the final geological-hydrological report indicates the presence of slopes in excess of fifteen percent (15%) and/or soils characterized by slow infiltration rates and high runoff potential, the subdivider shall provide drainage structures designed to detain the stormwater generated by the subdivision within the subdivision site in order to prevent potential erosion, sedimentation and flooding.

**7-01-1380 SAME: PONDING LOTS:**

(a) If it is not feasible to provide for an adequate system of drainage outside of the subdivision, a ponding lot or lots shall be required within the subdivision to provide for drainage of surface and storm waters generated in the subdivision or flowing across the subdivision. The ponding lot or lots shall be located adjacent to the probable route of any drainage facility that might be constructed in the future in order to facilitate connection to such drainage facility when it is constructed.

(b) The area of the ponding lot or lots shall be established on the basis of one (1) subdivision lot for each twenty (20) lots in the subdivision if the subdivision lots average one half (1/2) acre or less in area, and one (1) lot for each thirty (30) lots in the subdivision if the subdivision lots average more than one half (1/2) acre in area. In determining the number of subdivision lots to be dedicated as a ponding lot or lots, the above computations shall be adjusted to the nearest full subdivision lot. The subdivision lot or lots provided shall have an area equal to or greater than the average area of all the lots in the subdivision.

(c) Ponding lots shall have one and one half (1/2) feet of freeboard, a maximum water depth of three (3) feet and a water surface elevation of one half (1/2) foot below the grate flow line of the lowest catch basin in the system. Ponding lots shall be constructed in accordance with the improvement standards referred to in section 7-01-2025 of this Chapter.

(d) The subdivider shall convey an easement to the County for the use of said ponding lot or lots, or he may convey fee title to the County if he prefers.

**7-01-1385 FIRE PROTECTION:**

- (a) Fire Hydrants shall be provided in a subdivision if the lots are served by a community water system. The hydrants shall be designed and constructed in accordance with the standards for water systems referred to in section 7-01-2025 of this Chapter.
- (b) Fuel breaks and safety areas may be required by the body which takes final action on the tentative map, pursuant to section 7-01-1745 of this Chapter, in potential fire hazard regions, as designated by the County Fire Chief. Provision for adequate maintenance of fuel breaks and safety areas shall be provided by the subdivider prior to the approval of a final map.
- (c) Subdivisions located in potential fire hazard regions, as designated by the County Fire Chief, shall have two (2) access routes.
- (d) If a greenbelt or greenbelts are proposed as part of a subdivision, the greenbelt or greenbelts shall be located so as to serve as a separation area between wild land fuels and structures. The location of the greenbelt or greenbelts shall be approved by the Fire Chief.
- (e) If a subdivision is proposed in a State Responsibility Area and a fire hydrant or fire hydrants are not required, an approved water supply meeting the requirements of NFPA 1142 shall be provided.

(Amended by Ord. No. 3407, effective 6-3-10)

**7-01-1390 SEWAGE DISPOSAL: SANITARY SEWER SYSTEM:**

All lots within a subdivision shall be connected to a sanitary sewer system operated by a political subdivision if the trunk line or other access point is located within one thousand three hundred twenty (1,320) feet of any portion of the subdivision. However, such connection to a sanitary sewer system shall not be required if the political subdivision will not allow the connection or if the political subdivision will not make satisfactory arrangements with the subdivider for reimbursement to the subdivider for additional connections to the sewer line by other property owners outside of the subdivision. If sewage disposal is to be provided pursuant to this section, the governing board controlling the sewer system shall submit a letter to the Planning and Development Director indicating the ability of the system to handle sewage from the subdivision and that satisfactory arrangements have been made with the subdivider for connection to the system.

**7-01-1395 SEWAGE DISPOSAL: SEPTIC TANKS:**

If connection to a sanitary sewer system is not required under section 7-01-1390 of this Article, provision shall be made for adequate sewage disposal by the installation of individual sewage disposal systems, such as septic tanks and leach lines, unless the body taking final action on the tentative map determines that such a method of sewage disposal will not be adequate for the subdivision or would be in violation of the Subdivision Map Act. A letter shall be submitted by the County Health Department certifying that field investigation, and the tests and reports submitted by the subdivider, show that ground slopes and soil conditions will allow satisfactory sewage disposal by this method, with the lot arrangement and the sizes as set forth on the subdivision map. Individual sewage systems shall comply with all applicable provisions of Chapter 13 (commencing with section 4-13-1000) of Part IV of this Ordinance Code and, to protect water quality and public health, shall comply with the following setback requirements:

**SETBACK REQUIREMENTS IN FEET**

| Facility                  | Drainage Course, Ditch or Ephemeral Stream (a) | Cut or Fill Bank |
|---------------------------|--|------------------|
| Septic tank or sewer line | 25   | 10               |
| Leaching field            | 50   | (b)              |
| Seepage Pit               | 50   | (b)              |

| Facility                  | Property Line (c) | Lake or Reservoir (d) |
|---------------------------|-------------------|-----------------------|
| Septic tank or sewer line | 25                | 50                    |
| Leaching field            | 50                | 200                   |
| Seepage Pit               | 75                | 200                   |

- (a) As measured from the edge of the drainage course, ditch or stream.
- (b) Distance in feet equals four (4) times the vertical height of the cut or fill bank. Distance is measured from the top edge of the bank or the toe edge of the fill.
- (c) This distance shall be maintained when individual wells are to be installed and the County Health Officer determines that the minimum distance between waste disposal and wells cannot be assured.
- (d) As measured from the high water line.

**7-01-1400 SAME: COMMUNITY DISPOSAL SYSTEM:**

If connection to a sanitary sewer system is not required under section 7-01-1390 of this Article, and if the body which takes action on the final map determines that individual sewage disposal systems shall not be used pursuant to section 7-01-1395 of this Article, then the subdivider shall construct a community disposal system. Plans for such sewage systems shall be submitted to the County Health Department for approval. Construction shall not be commenced upon any such system until all portions of the system have been approved, in writing, by the County Health Department and until provision has been made for maintenance of the system after it is constructed.

**7-01-1405 SEWAGE SYSTEMS: SIZE REQUIREMENTS:**

In cases where individual sewage systems are proposed, the absorption field shall be calculated by the following two tables:

TABLE 1. ABSORPTION AREA REQUIREMENTS FOR INDIVIDUAL RESIDENCES (a)

| Percolation rate (time required for water to fall one (1) inch) (e) | Required absorption area in square feet per bedroom (b), standard trench (c), seepage beds (c), and seepage pits (d) |
|---|--|
| 5 minutes   | 125 square feet  |
| 10 "  | 165 " "  |
| 15 "  | 190 " "  |
| 30 (f) "  | 250 " "  |
| 45 (f) "  | 300 " "  |
| 60(f)(g) "  | 330 " "  |

- (a) Regardless of any other provisions of this Chapter establishing minimum parcel size, the minimum size of every lot must be sufficient in area for an entirely new absorption system to be constructed in the future if the original system should fail.
- (b) In every case, sufficient land area shall be provided for the number of bedrooms (minimum of two (2)) that can be reasonably anticipated, including the unfinished space available for conversion into additional bedrooms.

- (c) Absorption area is figured as trench bottom area and includes a statistical allowance for vertical side wall area.
- (d) Absorption area for seepage pits is figured as effective side wall area beneath the inlet.
- (e) If the percolation rate is not shown on this Table, the required absorption area shall be determined by using a straight line interpolation of absorption area requirements as set forth in the Manual of Septic Tank Practices, Public Health Service Publication No. 526 of the Department of Health, Education and Welfare.
- (f) Unsuitable for seepage pits if over thirty (30) minutes per inch. A special design system is required.
- (g) Unsuitable for absorption system if over sixty (60) minutes per inch. A special design system is required.

TABLE 2. ALLOWABLE REDUCTION BY PERCENTAGE OF LENGTH OF STANDARD LEACH LINE TRENCH (a)

| Depth of gravel below pipe in inches (a) | Trench width 18" | Trench width 24" | Trench width 36" | Trench width 48" | Trench width 60" |
|--|------------------|------------------|------------------|------------------|------------------|
| 18"                                      | 64%(b)           | 66%(b)           | 71%(b)           | 75%(b)           | 78%(b)           |
| 24                                       | 54               | 57               | 62               | 66               | 70               |
| 30                                       | 47               | 50               | 55               | 60               | 64               |
| 36                                       | 41               | 44               | 50               | 54               | 58               |
| 42                                       | 37               | 40               | 45               | 50               | 54               |

- (a) The "standard" leach line trench which serves as the standard for this chart is one in which the filter material extends two (2) inches above and twelve (12) inches below the pipe.
- (b) This is the percentage of the required length of the standard trench.

For leach line trenches or seepage beds having widths not shown in Table 2, the percent of length of standard leach line trench shall be computed as follows:

Percent of length standard leach line trench =

$$\frac{w + 2}{w + 1 + 2d} \times 100$$

Where w = width of leach line trench in feet

d = depth of gravel below pipe in feet

**7-01-1410 SAME: SPECIAL DESIGN SEWAGE SYSTEMS:**

- (a) A special design sewage disposal system is one which exceeds or varies significantly from the criteria set forth in the Uniform Plumbing Code. The following procedures and criteria are applicable for special design sewage disposal systems where the soil conditions, hydrology, topography or ultimate use precludes compliance with the minimum requirements for on lot sewage disposal, including any of the following conditions:

- (1) Percolation rates slower than sixty (60) minutes per inch for disposal fields, slower than thirty (30) minutes per inch for seepage pits, or rates faster than five (5) minutes per inch. Percolation rates greater than one hundred twenty (120) minutes per inch are not suitable for in ground percolation systems.
  - (2) Installations on slopes greater than thirty percent (30%).
  - (3) Ground water table less than five (5) feet below the leaching trench.
  - (4) For any use other than single family residential use.
- (b) Special design systems shall be prepared by a registered civil engineer, registered engineering geologist, registered sanitarian, or other competent persons who are registered professionals knowledgeable and experienced in the field of sewage disposal system design and installation. All special design disposal system plans, specifications and engineering data shall be submitted to the County Health Department for review, evaluation and final approval.
- (c) A plot plan of the proposed special design system shall be filed in triplicate and shall include the following data.
- (1) Assessor's parcel number.
  - (2) Address of property, with sufficient information to accurately locate the property on the soils map of Tulare County.
  - (3) Owner's address and telephone number.
  - (4) Name of the individual or firm designing the plan, address and telephone number.
  - (5) Plot plan of site indicating north arrow, location of proposed improvements on property (dwelling, driveways, walks, water, gas lines, other structures) and location of all existing wells and sewage disposal systems, if any are located on adjacent property within fifty (50) feet of the property lot line.

**7-01-1415 DOMESTIC WATER: MEANS OF SUPPLYING:**

Provisions shall be made for providing an adequate and safe supply of water to all lots in the subdivision and no tentative subdivision map shall be approved unless there is assurance of such an adequate and safe supply of water. Subject to the requirements of section 7-01-1420 and 7-01-1425 of this Article, water may be supplied by one of the following means:

- (a) Connection to a public utility, in which case a letter from the public utility company shall be submitted to the Planning Director indicating its ability to serve the proposed subdivision.
- (b) Establishment of a mutual or private water system subject to approval by the County Health Department of the quality and safety of the proposed water supply.
- (c) Service from individual wells or springs which have been approved by the County Health Department as to the quality and safety of the proposed supply.

The water systems shall be designed and installed in accordance with the standards referred to in section 7-01-2025 of this Chapter.

**7-01-1420 SAME: PLANNED DEVELOPMENT FOOTHILL ZONE AND MOUNTAINOUS AREAS:**

- (a) If any lot in the subdivision is less than five (5) acres in size, and all or a portion of the subdivision is in a mountainous area, domestic water for the subdivision shall be supplied only by the means set forth in subsection (a) or in subsection (b) of section 7-01-1415 of this Article, and water shall not be supplied from individual wells or springs pursuant to subsection (c) of section 7-01-1415.

(b) Regardless of the provisions of subsection (a) of this section, if any lot in the subdivision is less than ten (10) acres in size, and all or a portion of the subdivision is within the boundaries of the PD F, Planned Development Foothill Zone, established pursuant to the Zoning Ordinance, domestic water for the subdivision shall be supplied only by the means set forth in subsection (a) or in subsection (b) of section 7-01-1415 of this Article.

**7-01-1425 SAME: NON MOUNTAINOUS AREAS:**

The domestic water for subdivisions which are not in mountainous areas shall be supplied by the means set forth in subsection (a) or in subsection (b) of section 7-01-1415 of this Article. Domestic water may be supplied by means of wells or springs on individual lots only under the following circumstances:

(a) If all of the lots in the subdivision are to be one (1) acre or more, water may be supplied from wells or springs on individual lots, pursuant to subsection (c) of section 7-01-1415 of this Article, if the body which takes final action on the tentative map, pursuant to section 7-01-1745 of this Chapter, finds, on evidence submitted by the subdivider and the County Health Department, that an adequate supply of potable water is available and can be obtained from wells or springs for all lots in the subdivision and, if individual sewage disposal systems will be used, that such individual sewage disposal systems will be located and constructed so as not to contaminate any existing or proposed well or any existing stream or underground water supply on the property to be subdivided or adjoining property.

(b) If any of the lots in the subdivision are to be less than one (1) acre, water may be supplied from wells or springs on individual lots, pursuant to subsection (c) of section 7-01-1415 of this Article, only if sewage disposal is provided by a sanitary sewer system or a community disposal system pursuant to sections 7-01-1390 and 7-01-1400 of this Article, and if the body which takes final action on the tentative map finds, on evidence submitted by the subdivider and the County Health Department, that an adequate supply of potable water is available and can be obtained from wells or springs for all lots in the subdivision.

**7-01-1430 UTILITY EASEMENTS:**

The tentative and final subdivision maps shall show the proposed location of easements for the placement of utilities where necessary to provide the subdivision with electric power, communication facilities, street lighting, sewer lines and gas lines. Such easements shall be labeled "Easements for Public Utilities."

**7-01-1435 STREET LIGHTING:**

In subdivisions where the electrical service will be underground, the subdivider may be required to provide ducts from the underground electrical wiring installed in the subdivision to places within the subdivision where street lights may be constructed at some future time. In determining whether a subdivider shall be required to construct any such ducts in the subdivision, the body taking final action on the tentative map shall only require such ducts to be constructed in those cases where it appears under Resolution No. 71-4871 of the Board of Supervisors that a street light will be needed at such location after houses have been constructed on some or all of the subdivision lots, and that the County will pay the cost of the electricity. The subdivider shall contact the utility company providing electricity to the subdivision to determine the duct size required, the location with respect to other underground facilities, the size of pull wire required and the method of capping the duct. The subdivider is not required to provide the electric service cable.

**7-01-1440 WAIVER OF ACCESS RIGHTS:**

Waiver of rights of direct access to streets and highways may be required pursuant to the provisions of section 66476 of the Government Code of the State of California.

**7-01-1445 SIGNS AND TRAFFIC CONTROL DEVICES:**

(a) The subdivider shall provide one (1) street name sign at each intersection within the subdivision. The subdivider shall also provide such additional signs and traffic control devices as are required by the body approving the tentative map. The types and locations of all signs and traffic control devices shall be approved by the Public Works Director.

(b) In mountainous areas where steep cut and fill slopes prevent parking off the paved portion of a road, if the Board of Supervisors adopts an ordinance prohibiting parking in such areas prior to the final acceptance of the subdivision improvements by said Board, the subdivider shall provide the signs required to designate such areas where parking is prohibited. The improvement plans shall indicate the specific areas where parking is to be prohibited. The type of signs and the locations shall be approved by the Public Works Director.

(c) If the subdivider and Public Works Director mutually agree that the County shall furnish and install the signs and/or traffic control devices required by this section, the subdivider shall reimburse the County for the full cost of furnishing and installing such signs and/or traffic control devices.

#### 7-01-1450 COMMERCIAL AREAS:

(a) When property is designated on the General Plan or by the Zoning Ordinance for commercial use, the plan of the subdivision shall be appropriate for such use. Streets shall have adequate capacity to handle the anticipated traffic that will utilize them. Insofar as possible, streets shall be laid out so that there will be direct access to the commercial area from Select System or Class 3 Roads without utilizing lesser streets or traversing residential areas. Lot areas and dimensions shall conform to the requirements of the Zoning Ordinance and shall be adequate to accommodate the yard spaces, off-street parking facilities and off-street loading facilities required by the Zoning Ordinance and such additional spaces and other service facilities as are needed for the type of use and development contemplated.

(b) In accordance with Government Code section 66412.1(a), the financing or leasing of any parcel of land, or any portion thereof, in conjunction with the construction or existence of two or more commercial buildings on a single lot or parcel which property is designated in the General Plan or by the Zoning Ordinance for commercial use shall be exempt from the preliminary, tentative, and final subdivision and parcel map filing and processing procedures of this Chapter provided a Site Plan for the construction has been reviewed and approved by the Site Plan Review Committee pursuant to Section 16.2 of Tulare County Zoning Ordinance (Tulare County Ordinance No. 352 as amended). In order to qualify for this exemption, the Site Plan shall comply with all the design and improvement standards and conditions otherwise required for such maps by this Chapter, the applicable regulations of the Zoning Ordinance, and such other design and improvement standards as may be adopted from time by time by resolution of the Tulare County Planning Commission or Board of Supervisors.

(Amended by Ord. No. 3291, effective 12-9-03)

#### 7-01-1455 INDUSTRIAL AREAS:

(a) When property is designated on the General Plan or the Zoning Ordinance for industrial use, the plan of the subdivision shall be appropriate for such use. Streets shall be laid out so that there will be direct access to the industrial area from Select System or Class 3 Roads without utilizing lesser streets or traversing residential or commercial areas. Lot areas and dimensions shall conform with the requirements of the Zoning Ordinance and shall be adequate to accommodate the yard spaces, off-street parking facilities and off-street loading facilities required by the Zoning Ordinance and such additional spaces and other service facilities as are needed for the type of use and development contemplated.

(b) In accordance with Government Code section 66412.1(a), the financing or leasing of any parcel of land, or any portion thereof, in conjunction with the construction or existence of two or more industrial buildings on a single lot or parcel which property is designated in the General Plan or by the Zoning Ordinance for industrial use shall be exempt from the preliminary, tentative, and final subdivision and parcel map filing and processing procedures of this Chapter provided a Site Plan for the construction has been reviewed and approved by the Site Plan Review Committee pursuant to Section 16.2 of Tulare County Zoning Ordinance (Tulare County Ordinance No. 352 as amended). In order to qualify for this exemption, the Site Plan shall comply with all the design and improvement standards and conditions otherwise required for such maps by this Chapter, the applicable regulations of the Zoning Ordinance, and such other design and improvement standards as may be adopted from time by time by resolution of the Tulare County Planning Commission or Board of Supervisors.

(Amended by Ord. No. 3291, effective 12-9-03)

**7-01-1460 PLANNED UNIT DEVELOPMENTS:**

If, in accordance with the provisions of the Zoning Ordinance, a use permit has been granted authorizing a planned unit development on the land or a portion of the land proposed to be subdivided, the plan of the subdivision shall be appropriate for the planned unit development. Exceptions to the subdivision regulations, which are necessary to make the planned unit development practicable may be authorized in accordance with the provisions of Article 19 of this Chapter.

**7-01-1465 HAZARDOUS AREAS:**

Areas subject to slides or other similar hazards to public safety shall not be subdivided unless preventative measures have been taken by the subdivider, under the direction of an engineering geologist, soils scientist or registered civil engineer, which are satisfactory to the body which takes final action on the tentative map pursuant to section 7-01-1745 of this Chapter.

**7-01-1470 FLOODING AND PONDING AREAS:**

Areas which are located within a floodway or selected flood lines or which are otherwise subject to the ponding of surface water shall not be subdivided until one or more of the following measures have been taken to prevent such flooding or ponding:

- (a) If any portion of the subdivision is located within a floodway or selected flood lines, the subdivider shall provide flood control devices to divert flood waters from the areas in the subdivision to be developed and shall dedicate such rights of way or easements as may be required by the Tulare County Flood Control District for the disposal of flood water. The subdivider shall design the subdivision to insure that the conveyance capacities of the selected flood are not diminished or velocities increased and that public and private property damage by flooding, both to properties within and adjoining the subdivision, will be avoided.
- (b) All public utilities and facilities such as sewer, gas, electrical, and water systems shall be located and constructed to minimize flood damage.
- (c) Building pads may be required in order to assure that development within the subdivision conforms to the flood damage prevention requirements set forth in Chapter 27 of this Part. If building pads are required, the elevation certificates described in section 7-01-2035 shall also be required.

The County Public Works Director shall review measures taken or proposed to be taken by the subdivider to prevent flooding or ponding of surface water and shall file a report with the Planning and Development Director on the adequacy of such measures.

**ARTICLE 5. FEES**

**7-01-1520 SCHEDULE OF FEES: PLANNING AND DEVELOPMENT DIRECTOR:**

(a) Unless otherwise provided, the Board of Supervisors shall adopt, from time to time by resolution, a schedule of fees applicable to all applications and filings made with the Resource Management Director pursuant to this Chapter and Chapter 3 of this Part.

**SCHEDULE OF FEES**

|   |            |
|---|------------|
| Preliminary map for a subdivision for which tentative and final maps are required under the Subdivision Map Act | \$2,176.00 |
| Preliminary map for a subdivision for which a parcel map is required under the Subdivision Map Act              | \$996.00   |
| Application for waiver of preliminary map requirement   | \$165.00   |
| Initial Fee for Health Officer review of geological hydrological report required by this Chapter                | \$61.00    |

Tentative map for a subdivision filed under section 7-01-1695 of this Chapter:

Total Number of Lots  
on Tentative Map

|               |   |
|---------------|---|
| 2-12          | \$2,511.00  |
| 13-25         | \$2,515.00 plus<br>\$103.00 per lot<br>over 12 lots |
| 26-50         | \$3,859.00 plus<br>\$71.40 per lot<br>over 25 lots  |
| 51-100        | \$5,647.00 plus<br>\$38.80 per lot<br>over 50 lots  |
| More than 100 | \$7,577.00 plus<br>\$11.90 per lot<br>over 100 lots |

A designated remainder parcel shall be counted as a lot for the purpose of computing the fee to be paid.

|   |   |
|---|---|
| Request for an extension of time for a tentative subdivision map      | \$315.00  |
| Minor revision to tentative subdivision map or tentative parcel map   | \$1,226.00  |
| Major revision to tentative subdivision map or tentative parcel map   | One half (1/2) of the fee<br>required for filing a tentative<br>subdivision or parcel map, not<br>less than \$1,751 |
| Appeal of Planning Commission decisions on tentative subdivision maps | \$324.00  |

Tentative parcel map filed under section 7-01-2285 of this Chapter:

Total Number of Lots on Tentative Parcel Map

|             |   |
|-------------|---|
| 1-4         | \$1,166.00 plus<br>\$515.00 per lot               |
| More than 4 | \$3,226.00 plus<br>\$68.50 per lot<br>over 4 lots |

A designated remainder parcel shall be counted as a lot for the purpose of computing the fee to be paid.

Tentative parcel which is substantially the same as, and which applies to the same property as, a tentative parcel map which has expired by operation of Section 66452.6 of the Subdivision Map Act provided the map is refiled within one (1) year of expiration.

One-half (1/2) if the fee  
required for filing a tentative  
parcel map

|   |          |
|---|----------|
| Application for waiver of the final parcel map              | \$195.00 |
| Request for an extension of time for a tentative parcel map | \$190.00 |

Lot line adjustment map filed under section 7-01-2525 of this Chapter:

|  |  |
|--|--|
| Total Number of Lots on Lot Line Adjustment Map After the Adjustment   |  |
| 2  | \$1,097.00                                   |
| More than 2  | \$1,117.00 plus \$168.00 per lot over 2 lots |
| Application for exception in conjunction with:   |  |
| Tentative Subdivision Map  | \$719.00                                     |
| Tentative Parcel Map   | \$224.00                                     |
| Additional fee for application for exception after approval of final subdivision or parcel map if lots have been sold or committed for sale and a public hearing is required   | \$240.00                                     |
| Appeal of Site Plan Review Committee decisions on tentative parcel maps  | \$324.00                                     |
| Application for Certificate of Compliance where (a) the present owner was not the subdivider, the buyer or the person contracting to purchase the property which is the subject of the Certificate at the time it was first divided, or (b) the property described in the Certificate was not subject to the Subdivision Map Act at the time it was first divided: |  |
| Total Number of Lots Described in the Application  |  |
| 1-4  | \$328.25 plus \$96.50 per lot                |
| More than 4  | \$702.25 plus \$12.84 per lot over 4         |
| Application for certificate of compliance which does not qualify under (a) and (b) of the foregoing fee:   |  |
| Total Number of Lots Described in the application  |  |
| 1-4  | \$998.00 plus \$386 per lot                  |
| More than 4  | \$2,494.00 plus \$51.34 per lot over 4       |
| Appeal of decisions on certificates of compliance and lot line adjustments   | \$300.00                                     |

(b) In addition, any application for a tentative map for a subdivision filed under Section 7-01-1695 of this Chapter or a parcel map filed under Section 7-01-2285 of this Chapter which is subject to review by the Airport Land Use Commission pursuant to Section 21670 et seq of the California Public Utilities Code shall be accompanied by an additional fee established by that Commission to defray the cost of the review.

(c) An additional fee in the amount of Ten Dollars (\$10.00) shall be collected for each preliminary and tentative map, lot line adjustment and certificate of compliance application to defray the expenses incidental to maintaining and enhancing the automated permit processing equipment and software utilized in the Planning and Development Department for processing planning and building permits and certificates.

(d) In accordance with Sections 26906 and 29740 et seq of the Government Code of the State of California, and Section 130 of this Ordinance Code, the County Auditor is authorized to refund twenty-five percent (25%) of fees paid to the Planning and Development Director for any of the foregoing tentative maps, revisions or lot line adjustments if an existing Environmental Impact Report (EIR) or Negative Declaration may be utilized for the project in accordance with the California Environmental Quality Act of 1970, as amended. No refunds may be granted unless the Planning and Development Director determines that (1) the project is subject to the California Environmental Quality Act; (2) an existing Environmental Impact Report (EIR) or Negative Declaration can be utilized for the project; and (3) no subsequent or supplemental EIR or Negative Declaration is required pursuant to Sections 21166 of the California Public Resources Code or Section 15162 of the State Guidelines for implementation of the California Environmental Quality Act. Such refunds shall be granted upon filing a written request by the applicant with the Planning and Development Director and upon certification by the Director as to the amount of the refund due to the applicant pursuant to this subsection.

(e) Unless otherwise provided herein, whenever there is a joint filing of multiple applications and the applicant consents to the consolidated processing of those applications, the applicable filing fees shall be reduced by twenty-five percent (25%). As used herein, the term "multiple applications" shall consist of two (2) or more applications for changes of zone, special use permits (including amendments thereto), variances, planned unit developments and planned developments, tentative subdivision maps or tentative parcel maps (including vesting maps), building line setback variances, flood variances and surface mining permits and reclamation plans (including amendments thereto) which pertain to the same project.

(Amended by Ord. No. 3184, effective 6-7-97) (Amended by Ord. No. 3262, effective 10-2-01)

**7-01-1525 ADDITIONAL FEES: VESTING TENTATIVE MAPS:**

Unless otherwise provided, the Board of Supervisors shall adopt, from time to time by resolution, fees, in addition to those adopted under section 7-01-1520, applicable to subdividers who file vesting maps pursuant to the Subdivision Map Act to defray the additional expenses incidental to processing the map. These additional fees are also intended to recover the direct costs associated with establishing and adopting County procedures for vesting tentative maps in accordance with section 66498.8 of the Government Code of the State of California.

**ADDITIONAL VESTING MAP FEES**

|  |          |
|--|----------|
| Preliminary Map for a Vesting<br>Tentative Subdivision Map   | \$705.00 |
| Vesting Tentative Map for a<br>subdivision filed under section <u>7-01-<br/>1695</u> of this Chapter | \$342.00 |
| Preliminary Map for a Vesting<br>Tentative Parcel Map  | \$400.00 |
| Vesting Tentative Map for a Parcel<br>Map filed under section <u>7-01-2285</u> of<br>this Chapter    | \$217.00 |

(Amended by Ord. No. 3262, effective 10-2-01)

**7-01-1530 SCHEDULE OF FEES: PUBLIC WORKS DIRECTOR:**

Unless otherwise provided, the Board of Supervisors shall adopt, from time to time by resolution, a schedule of fees applicable to all applications and filing made with the Public Works Director pursuant to this Chapter.

|   |  |
|---|--|
| Final map of a subdivision<br>filed in accordance with<br>Section <u>7-01-1960</u> of this<br>Chapter | \$1,412.00 plus<br>\$25.00 for each lot in the<br>proposed subdivision |
|---|--|

Plan checking and inspection of improvements required for a subdivision filed under section 7-01-1960 of this Chapter:

|   |   |
|---|---|
| Total Estimated Cost<br>of all improvements   |   |
| \$200,000 or less   | 3% of the estimated cost  |
| \$200,001 \$500,000   | \$6,000.00<br>plus 2% of the estimated cost in excess of<br>\$200,000   |
| More than \$500,000   | \$12,000.00<br>plus 1 1/2% of the estimated cost in<br>excess of \$500,000; provided, however, if<br>the actual cost incurred by the County is<br>less than the total fee paid, the subdivider<br>may apply for a refund of fee paid in<br>excess of the actual cost to the County. |
| Final parcel map filed in accordance with section 7-01-2385   | \$776.00  |
| Plan checking and inspection of improvements required for<br>a parcel map filed under section <u>7-01-2385</u> of this Chapter  | 3% of the total cost of constructing the<br>improvements required by the County,<br>provided, however, that the minimum fee<br>shall be \$100.00  |
| Inspection of private vehicular access improvements<br>required for a parcel map filed under Section <u>7-01-2385</u> of<br>this Chapter (no plan check fee required)   | 2% of the total cost of constructing the<br>private vehicular access required by the<br>County, provided, however, that the<br>minimum fee shall be \$67.00   |
| Map checking of reversion to acreage map filed under<br>Article 23 of this Chapter  | \$163.00  |
| Checking of a certificate of correction or an amending map<br>of a final map or parcel map filed under Article 7, Chapter 3<br>of the Subdivision Map Act   | \$163.00  |
| Plan checking of grading, drainage and/or erosion control<br>plans filed in accordance with conditions of approval of the<br>following: (a) tentative maps approved under this Chapter;<br>(b) site plans, variances, special use permit and planned<br>developments approved under the Tulare County Zoning<br>Ordinance (Ordinance #352 as amended) and (c) surface<br>mining and/or reclamation plans approved under Chapter<br>25 of this Part. | \$144.00  |

Plan checking of water and/or fire suppression system plans filed in accordance with conditions of approval of the following: (a) tentative parcel maps approved under this Chapter; (b) special use permits approved under the Tulare County Zoning Ordinance (Ordinance No. 352, as amended), and (c) building permits issued under Chapter 15 of Part VII of this Ordinance \$144.00

(Amended by Ord. No. 3184, effective 6-7-97) (Amended by Ord. No. 3262, effective 10-2-01)

**7-01-1535 STATE RESPONSIBILITY AREAS:**

Unless otherwise provided, the Board of Supervisors shall adopt, from time to time by resolution, fees, in addition to the fees set forth in Article 5 of Chapter 1 of Part VII of the Ordinance Code of Tulare County, applicable to subdividers who file maps for property located all or in part within the State Responsibility Areas (SRAs) to defray the additional expenses to the County Fire Warden incidental to processing the maps.

**ADDITIONAL SRA FEES**

|   |          |
|---|----------|
| Preliminary Map for a subdivision for which tentative and final maps are required under the Subdivision Map Act | \$75.00  |
| Tentative Map for a subdivision filed under section <u>7-01-1695</u> of this Chapter                            | \$150.00 |
| Tentative Map for a parcel map filed under section <u>7-01-2285</u> of this Chapter                             | \$75.00  |

(Amended by Ord. No. 3262, effective 10-2-01)

**ARTICLE 7. PRELIMINARY MAP**

**7-01-1585 PRELIMINARY MAP: FEES:**

Prior to submitting a tentative map, a subdivider shall submit to the Planning and Development Director twelve (12) copies of a preliminary map and such additional copies as may be required for transmission to interested public and private agencies. At the time of filing the preliminary map, the subdivider shall pay to the Planning and Development Director the applicable fee set forth in Article 5 of this Chapter to defray the expenses incidental to processing the map. Upon submittal, the Planning and Development Director shall transmit one (1) copy of the preliminary map to each of the other members of the Site Plan Review Committee established pursuant to section 16.2 of the Zoning Ordinance, together with requests for recommendations thereon. Additional copies of the preliminary map shall be transmitted to the County Fire Warden and to each public and private agency to which a copy of the tentative map will be transmitted, in accordance with section 7-01-1695 of this Chapter, with a request for recommendations on the proposed subdivision.

**7-01-1590 WAIVER OF PRELIMINARY MAP: FEES:**

In the event the subdivider wishes to file the tentative map without filing a preliminary map, he may file with the Planning and Development Director an application for waiver of the preliminary map requirement. The application shall fully state the grounds for the waiver and, in particular, why the filing of the preliminary map would not serve the purposes set forth in section 7-01-1000 of this Chapter. The subdivider shall pay the applicable fee set forth in Article 5 of this Chapter to the Planning and Development Director to defray the expenses of processing the application for waiver. If the Planning and Development Director determines that filing of the preliminary map and holding a design conference will not serve the purposes set forth in section 7-01-1000 of this Chapter, he may waive the requirements for filing a preliminary map; however, the Planning and Development Director may not under any circumstances waive the filing of a preliminary map for a subdivision for which a vesting tentative map

is to be filed or for a subdivision to be located within the boundaries of a zone, established pursuant to the Zoning Ordinance, which requires a site plan review for subdivisions.

**7-01-1595 FORM:**

The preliminary map shall be complete as to form and contain the information required by section 7-01-1600 of this Article. The preliminary map shall be clearly and legibly drawn. The size of the sheet shall be appropriate to allow proper review, as determined by the Planning and Development Director. The scale of the map shall be one (1) inch equals one hundred (100) feet or a decimal fraction or a multiple of one hundred (100) feet.

**7-01-1600 INFORMATION ON PRELIMINARY MAP:**

The preliminary map shall contain the following information:

- (a) Location of proposed subdivision with reference to section, township and range.
- (b) Names and addresses of record owner and subdivider.
- (c) Name and address of person who prepared the map.
- (d) Date of preparation.
- (e) North point.
- (f) Scale and graphic scale.
- (g) Boundaries of the proposed subdivision.
- (h) Locations of streets, alleys and pedestrianways within the proposed subdivision.
- (i) Names and locations of streets and alleys adjacent to the proposed subdivision.
- (j) Suggested locations of street extensions and street connections in surrounding unsubdivided properties.
- (k) Approximate grades of all streets or parts of streets exceeding six percent (6%).
- (l) Lot lines and approximate dimensions.
- (m) Locations of proposed public areas.
- (n) Locations of permanent physical features affecting the design of the proposed subdivision, including any hazardous areas as specified in section 7-01-1465 of this Chapter.
- (o) The specific use intended for each lot in the subdivision.
- (p) Approximate contour lines if necessary to illustrate the influence of topographic conditions on the design of the subdivision. An aerial photograph or a topographic model of the property may be submitted in lieu of indicating contour lines on the preliminary map.
- (q) Locations and names of watercourses, location of floodway and or selected flood lines together with the elevation of the base flood, and location of areas subject to ponding of surface water.
- (r) A tentative drainage plan indicating provisions for drainage and storm water control and, for any area which is located within selected flood lines, the proposed method of flood protection.
- (s) If a vesting tentative map is to be filed, the preliminary map shall have printed conspicuously on its face the words "Preliminary Map for Vesting Tentative Map."

**7-01-1605 PRELIMINARY SITE PLAN REQUIRED BY ZONING:**

If the property proposed to be subdivided is located within the boundaries of a zone, established pursuant to the Zoning Ordinance, which requires a site plan review for subdivisions, a site plan and associated documents

prepared in accordance with the requirements of the Zoning Ordinance shall be submitted with the map. The information required to be shown in a preliminary site plan may be incorporated onto the preliminary map rather than on a separate document.

**7-01-1610 PRELIMINARY GEOLOGICAL HYDROLOGICAL REPORT:**

- (a) The preliminary map shall be accompanied by a preliminary geological hydrological report prepared by a registered civil engineer or a registered geologist.
- (b) If the Planning and Development Director determines that sufficient accurate information is already available with regard to any or all of the matters to be covered in a preliminary geological hydrological report, he may waive a report on such matters.
- (c) The preliminary geological- hydrological report shall contain a general analysis of the following factors with regard to the property to be subdivided:
- (1) Geological structure of the property, including the identification of all potential geological hazards which can be ascertained.
  - (2) A general report on the several matters that will be covered in more detail in the final geological hydrological report to be submitted at a later date pursuant to section 7-01-1725 of this Chapter.
  - (3) Stability of soil for cuts and fills.
  - (4) Seismicity.
  - (5) Probability of a permanent ground water supply on the property adequate to supply the anticipated needs of the subdivision.
  - (6) Potential erosion and sedimentation problems.
  - (7) Other special factors deemed to be pertinent to the proposed subdivision by the person preparing the report.
- (d) The preliminary geological hydrological report, and the final geological hydrological report if required under section 7-01-1725 of this Chapter, shall serve as a basis for decisions pertaining to adequacy and safety of the water supply, the suitability of soils for subdivision and the suitability of the site with regard to other geological characteristics.

**7-01-1615 SAME: FEES FOR HEALTH OFFICER REVIEW:**

At the time of filing the preliminary geological-hydrological report the subdivider shall pay the initial fee set forth in Article 5 of this Chapter to the Planning and Development Director to defray the expenses of the County Health Officer in reviewing the report. The County Health Officer shall keep accurate records of the actual costs associated with the review. Upon completion of the design conference required in section 7-01-1630 of this Article, the Health Officer shall bill the subdivider for the actual costs of the review in excess of the initial fee and the subdivider shall pay the cost thereof to the Health Officer. The Planning and Development Director shall withhold acceptance of the tentative map pursuant to section 7-01-1695(d) of this Chapter until the fee for the Health Officer's review of the preliminary geological-hydrological report is paid.

**7-01-1620 STATEMENTS TO ACCOMPANY PRELIMINARY MAP:**

The preliminary map shall be accompanied by the following statements:

- (a) Methods to be used for disposal of liquid and solid wastes.
- (b) Method of supplying domestic water.

**7-01-1625 ENVIRONMENTAL IMPACT:**

At the time of filing the preliminary map, the subdivider shall file an application with the Planning and Development Director for the environmental studies and reports required for the proposed subdivision under the Environmental Quality Act of 1970 (Public Resources Code section 21000 et seq.). Thereafter, the subdivider shall, from time to time, provide such fees, additional data and information as may be required by the Planning and Development Director to complete the required studies and reports under said law and the rules and regulations adopted pursuant thereto.

**7-01-1630 DESIGN CONFERENCE:**

Within ten (10) days after the date of submission of the preliminary map, the Site Plan Review Committee established pursuant to section 16.2 of the Zoning Ordinance, shall conduct a design conference with the subdivider. Representatives of the Fire Warden, cities, school districts, water districts, irrigation districts, community service districts, the State Division of Highways, utility companies and other public and private agencies affected by the proposed subdivision may attend the design conference. The Planning and Development Director, the Public Works Director, the Health Officer, and the Fire Warden or their authorized representatives shall make recommendations to the subdivider regarding the conformity of the preliminary map with the provisions of this Chapter and other applicable ordinances and regarding possible improvements in the design of the subdivision plan. Representatives of public and private agencies to which the preliminary map was transmitted may make recommendations to the subdivider regarding the proposed subdivision.

**7-01-1635 REPORT ON DESIGN CONFERENCE:**

The Planning and Development Director shall furnish a written report of the recommendations presented at the design conference to the subdivider, the other members of the Site Plan Review Committee, the Planning Commission and to each public and private agency to which a copy of the preliminary map was submitted. In those cases in which the Board of Supervisors will be taking final action on the tentative map, a copy of said report shall be filed with said Board.

**7-01-1640 MASTER PLAN:**

(a) Subsequent to the preliminary design conference, if one is held, and at least ten (10) days before filing a tentative map, the subdivider shall file with the Planning and Development Director a master plan of all of the lands adjacent to the proposed subdivision which are owned by him and which constitute a potential subdivision. The subdivider may also include adjacent land owned by other persons. The master plan shall consist of the following:

- (1) A generalized layout of a road pattern.
- (2) An indication of the type and functional relationship of the proposed land uses.
- (3) Such additional designs and elements as the Planning and Development Director may require in order to evaluate the proposed subdivision.

(b) The Planning and Development Director may waive the requirement of a master plan in connection with a proposed subdivision if he determines that a master plan would not be necessary to evaluate the proposed subdivision. Said master plan shall be furnished, unless waived by the Planning and Development Director, even though the Planning and Development Director has waived the filing of a preliminary map and the holding of a design conference.

**ARTICLE 9. TENTATIVE MAP**

**7-01-1690 SUPPLEMENTAL PROVISIONS:**

The requirements and procedures set forth in this Article are supplemental to the Subdivision Map Act.

**7-01-1695 TENTATIVE SUBDIVISION MAP: FILING: FEES: DISTRIBUTION:**

(a) The subdivider shall deliver to the Planning and Development Director twenty five (25) prints of the tentative map or ten (10) prints and two (2) sepia line transparencies, or equal, from which diazo type prints can be produced.

(b) At the time of delivering the tentative map, the subdivider shall pay to the Planning and Development Director the applicable fee set forth in Article 5 of this Chapter to defray the expenses incidental to processing the map.

(c) The tentative map shall be delivered to the Planning and Development Director prior to the completion of final surveys of streets and lots and before grading or construction work is begun within the proposed subdivision which might be affected by changes in the tentative map.

(d) The tentative map shall not be deemed to be filed until the Planning and Development Director has made the review authorized by section 65943 of the Government Code of the State of California and has determined whether the map and accompanying documents are complete. When the Planning and Development Director has determined that said map and documents are complete, and transmitted the written notice that the map and documents are complete, or when the thirty (30) day period has expired, all as set forth in said section 65943, the tentative map shall be deemed to be filed. If the Planning and Development Director notifies the subdivider that the map and documents are not complete, the tentative map shall not be deemed to be filed until the Planning and Development Director determines that all information required by the notice has been provided by the subdivider.

(e) Within five (5) days after the delivery of the tentative map and accompanying statements, the Planning and Development Director shall transmit copies of the tentative map to the Public Works Director, the County Health Department, the County Fire Warden, and to each of the public utilities affected, together with requests for recommendations on the proposed subdivision. In addition, the Planning and Development Director shall transmit copies of the tentative map to Cities, the State Department of Transportation, and to each school district within which the subdivision is located, in accordance with the Subdivision Map Act. The Planning and Development Director may also transmit copies of the tentative map and accompanying statements to water districts, irrigation districts, community services districts and other public and private agencies affected by the proposed subdivision, together with requests for recommendations on the proposed subdivision.

**7-01-1700 FORM OF TENTATIVE MAP:**

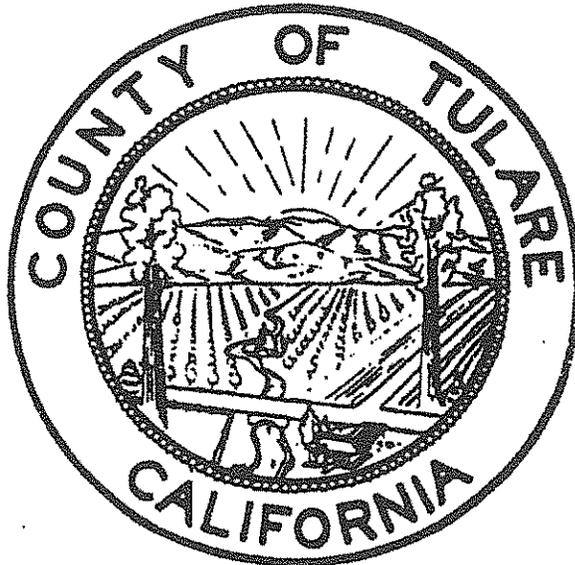
The tentative map shall be clear and legible. The size of the sheet shall be appropriate to allow proper review, as determined by the Planning and Development Director. The scale of the map shall be one (1) inch equals one hundred (100) feet or multiples of one hundred (100) feet.

**7-01-1705 INFORMATION ON TENTATIVE MAP:**

Mobile Version

## 5. Tulare County Improvement Standards.

**IMPROVEMENT  
STANDARDS  
OF  
TULARE COUNTY**



County Civic Center  
Visalia, California

IMPROVEMENT  
STANDARDS  
OF  
TULARE COUNTY

STANDARDS ADOPTED ON THE 16TH DAY OF JANUARY, 1973, BY  
THE TULARE COUNTY BOARD OF SUPERVISORS FOR CONSTRUCTION  
OF IMPROVEMENTS IN SUBDIVISIONS, ROAD RIGHTS-OF-WAY, AND  
AT OTHER LOCATIONS WHERE SPECIFIED BY ORDINANCE.

Revised: November 3, 1981/Res. 81-2221

(Fire Flow and Protection)

Revised: September 19, 1989/Res. 89-1236

(Concrete Curbs and Sidewalks)

Revised: December 10, 1991/Res. 91-1409

(SRA Fire Safe Regulations)

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## SECTION I

### GENERAL PROVISIONS

#### A. STANDARDS

Required improvement work shall be done in accordance with the applicable sections of these Improvement Standards including the California Standard Specifications, (hereinafter called the "Standard Specifications"); Sections 7000 - 7126 of the Tulare County Ordinance Code; and such other special provisions prepared by the developer's engineer and approved by the County Public Works Director that are necessary for the successful completion of the required work.

In case of conflict between the approved Special Provisions prepared by the design engineer and these Improvement Standards and/or the Standard Specifications, the approved Special Provisions shall take precedence over and be used in lieu of such conflicting portions of these Improvement Standards and/or the Standard Specifications. To supplement the above, the design engineer shall prepare necessary plans and profiles using accepted principles of civil engineering using, wherever applicable, the Standard Plates found in Section IV of these Improvement Standards.

#### B. DEFINITIONS

When used for the construction of any improvements required by these Improvement Standards, the definitions and terms listed in Section 1 of the Standard Specifications shall apply with the following exceptions:

Contractor - The person or persons, firm, partnership, corporation or combination thereof, private or municipal, or his or their legal representative, who have entered into an agreement with the County of Tulare for the construction of improvements in accordance with these Improvement Standards. Also a developer performing work under these Improvement Standards.

Department of Public Works - The Board of Supervisors of Tulare County.

Director of Public Works - Chairman of the Board of the Tulare County Board of Supervisors.

Department of Transportation - The Tulare County Public Works Department and/or Road Department.

Engineer - Tulare County Road Commissioner and County Public Works Director, acting either directly or through the properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

Laboratory - The laboratory of the Tulare County Road Department or any other laboratory approved by the Tulare County Road Department to test materials and work performed under these Improvement Standards.

Plans - The project plans and Standard Plates, profiles, typical cross sections, general cross sections, working drawings and supplemental drawings, or reproductions thereof, approved by the Engineer, which show the location, character, dimensions and details of the work to be performed. All such documents are to be considered as part of the plans whether or not reproduced in the special provisions.

In the above definitions, the following terms are defined as follows:

Standard Plates - The plates contained in Section IV of these Improvement Standards.

Project Plans - The project plans are specific details and dimensions peculiar to the work and are supplemented by the Standard Plates insofar as the same may apply.

Specifications - The directions, provisions and requirements contained herein as supplemented by the Standard Specifications and by such approved special provisions as may be necessary pertaining to the method and manner of performing the work or to the quantities

and qualities of the materials involved.

Special Provisions - The special provisions are specific clauses or instructions setting forth conditions or requirements peculiar to the project under consideration and covering work or materials not satisfactorily covered by these Improvement Standards and the Standard Specifications. Only those special provisions approved by the Engineer shall be applicable to the work.

State - The County of Tulare except where the word "State" refers to the laws of the State of California.

Work - All the work specified, indicated, shown or contemplated in the improvement, including all alterations, amendments or extensions thereto authorized by the Engineer.

In addition to the definitions and terms of Section I of the Standard Specifications, whenever in these improvement standards, the specifications or on the plans, the following terms are used or pronouns used in place of them, the intent and meaning shall be as follows:

Design Engineer - The Civil Engineer retained by a subdivider or other developer to prepare the plans and specifications and to provide general supervision of the construction of the required improvement work.

Developer - A subdivider or other party who undertakes work by agreement or permit governed by these Improvement Standards.

Improvement Plans - Plans prepared for the developer by his design engineer and approved by the County Public Works Director and Road Commissioner.

State Responsibility Area (SRA) - That area or those areas within the definition of a "State Responsibility Area" as set forth in the Zoning Ordinance of Tulare County, Tulare County Ordinance No. 352, as amended from time to time.

#### C. SUBDIVISION PLANS AND SPECIFICATIONS

All improvement plans, specifications, and special provi-

sions shall comply with the requirements of the approved or conditionally approved subdivision tentative map and these Improvement Standards. Prior to beginning any construction and at least 14 days prior to the date on which a developer desires the County Public Works Director to present his final

map of the development to the Board of Supervisors, his engineer shall present completed improvement plans and specifications along with any required special provisions, to the County Public Works Director for his approval.

Construction changes from the approved Improvement Plans shall be permitted only upon approval of the County Public Works Director. As built plans shall be furnished to the County Public Works Director upon completion of the work and shall be a prerequisite to acceptance of the work.

## SECTION II

### DESIGN

#### A. STREETS AND HIGHWAYS

##### 1. Road Classification

a. Class 1 Roads - A cul-de-sac or minor residential street so designed that it cannot serve more than 50 lots, the primary function of which is to provide access to abutting property.

b. Class 2 Roads - A minor residential street so designed that it cannot serve more than 120 lots, the primary function of which is to provide access to abutting property.

c. Class 3 Roads - A minor residential collector street that has or is expected to have the dual purpose of providing access to abutting property and of carrying traffic from Class 1 and Class 2 Roads to roads in the County Select System.

d. Select System Roads - All State Highways, Federal Aid Secondary Routes, arterials and collector roads existing or unconstructed, that are designated for inclusion in the Select System by the Board of Supervisors with the approval of the State Department of Transportation.

##### 2. Geometric Design

a. Road Widths - The road widths shall comply with the applicable geometric section shown on Plate No.s A-1, A-2,

A-3, A-1M, A-2M and A-3M of these Improvement Standards.

b. Design Speeds - The minimum design speed shall comply with the applicable design velocities shown on Plate No.s A-1, A-2, A-1M, A-2M and A-3M of these Improvement Standards.

c. Grades - Road grade shall not be less than 0.15%. Maximum allowable grades shall comply with the applicable grades shown on Plate No.s A-1, A-2, A-3, A-1M, A-2M and A-3M.

d. Superelevation - Superelevations shall comply with Plate No. A-5.

e. Sight Distance - Vertical curves shall be constructed to provide the following stopping sight distance or headlight sight distances.

| <u>Design Speed, MPH</u> | <u>Sight Distance - Feet</u> |
|--------------------------|------------------------------|
| 20                       | 120                          |
| 25                       | 160                          |
| 30                       | 200                          |
| 35                       | 240                          |
| 40                       | 275                          |
| 50                       | 350                          |
| 60                       | 475                          |

f. Horizontal Alignment - The curve radii, curve or arc length, and the minimum tangent length between super-elevated curves shall be determined from Plate No. A-4.

g. Intersections - Street intersections shall be as near right angles as practical. In no case shall the angle of intersection be less than seventy degrees nor shall the tangent distance measured from the intersection be less than 35 feet. Streets located on opposite sides of an intersecting street shall have their centerlines directly opposite each other or their centerlines shall be separated by not less than 150 feet.

In mountainous areas where a minor residential street or cul-de-sac connects to a minor residential collector street and adequate signing for a full stop is provided, the radius of curvature and sight distance for the minor residential street may be reduced to 50 feet and 85 feet respectively within 150

feet of the intersection.

The centerline grades of intersecting streets shall not exceed 6 percent for a distance measured from the intersection of:

1. 50 feet on Class 1 and 2 roads  
(Minor Residential Street).
2. 70 feet on Class 3 (Minor Residential  
Collector Street).

h. Slopes and Clearing - The limits of clearing on all roads shall be not less than 2 feet outside excavation and embankment slopes and not less than 5 feet from the edge of pavement.

Embankment slopes shall be 1 1/2:1 or flatter. Excavation slopes shall not be steeper than 1:1 for cuts less than 15 feet high nor shall they be steeper than 1 1/2:1 for cuts greater than 15 feet high unless evidence satisfactory to the Road Department is submitted that indicates steeper slopes would be stable.

i. Industrial Streets - The geometric design of roads in industrial areas will be based upon the specific traffic requirements of the area served but shall have the following minimums:

|                                |         |
|--------------------------------|---------|
| Travel lane widths             | 12 feet |
| Parking lane widths            | 10 feet |
| Border widths (sidewalk areas) | 8 feet  |

The design velocity, maximum grade, maximum superelevation and minimum right of way widths shall generally not be less than those specified for Select Roads as shown on Plates A-1, A-2 and A-3 of Section IV of the Improvement Standards.

### 3. Structural Design-Roads

The R-value design method used by the California State Department of Transportation shall be used to determine the thickness of the various structural elements of the roadway. A 10 year design life shall be used. The gravel equivalents and minimum thickness of the various structural layers shall be obtained from Plate A-9, Section IV of these

Improvement Standards.

The Traffic Index, T.I., shall be determined from Plate No. A-6 where traffic estimates can be made by conventional means. If traffic estimates cannot be made, the T.I. shall be determined from Plate No. A-7. Commercial and Industrial Streets and alleys shall use a minimum traffic index of 6.0.

The number of dwellings served by a road, including loop roads, shall be the number of dwellings fronting the entire road plus the number of dwellings fronting any other lesser street connected to it that would logically be served by the road under consideration.

4. Structure Design-Bridges

All bridges and culverts shall be designed for the following minimum design loads:

| <u>Road Class</u>                               | <u>AASHTO Design Load</u> |
|---|---------------------------|
| 1 & 2   | H 15 - 44                 |
| 3   | HS 15 - 44                |
| Select System Roads and<br>All Roads in the SRA | HS 20 - 44                |

In mountainous areas the minimum clear width of bridges shall not be less than the paved width plus four feet on each side.

In valley areas the width of the bridge shall be sufficient for the full curb to curb width plus standard sidewalk areas and railings on each side of the bridge.

5. Curbs, Gutters and Sidewalks

In valley areas curbs and gutters shall be required on all lots within a subdivision if a majority of the lots contain less than 2.5 acres and/or have less than 200 feet average widths.

Sidewalks, where provided, shall have a minimum width of four (4) feet and shall be located adjacent to the curb unless approved by the Engineer.

6. Auxiliary Drainage Facilities

Culverts, ditches at the bottom of cut slopes, and other such drainage facilities shall be designed for a flood frequency of 10 years or more with inlet not submerged, and a

frequency of 50 years or more without overtopping the roadway fill.

Down flumes or other overside drains shall be spaced so as to drain no more than 300 feet of roadway.

Energy dissipators or other suitable forms of erosion protection shall be placed at culvert outlets where the Road Department determines such measures are needed for erosion control.

7. Cul-de-Sacs

Cul-de-sacs in valley areas shall not be more than six hundred and sixty (660) feet in length and shall terminate with a circular turnaround constructed as shown on Plate A-20 of Section IV.

The maximum length of cul-de-sacs in mountainous areas shall be 1,000 feet, except in the SRA where cul-de-sacs serving parcels zoned for less than one acre maximum length shall be 800 feet. The minimum radius of the cul-de-sacs right of way in mountainous areas shall be 45 feet and the minimum radius of the pavement edge shall be 37 feet, except in the SRA where the minimum radius of the cul-de-sacs right of way shall be 48 feet and the minimum radius of the pavement edge shall be 40 feet.

The minimum distance from the centerline of the road to the right of way in mountainous areas may be reduced 5 feet (Distance B, Plate No. A-1M and Plate No. A-2M.)

The maximum paved slope across the bulb of a cul-de-sac shall be 6 percent.

In mountainous areas the sight distance may be reduced to 85 feet within 150 feet of the center of the bulb.

8. Stub Roads

Stub roads shall be completely improved to the subdivision boundary and such boundaries shall not be distorted to specifically exclude the stub road.

Temporary turn-arounds on stub roads exceeding one lot in depth shall be constructed using a pavement radius of 30 feet.

9. Alleys in Valley Areas

If alleys are provided, they shall be a minimum of twenty (20) feet in width and shall be constructed as shown on Plate A-3, Section IV.

If two alleys intersect, the corners shall be cut either on a twenty (20) foot radius to which the lot boundaries are

tangent or on a straight line connecting points on both lot lines fifteen (15) feet from the corner of the lot at the intersection of the alleys.

Alleys thirty (30) feet or more in width may be required at the rear of lots in areas zoned for commercial and industrial use and in unzoned areas proposed for commercial and industrial use.

10. Private Drives in Mountainous Areas

Where reasonable access to abutting property cannot be provided within one lot, the driveway shall be constructed together with other subdivision improvements and the easements for such joint drives shall be shown on the improvement plans.

Joint driveways shall not serve more than 4 lots and shall be surfaced within the public road right of way and the entire driveway shall be constructed to prevent eroded material from being deposited on the public road.

11. Signs

At locations where steep cut or fill slopes prohibit parking off the pavement, "No Parking" signs shall be installed and charged to the developer. The subdivision plans shall clearly indicate such locations so that approval of no parking zones by the Board of Supervisors can be obtained.

12. Redwood Headers

2" X 6" redwood headers shall be installed to protect all edges of asphalt concrete where streets are partially completed prior to placing A.C. surfacing. Header shall be held in place with 2" X 3" stakes 18" long which shall be driven vertically and securely nailed to the headers. The backfill on the unimproved side of the headers shall be compacted to the density of the undisturbed earth.

B. DRAINAGE

1. General

All drainage design shall be done in accordance with the accepted principles of Civil Engineering and these Improvement Standards.

a. Closed Conduits - Waterways whose design dis-

charge may reasonably be conveyed in a 48-inch diameter or smaller concrete pipe shall be placed underground in a closed conduit, except for natural waterways.

2. Hydrologic Design

Hydrologic Design shall be based upon anticipated full development of the tributary watershed.

Average recurrence interval is defined as the average number of years, over a long period of time, in which a given rate of flow is equalled or exceeded in magnitude. Flood flows to be used for the design of waterways, channels and closed conduits shall have minimum average recurrence intervals as follows:

a. Major Waterways having a drainage area of over four square miles shall be designed for an average recurrence interval of 50 years or more.

b. Secondary Waterways having a drainage area of between one and four square miles, and drainage facilities for subdivisions, shall be designed for an average recurrence interval of 10 years or more.

c. Minor Waterways having a drainage area of less than one square mile shall be designed for an average recurrence interval of 5 years or more.

A given waterway, therefore, may be classed as minor in its upper reaches, then change to the secondary classification at a point where the drainage area exceeds one square mile and then change again to the major classification at a point where the drainage area exceeds four square miles.

In the absence of stream gages or other recorded information on major, secondary and minor waterways, the design discharge shall be determined by the use of the following modified rational formula:

$$Q = KCIA$$

in which:

Q = design discharge, cubic feet per second

C = runoff coefficient (from Plate No. B-1, based upon anticipated full development.)

I = intensity of rainfall, inches per hour (from Plate No. B-2.)

A = tributary watershed area, acres.

K = factor related to annual average rainfall from Plate No.s B-3 and B-4.

Time of concentration shall be based on an initial lot to street time of 10 minutes for lots smaller than 1/2 acre, and 15 minutes for lots of 1/2 acre and larger, plus water travel time.

Where the size of a watershed is too large for application of the rational method in one step, the waterway shall be subdivided into reaches of reasonable length and the rational formula applied to each, step-by-step, properly accumulating the parameters unless another accepted engineering procedure for determining the design discharge is approved by the Engineer.

### 3. Hydraulic Design

a. General - Minor waterways discharging into major or secondary waterways shall be designed to operate against a 5 year flow in the major or secondary waterways, provided that the ground elevation along the minor system shall be above the 50 year water surface elevation in the major or secondary waterway.

If a secondary or minor waterway is placed in a closed conduit, sufficient additional surface routes for flood flows shall be made available to carry the added flow increment up to the 50 year design discharge with no more than nuisance damage to improvements or projected improvements and with no inundation of present or future buildings. If such surface routes cannot be made available, the secondary or minor waterway shall be designed to carry the 50 year design discharge.

Design depth of flow in gutters shall not exceed 0.4 feet for the 5 year flow, provided the 10 year flow shall be contained within the right-of-way. Roadside ditches are allowed where lot frontage is greater than 200 feet, except that they shall not be used where the design flow is greater

than that which could be carried in a standard gutter flowing 0.4 feet deep on the same slope as the road profile slope. Where the discharge exceeds such gutter capacity, or the length of open flow exceeds 1,500 feet, a closed conduit system shall be provided. The minimum size of cross drains, storm sewer mains and laterals over twenty feet in length shall be 15 inches in diameter. The minimum size of any such line twenty feet or less in length shall be 12 inches in diameter.

Open channels shall be constructed to carry the design discharge with 1.5 feet of freeboard. Protective lining may be required when velocity of flow exceeds 3 feet per second and soil conditions would present erosion problems. Fencing of open channels may be required.

b. Manning's "n" values - Manning's "n" value for design shall be as follows:

1. Concrete Pipe 24" and greater    n = 0.012  
   Concrete Pipe less than 24"    n = 0.015
2. Concrete, wood float or broomed  
   finish                                    n = 0.015
3. Asphaltic Concrete                    n = 0.017
4. Corrugated Metal Pipe                n = 0.024

c. Conduit System - Major and secondary waterways placed within a closed conduit system shall have a minimum 1 foot clearance between the design water surface and the soffit of the conduit. The design depth in circular conduits shall not exceed 0.80 of the diameter of the conduit for major and secondary waterways. Minor waterways placed in closed conduit systems may be designed for full conduit capacity and pressure flow. At inlets and non-pressure type manholes within a closed conduit system, the hydraulic grade line shall be not less than 0.5 foot below the gutter or inlet surface elevation.

d. Alignment and Structures - The alignment of closed conduits shall be as nearly straight as practicable. Manholes shall be provided at all junctions, at all bends which are sharper than those formed by standard single bevel concrete pipe, at intervals not to exceed 500 feet along 21-inch and

smaller conduits, at intervals not to exceed 1000 feet along 24-inch and larger conduits, and at the junction of trunk lines with catch basin laterals where the length of the catch basin lateral is greater than 4-feet.

e. Ponding Lots - Ponding lots will be permissible if connection to an existing drainage system is not feasible. The location of a ponding lot shall be located adjacent to a logical storm drain route.

Ponding lot areas are to be established on the basis of one (1) lot for each twenty (20) for 1/2 acre lots and smaller and one (1) lot for each thirty (30) for lots larger than 1/2 acre. Where the ratio requires more than one-half of a lot, a full additional lot will be required. The minimum ponding lot area shall be one lot area (based on the average lot area).

Ponding lots shall have a 1.5 foot minimum freeboard, a 3.0 foot maximum water depth and a water surface elevation of 0.5 foot or more below the grate elevation of the lowest catch basin in the system. Ponding lot construction shall conform to the details shown on Plates B-5 and B-6 in Section IV.

f. Pumping Systems - Pumping systems shall be of sufficient capacity to discharge the peak design flow. Pumping systems on major and secondary systems shall consist of two pumps whose combined capacity equals the total expected peak design flow. The sump shall be designed to provide a minimum storage, in gallons, of one and one-half times the rated capacity of the pumping system in gallons per minute.

All switches and control mechanisms, except for reset switches, shall be enclosed or placed in lockable boxes or buildings so that operation by unauthorized personnel can be prevented. All pumping systems shall be enclosed with standard six foot chain link fence.

g. Irrigation Channels - When disposal of storm waters is proposed to be into an irrigation channel the developer shall first secure written consent of the owner or the operating authority to the discharge of storm waters into irrigation facilities, together with the right to assign such

privilege at no cost to the County. At the conclusion of the improvement work and prior to acceptance of the improvements, the developer shall assign the privilege to the County.

The design engineer representing the developer shall evaluate and certify as to the adequacy of the irrigation facility as a disposal system.

C. WATER SYSTEMS

1. Source of Water

When the source of water is other than an existing system approved by either the State Department of Health Services or the County Department of Health Services, construction of the source facilities shall comply with the requirements of Bulletin No. 74, Water Well Standards, State of California, Department of Water Resources.

2. Quantity of Water

The quantity of water delivered to the distribution system within a subdivision from all source and storage facilities for a period of two (2) hours shall be the maximum domestic demand plus a fire flow quantity of not less than 500 gpm for single family residential, 1500 gpm for multi-family residential-commercial-light manufacturing, and 2500 gpm for heavy manufacturing. For systems up to 625 customer units the domestic quantity shall not be less than  $Q = 100 \text{ plus } 25 \sqrt{N}$ , and  $Q = 100 \text{ plus } N$  for more than 625 customer units at sufficient pressure to provide a minimum pressure of 25 p.s.i.g. to each lot served; where Q equals the rate of flow in gallons per minute delivered from the combined source facilities to the distribution system, and N equals the total number of customer units where each customer unit is equivalent to one for a single family dwelling on a normal subdivision lot. Other types of development shall be assigned appropriate customer unit values by the Engineer as experience with the distribution system or locality indicates. The minimum source and domestic demand storage design requirements shall be in accordance with Plate No. WS-11 of Section IV.

### 3. Quality of Water

The quality of water supplied for human consumption shall conform to Sections 3, 4 and 5 of the latest United States Public Health Service Drinking Water Standards.

Samples will be taken and tests made by the County Department of Health Services for bacteriological determination of potability.

Chemical and physical tests for potability shall be performed by a commercial laboratory certified by the State Department of Health Services for performance of chemical and physical analysis, and the costs thereof shall be borne by the subdivider.

Construction plans shall show provision for adequately treating the water in order to meet water quality requirements of this section; or before the Engineer shall approve and sign the plans, the Tulare County Health Officer shall certify that the water supply meets the quality requirements of this section.

Installation of water treatment or water conditioning equipment will be accomplished by personnel properly licensed by the State of California.

### 4. Use of Water

Connection of house services to service laterals and subsequent use of water, either temporarily or permanently, shall not be allowed prior to approval of the distribution system by the County Health Officer and County Public Works Director.

### 5. Piping and Appurtenances

a. General - The design of water systems shall be based on good engineering practice and the requirements of these Standards, and shall be approved by the Engineer prior to any construction. If the design engineer of the water system can provide satisfactory information and calculations to substantiate that reduced sizes and substitute material will meet the quantity and quality requirements of these standards, the County Public Works Director may allow use of alternate methods

and materials. All distribution systems shall be designed to permit circulation of water flows throughout, except where impractical because of a cul-de-sac, or like conditions, or the incomplete development of a grid system. All dead end runs shall be provided with a means of flushing.

b. Water Main Size - The water mains shall be of adequate size and so designed in conjunction with related facilities to maintain a minimum operating pressure of 25 p.s.i.g. for each customer at the time of maximum domestic and fire flow demands in the system.

All water mains in valley subdivisions shall have a minimum nominal diameter of six (6) inches for single-family residential, ten (10) inches for multi-family - commercial - light manufacturing, and twelve (12) inches for heavy manufacturing except cul-de-sacs or other streets not required to have a fire hydrant, and serving six (6) lots or less, in which case a minimum size of four (4) inches nominal diameter shall be permitted. Water mains for mountainous areas shall have a minimum nominal diameter of four (4) inches and shall be designed to provide a loop system to maintain adequate pressure for fire protection. Any stub line over 660 feet in length or supporting more than one fire hydrant shall be 6 inches. A four (4) inch waterline from the street main shall be provided to the hydrant outlet.

c. Location - In general, when mains are to be placed in the traveled portion of streets, they shall be as parallel as possible to, and between four (4) and fourteen (14) feet from street centerline, but shall in no case be closer than three (3) feet from the lip of the gutter or edge of pavement.

Street mains shall be laid in the streets on which the property to be served fronts, and in subdivisions such mains shall be run to the limits of the subdivision on stub roads so that adjacent future development will not require excavation of the improved street within the subdivision.

The mains shall be kept a minimum of ten (10) feet from

the sewers.

d. Gate Valves - Gate valves shall be of the same size as the pipeline in which they are installed and a minimum of three valves shall be placed at a cross and two valves at a tee and shall be placed on the projection of the edge of pavement or lip of gutter. Valves on distribution systems shall be so located that any single break, accident, or repair will not necessitate shutting off from service a length of main greater than 800 feet for the valley and 1320 feet in the mountainous areas, except that in commercial or industrial areas, the Engineer may require a maximum length of 500 feet.

e. Air and Vacuum Valves - Air release and vacuum valves of adequate size shall be provided where necessary at all high points on mains. Suitable housing and protection for valves shall be provided and a shut off valve shall be provided in conjunction with each air release and vacuum valve to permit removal of valves for maintenance and servicing.

f. Flexible Couplings - Sufficient flexible couplings shall be provided in all piping adjacent to structures to permit differential settling of the foundations of piping and structures without damage to the piping.

g. Service Laterals - A service lateral shall be provided to each lot in the subdivision. Main water pressure, type of development and expected rate of water consumption shall determine the size of the service lateral, but in no case shall said lateral be smaller than a nominal diameter of 3/4-inch. Service laterals shall be placed perpendicular to the main and within the limits of the projection of the property lines of the property to be served. A "T" lateral may be allowed for two adjacent lots if the design engineer can provide calculations and information that the minimum pressure and volume can be maintained.

h. Fire Hydrants - Spacing of said hydrants shall be uniform throughout the subdivision with maximum spacing such that the maximum run of hose required between any hydrant and

the nearest available point on the extreme lot shall not exceed 330 feet for single family and 150 feet for other types of development.

In the SRA, fire hydrants serving any building shall be not less than 50 feet nor more than one-half mile by road from the building it is to serve and located at a turnout or turnaround along the driveway to that building or along the road that intersects with that driveway.

Fire hydrants in valley areas shall be placed with the centerline of the hydrant 18 inches behind the face of the curb. If sidewalk is to be constructed or if the subdivision is within an Urban Improvement Area, then hydrants shall be located at the back edge of the sidewalk. For mountainous areas, the hydrants shall be located between 2 and 5 feet beyond the edge of pavement. Hydrants shall be located at street intersections in conformance with Standard Drawings with additional hydrants located at sufficient intervals along the streets to comply with the spacing requirements of these Standards.

In the SRA, fire hydrants shall be 8 feet from flammable vegetation, between 4 and 5 feet beyond the edge of pavement, and in a location where fire apparatus using it will not block the roadway. Furthermore, within a SRA hydrants located along a road or private vehicular access shall be required to have a reflectorized blue marker, with a minimum dimension of 3 inches, mounted on a fire retardant post. Said post shall be within 3 feet of the hydrant with the marker no less than 5 feet above established grade in a position visible from the roadway.

i. Thrust Blocks - All tees, bends, plugs, fire hydrants and other sections of piping and appurtenances that might be capable of being displaced by the action of either working pressures or test pressures within the water system shall be anchored in place by the use of thrust blocks, thrust backing or harnesses as shown on the standard drawings. The bearing areas of thrust blocking on the supporting soil shall

not exceed that allowable for the soil involved. The pressure used to determine the required size of thrust blocks bearing area shall be no less than the test pressure required in Section III herein. Required thrust block bearing areas shall be in accordance with Plates WS-6 and WS-8 in Section IV.

### SECTION III

#### CONSTRUCTION

##### A. CONTROL OF THE WORK

All work accomplished and all materials furnished under these Improvement Standards shall be subject to the inspection and approval of the Engineer. Such inspection and approval of work and materials shall not relieve the developer of any of his obligations to complete the work as specified. Work and materials not meeting these requirements shall be made good and

unsuitable work and materials shall be rejected.

The Engineer shall have access to the work at all times and shall be furnished every reasonable facility for ascertaining that the methods, materials and workmanship are in accordance with the requirements and intent of these Improvement Standards. The developer or his authorized agent shall be in charge of, and responsible for all phases of the work while it is in progress.

The Engineer shall be notified at least twenty-four hours prior to beginning any of the following stages of work, shall be notified when each of the stages has been completed, and subsequent stages shall not be begun without approval of the Engineer. Should the developer fail to so notify the Engineer, the cost of all subsequent inspection and testing necessary to ascertain if the work has met all the specified requirements shall be borne by the developer or the work shall not be approved.

1. Roadway and ditch excavation, including the preparation of embankment areas and the placement of embankment material.
2. Structure Excavation.
3. Placing culvert pipes and storm drains.
4. Placing structure backfill material.
5. Construction of forms for all concrete work including concrete curbs.
6. Placing Concrete.
7. Placement of any layer of subbase, base or surfacing material including the preparation of the subgrade therefore.
8. Final Cleanup.

In addition to the above, the developer shall notify the Engineer whenever improvement work is to be performed on Saturdays, Sundays or holidays or during hours of the day when such work is normally not performed so that inspection may be provided.

The source of materials used for work performed under

these Improvement Standards shall be approved by the Engineer before delivery is made. The developer shall give the Engineer sufficient notice of sources of material so that such tests and inspections as the Engineer deems necessary can be performed to determine that the materials comply to the specifications. If the source is not already approved the notice shall not be less than 10 working days prior to delivery of the material to the project. Only approved material shall be used in the work. If it is found that sources of supply which have previously been approved do not furnish a uniform product or if the product proves unacceptable at any time, the developer shall furnish acceptable material from another approved source. No material which after approval has in any way become unfit for use shall be used in the work.

All tests of materials and work to determine compliance with the approved specifications shall be in accordance with the methods and procedures in use by the Department of Transportation and defined in Section 6-3.01 of the Standard Specifications or as they may be amended in these Improvement Standards or by the Special Provisions. Should the work not be performed by contract, the test method shall be the test method in effect on the first day of the month preceeding the month in which work is first begun on the project. The developer shall furnish to the Engineer, without charge, samples of all materials to be used in the work. Samples of material from which tests are to be made shall be taken under the supervision of the Engineer, by a recognized laboratory or by the Design Engineer retained by the developer.

In lieu of prior sampling and testing of certain manufactured products such as reinforcing and structural steel, culvert pipe, paint, cement and asphalt products, the Engineer may permit or require certificates of compliance from the supplier of such products before such materials can be used in the work.

Preliminary sampling and testing of the improvement site or sources of materials that are to be made prior to construc-

tion may, at the option of the Engineer, be performed by the Laboratory of the Tulare County Road Department, by a recognized commercial laboratory or by the Design Engineer retained by the developer. Construction control testing of materials entering the work shall be performed by the Engineer or by a commercial laboratory retained by the County of Tulare. The cost of all preliminary testing not performed by the Laboratory of the Tulare County Road Department shall be paid by the developer. Costs of all preliminary testing performed by the County Laboratory under the direction of the Engineer and all construction control testing performed by the Engineer or laboratory retained by the County shall be paid by the County except as follows:

Whenever a specified percent relative compaction is required and the material or portion thereof so tested fails to meet or exceed the relative compaction specified, the first retest shall be performed at no expense to the contractor. Should the first retest also fail, a charge of \$30.00 for each additional retest performed by the County shall be charged the developer. Failure of the developer to comply with the approved plans and specifications and the procedures specified herein shall be deemed sufficient cause for the rejection by the County of all or any portion of the work. The Engineer may cause rejected work to be remedied, removed or replaced all at the expense of the developer.

B. STREETS AND HIGHWAYS

1. General

The construction of all streets, highways, drainage structures, and their auxiliary facilities shall comply with the requirements of the following portions of the Standard Specifications, except as such portions shall be amended by these Improvement Standards and/or the special provisions, excluding therefrom all reference to measurement and payment. Measurement and payment for improvement work performed under Division Seven or Twelve of the Streets and Highways Code of

the State of California shall be as specified in the Special Provisions. Measurement and payment for other work performed under these improvement standards shall be the responsibility of the developer.

Applicable Sections:

1. Definition and Terms
5. Control of Work
6. Control of Materials
10. Dust Control
15. Existing Highway Facilities
16. Clearing and Grubbing
17. Watering
18. Dust Palliative
19. Earth Work
20. Erosion Control and Landscaping
22. Finishing Roadway
24. Lime Treatment
25. Aggregate Subbase
26. Aggregate Bases
27. Road Mixed Cement Treated Bases
36. Penetration Treatment
37. Bituminous Seals
38. Road Mix Asphalt Surfacing
39. Asphalt Concrete
51. Concrete Structures
52. Reinforcement
53. Air-blown Mortar
60. Rubble Masonry
64. Asbestos Cement Pipe
65. Reinforced Concrete Pipe
66. Corrugated Metal Pipe
67. Structural Plate Pipe, Arches, and Pipe Arches
68. Sub-surface Drains
69. Over-side Drains
70. Miscellaneous Facilities
72. Slope Protection

- 73. Concrete Curb and Sidewalks
- 80. Fences
- 83. Railings and Barriers

Applicable Sub-Sections:

- 4-1.01 Intent of Plans and Specifications
- 4-1.02 Final Cleanup
- 4-1.04 Detours
- 4-1.05 Use of Materials Found on the Work
- 7-1.01 Laws to be Observed, excepting sub-sections 7-1.01A through 7-1.01L; In lieu of these excepted sub-sections, the Developer shall comply with all applicable local, State and Federal laws, and shall hold the County of Tulare harmless from any breach of said laws.
- 7-1.02 Weight Limitations
- 7-1.04 Permits and Licenses
- 7-1.05 Patents
- 7-1.06 Safety Provisions
- 7-1.07 Sanitary Provisions
- 7-1.08 Public Convenience
- 7-1.09 Public Safety
- 7-1.10 Use of Explosives
- 7-1.11 Preservation of Property
- 7-1.12 Responsibility for Damage
- 7-1.13 Disposal of Material Outside the Highway Right of Way
- 7-1.14 Cooperation
- 7-1.16 Contractors Responsibility for the Work and Materials
- 8-1.10 Utility and Non Highway Facilities

2. Earthwork

The earthwork shall conform to the requirements of Section 19 of the Standard Specifications and the following provisions.

All unsuitable or surplus material excavated shall become the property of the Contractor and shall be disposed of in accordance with the provisions in Section 7-1.13 of the Standard Specifications. Such material encountered in subdivision improvements may be used to regrade lots within the sub-

division with the approval of the developer and the Engineer provided such regrading is done in a manner which will not prohibit the proper drainage of lots or property within or adjacent to the subdivision.

Selected material for use in subdivision improvements may be obtained from material excavated from a location outside the right of way but within the subdivision when specified in the special provisions, shown on the plans, or designated by the Engineer.

The trench for pipe culverts shall be excavated a minimum depth of 3 inches below the bells or couplings for the full length of the trench under ordinary circumstances and if solid rock or other unyielding material is encountered the material shall be removed to a depth of one-fourth the nominal diameter of the pipe below the couplings or bells but not less than 4 inches. If the foundation is soft, spongy, or unstable, the trench shall be excavated to a stable soil or 1 foot below the bells or couplings, whichever is the least, and the excavation backfilled with structure backfill material of a quality and gradation specified herein.

Below an elevation of 12-inches above the top of the pipe backfill material shall have a sand equivalent of 30 and shall meet the following gradation requirements.

| <u>Sieve Size</u> | <u>Percent Passing</u> |
|-------------------|------------------------|
| 3"                | 100                    |
| No. 4             | 35-100                 |

Backfill around the pipe and to an elevation of 12 inches above the pipe shall be placed carefully to provide uniform support for the pipe and in such a manner as not to injure or disturb the pipe.

Backfill material above an elevation of 12 inches above the pipe may be material from excavation, free from stones or lumps exceeding 3 inches in greatest dimension, vegetable matter, or other unsatisfactory material and shall be compacted to a relative compaction of not less than 90 percent. Backfill material placed below the roadway surfacing or other paved area

shall be compacted to a relative compaction of 95 percent to a depth of 1.5 feet below finished grade or to a depth of 0.5 foot below the lowest layer of surfacing, base or subbase whichever is the greatest.

Surfacing, base or subbase removed during the trenching operations shall be replaced with material equal or better than the material so removed. However, the surfacing replaced shall have a minimum depth of not less than 3 inches.

Jetting may be permitted under favorable conditions with prior approval of the Engineer. Mechanically operated tamping machines employing the impact principal will not be permitted at locations where, in the opinion of the Engineer, their use could cause damage to the pipe being backfilled.

Excavation for compaction of original ground as provided in Section 19-5.02 of the Standard Specifications shall not be required, but this provision will not preclude the necessity of compacting subgrade. The subgrade shall be prepared and compacted as provided in Section 19-1.03 of the Standard Specifications.

The relative compaction of each layer of embankment beneath the surfacing to a depth of 1.5 feet from finished grade or to a depth of 0.5 foot below the lowest layer of pavement, base or subbase, whichever is the greatest, shall not be less than 95 percent. The relative compaction of all other embankment material shall be not less than 90 percent.

### 3. Aggregate Subbase

Aggregate subbase shall conform to the requirements of Section 25 of the Standard Specifications and the following provisions.

Aggregate Subbase shall be Class 4 and the percentage composition by weight shall conform to the following grading when determined by Test Method No. Calif. 202.

| <u>Sieve Sizes</u> | <u>Percentage Passing</u> |
|--------------------|---------------------------|
| 2 1/2 inches       | 100                       |
| No. 4              | 50-100                    |
| No. 200            | 0-25                      |

Class 4 aggregate subbase shall also conform to the following minimum quality requirements:

| <u>Tests</u>         | <u>Test Method No.</u> | <u>Requirements</u> |
|----------------------|------------------------|---------------------|
| Sand Equivalent      | 217                    | 20                  |
| Resistance (R-Value) | 301                    | 50                  |

The R-Value requirement will be waived provided the aggregate subbase conforms to the specified grading and has a Sand Equivalent of 25 or more.

Where the required thickness is 0.67 foot or less, the aggregate subbase may be spread and compacted in one layer. Where the required thickness is more than 0.67 foot, the aggregate subbase shall be spread and compacted in 2 or more layers of approximately equal thickness, and the maximum compacted thickness of any one layer shall not exceed 0.67 foot. Each layer shall be compacted in a similar manner.

#### 4. Lime Treatment

Lime Treatment shall conform to the requirements in Section 24 of the Standard Specifications and these provisions.

Lime treated material may be used in place of aggregate subbase provided the minimum thickness of aggregate base and paving is provided.

Lime for use in lime treatment may be a granular quicklime which when sampled at the point of delivery shall conform to the following requirements.

1. Free lime, expressed as calcium hydroxide,  $\text{Ca}(\text{OH})_2$ , shall not be less than 95 percent as determined by Test Method No. Calif. 414-A.
2. Granular Quicklime shall meet the following dry mechanical grading analysis.

| <u>Sieve Size</u> | <u>Percentage Passing</u> |
|-------------------|---------------------------|
| No. 4             | 100                       |
| No. 100           | 10 maximum                |

3. Lime reactivity shall be not less than 25° C. Lime reactivity shall be expressed as the slaking rate of quicklime after 30 seconds in accordance with ASTM designation C110.

5. Aggregate Base

Aggregate base shall conform with the requirements of Section 26 of the Standard Specifications and the following provisions.

Aggregate base shall be Class 2, 3/4 inch maximum in the valley areas.

Aggregate base may be either Class 2, 3/4 inch maximum or Class 3 aggregate base in the mountain areas.

Class 3 aggregate base shall be free from vegetable matter and other deleterious substances and shall be of such nature that it can be compacted readily under watering and rolling to form a firm, stable base.

Aggregate for Class 3 aggregate base shall consist of any one or a mixture of broken or crushed stone, crushed gravel, or natural materials that will meet the specified quality requirements when combined within the specified limits of grading.

The percentage composition by weight of Class 3 aggregate base shall conform to one of the following gradings when determined by Test Method No. Calif. 202.

| <u>Sieve Sizes</u> | <u>Percentage Passing</u> |                  |                  |
|--------------------|---------------------------|------------------|------------------|
|                    | <u>3/4" max.</u>          | <u>1/2" max.</u> | <u>3/8" max.</u> |
| 1"                 | 100                       | -                | -                |
| 3/4"               | 85-100                    | 100              | -                |
| 1/2"               | -                         | 90-100           | 100              |
| 3/8"               | -                         | -                | 95-100           |
| No. 4              | 35-65                     | 50-75            | -                |
| No. 8              | -                         | 35-60            | 60-85            |
| No. 30             | 10-30                     | 15-35            | 25-45            |
| No. 200            | 2-10                      | 4-12             | 6-15             |

Class 3 aggregate base shall also conform to the following quality requirements:

| <u>Tests</u>          | <u>Test Method</u> | <u>Requirements</u> |
|-----------------------|--------------------|---------------------|
|                       | <u>No. Calif.</u>  |                     |
| Resistance (R-Value)* | 301                | 65 min.             |

Sand Equivalent

217

25 min.

\* The R-Value requirement will be waived provided the aggregate base conforms to the specified grading and has a Sand Equivalent value of 35 or more.

In lieu of the requirements of Section 26-1.04B, aggregate base may be spread in accordance with the requirements of spreading aggregate subbase as specified in Section 25-1.04 of the Standard Specifications.

In mountain areas the finished aggregate base may vary up to 0.08 foot above or below the grade established by the Engineer.

6. Road-Mixed Asphalt Surfacing - Road-mixed asphalt surfacing shall conform with the following provisions.

Road-mixed asphalt surfacing shall only be used in mountain areas approved by the County Public Works Director.

The bituminous binder to be mixed with the aggregate shall be liquid asphalt conforming to the provisions in Section 93 of the Standard Specifications and shall be of a grade approved by the Engineer. The amount of liquid asphalt to be mixed with the aggregate shall be determined by the Engineer.

Aggregate may be imported material, selected material, local borrow material, or combination of such materials and shall consist of any one or a mixture of the following materials:

1. Broken or crushed stone, or crushed gravel.
2. Natural material having sufficient roughness to meet the specified stabilometer requirements when combined within the specified limits of grading.

The percentage composition by weight of the aggregate shall conform to one of the following gradings when determined by Test Method No. Calif. 202.

| <u>Sieve Sizes</u> | <u>Percentage Passing</u> |                  |                  |
|--------------------|---------------------------|------------------|------------------|
|                    | <u>3/4" max.</u>          | <u>1/2" max.</u> | <u>3/8" max.</u> |
| 1"                 | 100                       | -                | -                |
| 3/4"               | 85-100                    | 100              | -                |

|         |       |        |        |
|---------|-------|--------|--------|
| 1/2"    | -     | 90-100 | 100    |
| 3/8"    | -     | -      | 95-100 |
| No. 4   | 35-65 | 50-75  | -      |
| No. 8   | -     | 35-60  | 60-85  |
| No. 30  | 10-30 | 15-35  | 25-45  |
| No. 200 | 2-10  | 4-12   | 6-15   |

The combined aggregate shall also conform to the following quality requirements immediately prior to mixing with asphalt binder:

| <u>Tests</u>  | <u>Test Method</u> |                     |
|---|--------------------|---------------------|
|   | <u>No. Calif.</u>  | <u>Requirements</u> |
| Both $K_C$ and $K_F$ - Factors<br>(obtained from C.K.E. Test) | 303                | 1.8 Max.            |
| Sand Equivalent   | 217                | 35 Min.             |

The combined aggregate shall also conform to the following quality requirements when mixed with the amount of asphalt determined to be optimum by Test Method No. Calif. 304 which in no case shall be less than 3.8 percent by weight of the dry aggregates:

| <u>Tests</u>  | <u>Test Method</u> |                     |
|---|--------------------|---------------------|
|   | <u>No. Calif.</u>  | <u>Requirements</u> |
| Stabilometer Value                                    | 304                | 30 Min.             |
| Moisture Vapor Susceptibility<br>(Stabilometer Value) | 307                | 20 Min.             |
| Swell   | 305                | 0.030 Max.          |

#### 7. Asphalt Concrete

Asphalt Concrete shall comply with the requirements of Section 39 of the Standard Specifications and the following provisions.

In valley areas the asphalt binder to be mixed with the aggregate shall be a paving asphalt, the grade to be approved by the Engineer.

In mountain areas the asphalt binder to be mixed with the aggregate shall be a paving asphalt or a liquid asphalt of a grade approved by the Engineer.

Aggregate for asphalt concrete shall be Type B, the percentage composition by weight conforming to one of the

following gradings:

3/4" Maximum (Medium)

3/4" Maximum (Fine)

1/2" Maximum (Coarse)

A prime coat or paint binder meeting the requirements in Section 39-4.02 of the Standard Specifications shall be applied to all areas to be surfaced with asphalt concrete.

When specified by the Engineer, a Fog Seal complying with the requirements of Section 37 of the Standard Specifications shall be applied to the finished surface of the asphalt concrete. The combined mixture of asphaltic emulsion and water shall be applied at the rate of 0.10 gallon per square yard unless a lesser rate of application is required by the Engineer.

In lieu of the requirements in Sections 39-5.03A and 39-5.03B, the minimum rolling equipment specified may be reduced to one 2-axle tandem roller, weighing at least 8 tons, when asphalt concrete is placed at a rate of 100 tons, or less, per hour at any location provided it is demonstrated to the satisfaction of the Engineer that one roller can perform the work.

In mountainous areas, when approved by the Engineer, any course or layer of asphalt concrete may be spread with pneumatic tired motor graders meeting the requirements specified in Section 39-5.01 of the Standard Specifications provided segregation can be avoided and a uniform, smooth pavement obtained.

In mountainous areas the allowable surface tolerance may be increased to the maximum permissible for road-mixed asphalt surfacing as specified in Section 38-4.07 of the Standard Specifications.

#### 8. Concrete Structures

Concrete structures shall be constructed in accordance with the requirements in Section 51 of the Standard Specifications and the following provisions.

When approved by the Engineer concrete may be designated

by 28 day comprehensive strength without reference to the class designation referred to in Section 90 of the Standard Specifications. If designated by compressive strength, the Contractor shall be responsible for furnishing concrete which contains not less than 5.5 sacks nor more than 8.5 sacks of cement per cubic yard of concrete which is workable, and which conforms to the strengths shown on the plans or specified by the Engineer. Unless approved by the Engineer the compressive strength specified shall be obtained without the use of admixtures. The weigh-batch proportions for concrete designated by compressive strength shall be determined by the Contractor.

Concrete may be mixed by hand where the batch size is less than 1/2 cubic yard and the concrete is mixed in accordance with the provisions in Section 90-6.05 of the Standard Specifications.

If approved by the Engineer in advance of mixing, where a truck mixer or agitator is used for transporting concrete, discharge of the concrete may be completed after more than 1½ hours or after 250 revolutions of the drum or blades following the introduction of the cement. The amount of additional time or number of revolutions permitted shall be determined by the Engineer.

The method used for curing concrete shall be determined by the Engineer and shall comply to the provisions in Section 90-7 of the Standard Specifications for the method selected.

A Class 1 surface finish may be waived for certain surfaces designated in Section 51-1.18B where shown on the plans or approved by the Engineer. However, an ordinary surface finish shall be required.

#### 9. Reinforcement

Bar reinforcement, mesh reinforcement, and reinforcing wire shall conform to the requirements in Section 52 of the Standard Specifications and the following provisions.

Steel lists as specified in Section 52-1.03 shall not be required unless requested by the Engineer.

Samples of reinforcing steel to be used in the work may be

taken at the site of the work after delivery of the steel. The number and size of samples to be furnished the Engineer by the Contractor will be determined by the Engineer but shall not exceed two samples 2.5 feet in length from each size in each heat or melt.

10. Drainage and Irrigation Pipe

Pipe and pipe arch for use in drainage and irrigation facilities shall conform to the requirements in Sections 63, 64, 65, 66 and 67 of the Standard Specifications and the following provisions.

The type of pipe specified for work governed by these Improvement Standards may be selected by the developer or the design engineer provided the pipe is of sufficient strength to withstand the loading imposed, has a minimum service life of 50 years, and meets the quality requirements specified in the above named sections of the Standard Specifications. Soil tests may be required by the Engineer where the chemical composition of the soil may be detrimental to certain types of pipes proposed for use.

The strength of the pipe required within the road right of way shall be determined by the design procedure used by the State Department of Transportation.

Non-reinforced concrete pipe up to 18 inches in diameter and reinforced concrete pipe up to 24 inches in diameter that meet the D-load, minimum shell thickness, and minimum reinforcement shown in Plate A-24 of Section IV of these Improvement Standards may be used in lieu of pipe conforming to the quality requirements in said Section 65 provided the pipe can withstand the loading imposed.

Corrugated aluminum pipe and pipe arch shall conform to the provisions in Section 62-1.02C of the Standard Specifications.

Band couplers for corrugated pipe shall have the following minimum widths:

| <u>Nominal Pipe Diameter</u> | <u>Minimum Band Width</u> |
|------------------------------|---------------------------|
| Under 15"                    | 7"                        |
| 15" thru 48"                 | 12"                       |
| Over 48"                     | 24"                       |

Helically corrugated pipe shall be connected to annular corrugated pipe using a universal coupling band having a minimum width of 12 inches. The coupling of the two types of pipes at locations where a firm, positive connection is desired shall be avoided.

The hydrostatic test specified for siphon and pressure pipe in Sections 65-1.08 and 66-1.09D of the Standard Specifications may be waived by the Engineer under field conditions that he determines make the tests unnecessary or impractical to conduct.

11. Subsurface Drains

Subsurface drains shall conform to the requirements in Section 68 of the Standard Specifications and these provisions.

Permeable material may be either Class 1 or Class 2 material at the option of the Contractor unless otherwise specified on the plans or in the special provisions.

Trenches for underdrains shall be excavated to the width shown on the plans or directed by the Engineer. However, said width shall not be less than 2.0 feet. The trench shall also be excavated to a minimum depth of 6 inches below the grade established for the bottom of the drain line. The height to which the filter material is placed shall be as shown on the plans or as directed by the Engineer, which height shall generally be 6 inches below the natural ground outside the roadway or to the elevation of the grading plane within the roadway.

12. Overside Drains

Overside drains shall conform to the requirements in Section 69 of the Standard Specifications and these provisions.

Overside drains shall be limited to the tapered inlet and flume downdrain type of either ferrous metal or aluminum, except that asphalt concrete may be used where the slope is 4:1 or flatter and the length required is less than 10 feet.

Where soil conditions at the end of the downdrain are subject to erosion; rock, asphalt concrete or other material shall be placed to inhibit erosion.

When there is a question as to the ability of the down-drain to function properly, the Engineer may require water to be deposited on the finished roadway in such a manner that the operation of the downdrain may be tested. Inadequacies determined by such tests shall be corrected.

### 13. Miscellaneous Facilities

Miscellaneous facilities shall conform to the requirements in Section 70 of the Standard Specifications and these provisions.

The pressure tests specified in Sections 70-1.02B and 70-1.02K of the Standard Specifications may be waived by the Engineer under field conditions that he determines make the tests unnecessary or impractical to conduct.

Driveway culvert pipe placed within the right of way shall have a nominal diameter of not less than 12 inches.

### 14. Slope Protection

Slope protection shall conform to the requirements in Section 72 of the Standard Specifications and these provisions.

Unless shown on the plans or approved by the Engineer rock slope protection, grouted or ungrouted, shall be placed by Method A Placement. However, the local surface irregularities may vary up to two feet from the planned slope measured at right angles to the slope.

The slopes on which sacked concrete slope protection is to be placed may vary up to 0.5 foot of the planned slope measured at right angles to the slope.

### 15. Concrete Curbs and Sidewalks

Concrete curbs, sidewalks and gutter depressions shall conform to the requirements in Section 73 of the Standard

Specifications and the following provisions.

Either the 1" or 1 1/2" maximum aggregate grading specified in Section 90-3.04 of the Standard Specifications may be used.

16. Fences

Fences shall conform to the requirements in Section 80 of the Standard Specifications and these provisions.

Fences for ponding basins or lots shall be chain link fence, Type CL-6 constructed as shown on Plate No. B-6, Section IV of these Improvement Standards.

Fences adjacent to freeways or limited access expressways shall be of a type approved by the Engineer.

Property fences not adjacent to freeways or limited access expressways may be of any type and material selected by the developer that does not conflict with State and local ordinances or codes.

C. DRAINAGE

1. Pipelines

Pipe and pipe arch shall conform to item number 10 of Subsection B (Streets and Highways) of this section.

2. Earthwork

Trench compaction and backfill material shall conform to item number 2 of Subsection B (Streets and Highways) of this section.

3. Pumping Plant Equipment

a. General - The drainage pumping equipment and the pumping plant electrical equipment shall conform to the provisions in Section 74, "Pumping Plant Equipment", of the Standard Specifications and these special provisions.

The data required in Section 74-1.04, "Data to be Furnished", of the Standard Specifications shall be limited to 3 copies of the following material:

1. The name of manufacturer, catalog number, size, capacity and all pertinent power ratings of the pump.

2. Pump performance curves.

3. Assembly plans showing the pump, pipes and fittings and any bracing to be installed.

In addition to the above data any parts lists and service instructions packaged with or accompanying the drainage pumping equipment and pumping plant electrical equipment shall be delivered to the Engineer.

b. Drainage Pumping Equipment - The pumping unit shall be suitable for outdoor installation, consisting of a vertical-shaft, single propeller-type pump, direct connected to a vertical shaft induction motor. The unit shall be designed to operate safely in the reverse direction of rotation due to water returning through the pump. The weight of the revolving parts of the pump, including the unbalanced hydraulic thrust of the propeller, shall be carried by a thrust bearing in the motor. The pump shall be supported from a base plate and channels by means of a vertical column having a horizontal discharge located as specified.

The vertical pump supporting column and discharge elbow shall be made of welded plate steel with a minimum wall thickness of 10 gage from 8" through 14" columns and 1/4" for 16" columns and larger in lieu of the 3/8" minimum specified in Section 74-2.04 of the Standard Specifications. The discharge opening shall be plain end, fitted with a Dresser type coupling suitable for connection to the discharge pipe. The discharge elbow shall be as shown on the plans.

The suction bell and pump bowl shall be made of close-grained cast iron and shall be designed for easy removal of the propeller and bearings. The suction bell shall have a flared inlet designed to reduce entrance losses and a sufficient number of vanes to support the lower guide bearings as well as to sustain the weight of propeller and pump shaft when dismantling the pump.

The pump propellers shall be made of bronze or stainless steel and shall be fastened to the shaft in such a manner as to be removed readily. They shall be balanced statically and dynamically to reduce vibration and wear.

The shaft of the pumping unit shall be of ample size to operate without objectionable distortion or vibration at maximum speed in both the forward and reverse direction of rotation. The pump-bowl shaft shall be made of stainless steel and the line shaft shall be made of carbon or alloy steel. The shaft couplings shall be of the threaded type. Provision shall be made at the top of the motor shaft for adjusting the elevation of the propeller with reference to the bowls. If water lubricated lineshaft is supplied, it shall be furnished with a stainless steel shaft sleeve, mechanically replaceable in the field.

All oil-lubricated lineshaft bearings shall be protected from water and foreign matter by an enclosing tube. A shaft seal shall be provided immediately above the top propeller. By-pass ports to drain excess oil from the shaft enclosing tube shall be provided above the seal. All bearings shall be easily replaceable, and spaced not more than five feet apart. All water-lubricated lineshaft bearings shall be furnished of rubber, and installed in bearing retainers spaced at the minimum distance required by good practice in the field. All bearings shall be easily replaceable.

If oil-lubricated, the pump shall be equipped with a solenoid operated lubricating system which shall supply lubricant to each lineshaft bearing. The solenoid-operated oiler shall be designed for outdoor operation and shall have a lockable metal oil reservoir with a capacity of not less than one gallon. If water lubricated, the pump shall be furnished with a deep packing box designed to effectively reduce leakage. The packing box shall have not less than 6 packing rings and shall have a provision for grease lubrication of the packing.

The packing gland shall be of the split type.

The pump shall be controlled by a float type switch as shown on the plans.

The pump stand shall be constructed from information given on plans.

The motor shall be of the 3-phase, 60-cycle, drop-proof,

vertical, ball-bearing, squirrelcage, induction type for outdoor service. It shall be suitable for operation at (220) (440) (2300) volts, and shall be of the low starting current type suitable for across-the-line starting service. The thrust bearing shall be of proper design to carry the weight of the rotating parts of the pump, including the unbalanced thrust of the propeller. Motor conduit box shall be suitable for accommodating leads from solenoid-operated oiler. The unit shall meet applicable requirements of the latest National Electrical Manufacturer's Association standards. The horsepower rating shall be such that the motor will not be overloaded beyond the service factor under the maximum pumping load possible to develop under the range of pumping heads specified.

The maximum pumping capacity, total dynamic head and maximum relative speed shall be shown on the plans and be approved by the Engineer.

#### D. WATER SYSTEMS

##### 1. Pipe and Fittings

a. Cast Iron - All cast iron pipe shall be cement lined and conform to A.W.W.A. Standard Specifications C 102, C 106 and C 108. Cement lining shall conform to A.W.W.A. Standard Specifications C 104.

The minimum pressure class allowable shall be Class 150. Where necessary, pipe of a higher pressure rating shall be used to give the proper factor of safety. Cast iron fittings shall be of the proper class for the intended use and in no case shall they be of a lower pressure rating than the pipe to which attached.

Cast iron pipe and fittings shall be joined by any of the methods generally accepted in water works practice, including bell and spigot joints, flanged joints, mechanical joints and sleeve type coupling joints. Any newly developed joints not generally accepted in the water works industry must have the approval of the Engineer prior to use.

Where caulked bell and spigot joints are used they shall be made up of the following materials:

(1) Caulking or packing material shall consist of (a) molded or tubular rubber rings, or (b) asbestos rope, or (c) treated paper rope.

(2) Lead shall be hot poured into the joint and shall contain not less than 99.73 percent pure lead. The producer's name or the mark of Lead Industries shall be clearly cast or stamped upon each piece of lead.

b. Asbestos-Cement - Asbestos-cement pipe shall conform to A.W.W.A. Standard Specifications C 400.

The minimum pressure class allowable shall be Class 150. Where necessary, pipe of a higher pressure rating shall be used to the proper factor of safety.

Fittings for asbestos-cement pipe shall be of cast iron and shall be of the proper pressure rating for the intended use and in no case shall they be of a lower pressure rating than the pipe to which attached.

Asbestos-cement pipe and cast iron fittings shall be joined by any of the methods generally accepted in water works practice, including continuous bell ring joints and lead caulking. Any newly developed joints not generally accepted in the water works industry must have the approval of the Engineer prior to use.

c. Copper Pipe - Copper pipe for service laterals shall conform to A.S.T.M. Designation B 88 for "Type K Copper Water Tube".

d. Other Types of Pipe and Fittings - Pipe and fittings of any material other than those herein set forth shall have the specific approval of the Engineer prior to their use.

e. Valves

(1) Gate Valves - All gate valves larger than four (4) inches shall conform to A.W.W.A. Standards C 500 when standard operating conditions are encountered. Where

other than Standard operating conditions are encountered, such as excessive waterhammer, operating in throttled position or under high operating pressure, gate valves of a design approved by the Engineer shall be used.

Gate valves four (4) inches and smaller shall be rated at 200 p.s.i. working pressure for non-shock, cold water service. all working parts of this class valve shall be bronze or bronze mounted and shall be standardized and interchangeable.

Gate valve ends shall be of any of the types commonly used in the water works industry, including screwed ends, hub ends, mechanical joint ends, flanged ends, spigot ends, universal ends and ends for direct connection to asbestos-cement pipe with rubber rings. Any ends other than those commonly used in the water works industry must have the approval of the Engineer prior to use.

(2) Plug Valves - The term "plug valve" shall, in these Standards, refer to regular duty plug valves, corporation stops and curb stops.

Regular Duty Plug Valves shall be designed for regular duty service and in sizes below twelve (12) inches, shall have a pressure rating not less than 175 p.s.i. water, oil or gas working pressure. Valves larger than 12 inches shall have a pressure rating approved by the Engineer.

Corporation stops shall have all bronze bodies, keys, stems, stem washers and stem nuts. Corporation stops shall have the proper type threads for the type of pipe or pipe clamp to which attached.

(3) Check Valves - Check valves for regular duty water works service shall employ non-corrosive materials in the construction of hinge pins, hinges, gate faces and seat faces.

Check valves up to twelve (12) inches in size for regular duty shall have a pressure rating of not less than 200 p.s.i. non-shock, cold water, oil or gas rating. Larger valves and valves for use in other than regular duty shall be of a pressure rating approved by the Engineer.

End connections on check valves may be any ends commonly used in water works practice, including hub ends, flange ends and universal ends. Types of ends other than those commonly used in the water works industry shall have the approval of the Engineer prior to use.

(4) Air and Vacuum Release Valves - Air and vacuum and air release valves shall have internal working parts made of corrosion resistant materials.

Air and vacuum and air release valves for regular service shall have a pressure rating of not less than 150 p.s.i., water, oil and gas, non-shock. Where other than regular service operation is required the valves shall have a pressure rating approved by the Engineer prior to their use.

(5) Miscellaneous Valves - Any type of valve not specifically covered in these specifications shall be considered in this category of "Miscellaneous Types of Valves".

Such valve types include: pressure relief valves, pressure regulating valves, altitude valves and globe valves, among other valve types.

Valves in this classification shall have the approval of the Engineer prior to use.

f. Fire Hydrants - When the required fire flow is 500 gpm, wet barrel or dry barrel fire hydrants may be installed. Wet barrel fire hydrants shall be installed when the required fire flow is 1500 gpm or greater.

Each fire hydrant shall have a minimum of one - 2½" outlet and one - 4½" outlet, except when the required fire flow in the system is 1500 gpm or greater then each hydrant shall have two - 2½" outlets and one - 4½" outlet. Outlets shall have National Standard Hose Threads.

Wet barrel fire hydrants shall meet the requirements of A.W.W.A. Standard C503. Dry barrel fire hydrants shall meet the requirements of A.W.W.A. Standard C502.

Each fire hydrant assembly shall be served with a minimum 6" diameter run of pipe, and shall be provided with a gate valve. Provisions shall be incorporated in the construction of

dry barrel hydrants to automatically shut off the flow of water in the event the hydrant is broken off.

Installation of fire hydrants shall be in accordance with Plate WS-9 in valley areas.

In mountainous areas only, the hydrant inlet may be reduced to 4 inches and installed in accordance with Plate WS-10.

g. Valve and Meter Boxes - Valve and meter boxes shall be constructed of materials capable of withstanding the loads imposed upon them.

Adequate access to all boxes shall be provided by means of readily removable covers.

Sizes of boxes shall be determined by sizes of valve or meter served.

Boxes shall be approved by the County Public Works Director prior to use.

## 2. Installation

a. General - All piping shall be supported and braced against movement as shown on the plans or as specified herein. When temporary supports are used they shall be sufficiently rigid to prevent any shifting or distortion of the pipe.

Where piping is installed on curves the maximum deflection of each joint shall be within the maximum deflection recommended by the pipe manufacturers.

Sufficient flexible couplings of Engineer approved design shall be provided in all piping adjacent to structures to permit differential settling of the foundation of said piping and structures without damage to the piping, or as may be required for ease of installation or removal of the pipe.

All dirt and scale shall be removed from the pipe prior to installing.

b. Earthwork - All trenching work shall conform to the requirements of the Item Number 2 of Subsection B (Streets and Highways) as found in these Standards.

c. Depth of Cover - Minimum cover from finished grade shall be as follows:

|              |       |          |                                       |
|--------------|-------|----------|---------------------------------------|
| 4" - 6" Pipe | - 36" | 12" Pipe | - 48"                                 |
| 8" Pipe      | - 36" | 14" Pipe | - 48"                                 |
| 10" Pipe     | - 36" | 14"+Pipe | as required by<br>County Public Works |

d. Laying and Handling Pipe - Proper implements, tools and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe, convenient, and workmanlike prosecution of the work.

All pipe, fittings and valves shall be carefully lowered into the trench in such a manner as to prevent damage to pipe or pipe coating. Under no circumstances shall pipe or accessories be dropped or dumped into the trench. Before lowering and while suspended, the pipe shall be inspected for defects and cast iron pipe shall be rung with a light hammer to detect cracks. Any defective, damaged or unsound pipe shall be rejected and sound material furnished. Cutting of pipe for inserting valves, fittings, or closure pieces shall be done in a neat and skillful manner without damage to the pipe.

All pipe shall be laid and maintained in the required alignment, with fittings and valves at the required locations and with joints centered and spigots home, and with all valve stems plumb. When the pipe is bedded in a trench it shall be brought into true alignment and shall be secured there with proper backfill material, carefully tamped under and on each side of it as specified herein. Care shall be taken to prevent dirt from entering the joint space.

Each length of pipe shall have a swab drawn through it and shall be freed of any visible evidence of contamination, dirt and foreign material before it is lowered into its position in the trench, and it shall be kept clean during and after laying. At times when pipe laying is not in progress, the open ends of any pipe which has been laid shall be plugged. Trench water shall not be permitted to enter the pipe.

All installation shall be in full conformance with the manufacturer's recommendation.

e. Service Laterals - Copper service laterals shall be installed in a trench of such depth and direction that the service pipe (tubing) will be at least 24" below finished street grade, shall be laid in a plane perpendicular to the longitudinal axis of the main, shall be as far away from sewer laterals as possible and shall not interfere with other utility installations.

The copper tubing shall be bent in such a manner as to prevent kinking of the tubing.

For 3/4" and 1" services, the corporation stops shall be tapped into that side of the main to which the service is to be installed at a point approximately 60 degrees down from the top of the main with the shut-off valve of the corporation stop facing up.

Service laterals may be attached to mains by the use of saddles where recommended by the pipe manufacturer and shall conform to the manufacturer's recommendations.

The house end of the service lateral shall terminate with a curb stop corresponding to the size of the service, with the outlet in a horizontal position facing the lot to be served. If meters are required, a concrete meter box of proper size shall be levelled and longitudinally centered over the end of the service. The meter box shall be set square with the curb or property line in solid ground, with the top of the box at the elevation of the top of the curb or adjacent ground.

f. Thrust Backing and Harness - All tees, bends, plugs, fire hydrants and appurtenances as may be specified on the plans, shall be provided with thrust backing and/or harness in accordance with Standard Drawings.

Thrust backing shall be of Class "B" concrete conforming with requirements of Section 90 of the Standard Specifications cast in place between solid ground and the fittings to be anchored. The backing shall be so placed that the pipe and fitting joint will be accessible for repair.

g. Valves - A valve box or masonry pit shall be provided for every valve.

A valve box shall be provided for every valve which has no gearing or operating mechanism or in which the gearing or operating mechanism is fully protected with a cast iron grease case. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the wrench nut of the valve, with the box cover flush with the surface of the finished pavement or such other level as may be directed.

A masonry valve pit shall be provided for every valve which has exposed gearing or operating mechanisms. The valve nut shall be readily accessible for operation through the opening in the manhole, which shall be set flush with the surface of the finished pavement or such other level as may be specified. Pits shall be so constructed as to permit minor valve repairs and afford protection to the valves and pipe from impact where they pass through the pit walls.

h. Fire Hydrants - All fire hydrants shall stand plumb and shall have their outlets parallel with or at right angles to the curb or road centerline with the steamer outlet facing the curb or road centerline, except that hydrants having two hose outlets 90 degrees apart shall be set with each outlet facing the curb or road centerline at an angle of 45 degrees. Hydrants shall be set to the established grade, with outlets a minimum of 18 inches and a maximum of 30 inches above the ground or as otherwise shown on the plans. In the SRA, hydrants shall be set 18 inches above the established grade.

### 3. Water Storage

Storage facilities shall be provided where necessary to meet the demands of the water system.

Steel storage tanks shall conform to A.W.W.A. D 100 specifications and shall be painted in accordance with A.W.W.A. D 102 specifications.

Other tanks such as wood tanks, hydropneumatic tanks, reinforced concrete tanks and ground storage reservoirs may be acceptable, subject to the approval of the Engineer. Request for approval of any of these facilities shall be accompanied by

complete specifications and design calculations.

4. Pressure Testing

a. Hydrostatic Test - After the pipe has been laid and backfilled, said pipe shall be subjected to a hydrostatic pressure no less than the full rated (Maximum recommended) pressure class of the pipe plus an additional 50 p.s.i.

The duration of each test shall be 30 minutes unless otherwise directed by the Engineer.

Each section of pipeline shall be slowly filled with water, and the specified test pressure, measured at the point of lowest elevation, shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Engineer. The pump, pipe connection, and all necessary apparatus, shall be furnished by the Contractor.

During the filling of the pipe and before applying the specified test pressure, all air shall be expelled from the pipeline. To accomplish this, taps shall be made, if necessary, at points of highest elevation, and after completion of the test the taps shall be tightly plugged unless otherwise specified.

During the test, all exposed pipes, fittings, valves, hydrants and joints shall be carefully examined. Any part found to be cracked or defective shall not be accepted and shall be removed and replaced by the Contractor with new, sound material. The test shall then be repeated until satisfactory to the Engineer.

b. Leakage Test - Leakage tests shall be conducted after completion of the hydrostatic test and shall be made at not less than the normal working pressure of the system as determined by the Engineer.

No pipe installation will be accepted until or unless the leakage for the section of line tested is less than the rate specified in the following table.

LEAKAGE ALLOWANCE

Gallons per 1300 feet per hour\*

| Pipe Diam.<br>(inches) | Test Pressure (psi) |      |      |      |       |       |       |
|------------------------|---------------------|------|------|------|-------|-------|-------|
|                        | 50                  | 75   | 100  | 125  | 150   | 200   | 225   |
| 4                      | 1.54                | 1.87 | 2.16 | 2.42 | 2.65  | 3.07  | 3.25  |
| 6                      | 2.30                | 2.80 | 3.25 | 3.63 | 3.98  | 4.50  | 4.88  |
| 8                      | 3.07                | 3.73 | 4.33 | 4.83 | 5.30  | 6.13  | 6.50  |
| 10                     | 3.83                | 4.66 | 5.41 | 6.04 | 6.63  | 7.66  | 8.12  |
| 12                     | 4.60                | 5.59 | 6.50 | 7.25 | 7.95  | 9.20  | 9.75  |
| 14                     | 5.37                | 6.52 | 7.58 | 8.46 | 9.28  | 10.73 | 11.38 |
| 16                     | 6.13                | 7.45 | 8.66 | 9.66 | 10.60 | 12.27 | 13.00 |

Measurement of allowable leakage need not be made until after the pipe has been filled with water for a period of 24 hours.

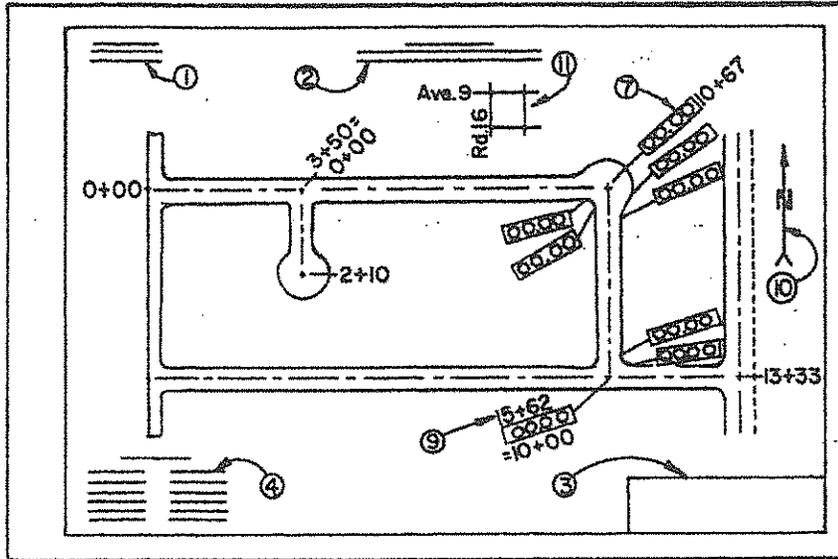
5. Disinfection

Disinfection of water mains shall be in accordance with A.W.W.A. Standard C 601. Special attention shall be given during pipe laying to keeping the pipe clean as outlined in Sections 1 through 4 of said standards.

Disinfection of storage tanks shall be in accordance with provisions of A.W.W.A. Standard D 102.

Following disinfection, samples will be taken and tests made by the Tulare County Department of Health Services for adequate disinfection. The Contractor shall request such tests and shall also provide the Engineer with evidence of Health Department acceptance.

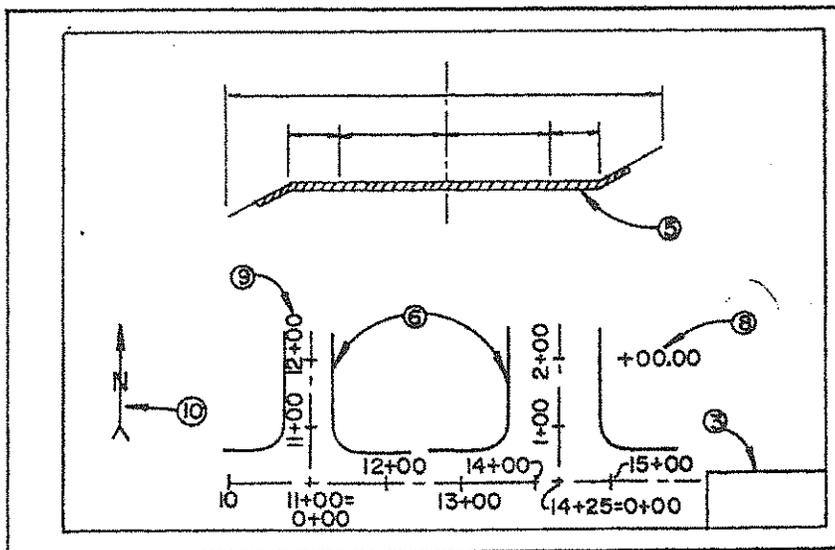
\* A.C. pipe/13 ft. joints. Leakage allowances for water pipelines constructed with other materials shall be determined by the Engineer.



Sheet No.1 Drainage layout showing all grade breaks, curb grades, catch-basins, storm drains, drainage channels, natural drainageways and other drainage works in sufficient detail; and showing lot line and location of fire hydrants, both proposed and existing; showing key map to show the relationship of subdivision to surrounding streets (scale 1" = 1000')

Standard sheet size-24"x36"  
or 22"x 35"

- ① Index of sheets
- ② Project title
- ③ Title Block
- ④ Conventional symbols or legend
- ⑤ Typical cross section
- ⑥ Road approaches
- ⑦ 00.00 Proposed elevation
- ⑧ 00.00 Existing Elevation
- ⑨ 0+00 Show Stationing
- ⑩ North Arrow
- ⑪ Key Map



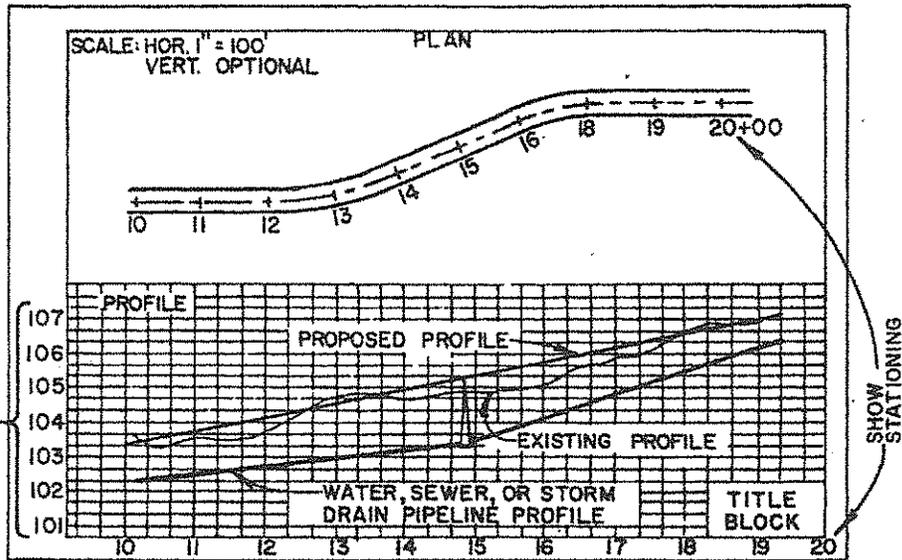
Sheet No. 2 Typical cross sections and road approaches

# PUBLIC ROAD STANDARDS

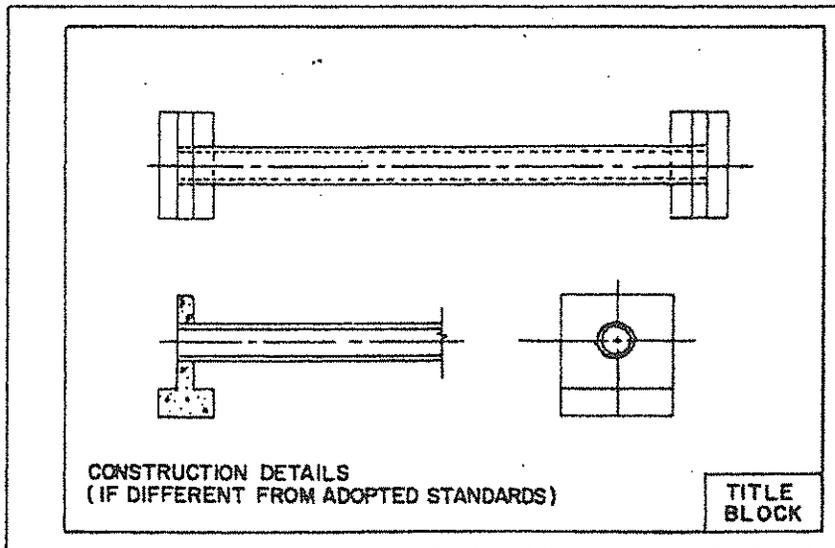
TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

TYPICAL IMPROVEMENT  
PLAN LAYOUT

PLATE NO. 1



Sheet no. 3 to be used for utility plan and profiles, road grades with vertical curves and superelevation. Show elevations of all changes of grade in streets, pipelines, etc.



Remaining sheets following plan and profile to be used for construction details.

# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

TYPICAL IMPROVEMENT  
PLAN LAYOUT

PLATE NO. 2

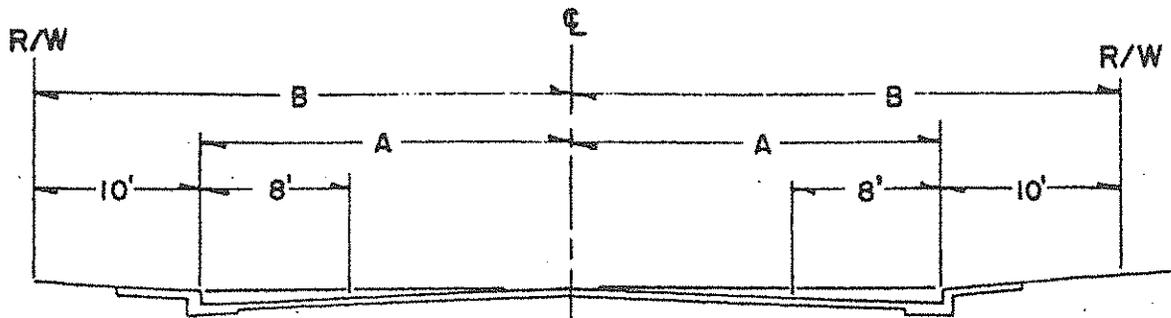
|   |                        |          |
|---|------------------------|----------|
| SUBDIVISION IMPROVEMENT PLANS<br>COUNTY OF TULARE |                        | SCALE    |
| ( NAME OF ENGINEERING FIRM )                      |                        | DRAWN BY |
| ( TRACT IDENTIFICATION )                          |                        | REVISED  |
| ( TITLE OF SHEET )                                |                        |          |
| DESIGN ENGINEER _____                             |                        | SHEET    |
| DATE _____  | C.E. LICENSE NO. _____ | _____ OF |
| REVISED   |                        | SHEETS   |
| APPROVAL  |                        |          |
| APPROVED _____                                    | C.E. LICENSE NO. _____ |          |
| COUNTY OF TULARE                                  | DATE _____             |          |
| REVISED   |                        |          |
| APPROVAL  |                        |          |

# PUBLIC ROAD STANDARDS

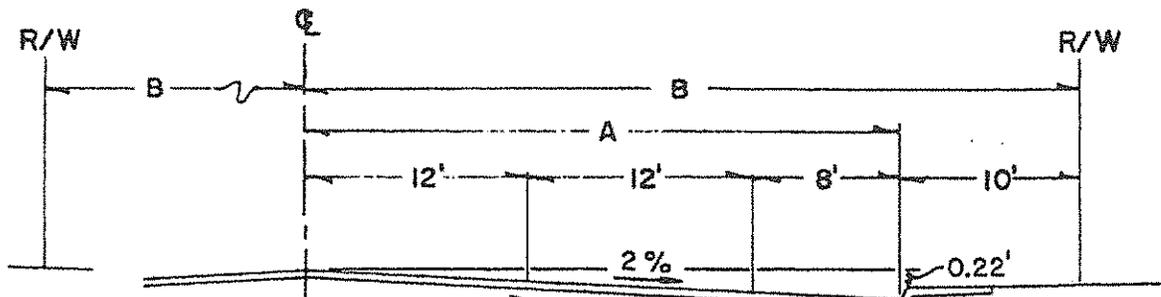
TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

APPROVAL AND  
TITLE BLOCK

PLATE NO. 3



**CLASS 1,2, & 3 TWO LANE ROADS**  
Top of curb elevation = centerline elevation



Top of curb elevation is 0.22' lower than C elevation  
**CLASS 3 & SELECT SYSTEM FOUR LANE UNDIVIDED ROADS**

\*Note: The distance between face of curb and right of way and distance B may be reduced to 8 feet and 40 feet respectively on existing 80 foot right of ways. The chart below applies to urban areas with speed control zones, and select system

| ROAD CLASS | NO. OF LANES | DESIGN VELOCITY | A MIN. | B MIN. | MAX. GRADE | MAX. SUPER |
|------------|--------------|-----------------|--------|--------|------------|------------|
| 1          | 2            | 25 MPH          | 18     | 28     | 10%        | ↑          |
| 2          | 2            | 30 MPH          | 20     | 30     | 10%        |            |
| 3          | 2            | 35 MPH          | 20     | 30     | 10%        | 6%         |
| 3          | 4            | 40 MPH          | 32     | 42'    | 8%         |            |
| SELECT     | 2            | 40 MPH          | 20     | 30     | 8%         | ↓          |
| SELECT     | 4            | 50 MPH          | 32     | 42'    | 8%         |            |

roads outside such areas shall be designed to 60 m.p.h. minimum using a maximum super of 10%.

# PUBLIC ROAD STANDARDS

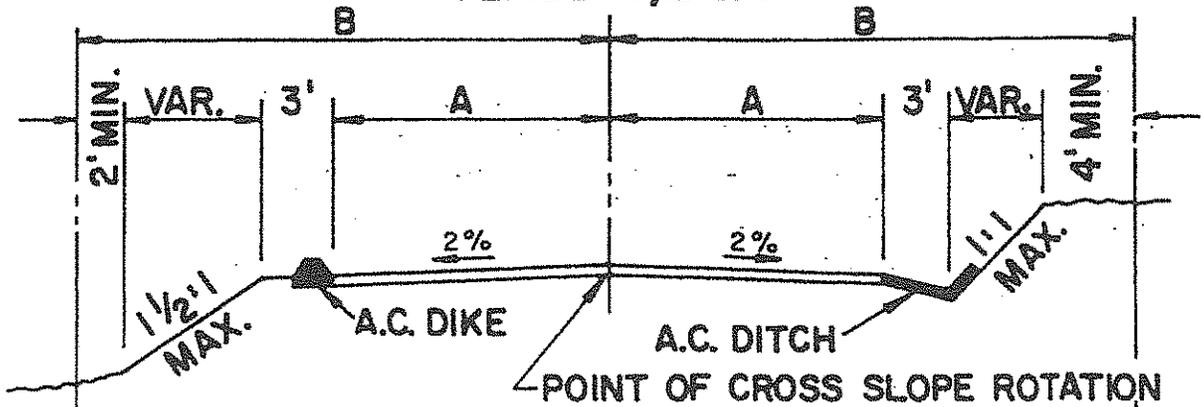
## VALLEY AREA

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

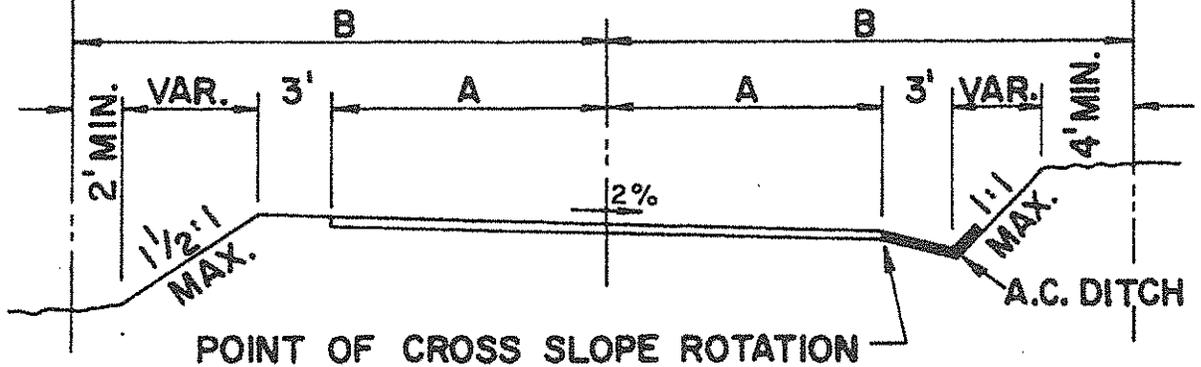
GEOMETRIC  
SECTIONS

PLATE NO. A-1

FOR LOT AREAS 20,000 SQ. FT. OR MORE  
CLASS 1, 2 & 3



CLASS 1 & 2 ALTERNATE

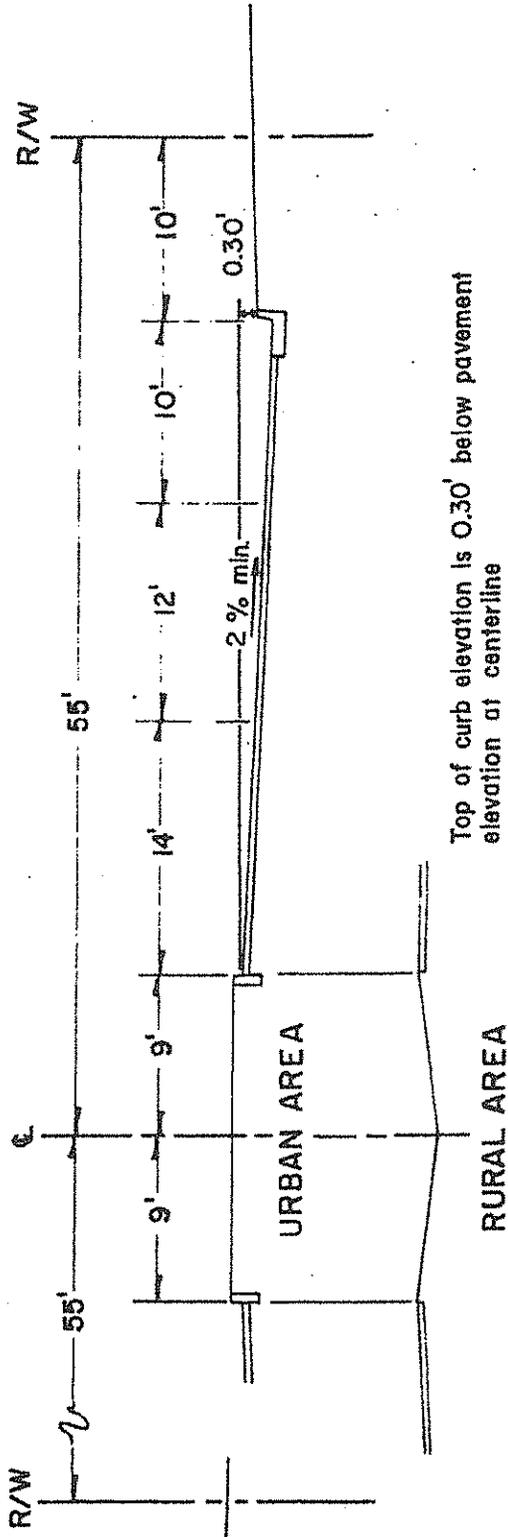


| ROAD CLASS | LOCATION                         | DESIGN VELOCITY | A MIN. | B MIN. | MAX. GRADE |
|------------|----------------------------------|-----------------|--------|--------|------------|
| 1          | WINTER TRAFFIC ABOVE ELEV. 3000' | 20 MPH          | 12'    | 25'    | 10 %*      |
| 2          |                                  | 20 MPH          | 13'    | 25'    | 10 %       |
| 3          |                                  | 30 MPH          | 14'    | 30'    | 10 %       |
| 1          | BELOW ELEV. 3000'                | 20 MPH          | 12'    | 25'    | 15 %       |
| 2          |                                  | 20 MPH          | 13'    | 25'    | 12 %       |
| 3          |                                  | 30 MPH          | 14'    | 30'    | 10 %       |

\* In very difficult terrain, grade up to 12% will be permitted for short distances at locations approved by the Road Department.

PUBLIC ROAD STANDARDS  
MOUNTAINOUS AREA

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080  
GEOMETRIC SECTION  
FOR LOT AREAS  
20,000sq.ft. OR MORE  
PLATE No. A-1M



**SELECT SYSTEM FOUR LANE  
DIVIDED HIGHWAYS**

| ROAD LOCATION | MIN. DESIGN VELOCITY | MAX. GRADE | MAX. SUPER |
|---------------|----------------------|------------|------------|
| Rural Areas   | 60 m.p.h.            | 6%         | 10%        |
| Urban Areas   | 50 m.p.h.            | 6%         | 6%         |

**PUBLIC ROAD STANDARDS**

**VALLEY AREA**

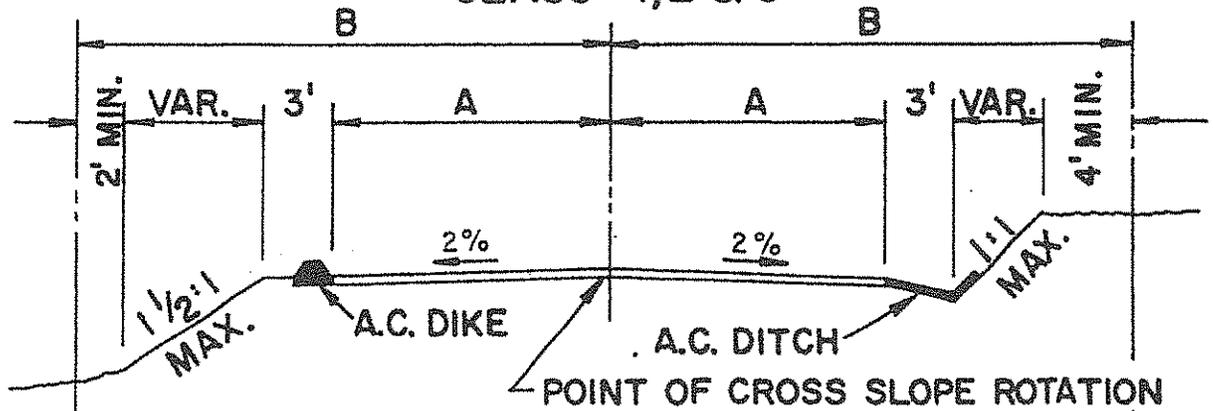
TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

SELECT SYSTEM  
GEOMETRICS

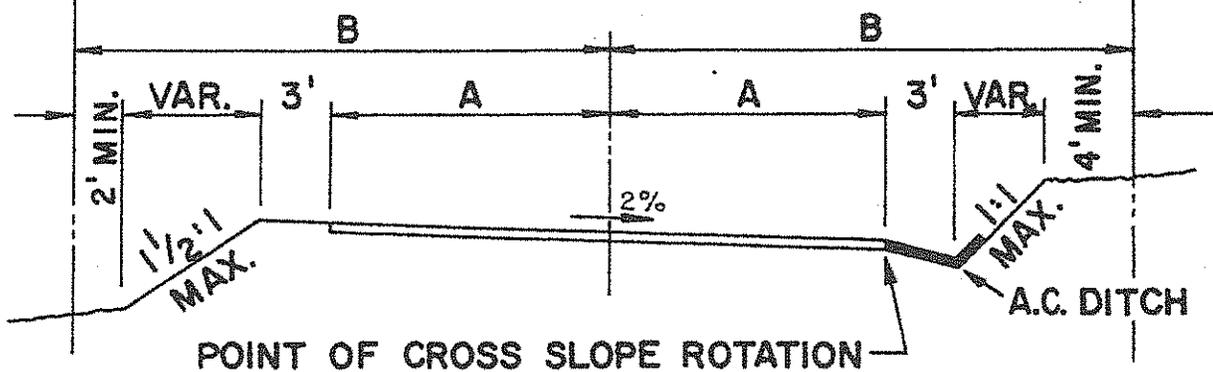
PLATE NO. A-2

FOR LOT AREAS LESS THAN 20,000 SQ. FT.

**CLASS 1, 2 & 3**



**CLASS 1 & 2 ALTERNATE**

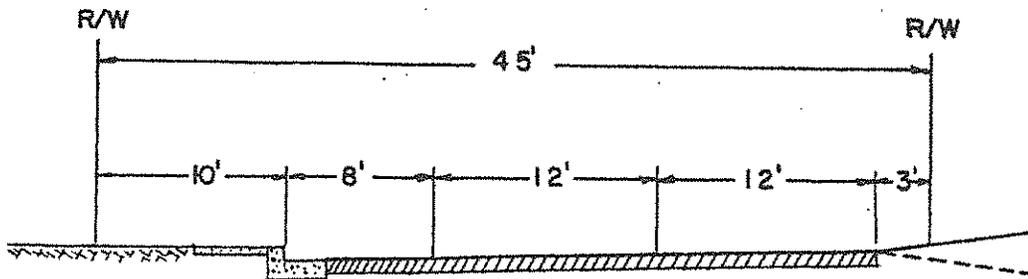


| ROAD CLASS | LOCATION                         | DESIGN VELOCITY | A MIN. | B MIN. | MAX. GRADE |
|------------|----------------------------------|-----------------|--------|--------|------------|
| 1          | WINTER TRAFFIC ABOVE ELEV. 3000' | 20 MPH          | 16'    | 30'    | 10 %*      |
| 2          |                                  | 20 MPH          | 17'    | 30'    | 10 %       |
| 3          |                                  | 30 MPH          | 18'    | 30'    | 10 %       |
| 1          | BELOW ELEV. 3000'                | 20 MPH          | 16'    | 30'    | 15 %       |
| 2          |                                  | 20 MPH          | 17'    | 30'    | 12 %       |
| 3          |                                  | 30 MPH          | 18'    | 30'    | 10 %       |

\* In very difficult terrain, grade up to 12% will be permitted for short distances at locations approved by the Road Department.

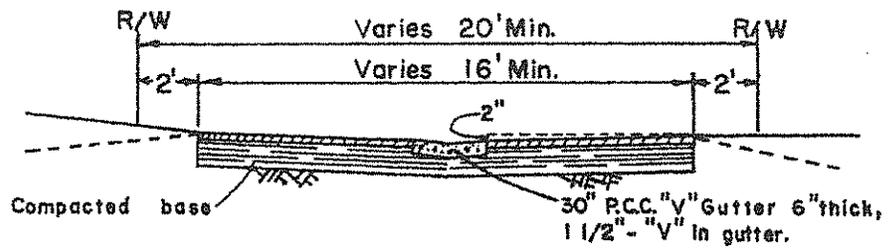
**PUBLIC ROAD STANDARDS  
MOUNTAINOUS AREA**

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080  
GEOMETRIC SECTIONS  
FOR LOT AREAS LESS  
THAN 20,000 sq. ft.  
PLATE No. A-2M



FRONTAGE ROAD SECTION

Note: Grade and alignment shall be the same as the parallel contiguous highway. Frontage roads shall enter four lane streets through Bulb Type Intersections.



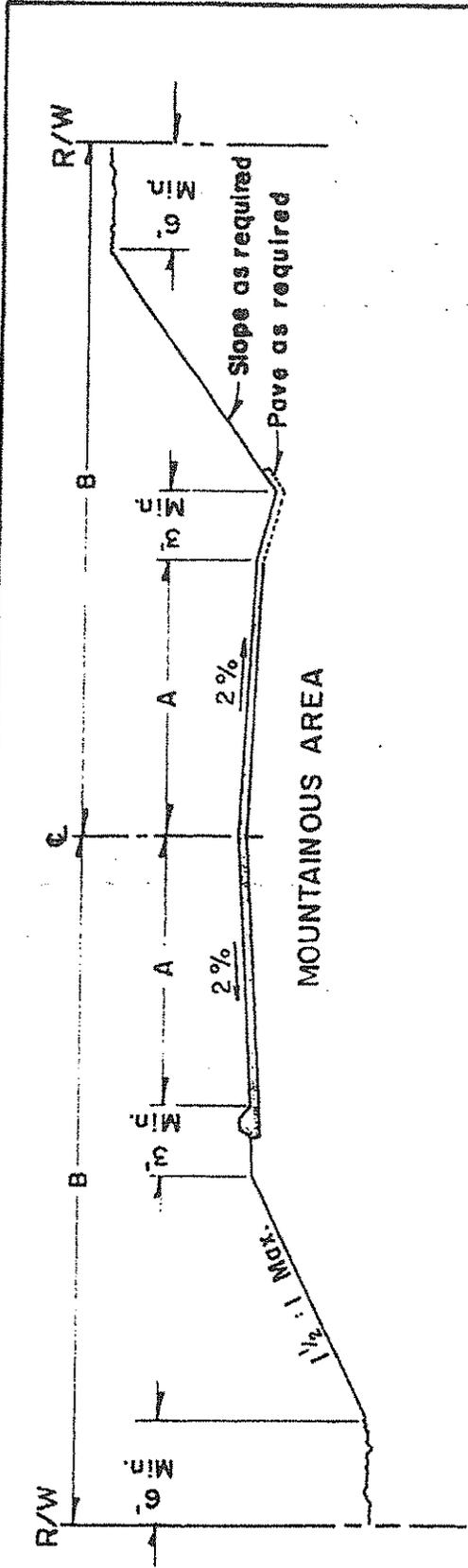
ALLEY SECTION

# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

FRONTAGE ROAD  
AND ALLEYS

PLATE No. A-3



MOUNTAINOUS AREA

| ROAD CLASS | LOT SIZE      | DESIGN VELOCITY | A MIN #    | B MIN | MAX. GRADE. |
|------------|---------------|-----------------|------------|-------|-------------|
| Collector  | 20,000 sq.ft. | 35 m.p.h.       | 14' or 16' | 30'   | 10%         |
| Arterial   | or more       | 40 m.p.h.       | 16'        | 40'   | 8%          |
| Collector  | Less than     | 35 m.p.h.       | 18' or 20' | 30'   | 10%         |
| Arterial   | 20,000 sq.ft. | 40 m.p.h.       | 20'        | 40'   | 8%          |

\*Paved width dependent upon traffic volume.

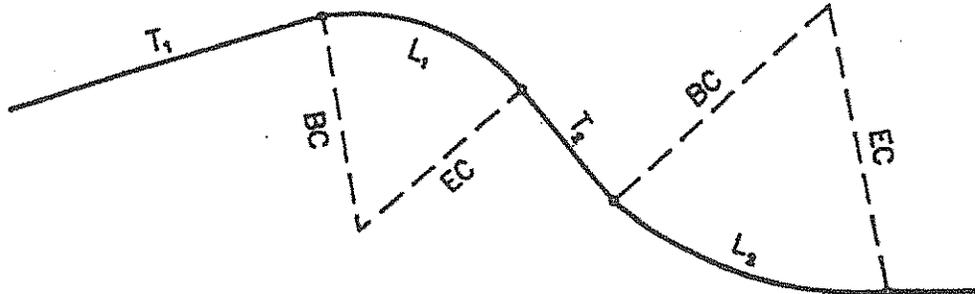
# PUBLIC ROAD STANDARDS

## MOUNTAINOUS AREAS

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

TWO-LANE SELECT  
SYSTEM ROAD

PLATE NO. A-3M



| TABLE OF MINIMUM CURVE RADII (R) |       |     |     |     |     |      |      |      |
|----------------------------------|-------|-----|-----|-----|-----|------|------|------|
| S \ V                            | 20    | 25  | 30  | 35  | 40  | 50   | 60   | 70   |
|                                  | NONE* | 125 | 235 | 375 | 585 | 820  | 1385 | 2180 |
| .02                              | 105   | 190 | 300 | 455 | 630 | 1040 | 1600 | 2330 |
| .04                              | 95    | 175 | 275 | 410 | 560 | 925  | 1410 | 2040 |
| .06                              | 90    | 160 | 250 | 375 | 510 | 835  | 1260 | 1815 |
| .08                              |       |     |     |     |     | 760  | 1140 | 1635 |
| .10                              |       |     |     |     |     | 695  | 1040 | 1485 |

\* Design based on S = -0.02

| TABLE OF MINIMUM TANGENT LENGTHS (T) |     |     |      |      |     |     |     |     |
|--------------------------------------|-----|-----|------|------|-----|-----|-----|-----|
| S <sub>1</sub> +S <sub>2</sub> \ V   | 20  | 25  | 30   | 35   | 40  | 50  | 60  | 70  |
|                                      | .02 | ←   | ←    | NONE | ←   | ←   | 300 | ↑   |
| .04                                  | ←   | ←   | NONE | ←    | ←   | 325 | 375 | ↑   |
| .06                                  | 20  | 25  | 30   | 35   | 40  | 350 | ↓   | 425 |
| .08                                  | 40  | 50  | 60   | 70   | 80  | 375 | ↓   | ↓   |
| .10                                  | 60  | 75  | 90   | 105  | 120 | 400 | 400 | ↓   |
| .12                                  | 80  | 100 | 120  | 140  | 160 | 425 | 425 | ↓   |
| .14                                  |     |     |      |      |     | 450 | 450 | 450 |
| .16                                  |     |     |      |      |     | 475 | 475 | 475 |
| .18                                  |     |     |      |      |     | 500 | 500 | 500 |
| .20                                  |     |     |      |      |     | 525 | 525 | 525 |

| V  | F   |
|----|-----|
| 20 | .24 |
| 25 | .20 |
| 30 | .18 |
| 35 | .16 |
| 40 | .15 |
| 50 | .14 |
| 60 | .13 |
| 70 | .12 |

$$R = \frac{V^2}{15(F+S)}$$

WHERE

- R = Radius in feet
- V = Velocity in M.P.H.
- S = Superelevation in ft./ft.
- F = Friction factor

NOTES:

1. See Plate A-5 for other applicable formulii
2. In the State Responsibility Area, add 4 feet additional surface width for R < 100 feet and 2 feet for 100 < R < 200 feet

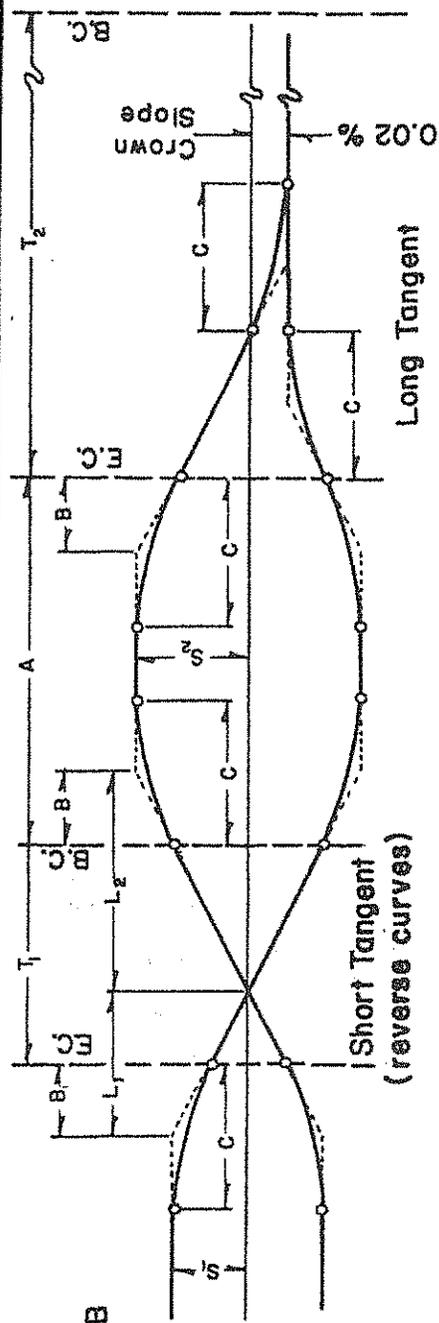
| TABLE OF MINIMUM ARC LENGTHS (L) FOR VARIOUS DESIGN VELOCITIES |    |     |     |     |     |     |     |     |
|--|----|-----|-----|-----|-----|-----|-----|-----|
| V  | 20 | 25  | 30  | 35  | 40  | 50  | 60  | 70  |
| L  | 80 | 100 | 120 | 140 | 160 | 300 | 360 | 420 |

# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

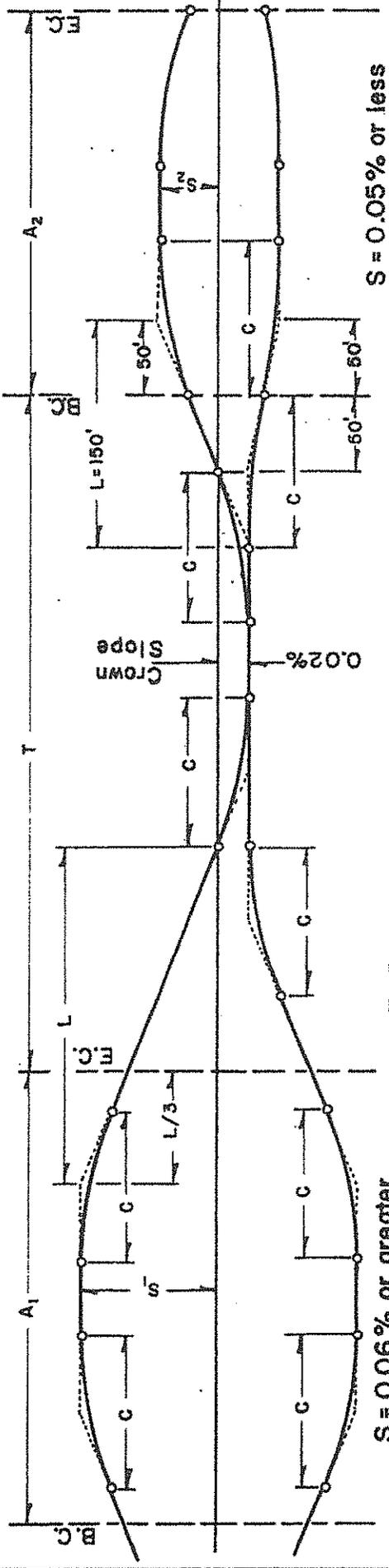
CURVE DESIGN  
RADII & TANGENTS

PLATE NO. A-4



$L = 50VS$   
 $T_{min.} = 50V(S_1 + S_2 \cdot 0.04) = L_1 + L_2 - 2B$   
 $A_{min.} = 4V$   
 $B = V$   
 $C = 2V$   
 $V =$  Design Velocity in M.P.H.  
 $S =$  Superelevation, ft./ft.  
 (max. = 0.06 ft./ft.)

**FOR DESIGN VELOCITIES 40 M.P.H. OR LESS**



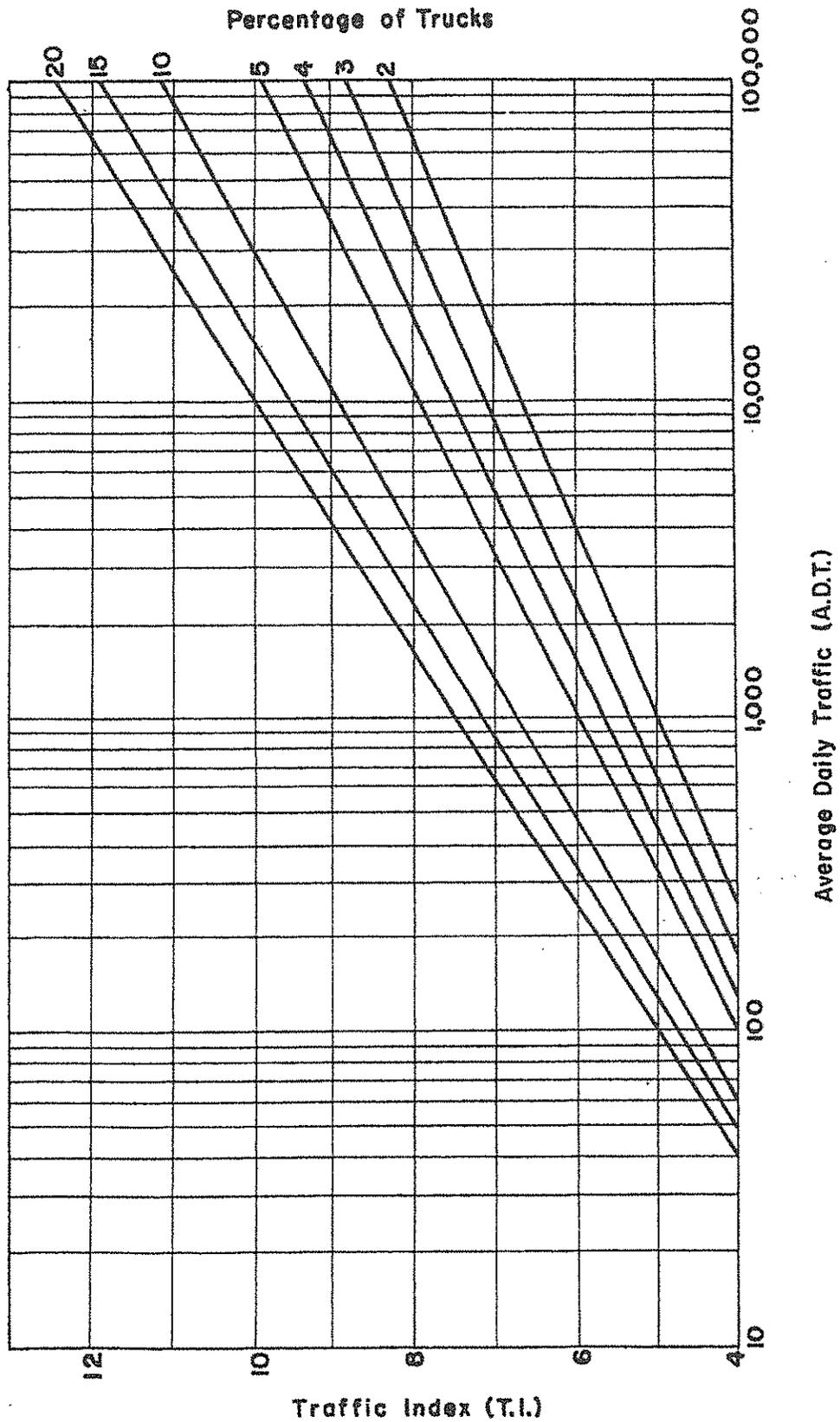
**FOR DESIGN VELOCITIES OVER 40 M.P.H.**

$S = 0.06\%$  or greater  
 $L = 2500 \times S, 150'$  min.  
 $T$  min., See Plate A-4  
 $A_{min.} = 6V$   
 $C = 100'$   
 $V =$  Design Velocity in M.P.H.  
 $S =$  Superelevation, ft./ft. (0.10 max.)  
 See Plate A-3 for table of min. values

**PUBLIC ROAD STANDARDS**

TULARE COUNTY  
 ORDINANCE CODE  
 SECTION No. 7080  
 CURVE DESIGN  
 SUPERELEVATION  
 PLATE NO. A-5

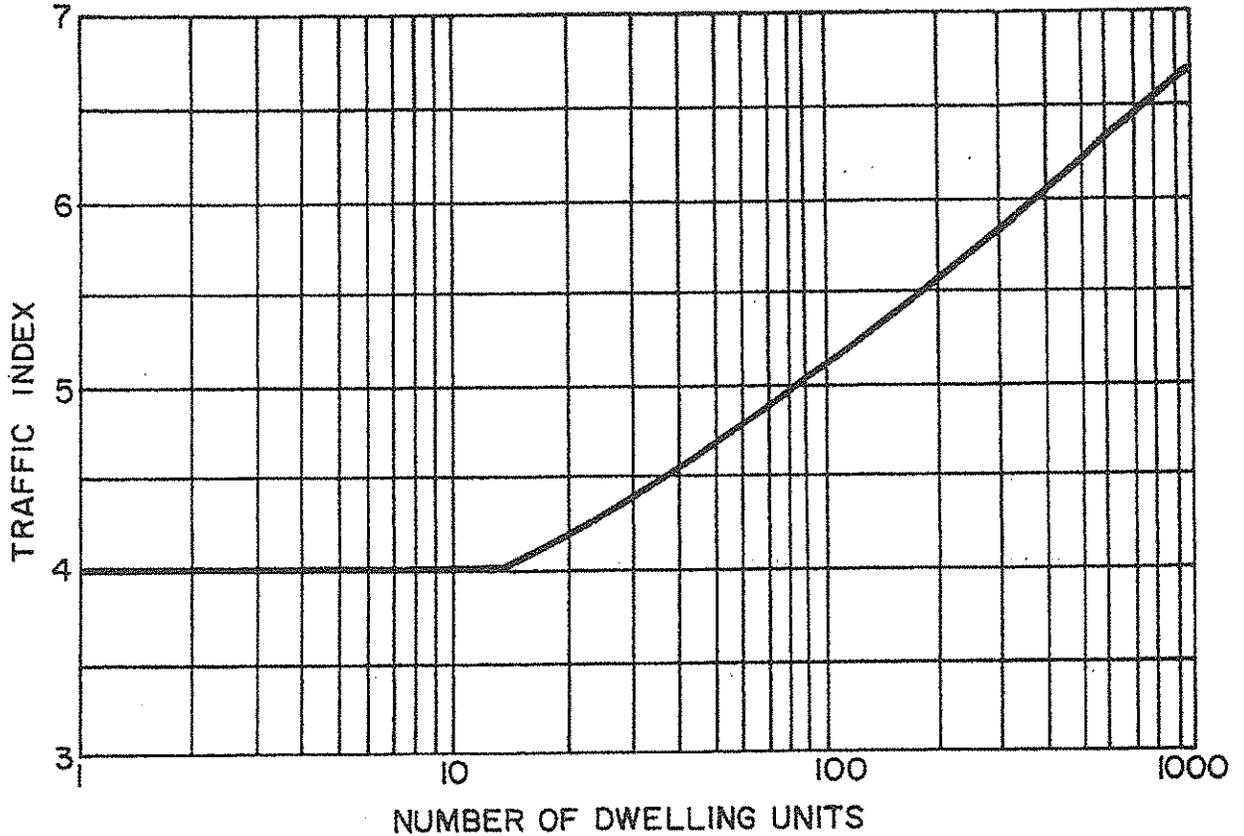
CONVERSION CHART  
 AVERAGE DAILY TRAFFIC TO TRAFFIC INDEX



PUBLIC ROAD STANDARDS

TULARE COUNTY  
 ORDINANCE CODE  
 SECTION No. 7080  
 TRAFFIC INDEX  
 TO A. D. T.  
 PLATE NO. A-6

## CHART FOR ESTIMATION OF TRAFFIC INDEX FROM NUMBER OF DWELLING UNITS



Notes: For use only within subdivisions for residential and residential collector streets.

Chart is based on a 10 year design life.

Where the number of dwelling units cannot be accurately determined, the following traffic indexes shall be used:

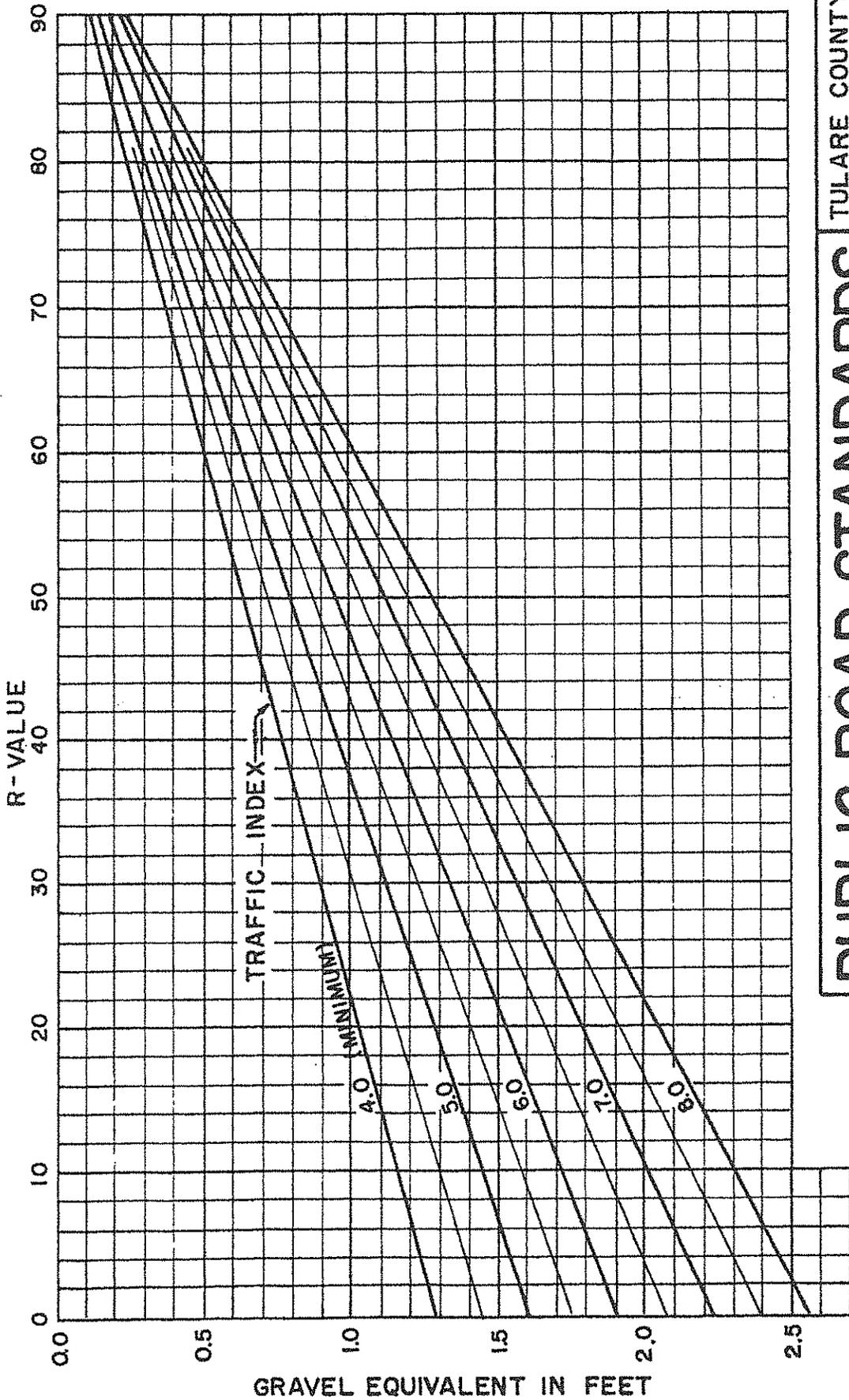
| <u>Class of road</u> | <u>T. I.</u> |
|----------------------|--------------|
| 1                    | 4.5          |
| 2                    | 5.0          |
| 3                    | 5.5          |

# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

TRAFFIC INDEX TO  
DWELLING UNITS

PLATE NO. A-7



TULARE COUNTY  
 ORDINANCE CODE  
 SECTION No. 7080

STRUCTURAL DESIGN  
 CHART FOR FLEXIBLE  
 PAVEMENT

PLATE NO. A - 8

# PUBLIC ROAD STANDARDS

$GE = 0.0032 (TI)(100-R)$

| ACTUAL THICKNESS IN FEET | GRAVEL EQUIVALENT IN FEET |              |            |            |                           |              |            |            |      |                |                               |                           |            |  |  |  |
|--------------------------|---------------------------|--------------|------------|------------|---------------------------|--------------|------------|------------|------|----------------|-------------------------------|---------------------------|------------|--|--|--|
|                          | ASPHALT CONCRETE          |              |            |            | ROAD-MIXED ASPH SURFACING |              |            |            | AB   | CL "B"<br>CTB, | CL "C"<br>CTB,<br>BTB,<br>LTB | CL "D"<br>CTB<br>&<br>ASB |            |  |  |  |
|                          | T. I.<br>FACTOR<br>Gf     | 5 &<br>BELOW | 5.5<br>6.0 | 6.5<br>7.0 | 7.5<br>8.0                | 5 &<br>BELOW | 5.5<br>6.0 | 6.5<br>7.0 |      |                |                               |                           | 7.5<br>8.0 |  |  |  |
| 0.13 MIN.                |                           | 2.50         | 2.32       | 2.14       | 2.01                      | 1.50         | 1.40       | 1.30       | 1.20 | 1.1            | 1.2                           | 1.2                       | 1.0        |  |  |  |
| 0.15                     |                           | 0.32         | 0.35       |            |                           |              |            |            |      |                |                               |                           |            |  |  |  |
| 0.20                     |                           | 0.38         | 0.46       | 0.43       |                           | 0.30         | 0.35       |            |      |                |                               |                           |            |  |  |  |
| 0.25                     |                           | 0.50         | 0.58       | 0.54       | 0.50                      | 0.38         | 0.42       |            |      |                |                               |                           |            |  |  |  |
| 0.30                     |                           | 0.63         | 0.70       | 0.64       | 0.60                      | 0.45         | 0.49       |            |      |                |                               |                           |            |  |  |  |
| 0.35                     |                           | 0.75         | 0.81       | 0.75       | 0.70                      | 0.53         | 0.56       | 0.45       |      | 0.39           |                               |                           | 0.35       |  |  |  |
| 0.40                     |                           | 0.86         | 0.93       | 0.86       | 0.80                      | 0.60         | 0.63       | 0.52       | 0.48 | 0.44           |                               |                           | 0.40       |  |  |  |
| 0.45                     |                           | 1.00         | 1.04       | 0.96       | 0.90                      | 0.68         | 0.70       | 0.59       | 0.54 | 0.50           | 0.66                          | 0.54                      | 0.45       |  |  |  |
| 0.50                     |                           | 1.16         | 1.16       | 1.07       | 1.01                      | 0.75         | 0.77       | 0.65       | 0.60 | 0.55           | 0.75                          | 0.60                      | 0.50       |  |  |  |
| 0.55                     |                           |              |            | 1.18       | 1.11                      | 0.90         | 0.96       | 0.72       | 0.66 | 0.61           | 0.83                          | 0.66                      | 0.55       |  |  |  |
| 0.60                     |                           |              |            |            | 1.21                      | 1.01         | 1.04       | 0.78       | 0.72 | 0.66           | 0.90                          | 0.72                      | 0.60       |  |  |  |
| 0.65                     |                           |              |            |            | 1.31                      | 1.11         | 1.16       | 0.78       | 0.78 | 0.72           | 0.98                          | 0.78                      | 0.65       |  |  |  |
| 0.70                     |                           |              |            |            |                           |              |            |            |      | 0.77           | 1.05                          | 0.84                      | 0.70       |  |  |  |
| 0.75                     |                           |              |            |            |                           |              |            |            |      |                | 1.13                          | 0.90                      | 0.75       |  |  |  |
| 0.80                     |                           |              |            |            |                           |              |            |            |      |                | 1.20                          | 0.96                      | 0.80       |  |  |  |

A. Solid line indicates minimum thickness allowed.

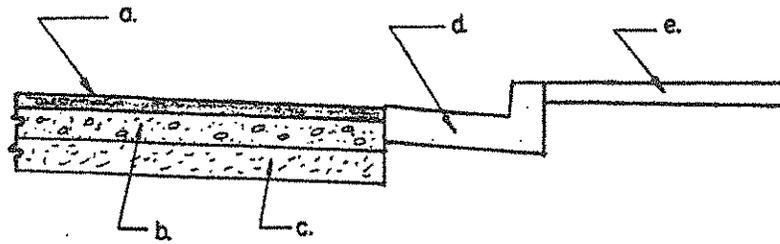
B. T. I. values shall be rounded to the nearest one half.

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

GRAVEL EQUIVALENTS  
AND MIN. THICKNESS

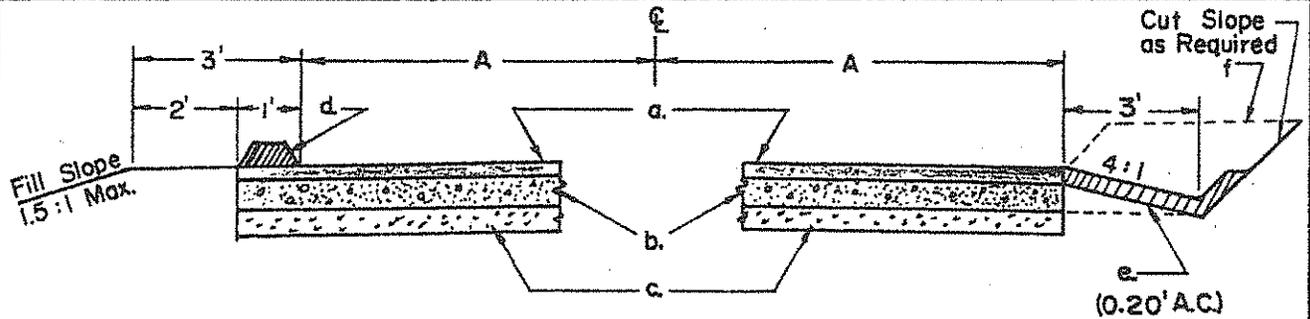
PLATE NO. A-9

# PUBLIC ROAD STANDARDS



**APPLICABLE TO VALLEY IMPROVEMENT STANDARDS**

- a. Type "B" Asphalt Concrete pavement.
- b. Class "2" Aggregate Base.
- c. Class "4" Aggregate Subbase if required by design.
- d. Standard Type Curb.
- e. Sidewalks where required.



**APPLICABLE TO MOUNTAIN IMPROVEMENT STANDARDS**

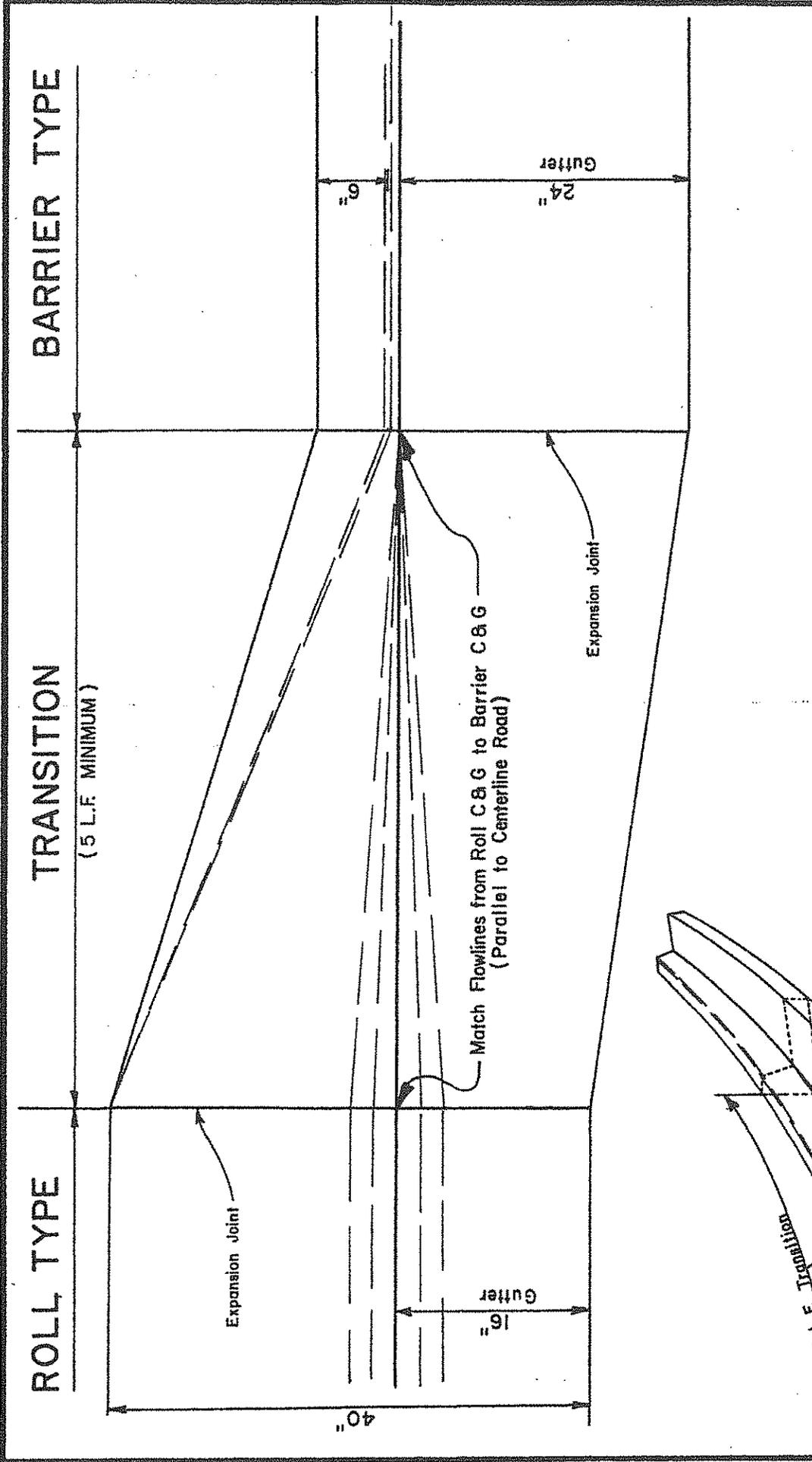
- a. Type "B" Asphalt Concrete or Road Mixed Asphalt Surfacing.
- b. Class "2" or Class "3" Aggregate Base.
- c. Class "4" Aggregate Subbase if required by design.
- d. Standard Asphalt Concrete Dike. May be eliminated where fill slope are flatter than 6:1 and erosion is not anticipated.
- e. Paved Roadside Ditch. Pavement may be eliminated on grades flatter than 4% if erosion is not probable.
- f. The roadside ditch (e) may be eliminated where paved width 'A' is 17' or greater and ditch is not needed to carry calculated gutter flow.

**PUBLIC ROAD STANDARDS**

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

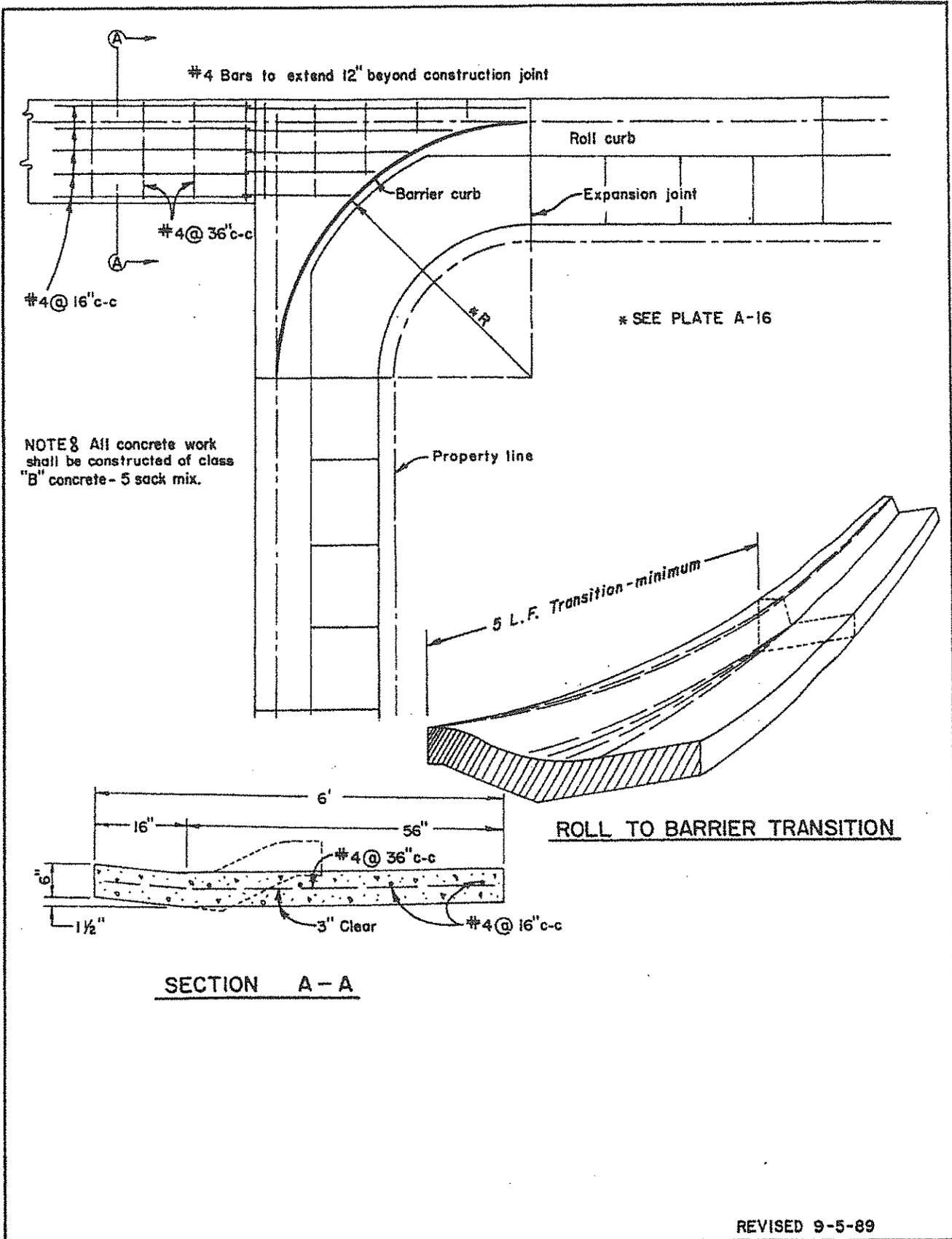
STRUCTURAL  
ROAD DETAILS

PLATE NO. A-10



TULARE COUNTY  
 ORDINANCE CODE  
 SECTION NO. 7080  
 CURB AND GUTTER  
 TRANSITION  
 ROLL TO BARRIER  
 PLATE NO. A-13

# PUBLIC ROAD STANDARDS

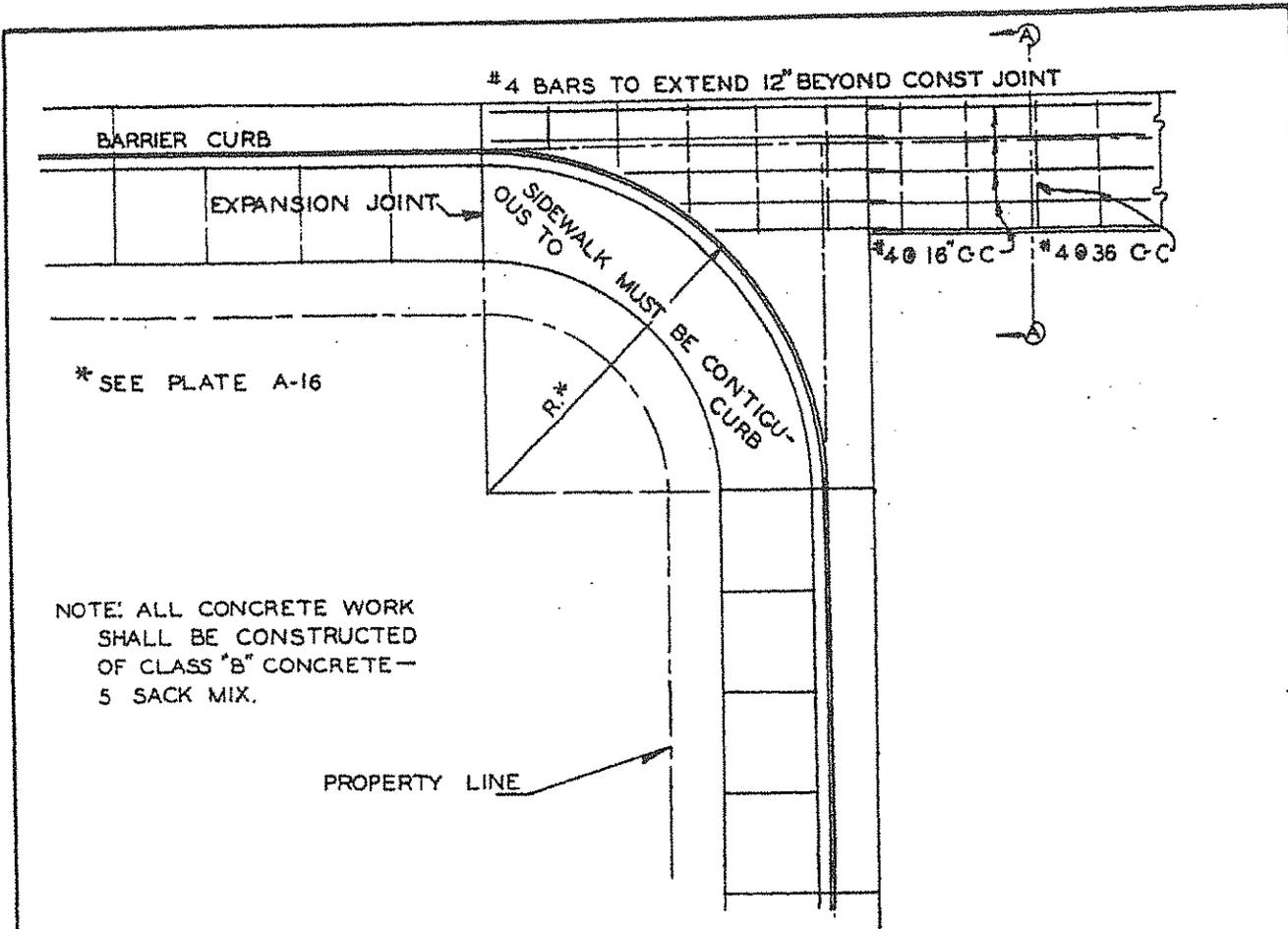


REVISED 9-5-89

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080  
CONTINUOUS GUTTER  
TRANSITION

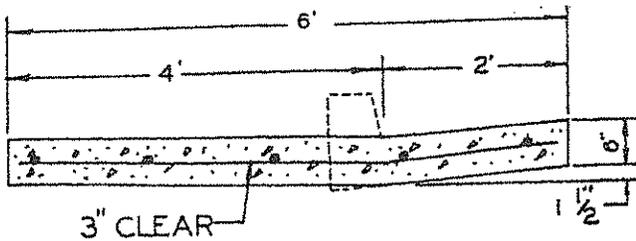
# PUBLIC ROAD STANDARDS

PLATE NO. A-14



\* SEE PLATE A-16

NOTE: ALL CONCRETE WORK SHALL BE CONSTRUCTED OF CLASS "B" CONCRETE - 5 SACK MIX.



APPLICABLE USE WITH BARRIER TYPE CURB

SECTION A-A

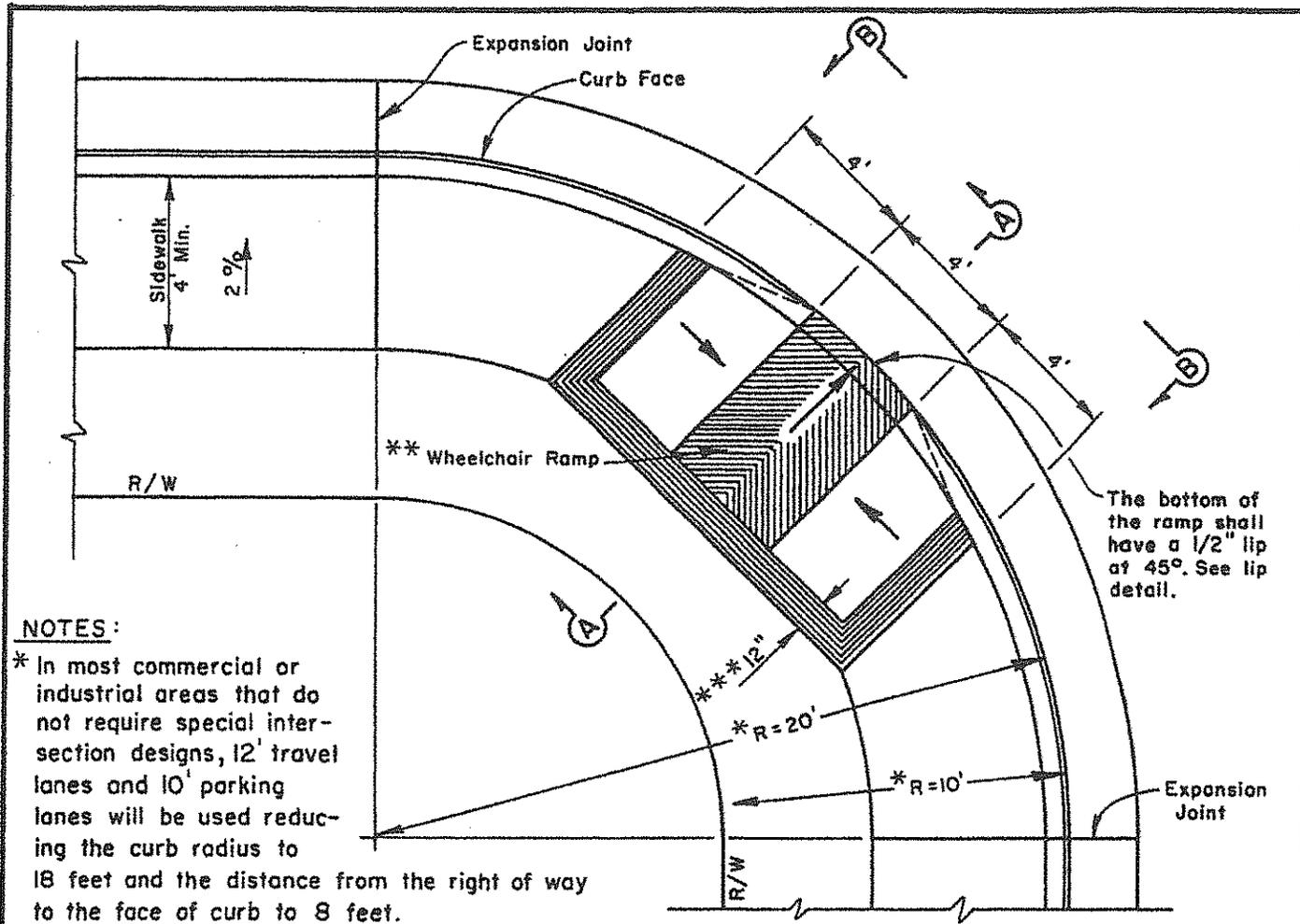
REVISED 9-5-89

PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

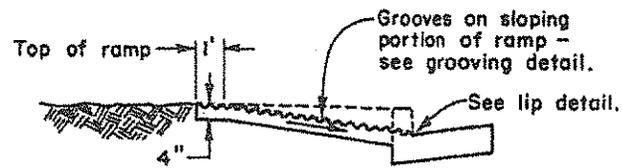
CONTINUOUS GUTTER  
CURB RETURN

PLATE NO. A-15

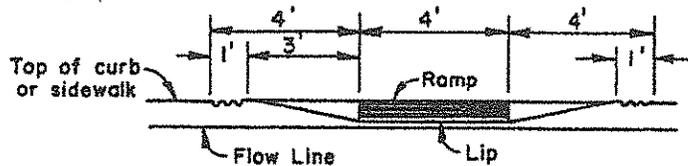


**NOTES:**

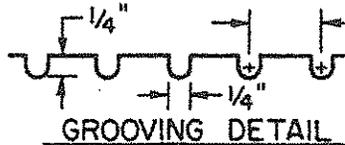
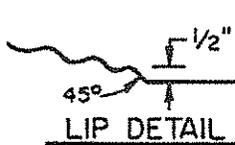
- \* In most commercial or industrial areas that do not require special intersection designs, 12' travel lanes and 10' parking lanes will be used reducing the curb radius to 18 feet and the distance from the right of way to the face of curb to 8 feet.
- \*\* Wheelchair ramps shall be located in the center of curb return. It shall be grooved in a herringbone pattern with 1/4" grooves approximately 1 1/2" o.c. See grooving detail. Grooves should be aligned parallel to crosswalk stripes to direct blind pedestrians into the correct crosswalk.
- \*\*\* The ramp shall have a 12" wide border with 1/4" grooves approximately 3/4" o.c. See grooving detail.



**SECTION A-A**



**SECTION B-B**



Approximately 3/4" at border and 1 1/2" on sloping portion of ramp.

REVISED 9-89

**PUBLIC ROAD STANDARDS**

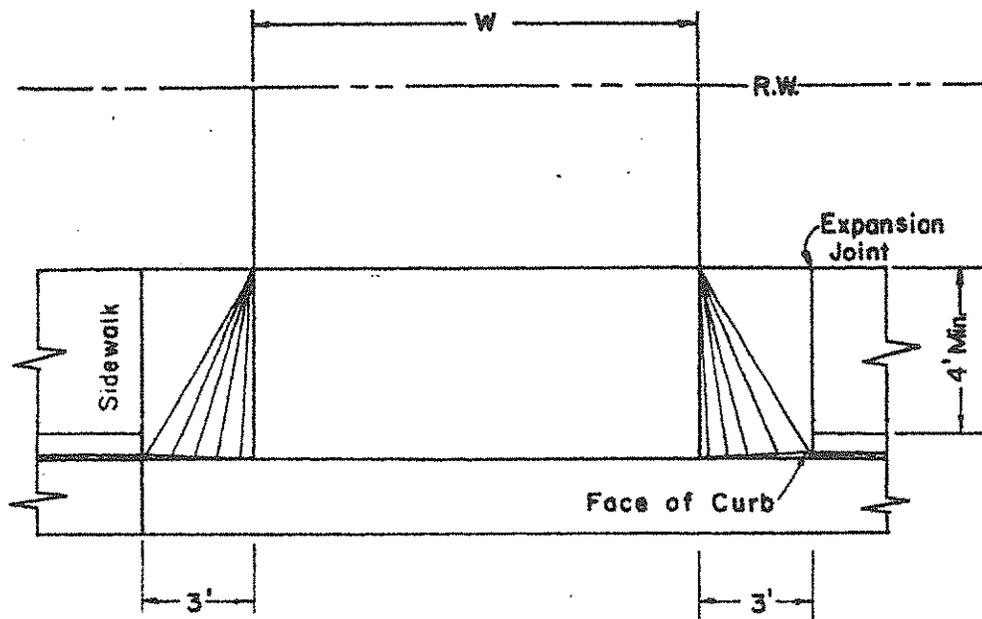
TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

CURB RETURN  
DETAIL

PLATE A-16

NOTE: Driveway approaches need only to extend to the back of sidewalk location where approved by the engineer and A.C. pavement continues.

NOTE: See sheet A-18 for further details of concrete driveway.

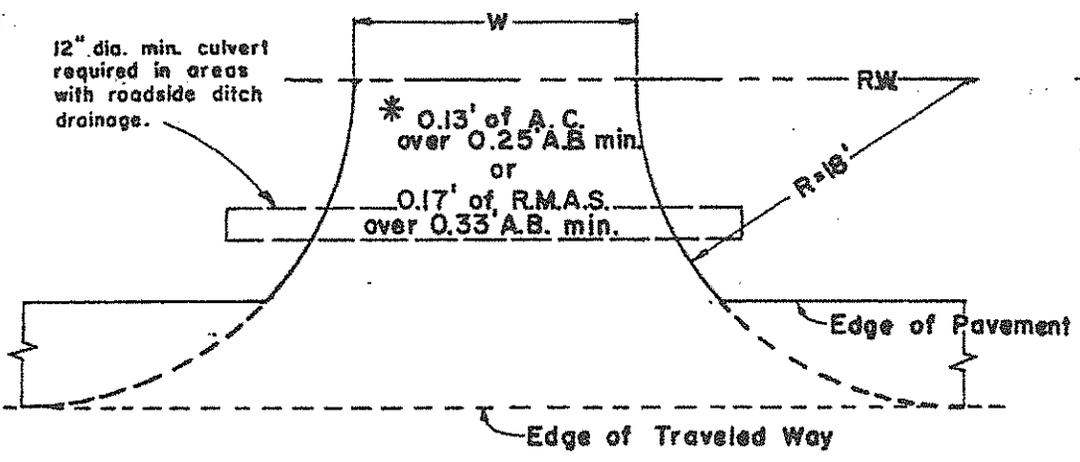


Vary slope from edge of sidewalk to existing ground at or near right of way. Max. slope=20%

**URBAN DRIVEWAY**

\* NOTE:

If County maintained road is surfaced with A.C. then A.C. approach is required. If County maintained road is R.M.A.S. surfacing then R.M.A.S. or A.C. approach is required.



Minimum height of drive crown above gutter 0.40'

**RURAL DRIVEWAY**

| TYPE        | W-MIN. | W-MAX. |
|-------------|--------|--------|
| Residential | 9'     | 24'    |
| Commercial  | 15'    | 35'    |

NOTES:

- All commercial drives shall be of urban type except in mountain areas where approved by Engineer.
- Where drives are constructed on diked roads, the A.C. dike shall be extended down the drive to R.W.

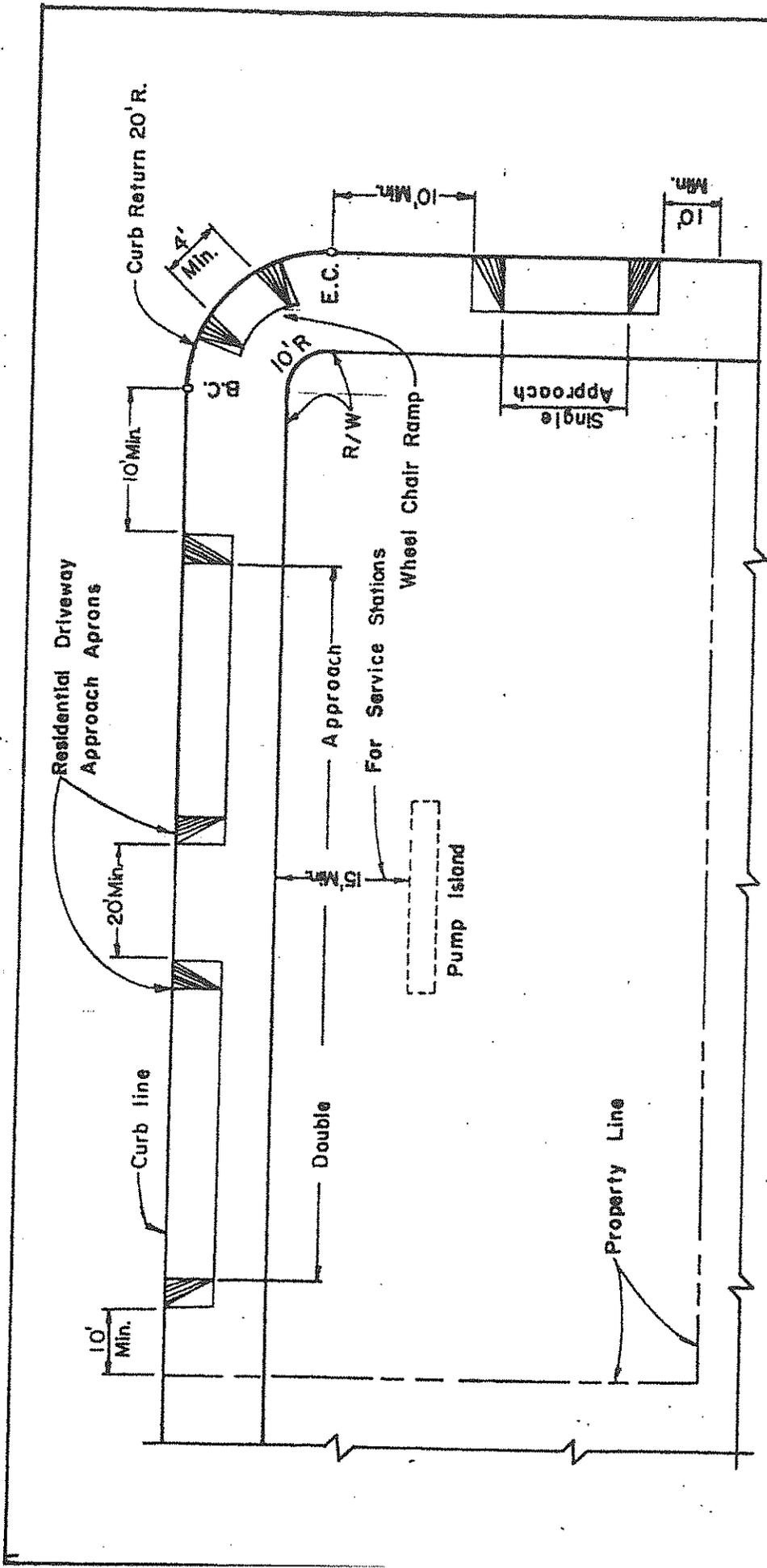
REVISED 7-10-79 G.R.M.

**PUBLIC ROAD STANDARDS**

TULARE COUNTY ORDINANCE CODE SECTION NO.7080

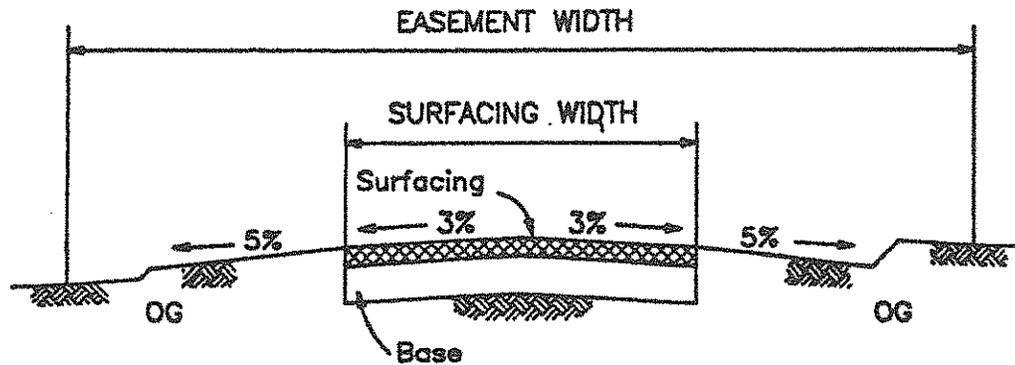
DRIVEWAY DETAILS

PLATE NO. A-17



**Notes:**  
 Not more than 60% of frontage to be in driveway opening, measured at Property Line.  
 For Driveway Approach Details see plate no. A-18  
 For Curb Return Details see plate No. A-16

|                              |                   |
|------------------------------|-------------------|
| <b>PUBLIC ROAD STANDARDS</b> |                   |
| TULARE COUNTY                | ORDINANCE CODE    |
| SECTION NO. 7080             |                   |
| COMMERCIAL                   | DRIVEWAY APPROACH |
| PLATE NO. A-17A              |                   |



| EASEMENT AND SURFACING WIDTHS *** |                      |                      | STRUCTURAL SECTION (minimum) *** |                            |                    |
|-----------------------------------|----------------------|----------------------|----------------------------------|----------------------------|--------------------|
| NO. OF PARCELS TO BE SERVED *     | EASEMENT WIDTH (ft.) | PAVEMENT WIDTH (ft.) | NO. OF PARCELS TO BE SERVED *    | BASE                       | SURFACING          |
| 1                                 | 18                   | 10                   | 1-2                              | 3" AB(3)                   | OIL PENETRATION ** |
| 2                                 | 18                   | 16                   | 3                                | 3" AB(3)                   | 1.5" RMAS or AC    |
| 3                                 | 20                   | 18                   | 4                                | AB(3)                      | RMAS or AC         |
| 4                                 | 26                   | 20                   |                                  | Use TI = 4.0 for thickness |                    |

- NOTES:
1. A 37' paved radius turnaround bulb shall be constructed within a 45' easement radius at the end of access easements serving 2,3, and 4 parcels. In the SRA, turnarounds will also be required for access easements serving one parcel with more than two buildings or four or more dwelling units. Turnaround bulbs shall be paved to a 40' radius within a 48' easement radius.
  2. Private Vehicular Access connections to County roads shall be constructed in accordance with Plate No. A-17.
  3. When more than four parcels are served, County Road Standards for right-of-way, surfacing widths, and structural section shall apply.
  4. When RMAS is used, the oil quantity and the quality of aggregate will be tested using test method No. Calif. 304 and other tests as required in Section III-B6 of these standards.
  5. Compaction of OG and AB shall be to a minimum of 90% relative compaction. Compliance tests will be taken as directed by the Public Works Director.
  6. Improvement Standards for public roads shall be applicable for those standards not specifically stated in these Private Vehicular Access Easement Standards.

#### ABBREVIATIONS

|       |                              |     |                             |
|-------|------------------------------|-----|-----------------------------|
| RMAS  | = ROAD MIX ASPHALT SURFACING | AC  | = ASPHALTIC CONCRETE        |
| AB(3) | = CLASS III AGGREGATE BASE   | SRA | = STATE RESPONSIBILITY AREA |
| OG    | = ORIGINAL GROUND            | TI  | = TRAFFIC INDEX             |

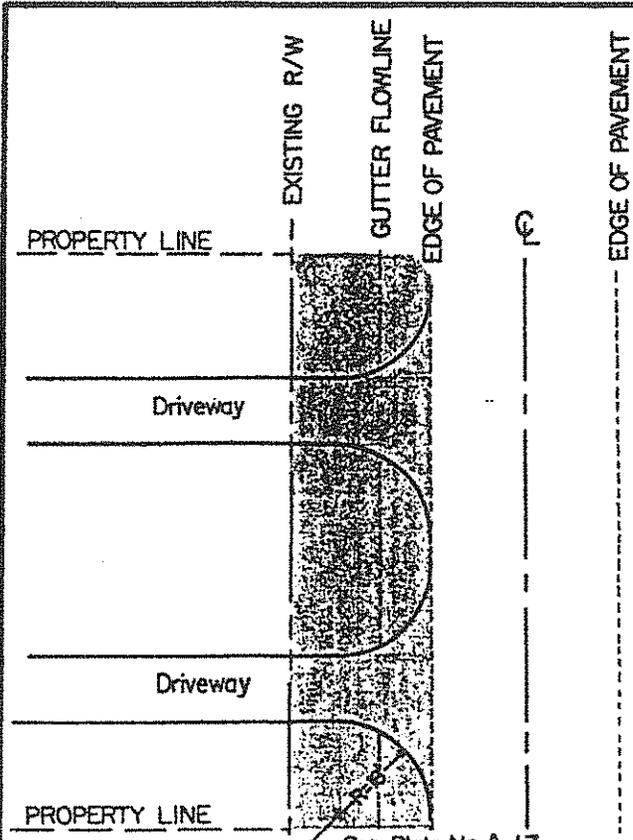
- \* Parcels served which do not have public road frontage
- \*\* Penetrating oil shall be SC 800 grade
- \*\*\* In the SRA, surfacing widths and structural section requirements for PVAEs serving three parcels, two parcels, or one parcel with more than two buildings or four or more dwelling units shall be improved to the following standards. Structural section requirements shall consist of AB(3) surfaced with AC or RMAS designed using a TI of 3.0. Pavement width shall be 18 feet, within an easement width of 20 feet. Grades shall not exceed 16 percent.

## PRIVATE VEHICULAR ACCESS EASEMENT STANDARDS

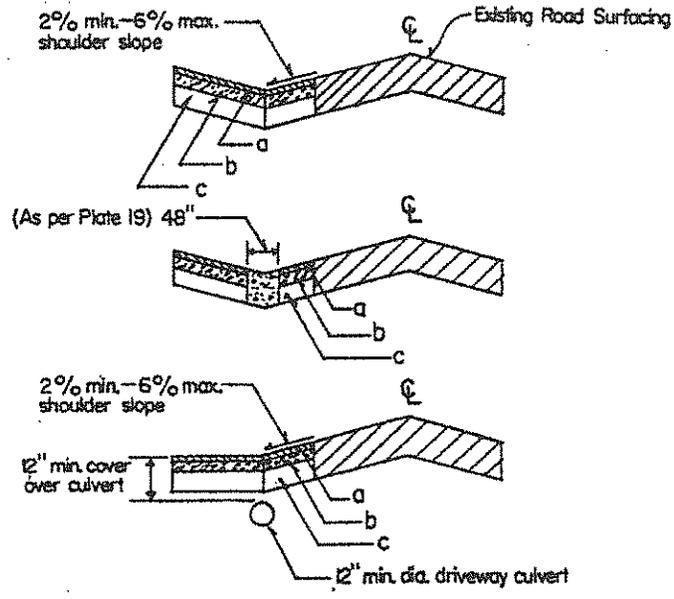
TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

VEHICULAR  
ACCESS  
EASEMENTS

PLATE NO. A-17-B



- a) 0.13' Asphalt Concrete
- b) 0.25' Min. Aggregate Base—  
95% Compacted
- c) 0.50' Original Ground—  
95% Compacted



**NOTES:**

Roadside drainage to be provided by use of asphalt gutter (0.5% min. slope), or concrete Vee gutter (0.4% min. slope), or 12" min. dia. culvert.

1. The granting of permission to perform frontage paving is not intended to allow driveway approach widths, at the existing R/W line, that exceed the standards. Approach widths and locations shall be defined by means approved by the Road Commissioner.
2. The diameter and length of driveway culvert shall be determined by the Road Commissioner based upon the hydraulic capacity needed and other field conditions. Driveway culverts shall be standard culverts designed to withstand traffic loads and soil conditions.
3. Vee gutter shall be placed at normal curb and gutter location and with a minimum flowline slope of 0.4% as per plate A-19.

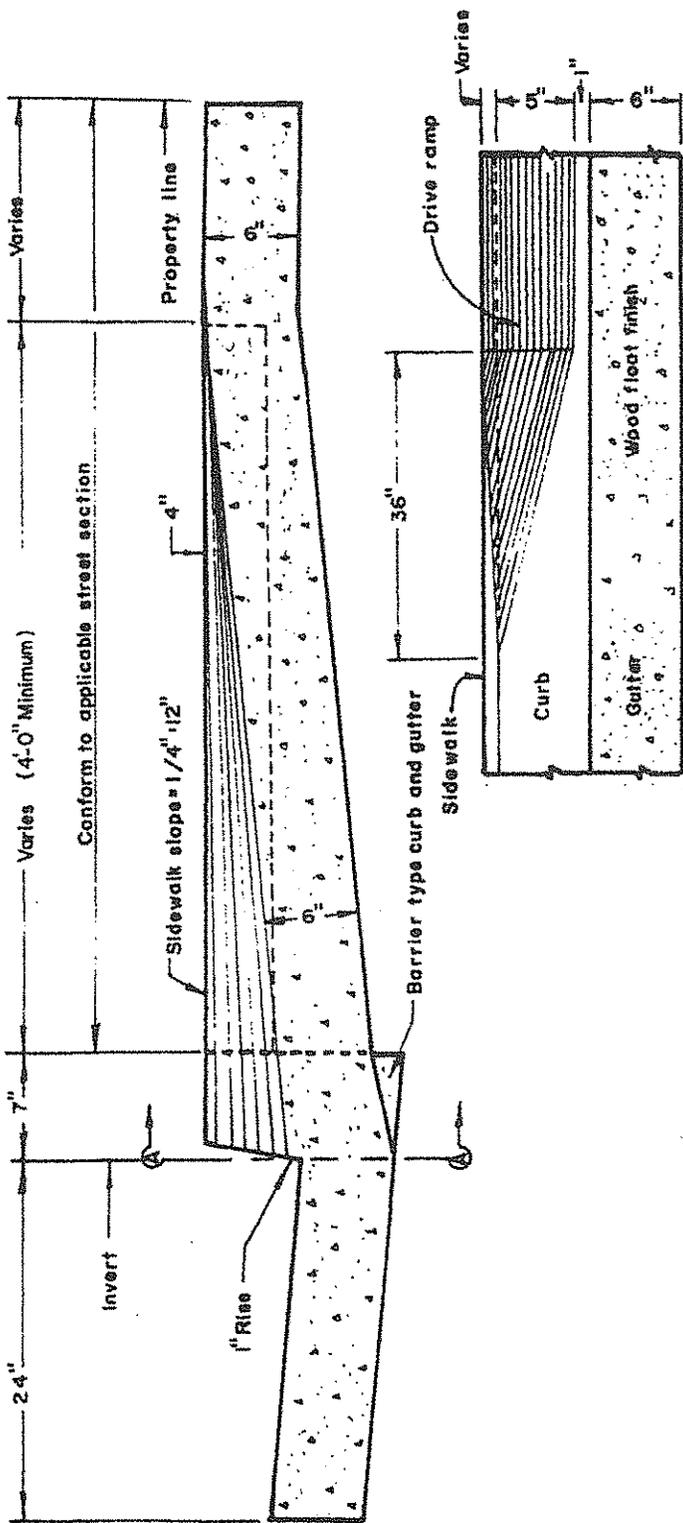
REVISED 9-5-89

**PUBLIC ROAD STANDARDS**  
(DOES NOT APPLY INSIDE URBAN IMPROVEMENT AREA BOUNDARY)

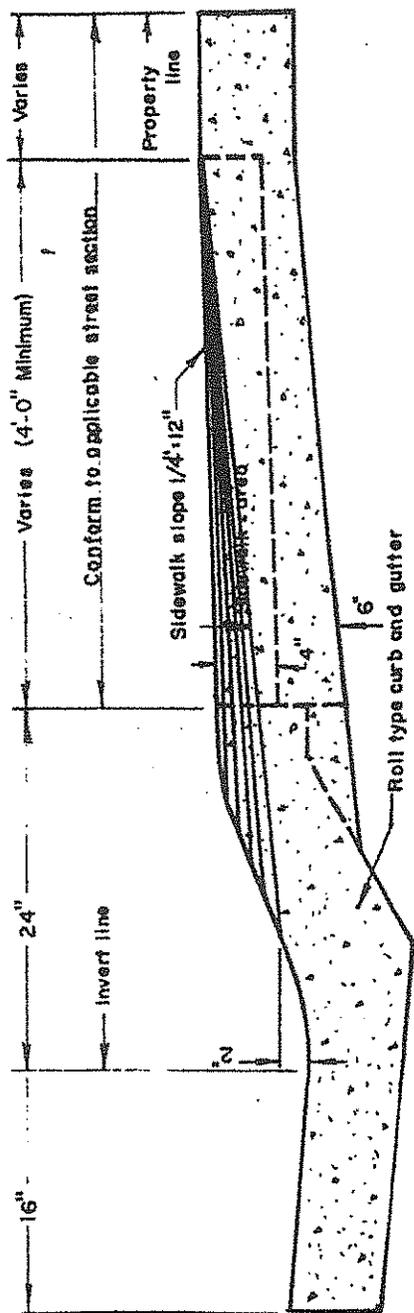
TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

RURAL FRONTAGE  
PAVING DETAILS

PLATE NO. A-17C



SECTION A-A

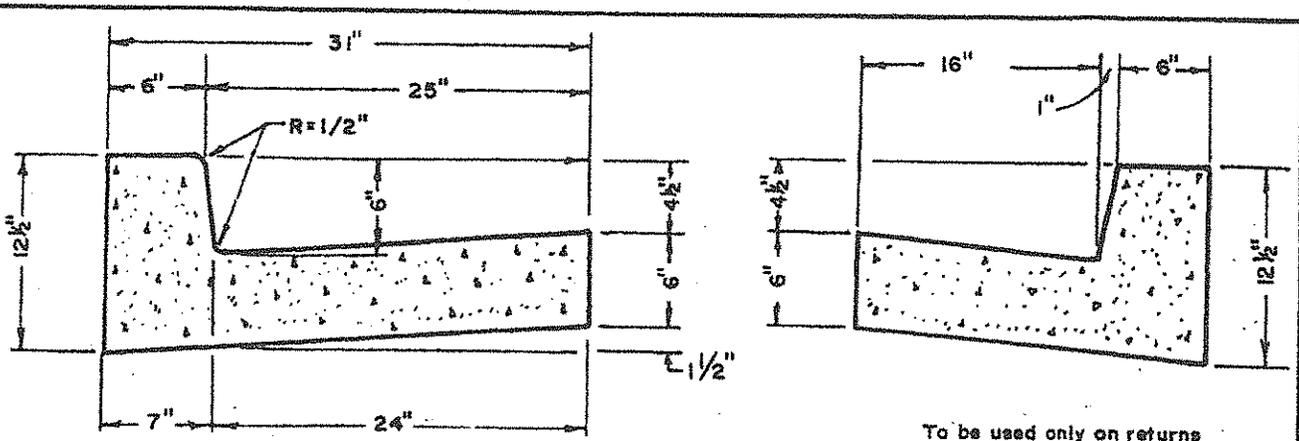


PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

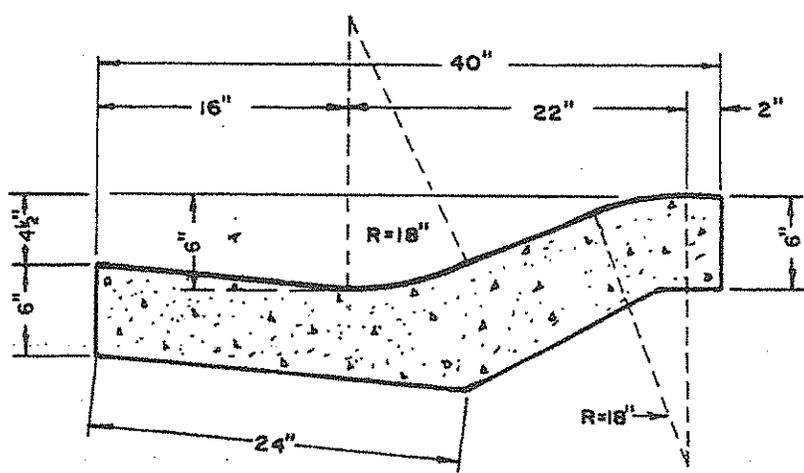
DRIVEWAY  
APPROACH

PLATE NO. A-18



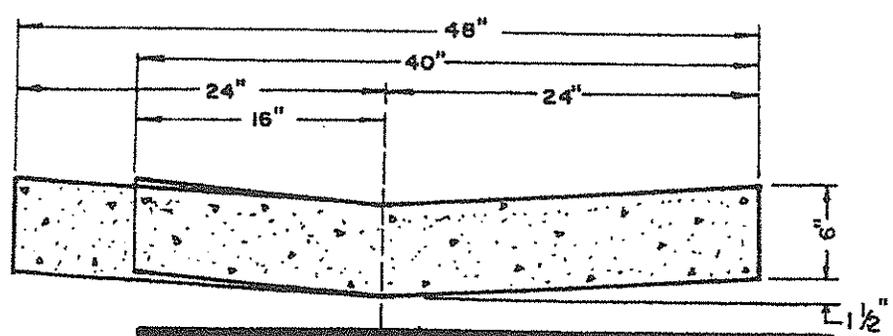
CURB and GUTTER  
BARRIER TYPE

To be used only on returns  
where Roll-Barrier transition  
is required.



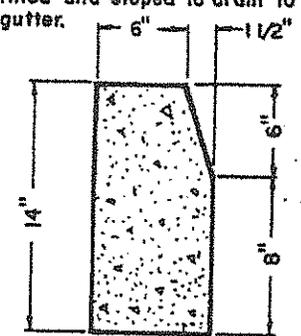
CURB and GUTTER  
ROLL TYPE

Notes: Barrier type curb and  
gutter shall have a minimum  
gradient of 0.15 feet per  
100 feet.  
Roll type curb and gutter  
shall have a minimum gradient  
of 0.40 feet per 100 feet.  
All concrete shall be of class  
"B" concrete- 5 sack mix  
Area between back of curb and  
and property line shall be back  
filled and sloped to drain to  
gutter.



VEE GUTTER

Shall not be used as continuous gutter at intersection.  
Vee gutter shall  
have a minimum gradient of 0.40 feet per 100 feet.



CURB

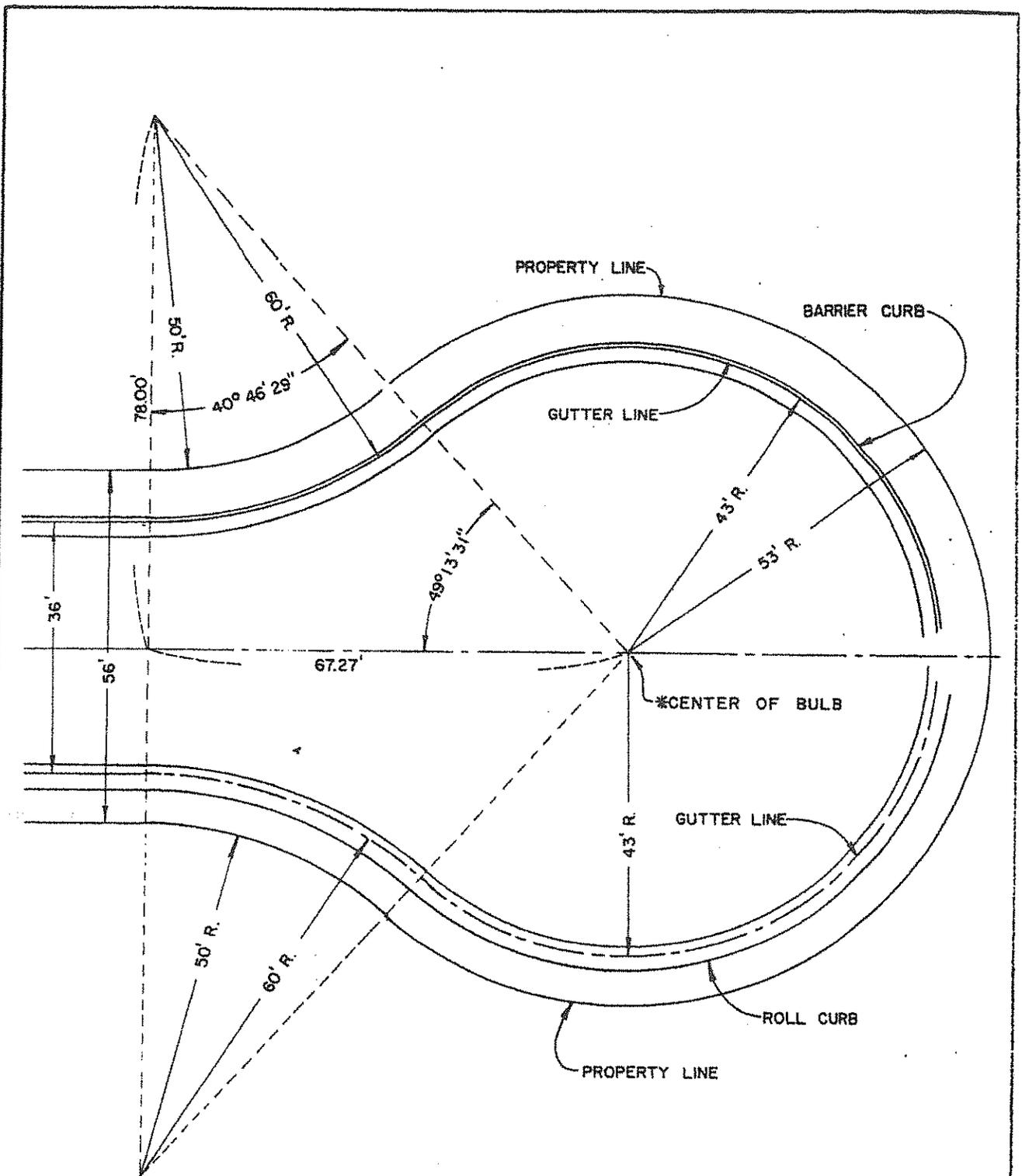
# PUBLIC ROAD STANDARDS

REVISED 9-5-89

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

CURB and GUTTER

PLATE NO. A-19



\* Elevation of pavement surface at center of bulb shall be designed to allow pavement slope to gutter of 2% minimum.

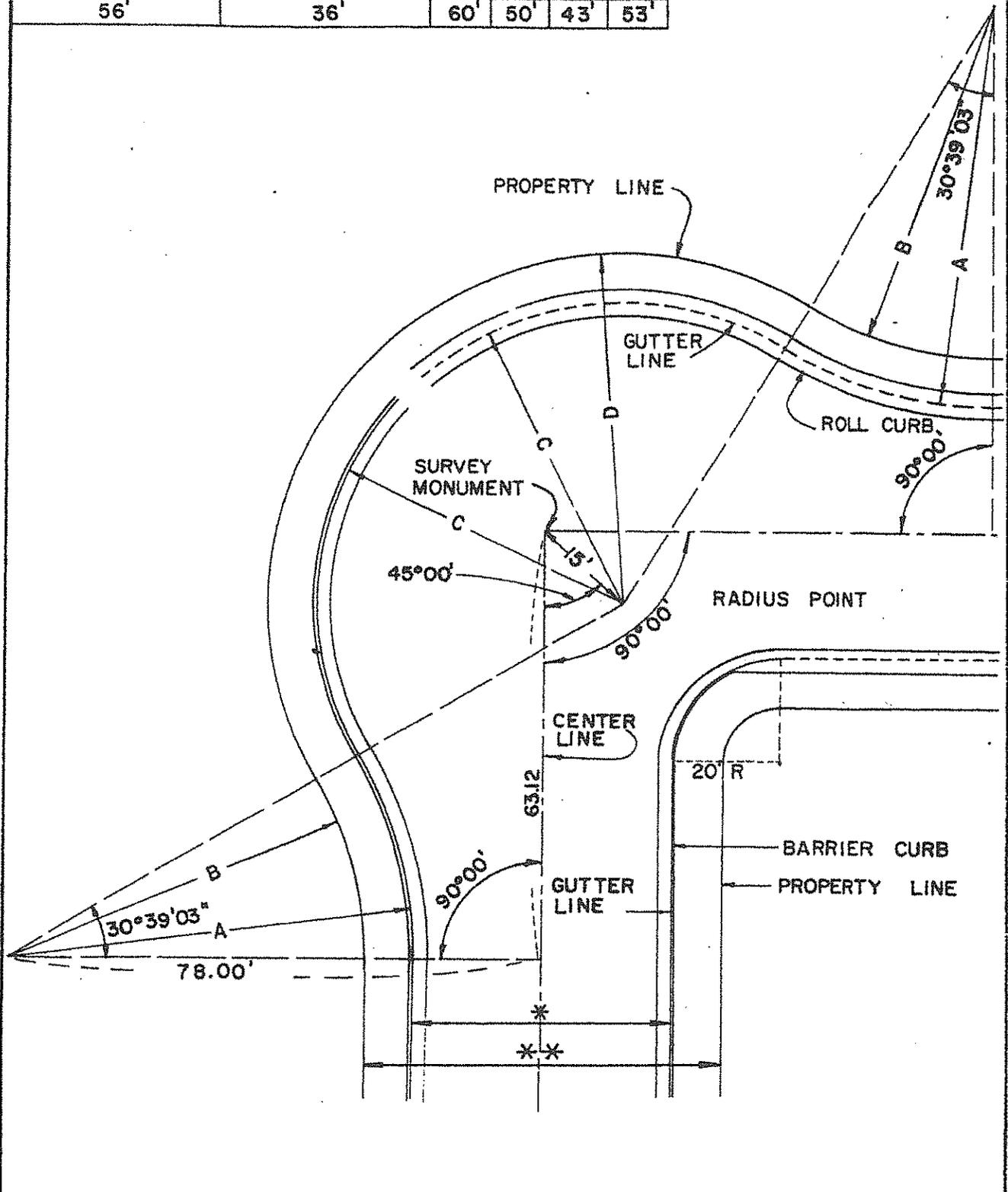
# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

CUL-DE-SAC

PLATE NO. A-20

| ** WIDTH OF RIGHT OF WAY | * CURB TO CURB ROAD WIDTH | LENGTH OF RADIUS |     |     |     |
|--------------------------|---------------------------|------------------|-----|-----|-----|
|                          |                           | A                | B   | C   | D   |
| 60'                      | 40'                       | 58'              | 48' | 45' | 55' |
| 56'                      | 36'                       | 60'              | 50' | 43' | 53' |

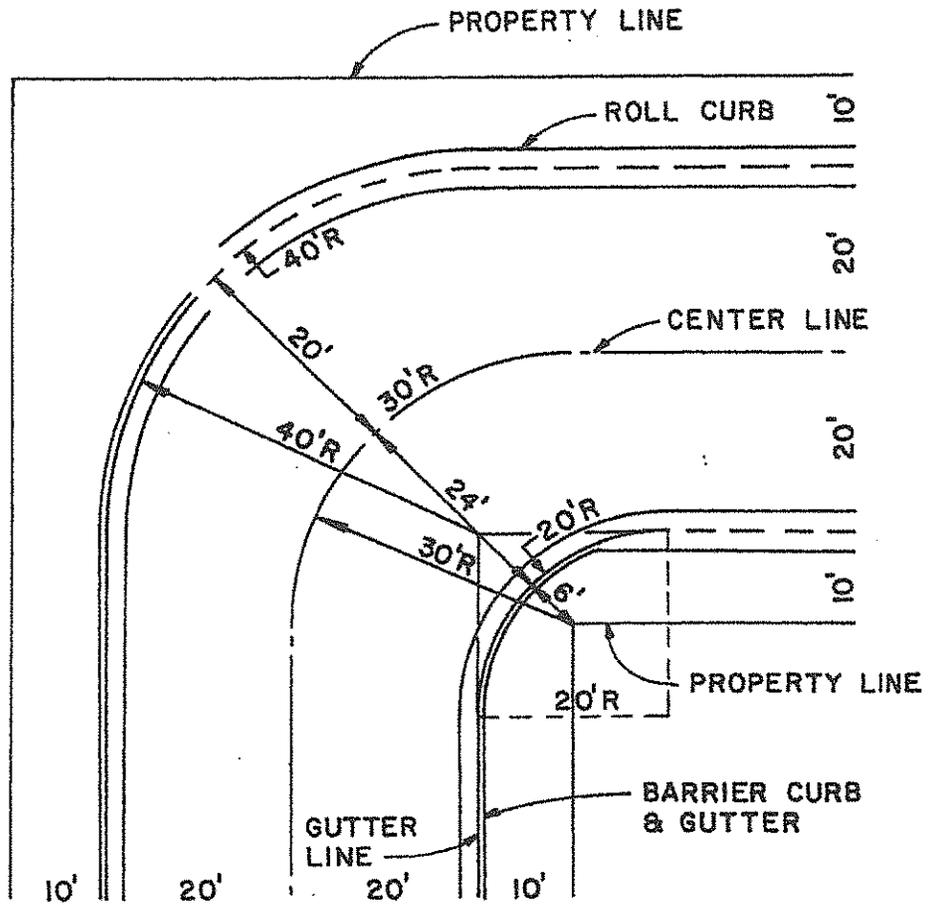


# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

STREET BULB  
CONNECTION

PLATE NO. A-21



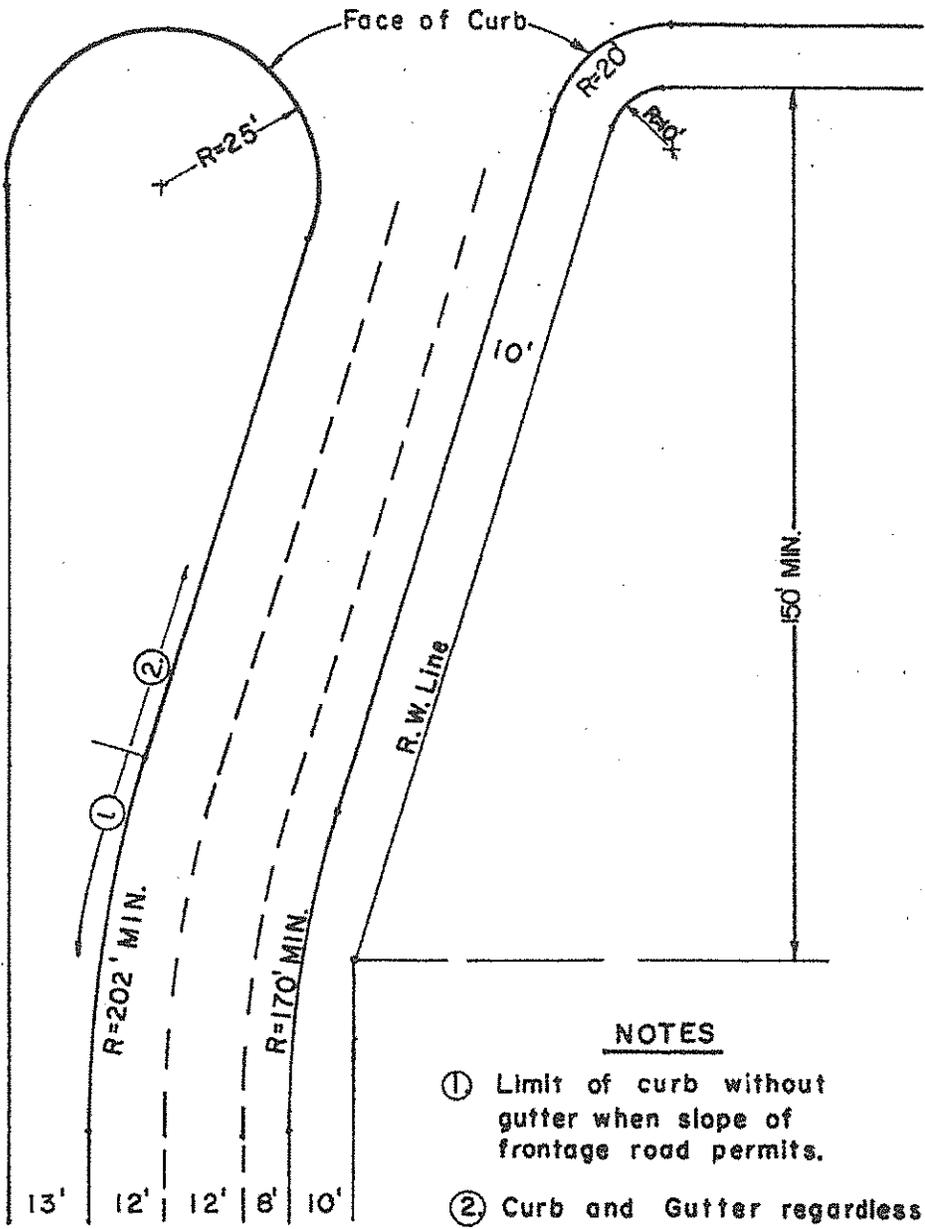
# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

STREET CONNECTION  
WITHOUT BULB

PLATE NO. A-21-a

LIMITED ACCESS ROAD

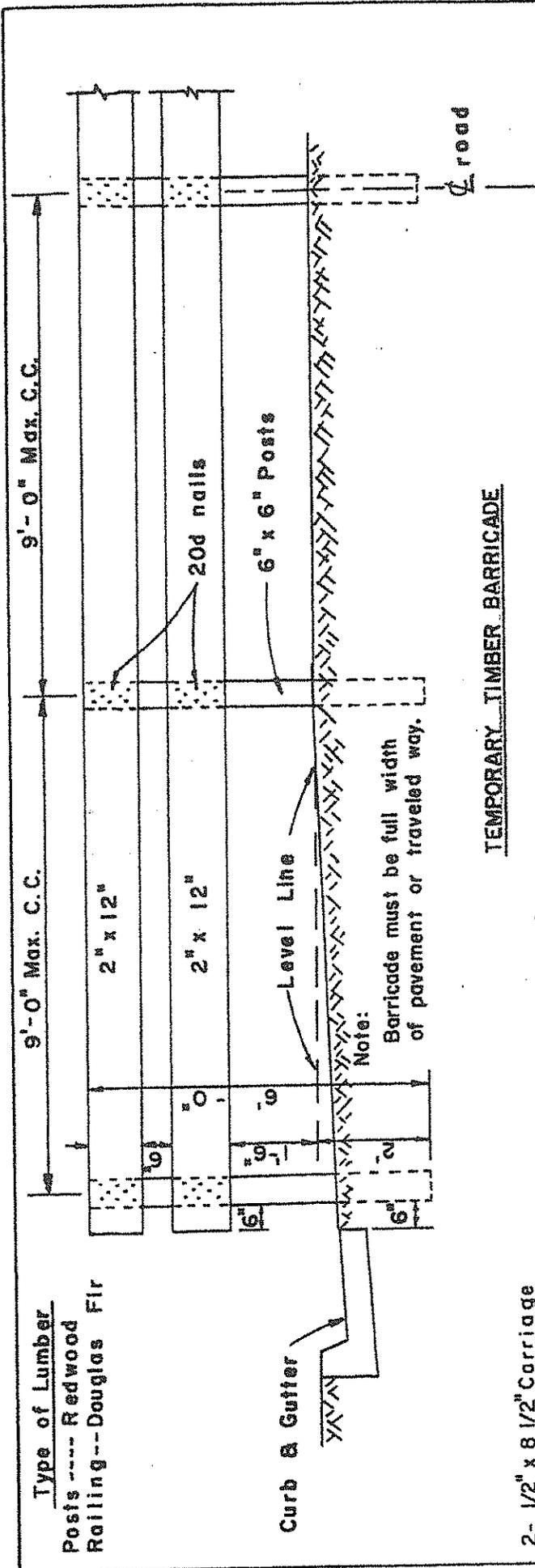


NOTES

- ① Limit of curb without gutter when slope of frontage road permits.
- ② Curb and Gutter regardless of slope of frontage road.

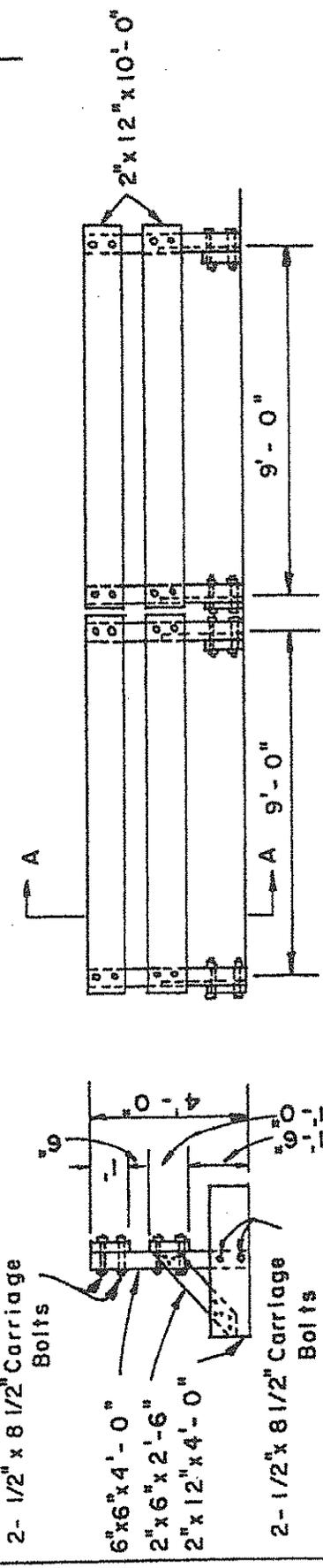
**PUBLIC ROAD STANDARDS**

|  |
|--|
| TULARE COUNTY<br>ORDINANCE CODE<br>SECTION NO.7080 |
| FRONTAGE ROAD<br>BULB LAYOUT                       |
| PLATE NO.A-22                                      |



TEMPORARY TIMBER BARRICADE

Note:  
Barricade must be full width  
of pavement or traveled way.



PORTABLE TIMBER BARRICADE

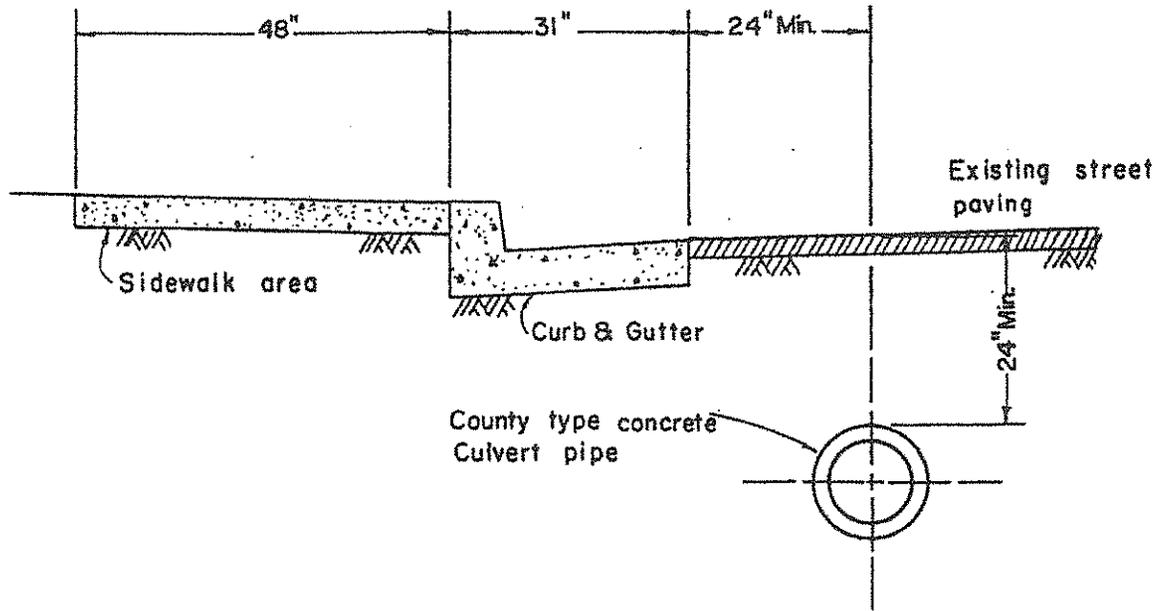
Note:  
Appropriate signs to be designated  
by the Road Commissioner. All signs  
to be in accordance with the State  
of California  
Standards.  
Two coats of white paint shall be  
applied to the surface of all lumber.

# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

BARRICADES

PLATE NO. A-23



#### STRENGTH REQUIREMENTS:

Design and Test Requirements of County type Concrete Culvert pipe are given in the following table:

| INSIDE<br>DIAMETER<br>INCHES | MIN. SHELL<br>THICKNESS<br>INCHES | MINIMUM<br>CIRCULAR<br>REINF.(a.) | ULTIMATE LOAD REQUIREMENTS             |                  |
|------------------------------|-----------------------------------|-----------------------------------|--|------------------|
|                              |                                   |                                   | THREE-EDGE BEARING<br>LB. PER LIN. FT. | METHOD<br>D-LOAD |
| 12                           | 2                                 | NONE                              | 3000                                   | 3000             |
| 15                           | 2                                 | NONE                              | 2750                                   | 2200             |
| 18                           | 2 1/4                             | NONE                              | 2700                                   | 1800             |
| 21                           | 2 1/2                             | .086                              | 3000                                   | 1700             |
| 24                           | 2 5/8                             | .086                              | 3000                                   | 1500             |

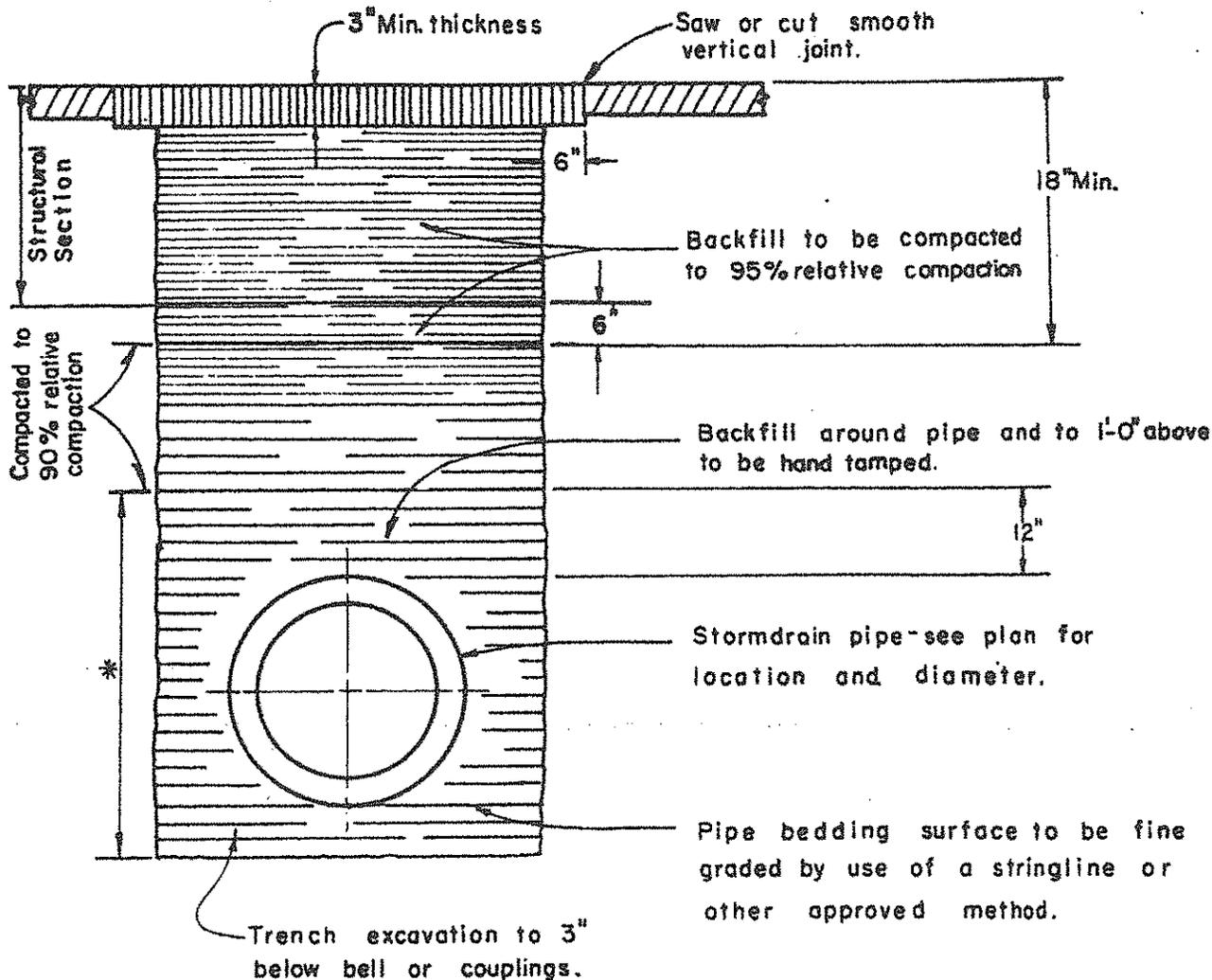
(a) In square inches per linear foot of pipe barrel.  
One line of reinforcement of the specified area or greater shall be placed in the barrel of the pipe equally distant from its inner and outer surfaces.

## PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

PIPE LOCATION AND  
STRENGTH REQUIREMENT

PLATE NO. A-24



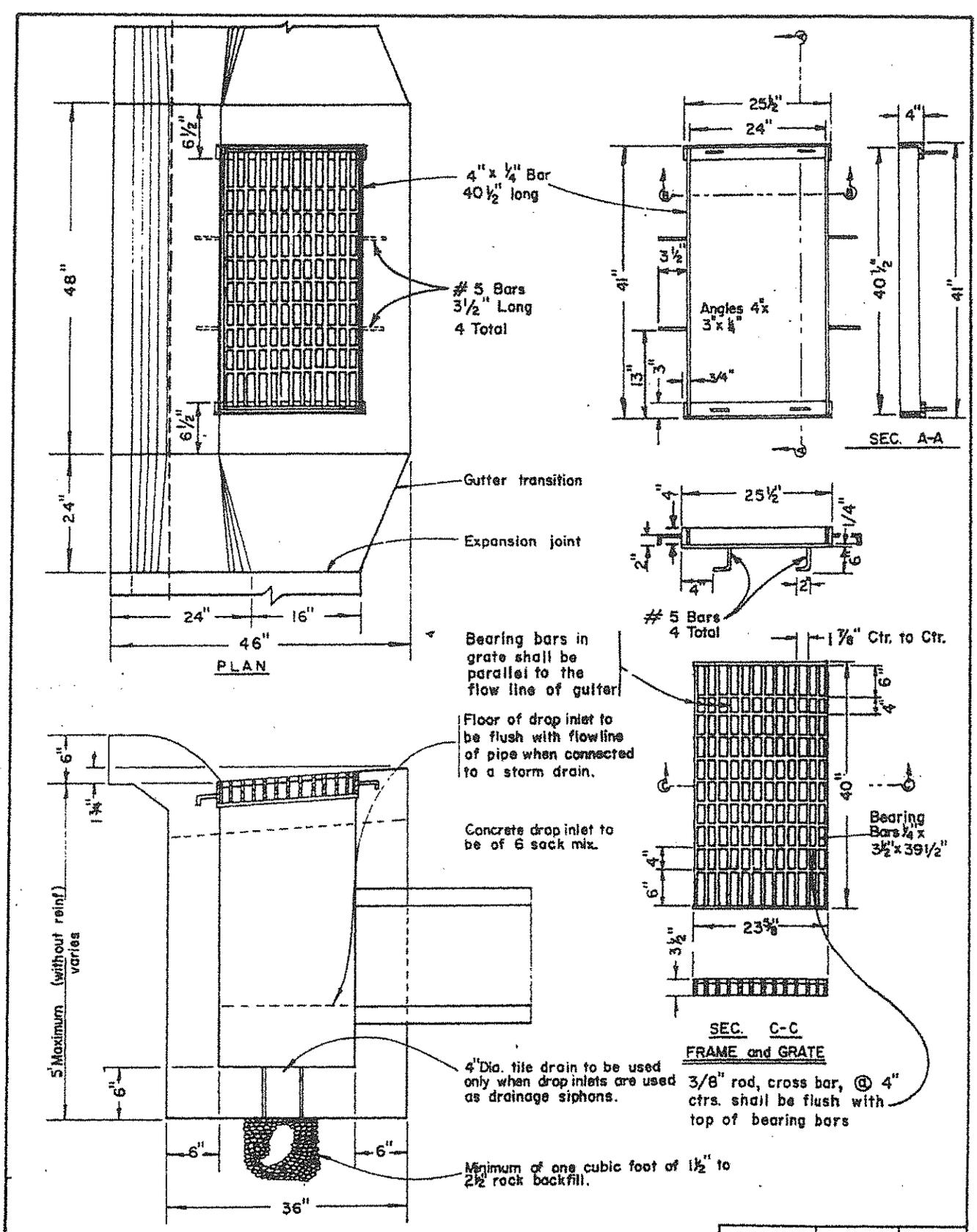
\*Backfill around pipe and to 1'-0" above top of pipe may be material from the excavation only if it has a sand equivalent of 30 minimum. For plastic pipe backfill around pipe and to 1'-0" above top of pipe may be material from the excavation only if it is coarse sand or decomposed granite free of rocks larger than 1 1/2" diameter.

# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

BACKFILL AND  
STREET EXCAVATION

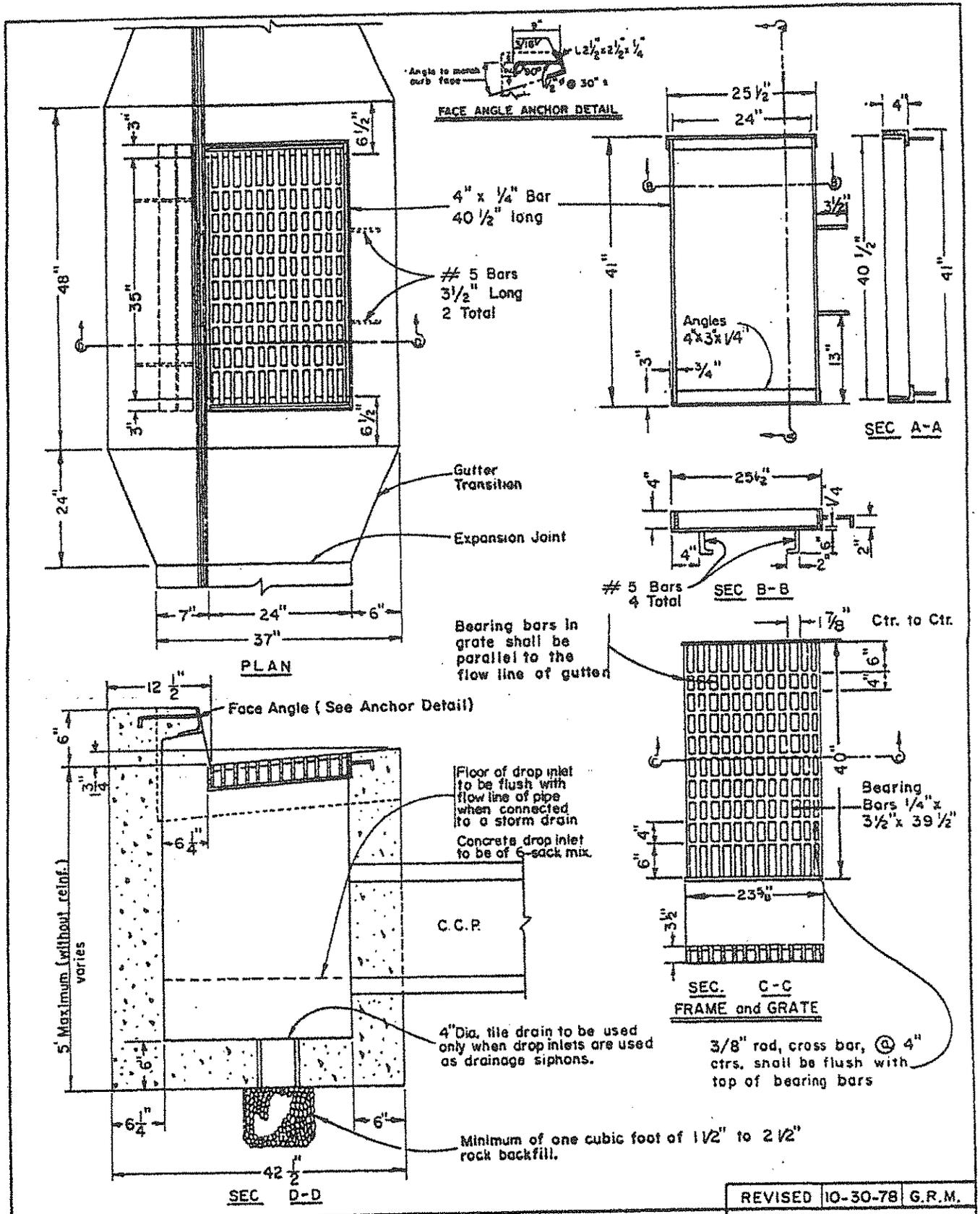
PLATE NO. A-25



# PUBLIC ROAD STANDARDS

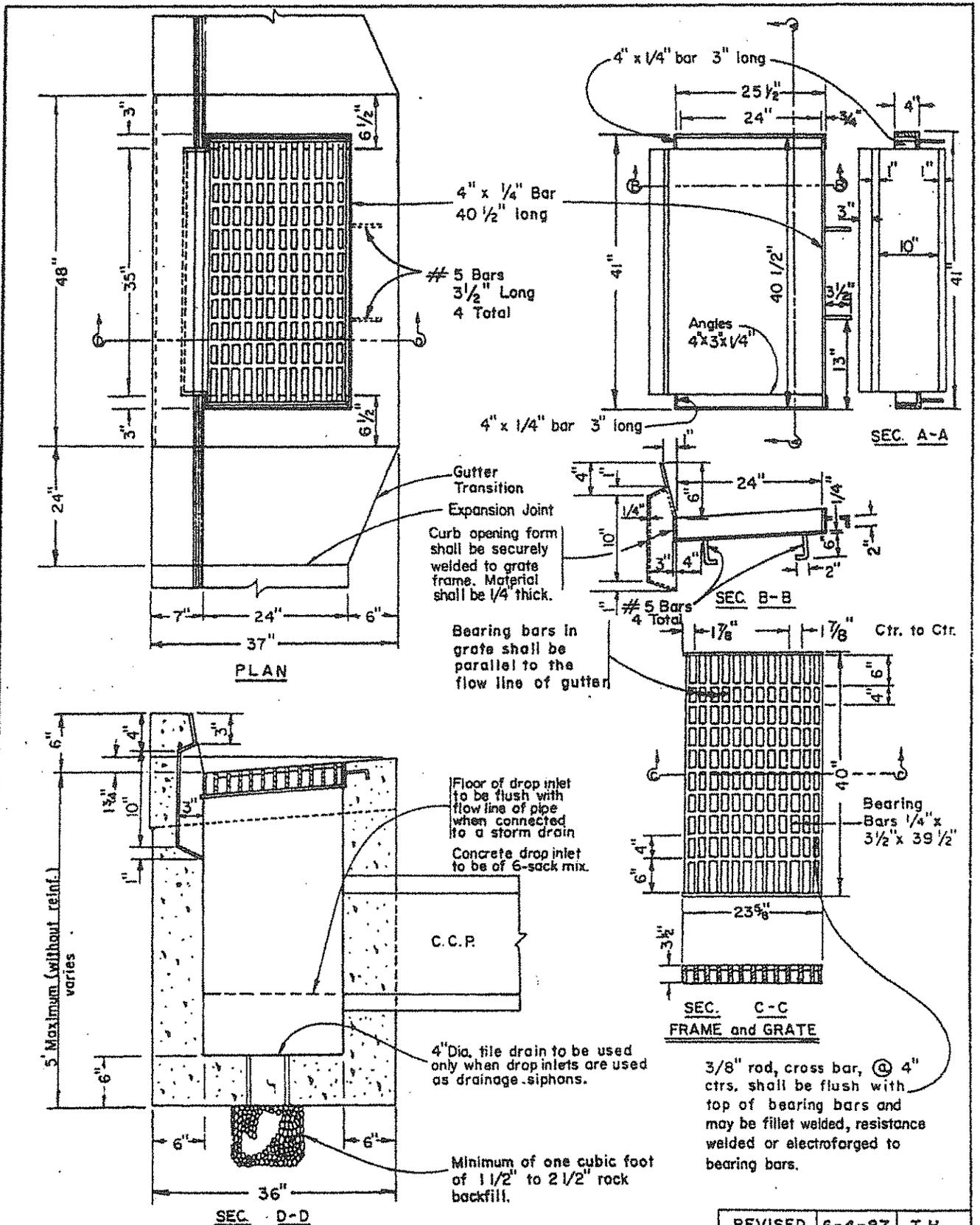
|   |        |
|---|--------|
| REVISED 7-7-72                                      | G.R.M. |
| TULARE COUNTY<br>ORDINANCE CODE<br>SECTION NO. 7080 |        |
| ROLL CURB<br>DROP INLET                             |        |
| PLATE NO. A-26.                                     |        |





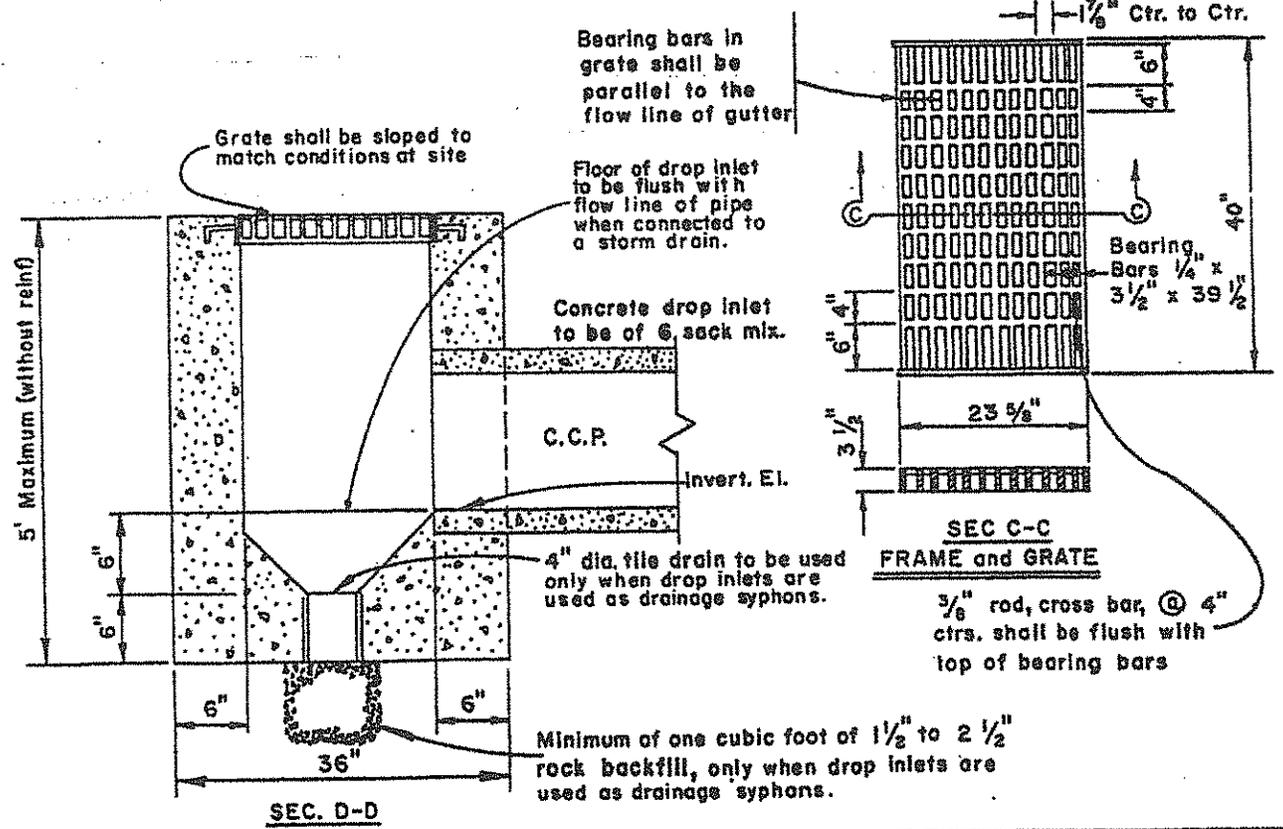
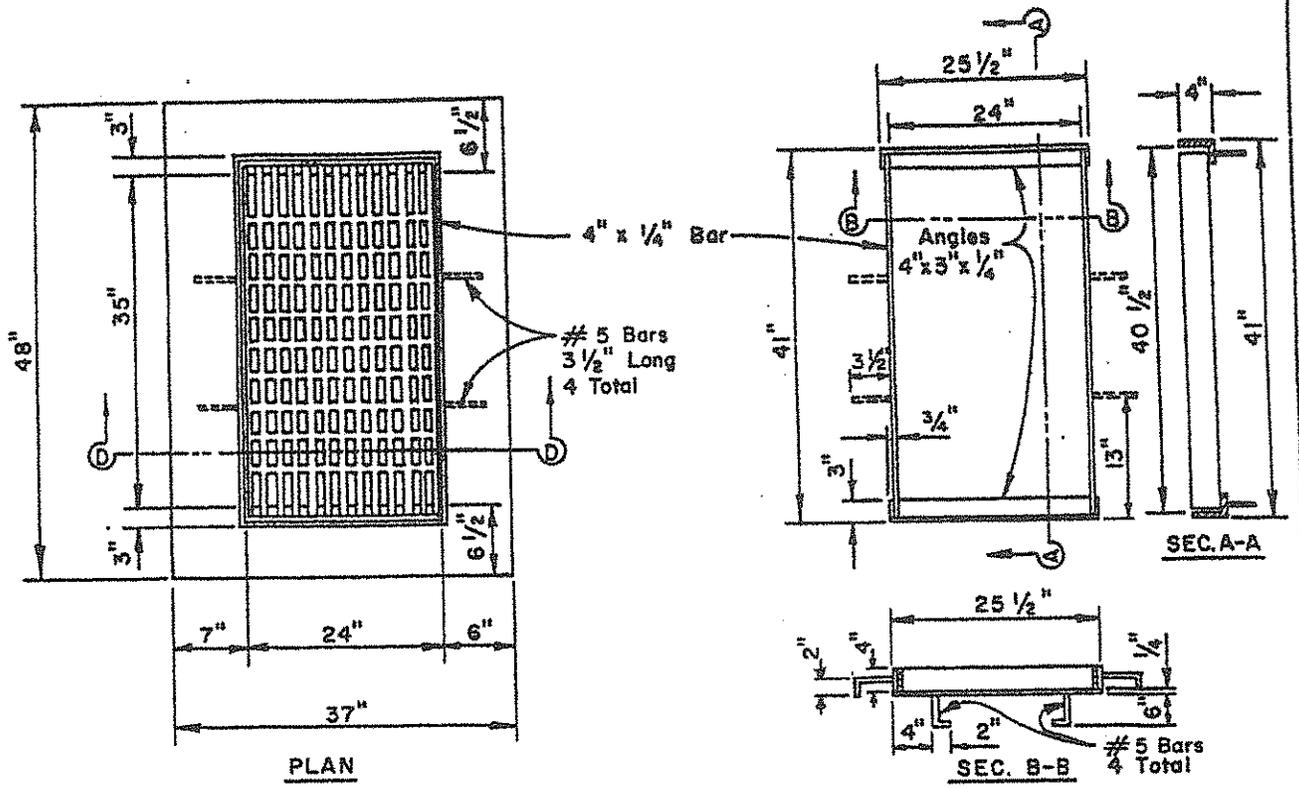
# PUBLIC ROAD STANDARDS

|   |          |        |
|---|----------|--------|
| REVISED   | 10-30-78 | G.R.M. |
| TULARE COUNTY<br>ORDINANCE CODE<br>SECTION NO. 7080 |          |        |
| BARRIER CURB<br>SIDE OPENING<br>DROP INLET          |          |        |
| PLATE NO.   | A-27a    |        |



|   |        |      |
|---|--------|------|
| REVISED   | 6-4-87 | T.H. |
| TULARE COUNTY<br>ORDINANCE CODE<br>SECTION NO. 7080 |        |      |
| BARRIER CURB<br>SIDE OPENING<br>DROP INLET          |        |      |
| PLATE NO. A-27 b                                    |        |      |

# PUBLIC ROAD STANDARDS

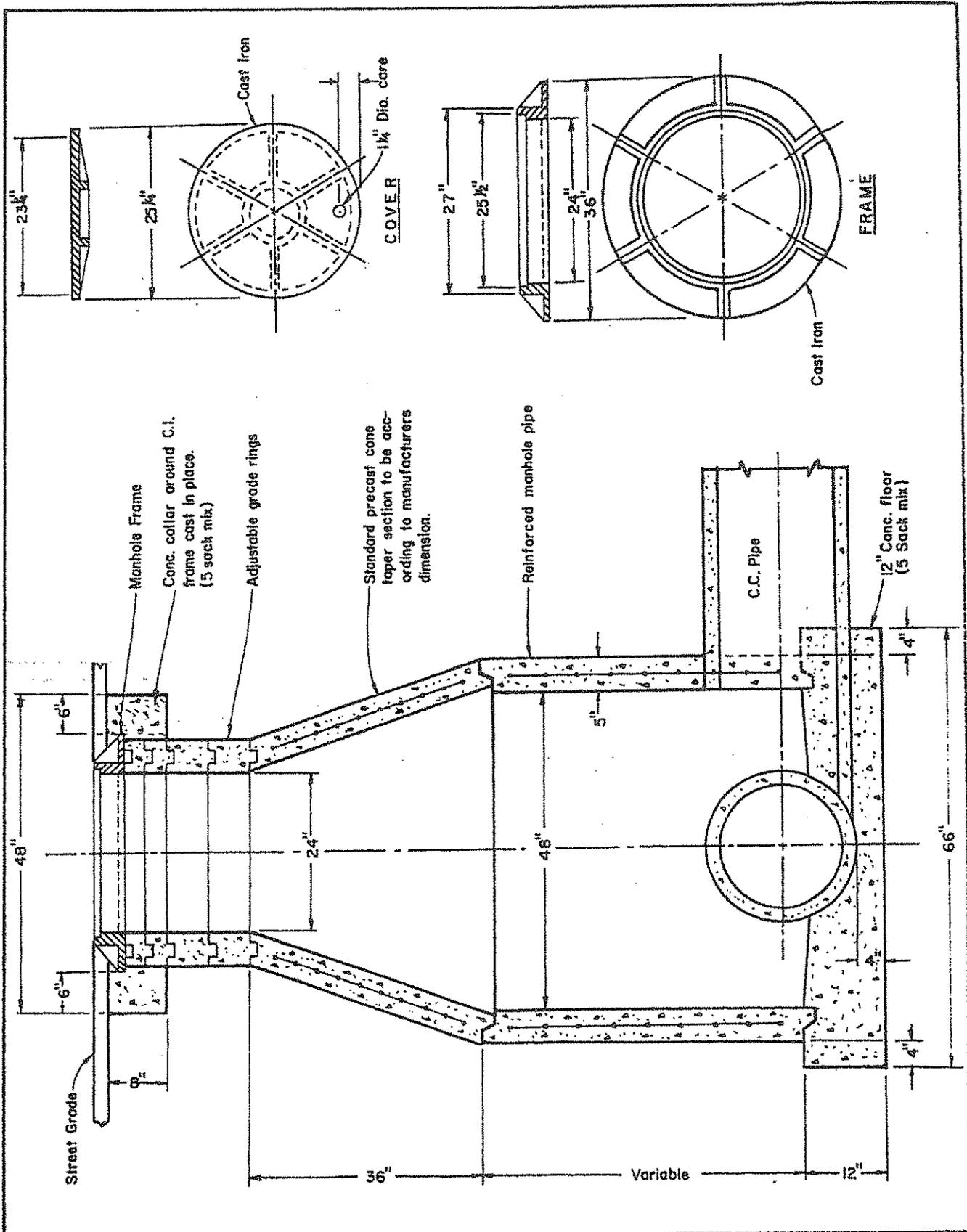


# TYPE "A" DROP INLET PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

TYPE A DROP INLET  
WITHOUT CURB & GUTTER

PLATE NO. A-27c



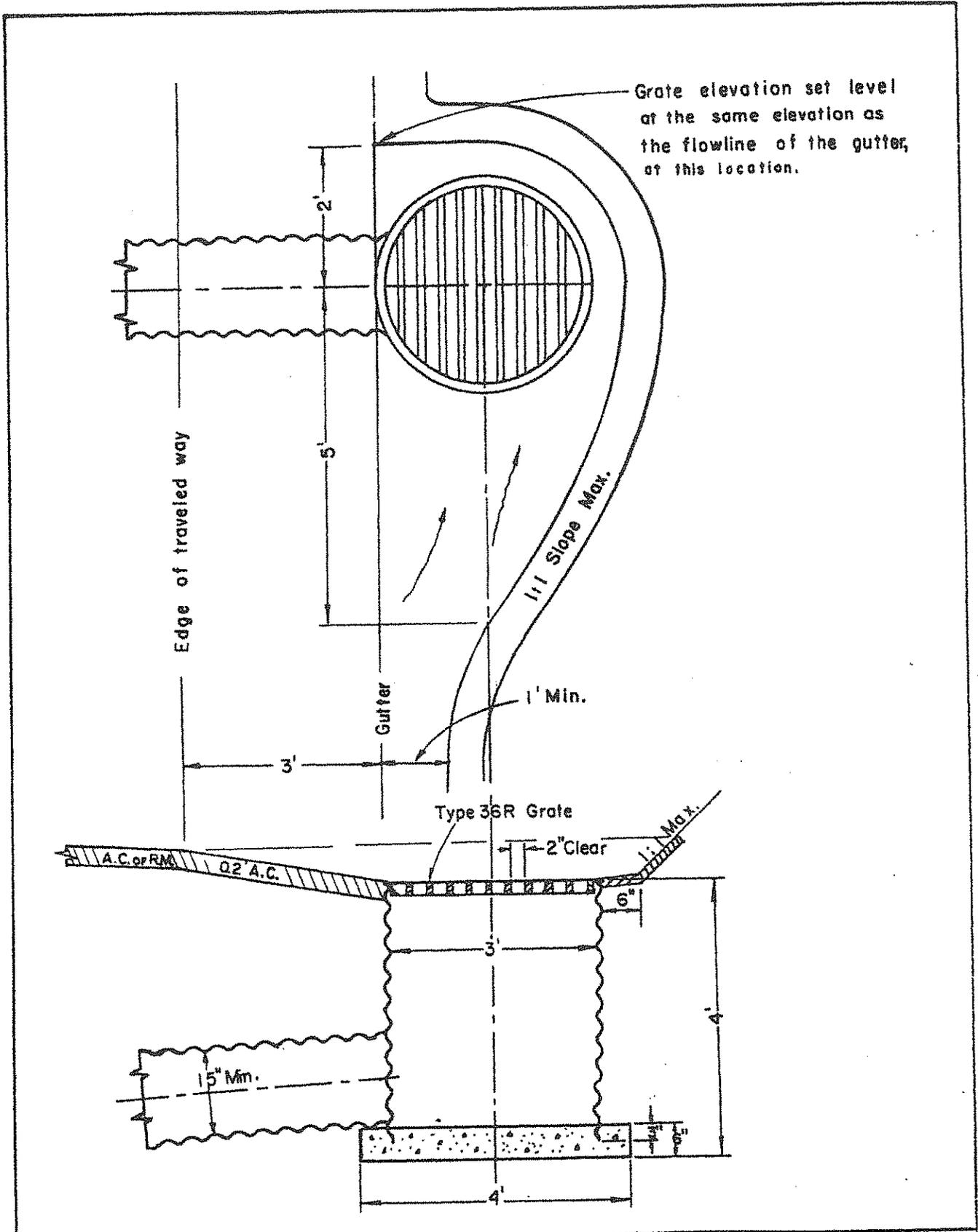
# DRAINAGE STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

MANHOLE FRAME  
AND COVER

PLATE NO. A-28





# PUBLIC ROAD STANDARDS

## MOUNTAINOUS AREAS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

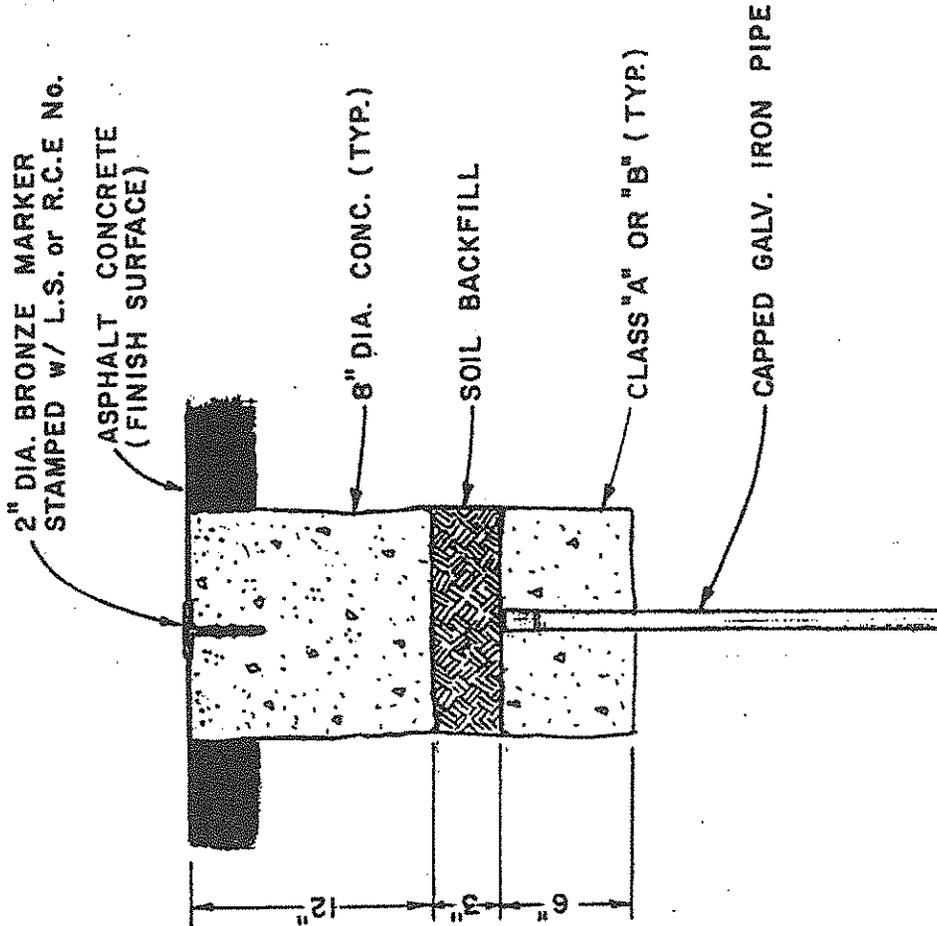
CROSS DRAIN  
INLET DETAIL

PLATE NO. A-29M



**NOTES:**

1. ALL MONUMENTS AND REFERENCES SHALL BE PERMANENTLY TAGGED OR MARKED WITH L.S. or R.C.E. No. ( Bus. & Prof. Code Sec. 8772 )
2. STREET MONUMENTS FOR GOV'T. CORNERS AND TRACT BOUNDARY CORNERS SHALL BE 2" x 24" MINIMUM. ( Gov't. Code Sec. 27580, Ord. Code Sec. 7074 )
3. OTHER STREET MONUMENTS FOR CENTERLINE INTERSECTIONS, ETC., SHALL BE 1/2" x 18" MINIMUM. ( Ord. Code Sec. 7074 )

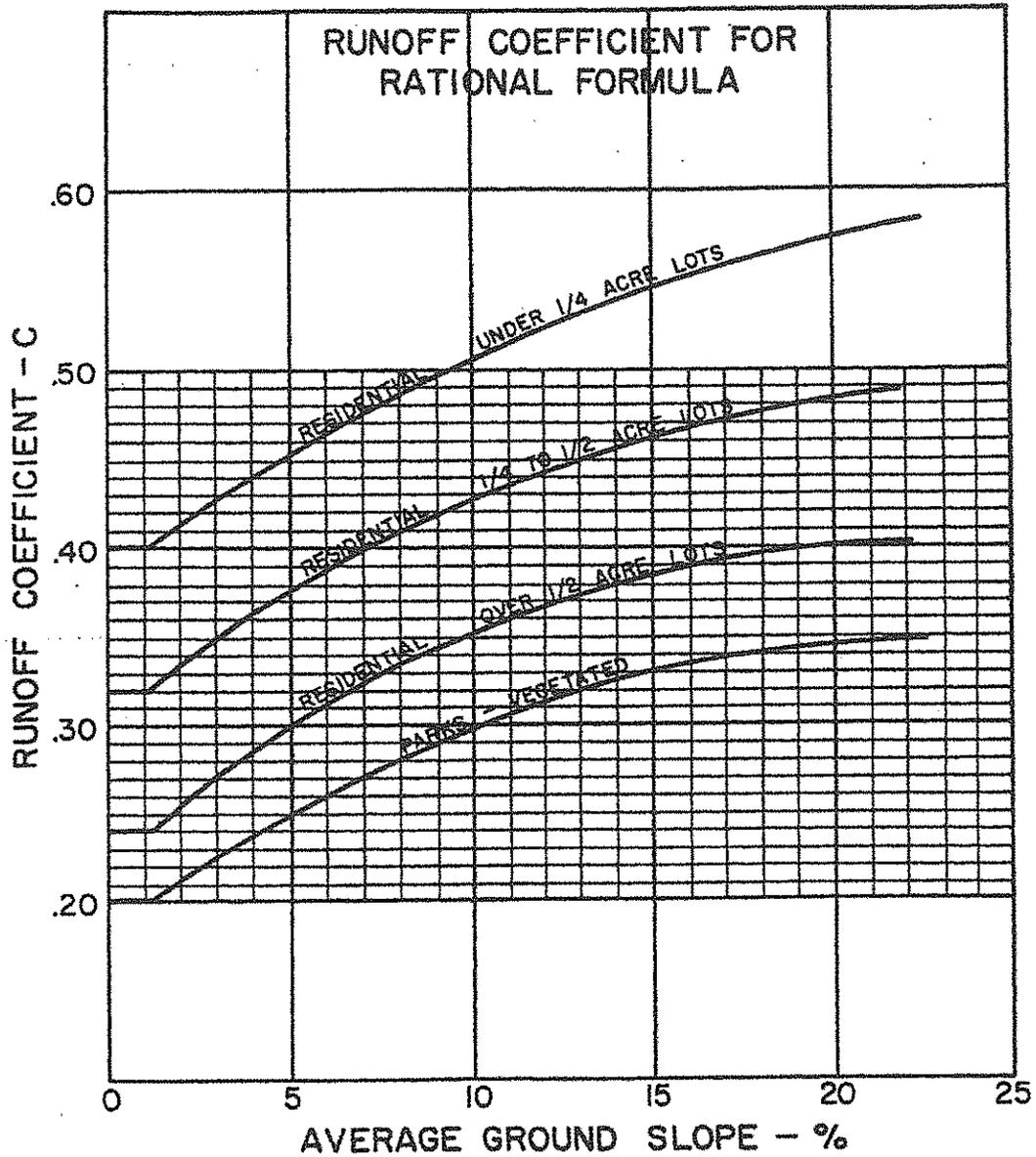


# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

STREET MONUMENT

PLATE NO. A-31



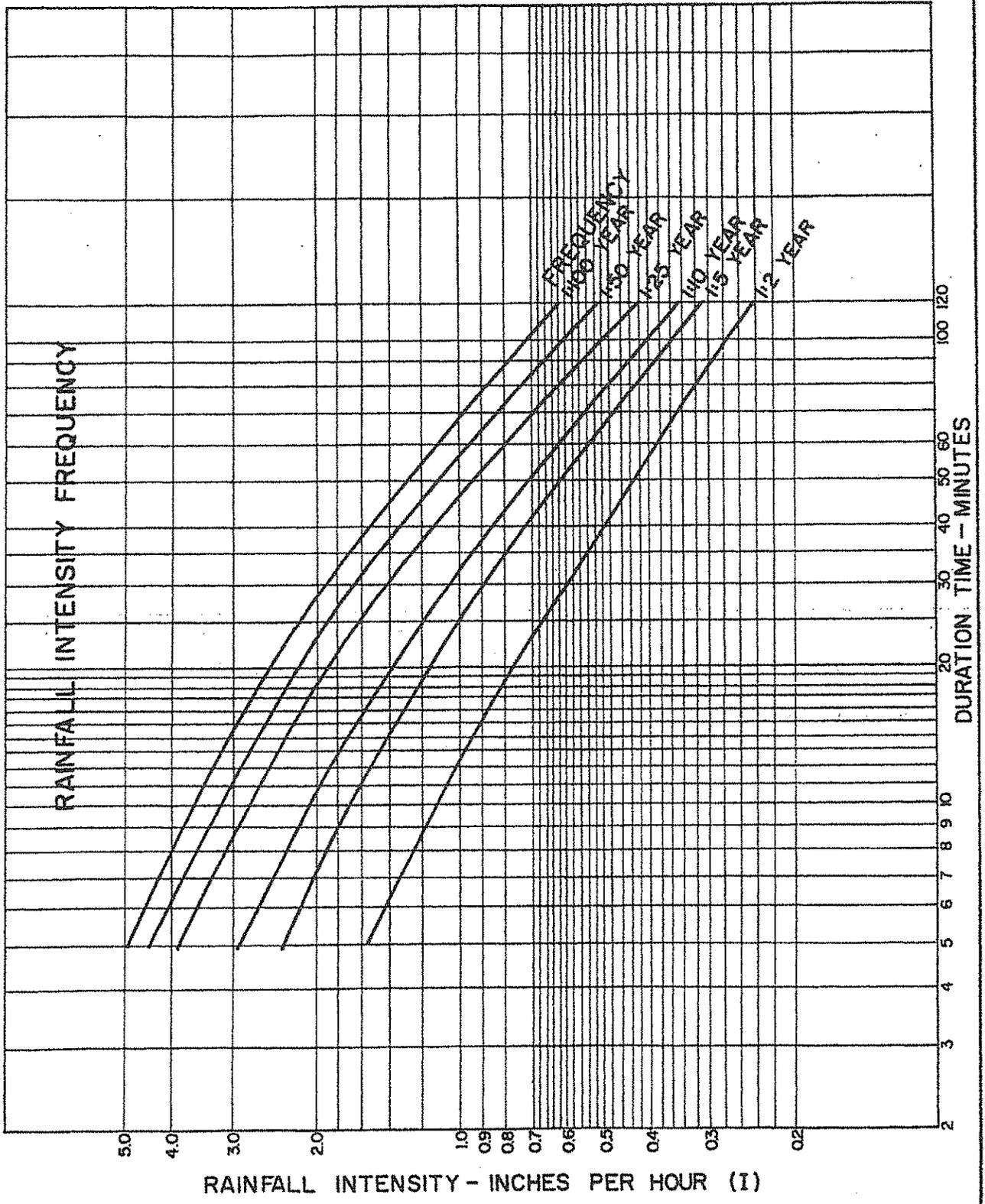
NOTE: USE C=0.85 FOR COMMERCIAL, INDUSTRIAL AND MULTIPLE RESIDENTIAL AREAS

# DRAINAGE STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

RUNOFF  
COEFFICIENT

PLATE NO. B-1



# DRAINAGE STANDARDS

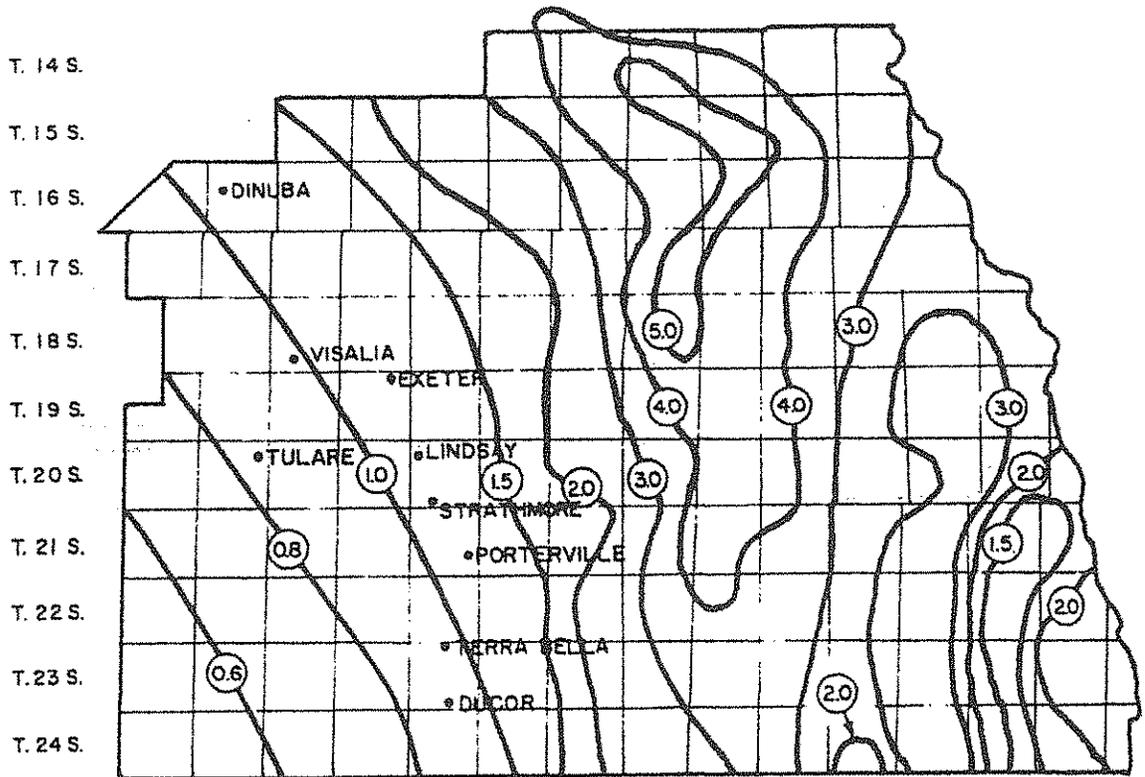
TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

INTENSITY  
DURATION CURVES

PLATE NO. B-2

# TULARE COUNTY

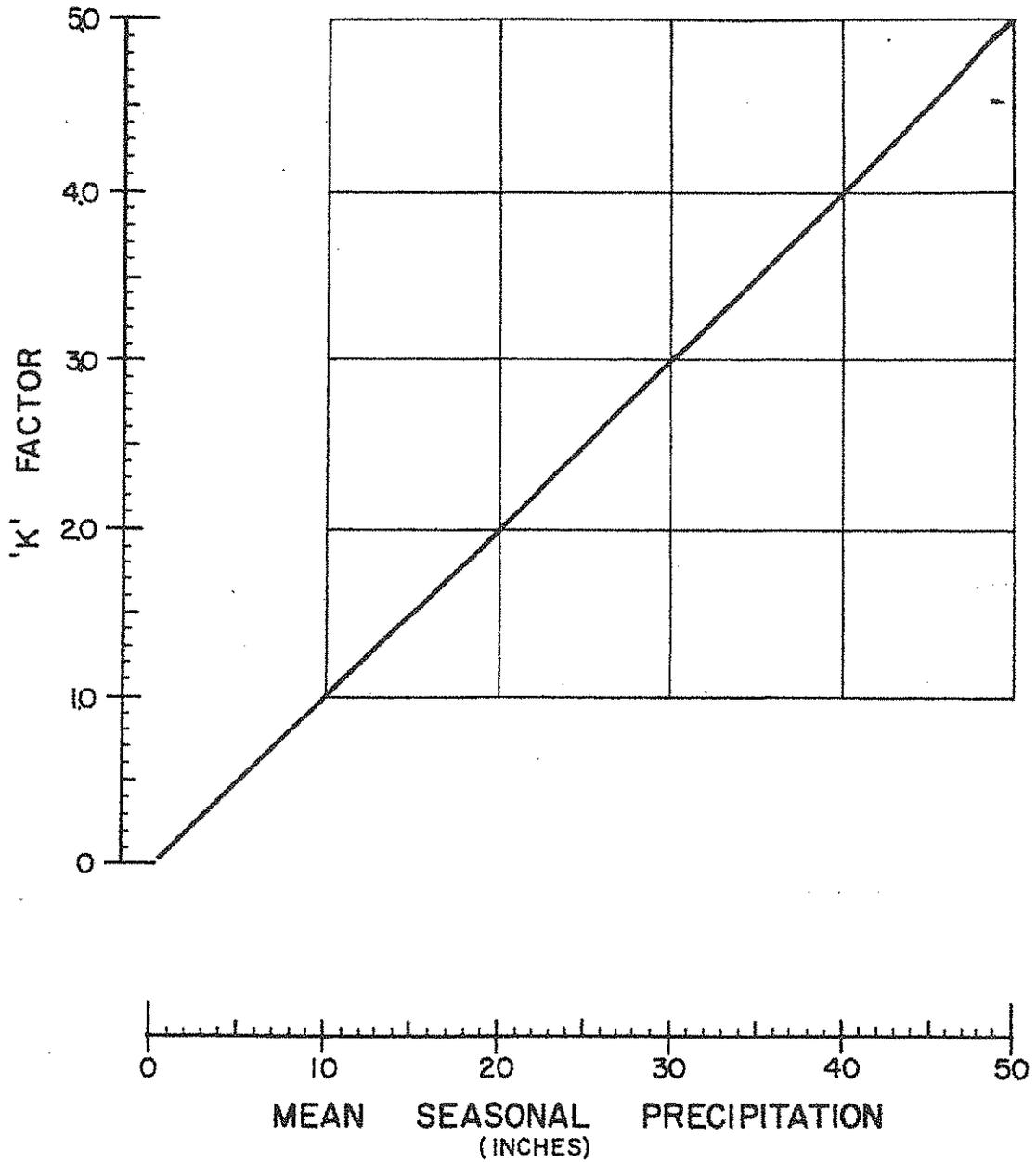
R. 23 E.   R. 24 E.   R. 25 E.   R. 26 E.   R. 27 E.   R. 28 E.   R. 29 E.   R. 30 E.   R. 31 E.   R. 32 E.   R. 33 E.   R. 34 E.   R. 35 E.   R. 36 E.   R. 37 E.



(1.0) INDICATES 'K' FACTOR TO BE USED WITH THE MODIFIED RATIONAL FORMULA ( $Q=KCIA$ )

## DRAINAGE STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080  
RATIONAL FORMULA  
'K' FACTOR  
PLATE NO. B-3



# DRAINAGE STANDARDS

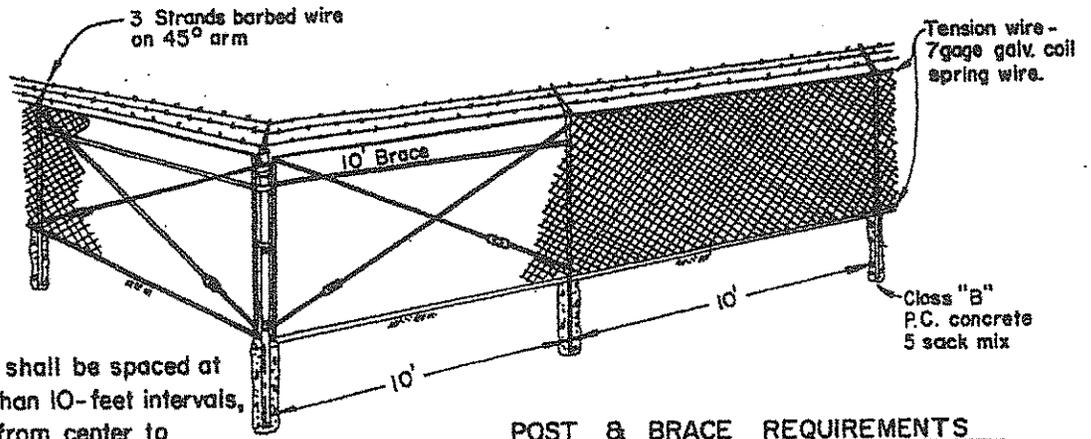
TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

'K' FACTOR TO  
PRECIPITATION

PLATE NO. B-4

Post taps, extension arms, stretcher bars and other required fittings and hardware shall be steel or malleable iron or wrought iron and shall be galvanized.

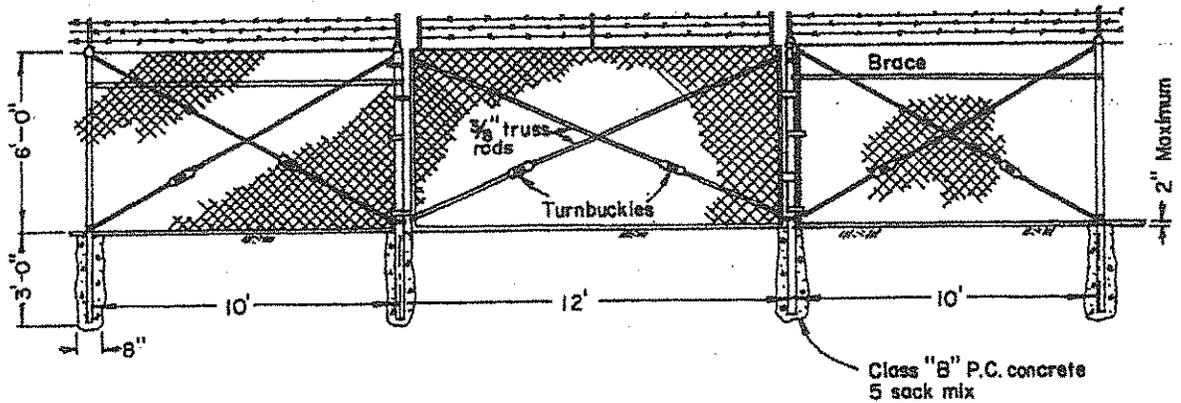
Wire used in the manufacture of the fabric shall be 11-gage for all fence 84" or less in height, and shall be woven into approximately 2-inch mesh.



Line posts shall be spaced at not more than 10-foot intervals, measured from center to center of posts.

End, corner, and gate posts shall be braced to the nearest line post with galvanized diagonal or horizontal braces used as compression members and galvanized 3/8" steel truss rods with turnbuckles used as tension members.

| POST & BRACE REQUIREMENTS |      |            |                  |
|---------------------------|------|------------|------------------|
| LOCATION                  | TYPE | MIN SIZE   | MIN WT.(LB./FT.) |
| End and corner posts      | Pipe | 2.351 O.D. | 3.10             |
| Line posts                | Pipe | 1.869 O.D. | 2.31             |
| Braces                    | Pipe | 1.630 O.D. | 1.93             |
| Gate posts                | Pipe | 3.960 O.D. | 8.65             |



Gate frame shall be constructed of not less than 1 1/2" galvanized pipe and shall be cross trussed with 3/8" adjustable truss rods. The corner of gate frames shall be fastened together with a malleable iron fitting.

The gate shall be hung by at least two (2) steel or malleable iron hinges not less than three inches (3") in width, and a malleable catch and locking attachment.

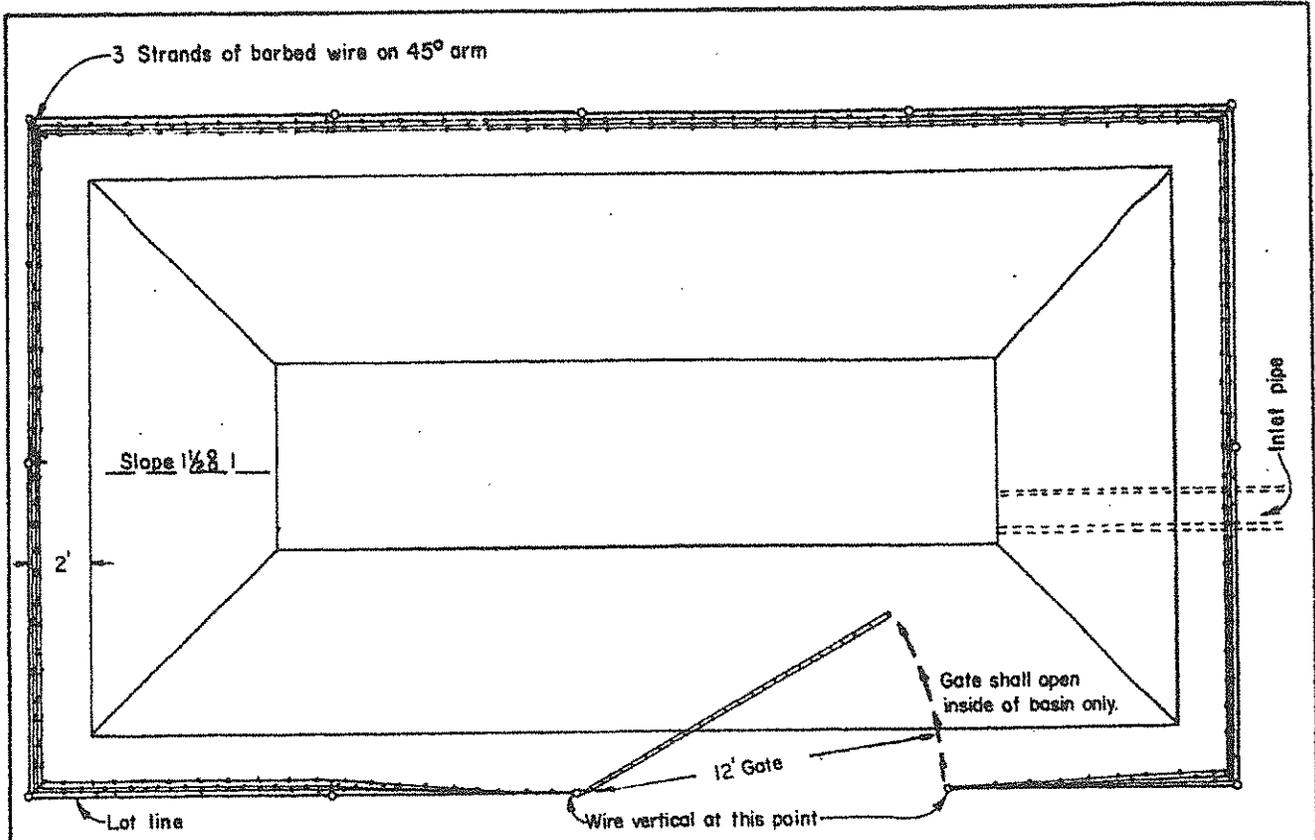
All posts shall be a minimum of 9' long.

# PUBLIC ROAD STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

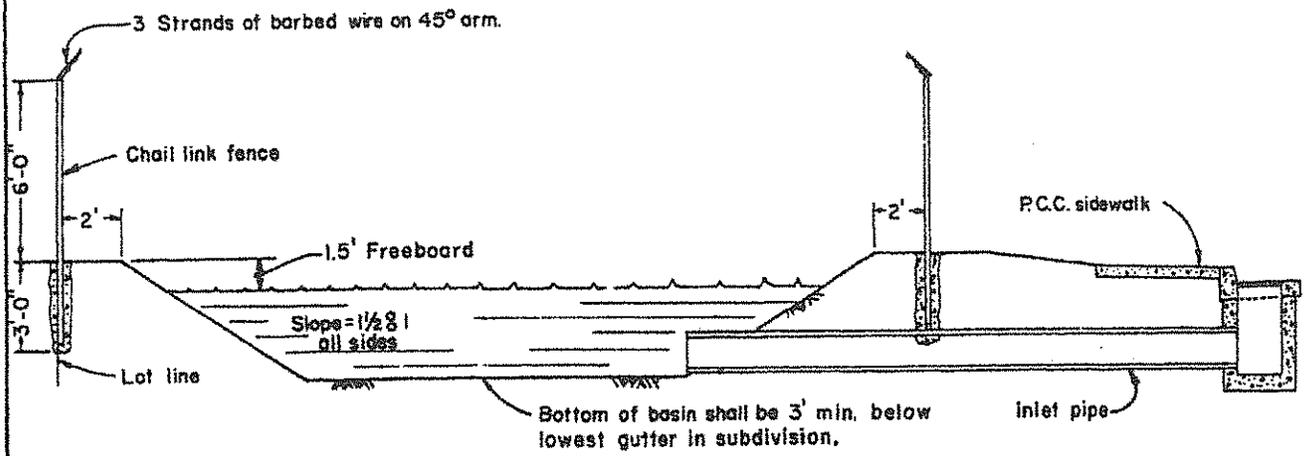
CHAIN LINK  
FENCING

PLATE NO. B-5



**GENERAL NOTES**

- Fence to be placed on lot line.
- Maximum depth of water in ponding basin - 3'-0".
- Fence post to be placed in class "B" P.C. Concrete.
- Access gate 12'-0" minimum, open inside of basin only.
- Entire area of ponding lot to be treated with soil sterilant to one foot outside of fence or to back of concrete curb or sidewalk.
- The soil sterilant to be used and rate of application must be approved by the Public Works Director before being applied.
- Where ponding basin is on corner lot, fence shall follow curve of lot line.

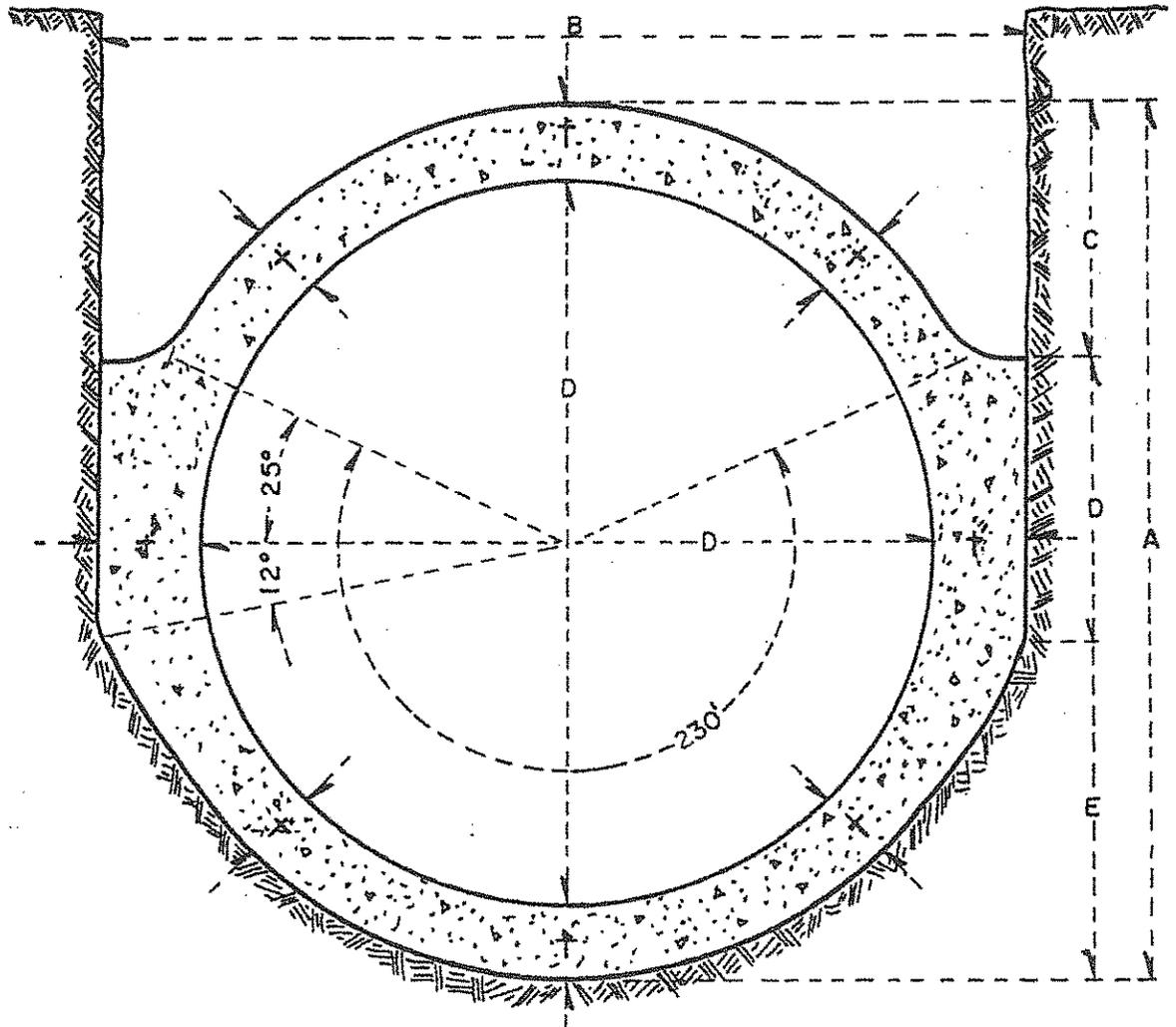


**DRAINAGE STANDARDS**

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

PONDING  
BASIN DETAILS

PLATE NO. B-6



| D  | t     | t'    | B      | C      | D      | E      | A  |
|----|-------|-------|--------|--------|--------|--------|----|
| 24 | 3     | 3 3/4 | 31 1/2 | 8 1/2  | 10     | 11 1/2 | 30 |
| 30 | 3     | 3 3/4 | 37 1/2 | 10     | 12     | 14     | 36 |
| 36 | 3 1/2 | 4 1/4 | 44 1/2 | 12 1/2 | 14     | 16 1/2 | 43 |
| 42 | 4     | 4 3/4 | 51 1/2 | 14 1/2 | 16     | 19 1/2 | 50 |
| 48 | 5     | 6 1/2 | 61     | 16 1/2 | 19     | 22 1/2 | 58 |
| 54 | 5 1/2 | 7 1/2 | 69     | 18 1/2 | 21     | 25 1/2 | 65 |
| 60 | 6     | 8     | 76     | 21     | 23     | 28     | 72 |
| 72 | 7     | 8 1/2 | 89     | 25     | 27 1/2 | 33 1/2 | 86 |

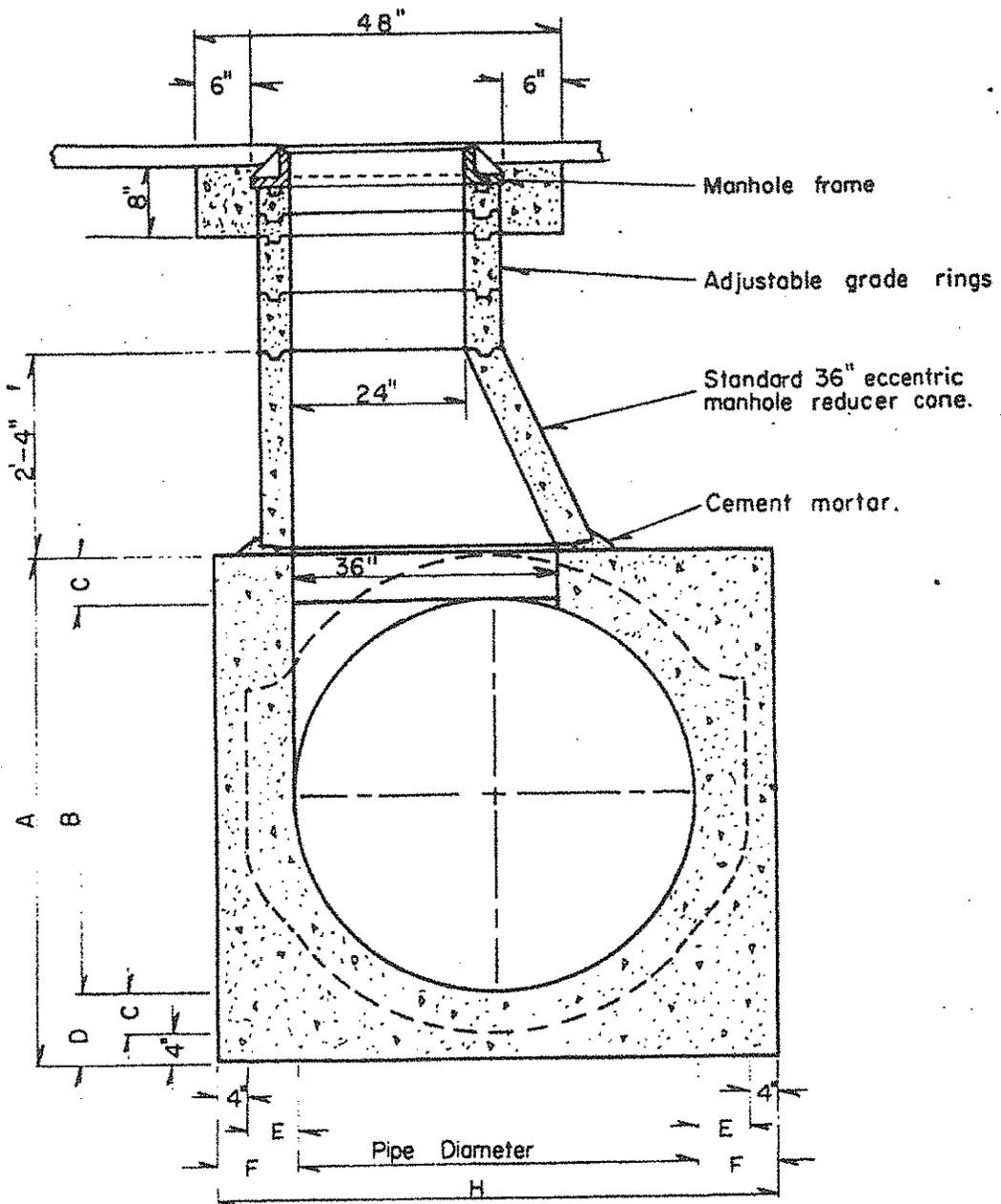
All dimensions in inches.

**DRAINAGE**

**STANDARDS**

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080  
CAST-IN-PLACE  
CONCRETE PIPE  
SECTION

Plate No. B-7



\*H equals width parallel to pipe flowline also.

| Pipe Dia. | A      | B  | C     | D      | E     | F      | H* |
|-----------|--------|----|-------|--------|-------|--------|----|
| 36        | 49 1/2 | 36 | 3 1/2 | 7 1/2  | 4 1/2 | 8 1/2  | 53 |
| 42        | 56     | 42 | 4     | 8      | 5     | 9      | 60 |
| 48        | 63     | 48 | 5     | 9      | 6     | 10     | 68 |
| 54        | 69 1/2 | 54 | 5 1/2 | 9 1/2  | 6 1/2 | 10 1/2 | 75 |
| 60        | 76     | 60 | 6     | 10     | 7     | 11     | 82 |
| 66        | 83     | 66 | 6 1/2 | 10 1/2 | 7 1/2 | 11 1/2 | 89 |
| 72        | 90     | 72 | 7     | 11     | 8     | 12     | 96 |

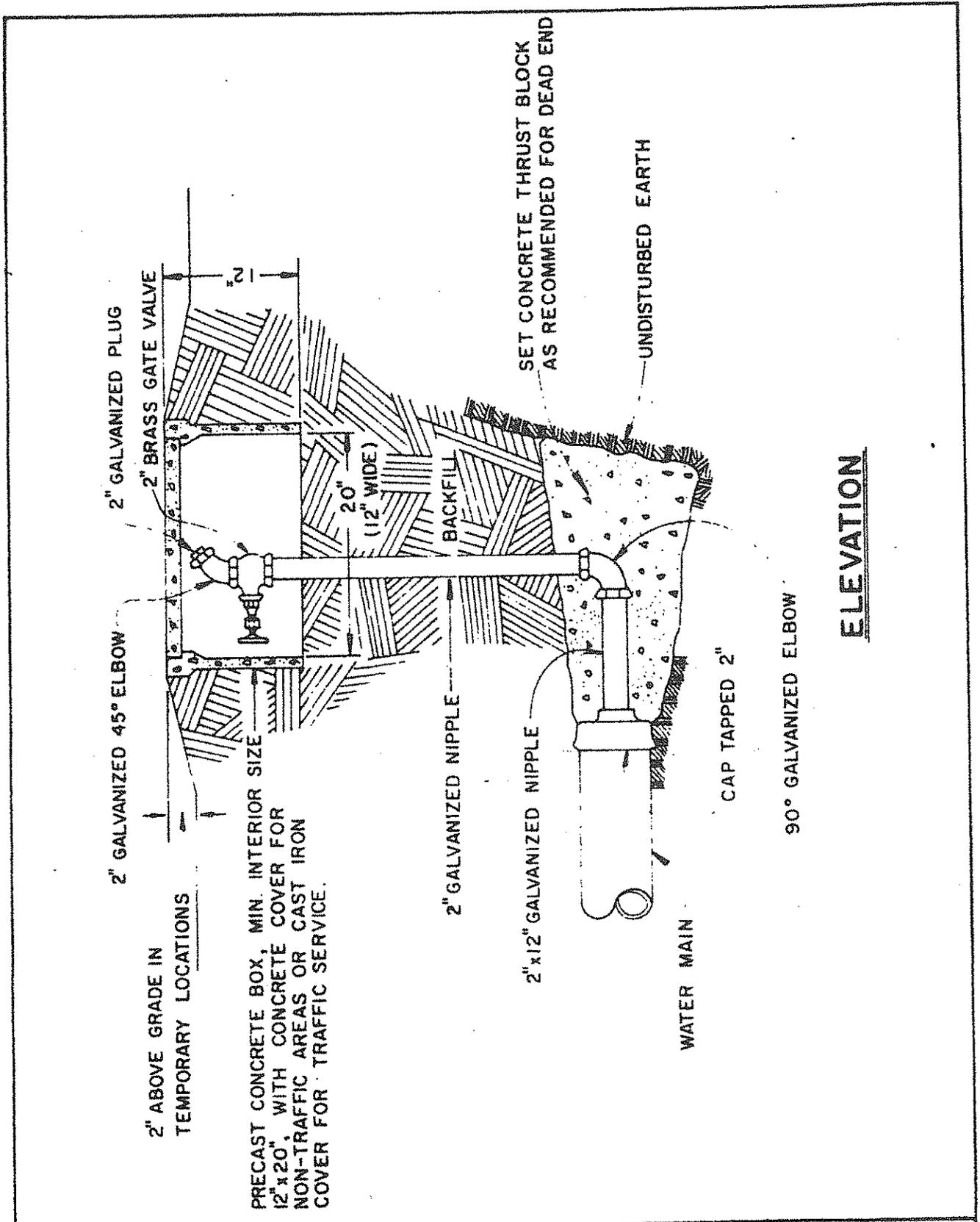
All dimensions in inches.

# DRAINAGE STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

CAST - IN - PLACE  
MANHOLE

PLATE NO. B-8



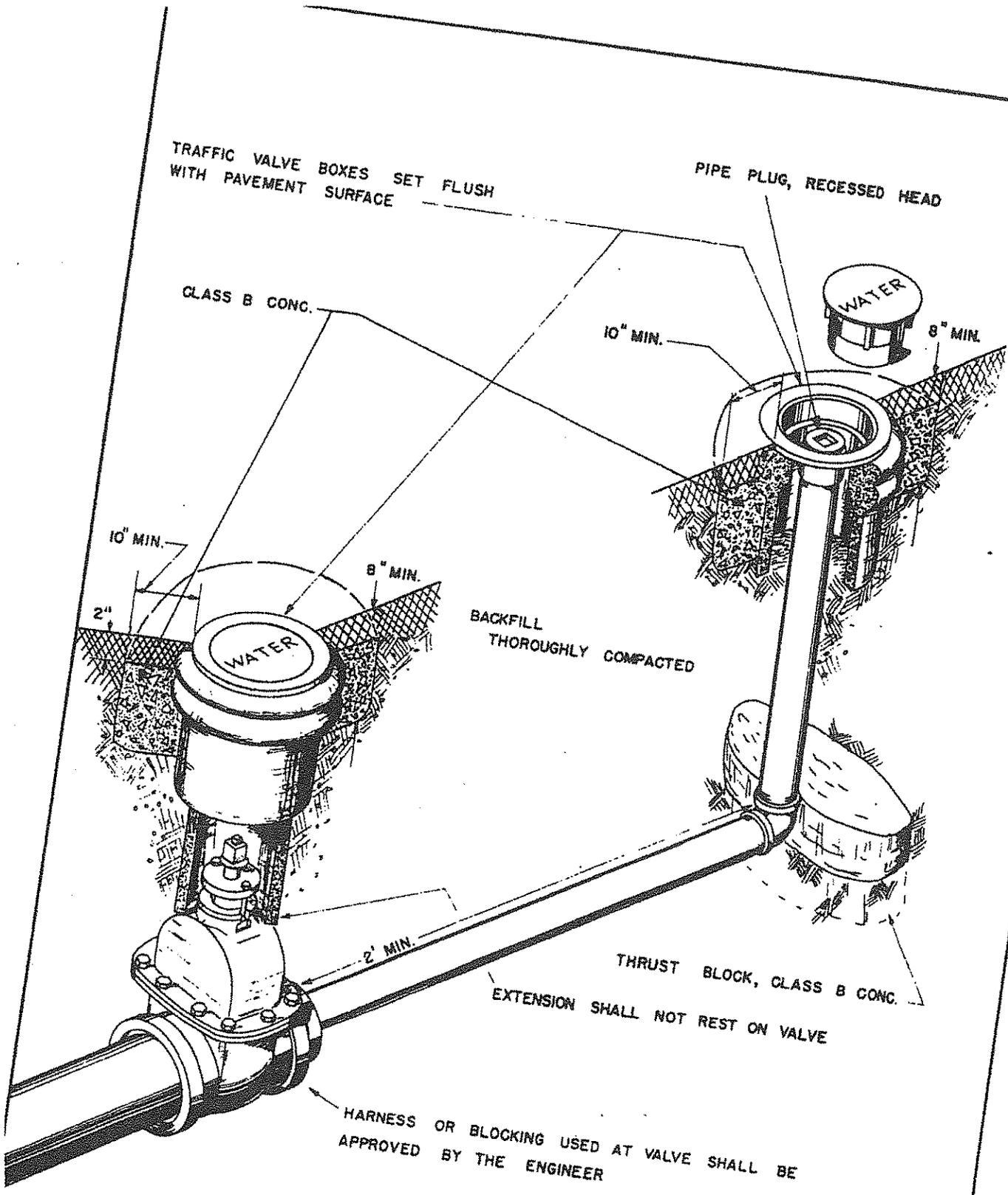
ELEVATION

WATER SYSTEM STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

BLOW-OFF WITH  
2" VALVE

PLATE No. WS-1

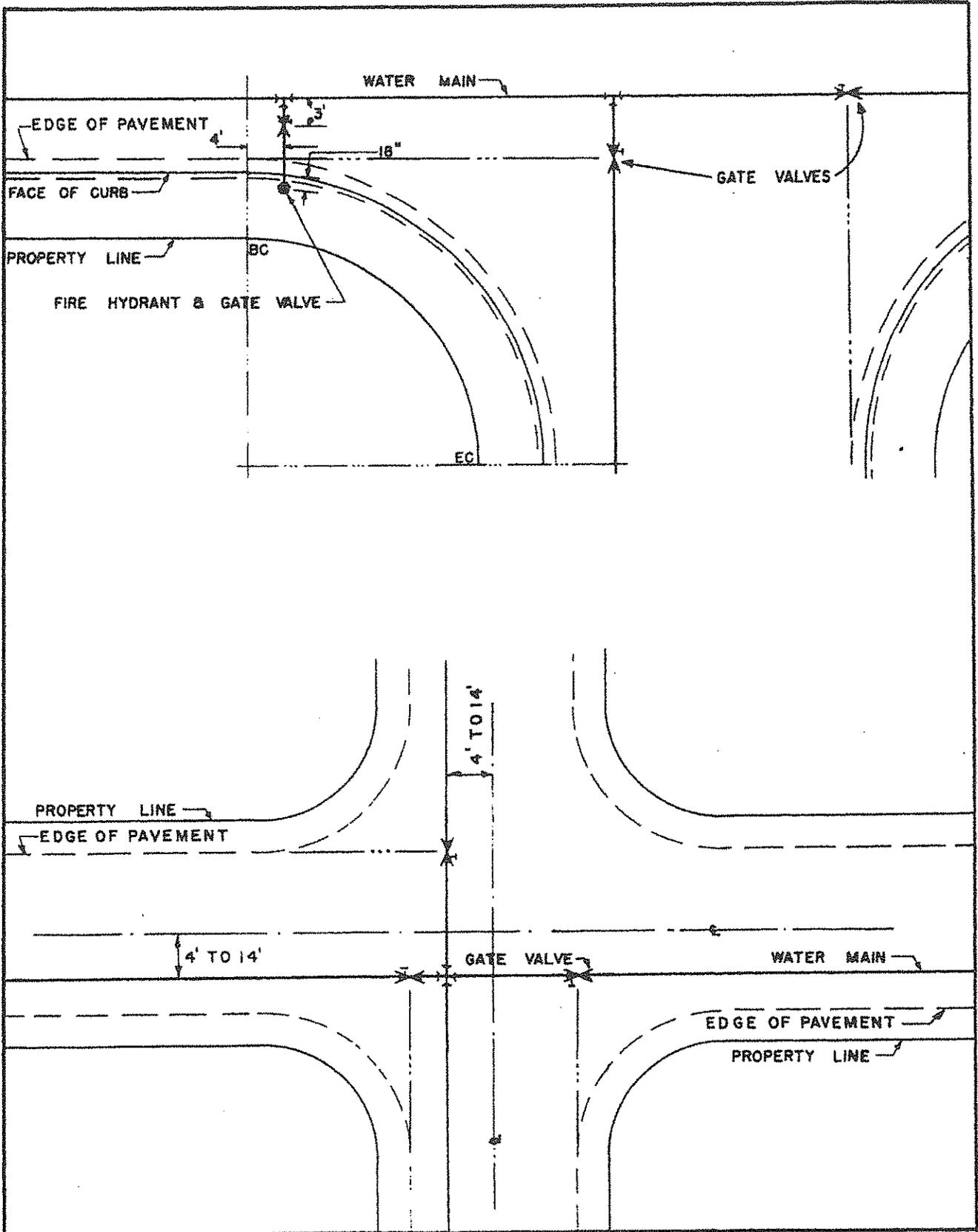


# WATER SYSTEM STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

BLOW-OFF WITH  
6" VALVE

PLATE ..

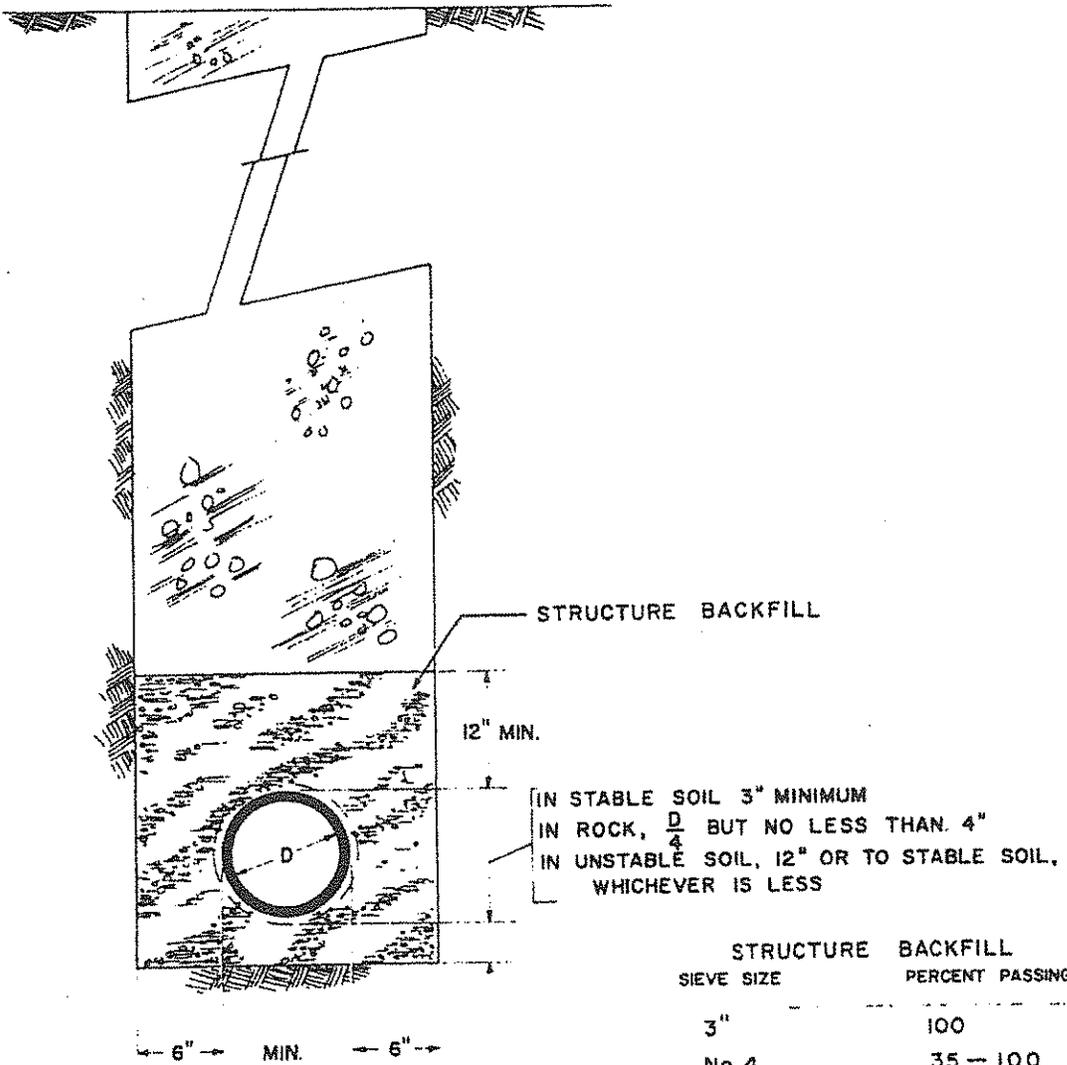


# WATER SYSTEM STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

LOCATION OF VALVES  
& HYDRANTS AT  
INTERSECTIONS

PLATE No. WS-3



ANY OVEREXCAVATION SHALL BE BACKFILLED WITH APPROVED BEDDING MATERIAL

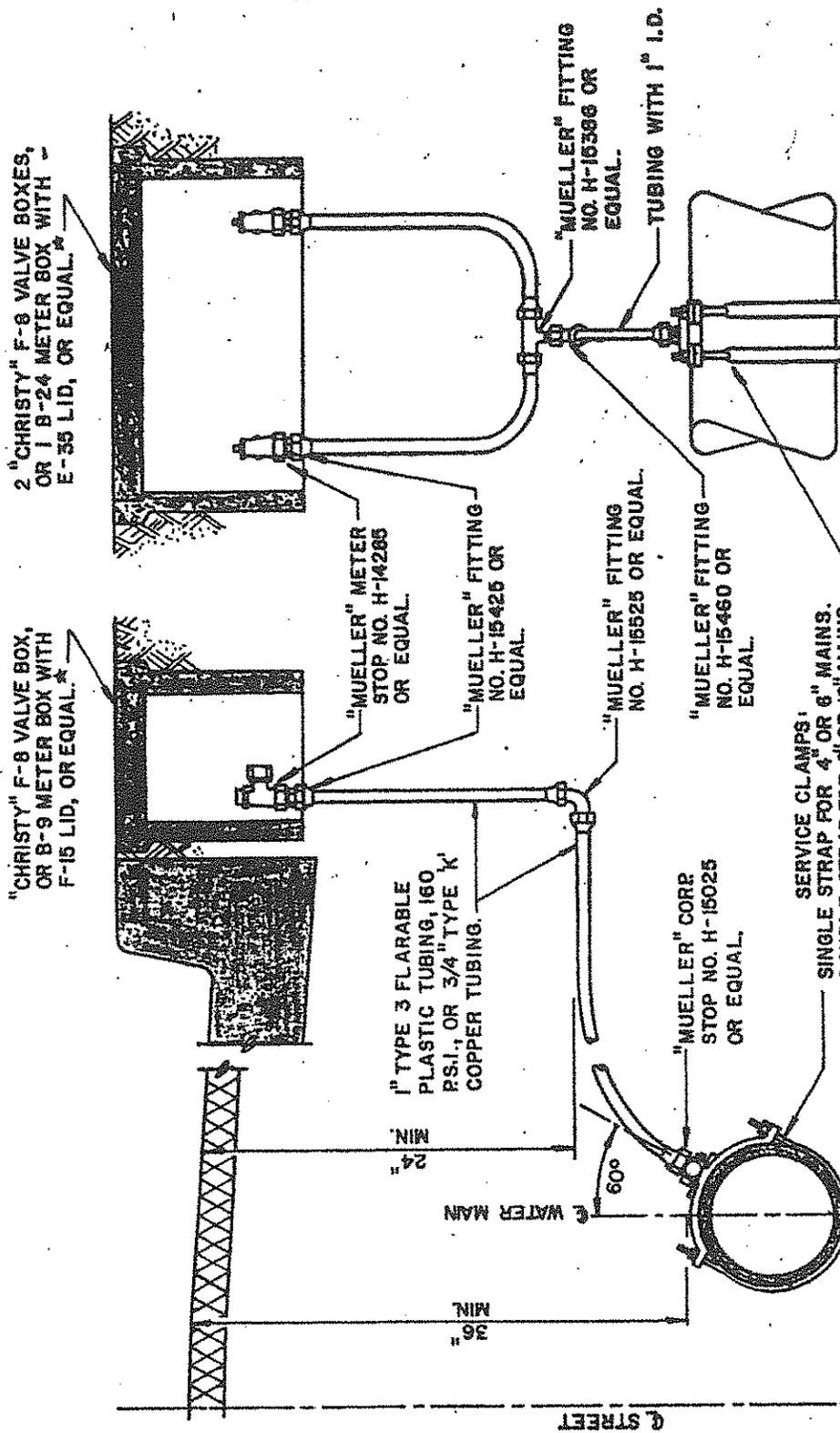
# WATER SYSTEM STANDARDS

TULARE COUNTY  
 ORDINANCE CODE  
 SECTION No. 7080

PIPE BEDDING

PLATE No. WS-4

**TYPICAL WATER SERVICE INSTALLATION  
FOR SINGLE SERVICE FOR DOUBLE SERVICE**



\* NOTE: METER BOX OR CURB VALVE BOX IS TO BE LOCATED ADJACENT TO CURB WHERE CURBS ARE INSTALLED AND ADJACENT TO THE PROPERTY LINE WHERE NO CURBS ARE INSTALLED. SPLIT SERVICES ARE TO BE CENTERED ON THE PROJECTED LOT LINE.

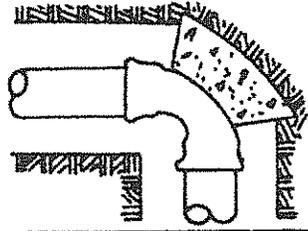
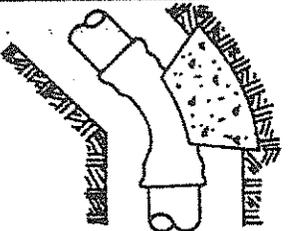
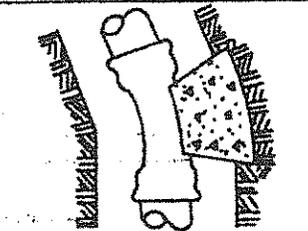
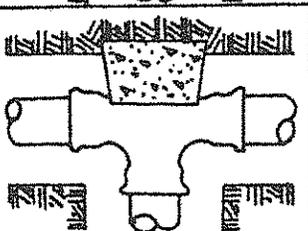
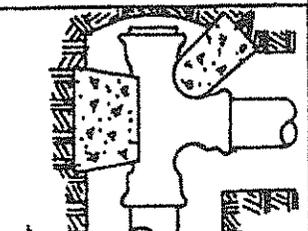
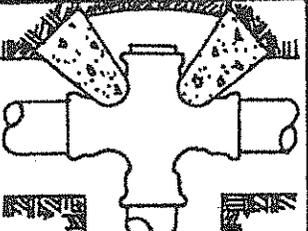
**WATER SYSTEM STANDARDS**

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

DOMESTIC  
WATER  
SERVICES

PLATE NO. WS-5

# REQUIRED BEARING AREA - TOTAL SQUARE FEET

| TYPE OF FITTING      | 90° BEND  | 45° BEND  | 11 1/4° OR 22 1/2° BEND  | TEE OR DEAD END   | TEE w/PLUG  | CROSS w/PLUG  |
|----------------------|---|---|--|---|---|---|
| TYPICAL INSTALLATION |  |  |  |  |  |  |
|                      | 2   | 1   | 1  | 2   | 2   | 2   |
| 4" PIPE              | 4   | 2   | 1  | 3   | 4   | 4   |
| 6" PIPE              | 7   | 4   | 2  | 5   | 7   | 7   |
| 8" PIPE              | 12  | 6   | 3  | 8   | 12  | 12  |
| 10" PIPE             | 16  | 10  | 5  | 12  | 16  | 16  |

NOTES: (1) THRUST BLOCKS TO BE CONSTRUCTED OF CLASS "B" CONCRETE

(2) AREAS GIVEN ARE FOR CLASS 150 PIPE AT PRESSURE OF 150 P.S.I. IN SOIL WITH 2000 P.S.F. BEARING CAPACITY.

INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES, AND/OR SOIL TYPES SHOULD ADJUST AREAS ACCORDINGLY, SUBJECT TO APPROVAL OF ENGINEER.

(3) BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL.

(4) JOINTS AND FACE OF PLUG TO BE KEPT CLEAR OF CONCRETE.

(5) MINIMUM THICKNESS OF THRUST BLOCKS TO BE 6 INCHES.

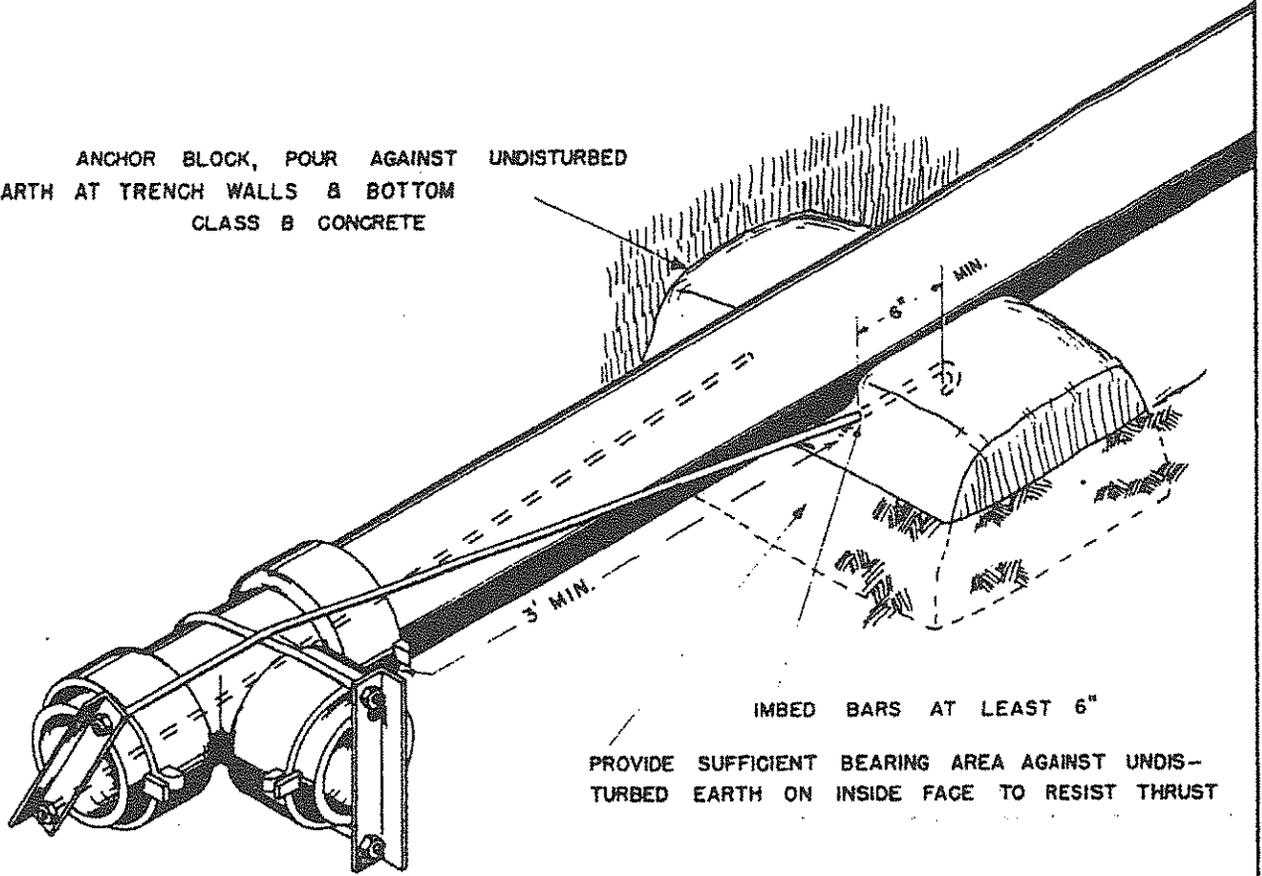
## WATER SYSTEM STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

THRUST BLOCK  
BEARING AREA  
REQUIREMENTS

PLATE NO. WS - 6

ANCHOR BLOCK, POUR AGAINST UNDISTURBED  
EARTH AT TRENCH WALLS & BOTTOM  
CLASS B CONCRETE



IMBED BARS AT LEAST 6"  
PROVIDE SUFFICIENT BEARING AREA AGAINST UNDIS-  
TURBED EARTH ON INSIDE FACE TO RESIST THRUST

HARNESS & ANCHOR BLOCK SHALL BE DESIGNED TO  
WITHSTAND THRUSTS DEVELOPED BY THE TEST  
PRESSURE  
BARE STEEL TO BE ASPHALT COATED

# WATER SYSTEM STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

PIPE HARNESS

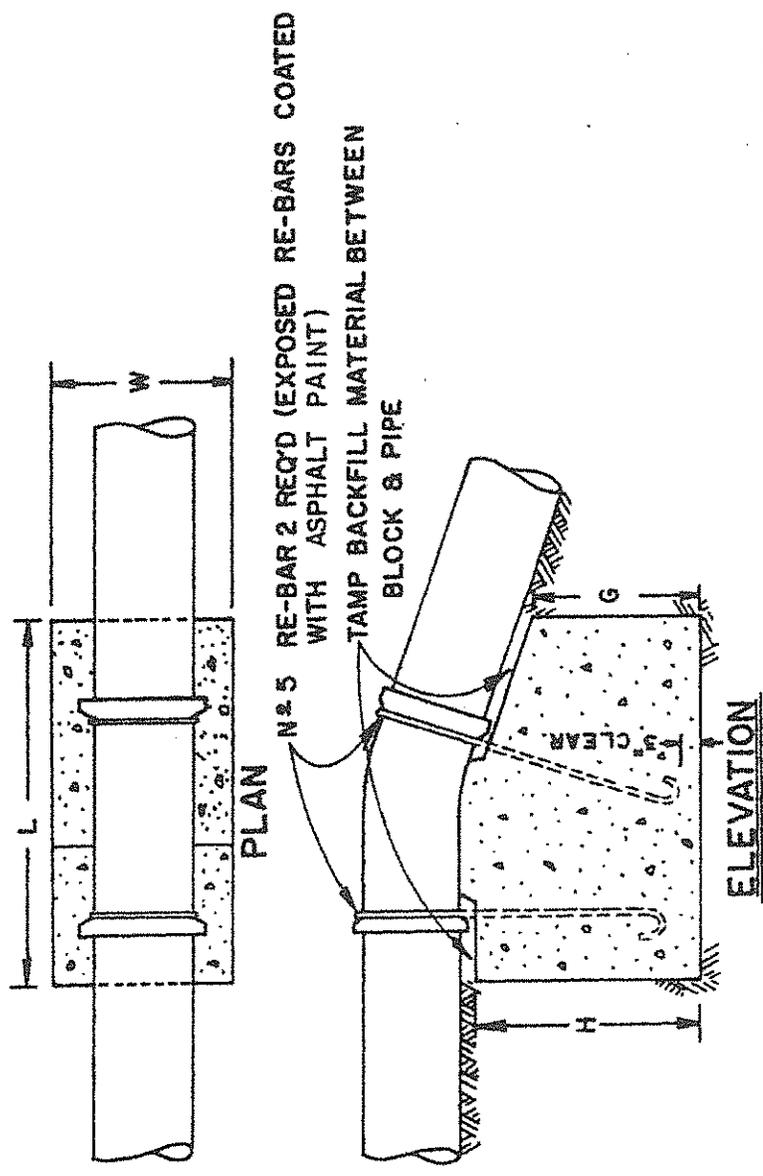
PLATE No. WS-7

# WATER SYSTEM STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION No. 7080

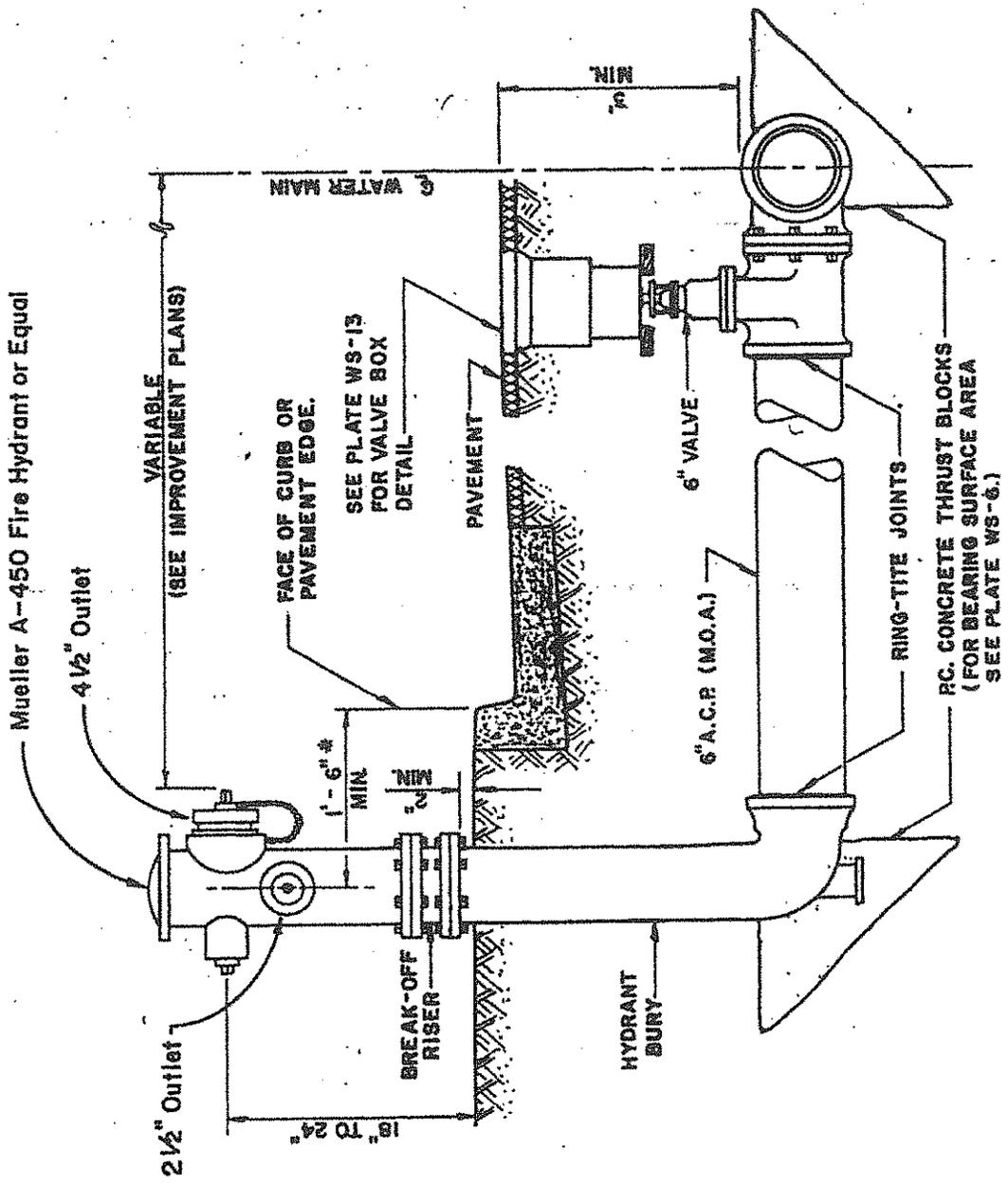
THRUST BLOCKING  
AT VERTICAL BENDS

PLATE No. WS-8



## THRUST BLOCK DIMENSIONS - UPWARD THRUST

| PIPE SIZE | 1 1/4" BEND |       |       | 2 1/2" BEND |       |       | 45° BEND |       |       |       |
|-----------|-------------|-------|-------|-------------|-------|-------|----------|-------|-------|-------|
|           | L           | W     | H     | L           | W     | H     | L        | W     | H     |       |
| 4" & 6"   | 2'-0"       | 2'-0" | 1'-0" | 2'-0"       | 2'-0" | 2'-0" | 2'-0"    | 2'-0" | 2'-0" | 2'-0" |
| 8"        | 2'-0"       | 2'-0" | 1'-0" | 3'-0"       | 2'-0" | 2'-0" | 4'-6"    | 2'-0" | 2'-0" | 3'-0" |
| 10"       | 3'-0"       | 2'-0" | 2'-0" | 4'-0"       | 2'-0" | 2'-0" | 6'-0"    | 2'-0" | 2'-0" | 3'-8" |
| 12"       | 3'-0"       | 2'-0" | 2'-0" | 6'-0"       | 2'-0" | 2'-0" | 7'-0"    | 2'-6" | 2'-6" | 4'-0" |



# WATER SYSTEM STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

FIRE HYDRANT  
INSTALLATION  
(WET BARREL)

PLATE NO. WS-9

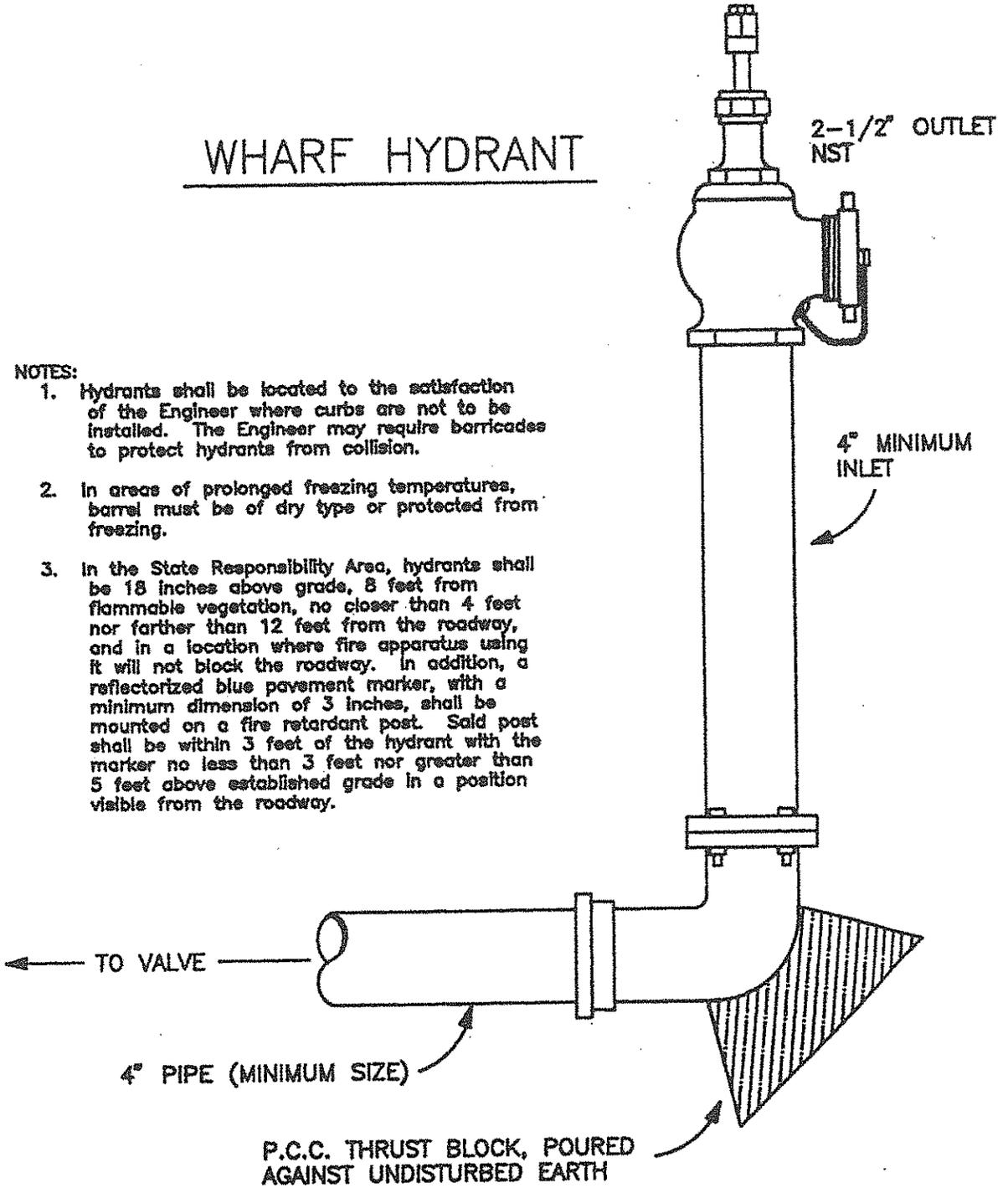
\* When sidewalk is constructed, or if within Urban Improvement Area, distance shall be 5'-0" min.

GREENBERG TYPE  
No. 123 OR EQUAL

# WHARF HYDRANT

**NOTES:**

1. Hydrants shall be located to the satisfaction of the Engineer where curbs are not to be installed. The Engineer may require barricades to protect hydrants from collision.
2. In areas of prolonged freezing temperatures, barrel must be of dry type or protected from freezing.
3. In the State Responsibility Area, hydrants shall be 18 inches above grade, 8 feet from flammable vegetation, no closer than 4 feet nor farther than 12 feet from the roadway, and in a location where fire apparatus using it will not block the roadway. In addition, a reflectorized blue pavement marker, with a minimum dimension of 3 inches, shall be mounted on a fire retardant post. Said post shall be within 3 feet of the hydrant with the marker no less than 3 feet nor greater than 5 feet above established grade in a position visible from the roadway.

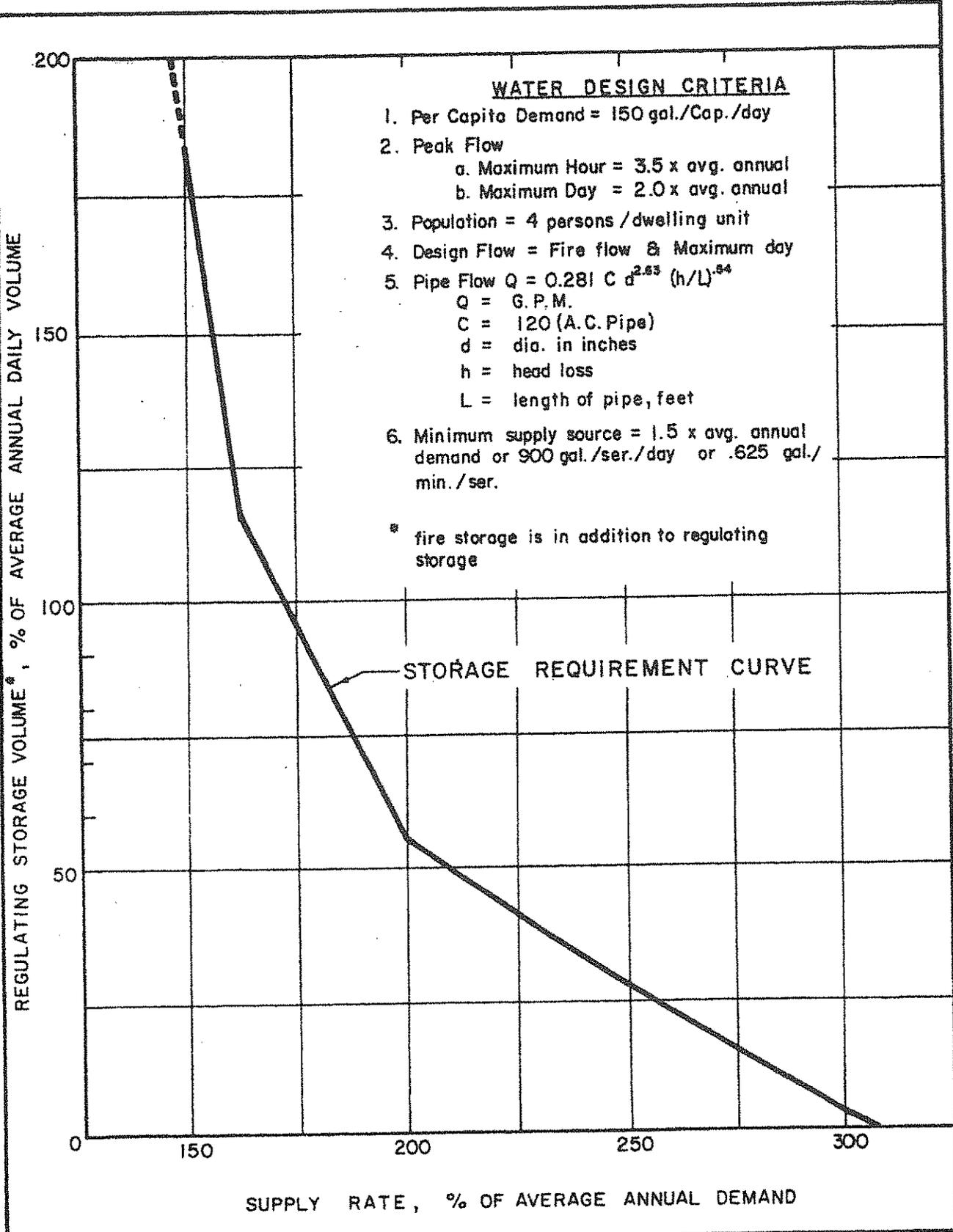


## WATER SYSTEM STANDARDS

TULARE COUNTY  
ORDINANCE CODE  
SECTION NO. 7080

FIRE HYDRANT  
INSTALLATION  
MOUNTAINOUS AREAS

PLATE NO. WS-10

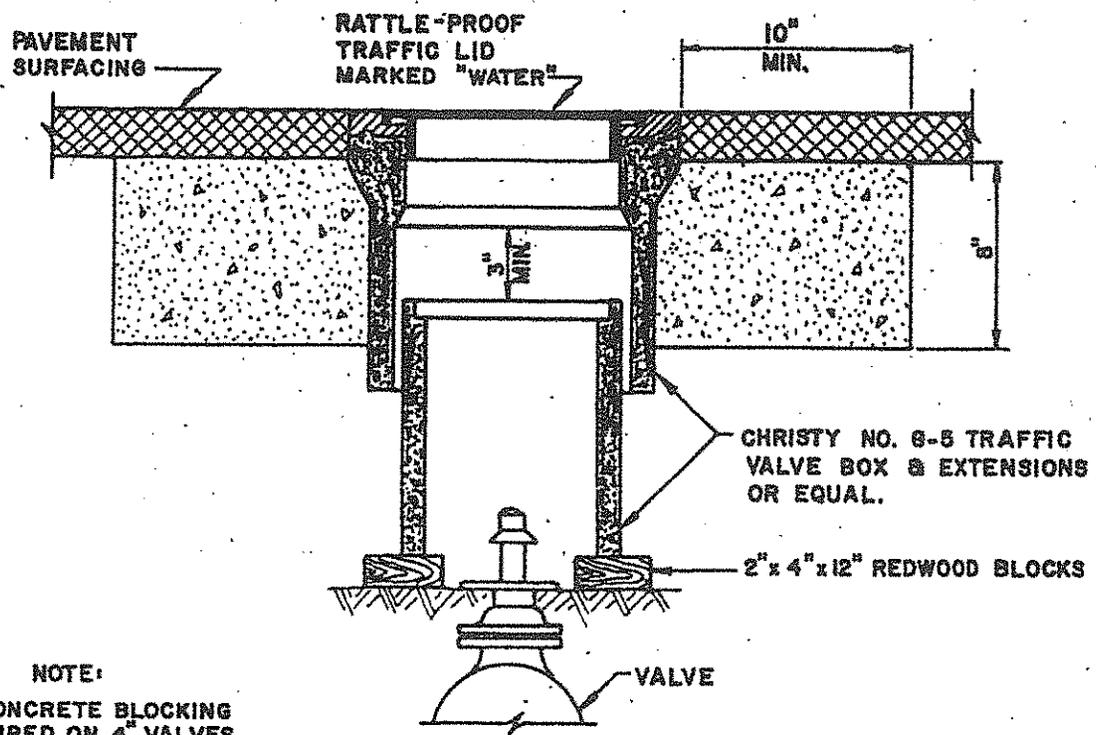


# PUBLIC WATER SYSTEMS

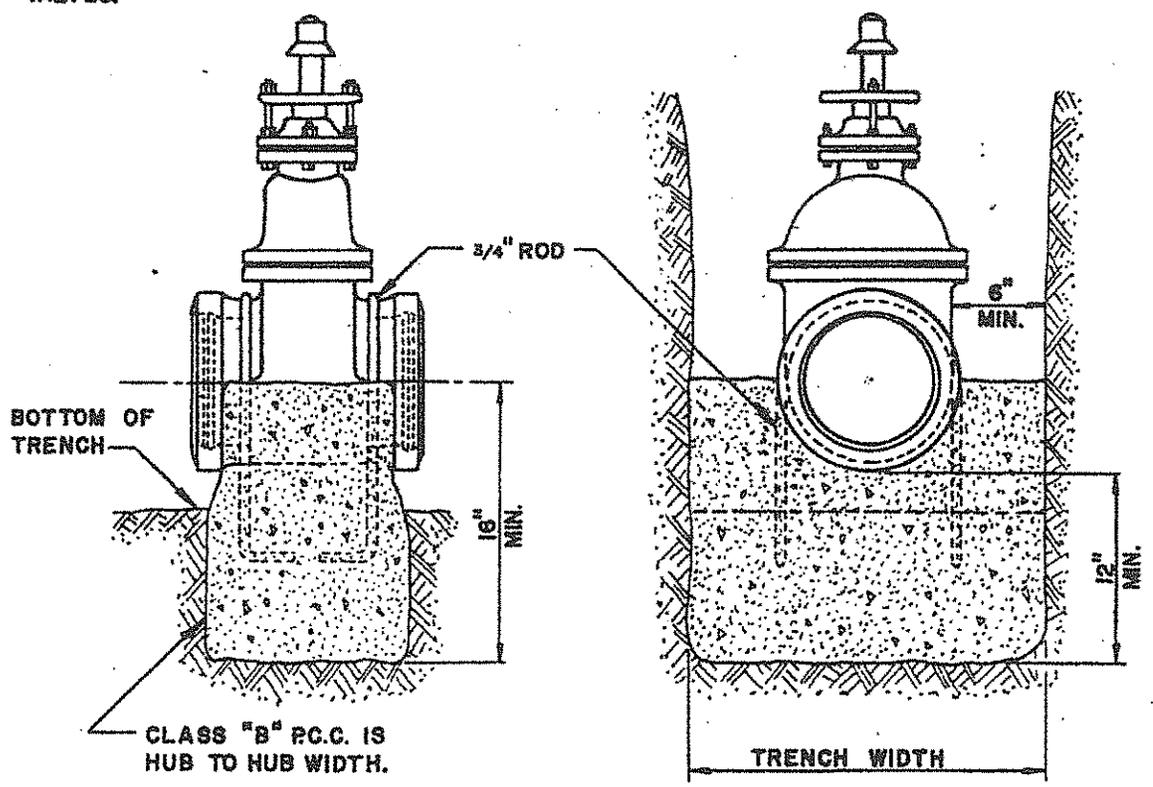
TULARE COUNTY  
 ORDINANCE CODE  
 SECTION No. 7080

FLOW DESIGN  
 AND STORAGE  
 REQUIREMENTS

PLATE No. WS-11



**NOTE:**  
 NO CONCRETE BLOCKING  
 REQUIRED ON 4" VALVES  
 OR 6" FIRE HYDRANT  
 VALVES.

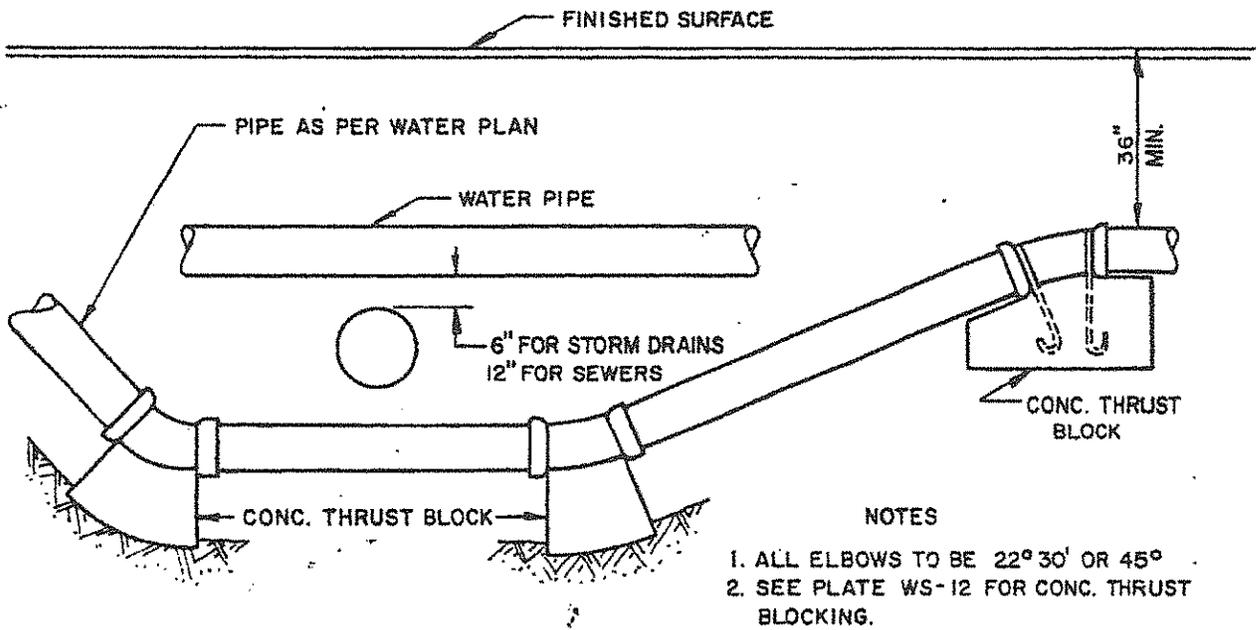


# WATER SYSTEM STANDARDS

TULARE COUNTY  
 ORDINANCE CODE  
 SECTION NO. 7080

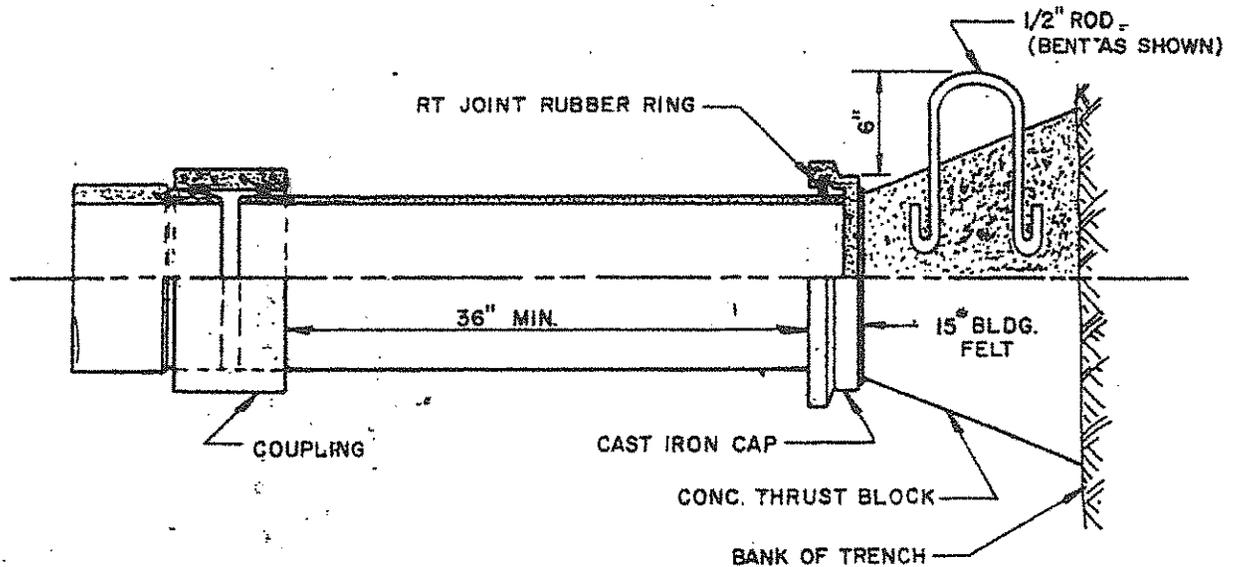
GATE VALVE  
 BLOCKING  
 & COVERS

PLATE NO. WS - 13



- NOTES
1. ALL ELBOWS TO BE 22° 30' OR 45°
  2. SEE PLATE WS-12 FOR CONC. THRUST BLOCKING.

**UNDER & OVER CROSSING-DETAIL**



**BULL PLUG ASSEMBLY DETAIL**

**WATER SYSTEM STANDARDS**

|   |
|---|
| TULARE COUNTY<br>ORDINANCE CODE<br>SECTION NO. 7080 |
| UTILITY CROSSINGS<br>AND<br>BULL PLUG ASSEMBLY      |
| PLATE NO. WS - 14                                   |

## 6. Three Rivers CSD LAFCo Inventory Overview.

**DISTRICT:** Three Rivers Community Services District  
**ADDRESS:** PO Box 423, 40915 Sierra Dr, Three Rivers CA 93271  
**PHONE:** (559) 561-3480 **FAX:** (559) 561-3480  
**CONTACT:** Randy Pares, General Manager  
**E-MAIL:** [info@3riverscsd.com](mailto:info@3riverscsd.com) **WEB:** <http://www.3riverscsd.com/>

**FUNCTIONS PERFORMED:** Preparation of project report for sewage system, trash pick-up, oversight of existing individual septic systems, provision of domestic water within Improvement District No. 1

**METHOD OF FINANCING:** Ad valorem taxes

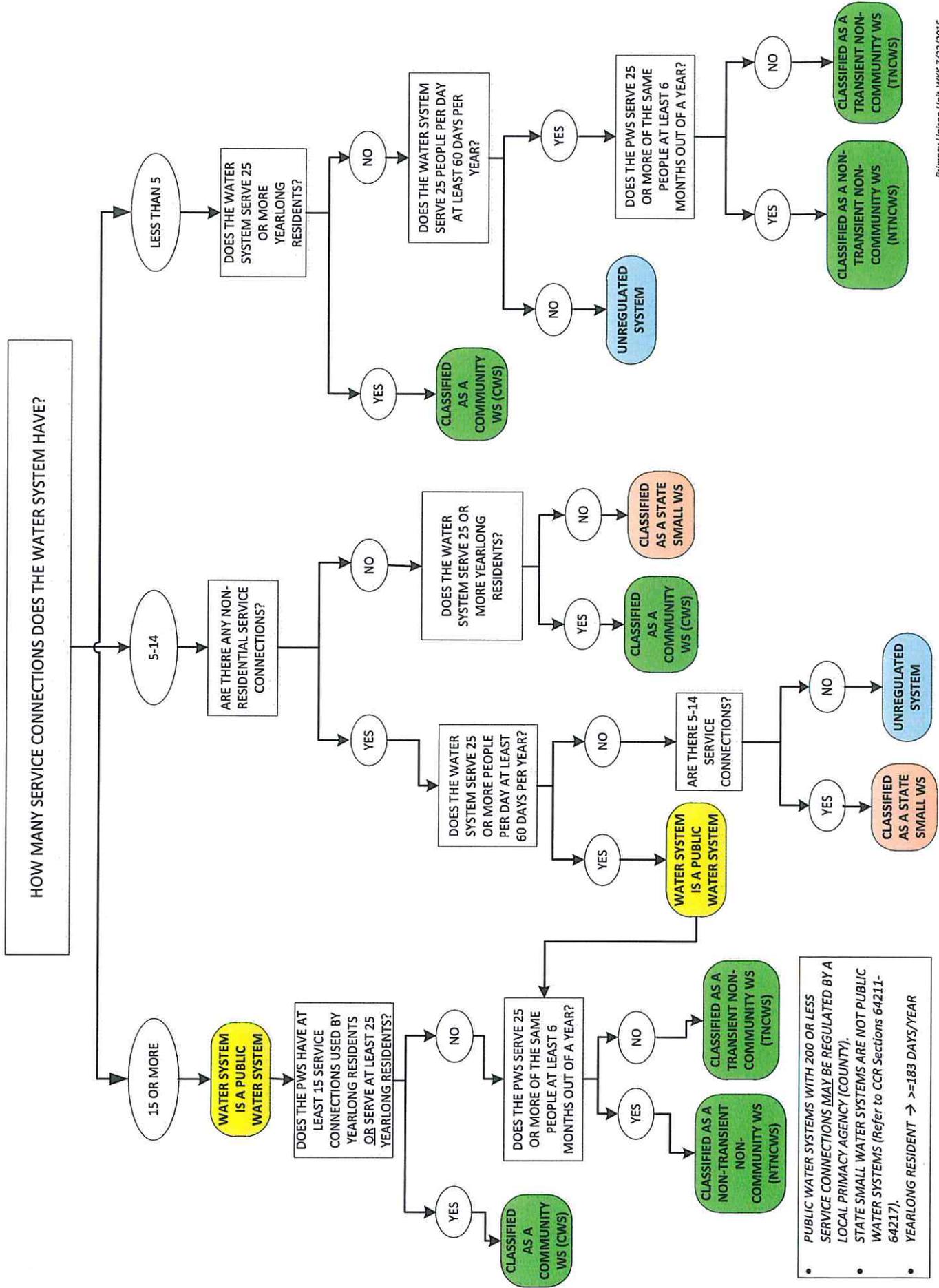
| BOARD OF DIRECTORS    | TERM OF OFFICE    |
|-----------------------|-------------------|
| Michael L. Cannarozzi | 12/2/05 – 12/4/09 |
| Rex H. Black          | 12/2/05 – 12/4/09 |
| Dennis Mills          | 12/5/03 – 12/7/07 |
| Tom Sparks            | 12/5/03 – 12/7/07 |
| Vincent D. Andrus     | 12/5/03 – 12/7/07 |

| MEETING TIME:                               |
|---|
| 1 <sup>st</sup> Wednesday of the month @7PM |
| MEETING LOCATION:                           |
| District office                             |

|                         |                  |                    |                           |
|-------------------------|------------------|--------------------|---------------------------|
| <b>PRINCIPAL COUNTY</b> | TULARE           | <b>POPULATION:</b> | 2,248 (Census ... 4/1/00) |
| <b>DISTRICT AREA</b>    | 5,397AC (8.4MI2) | <b>SOI AREA</b>    | NO SOI                    |
| <b>FORMED</b>           | October 1973     | <b>LAFCO RESO.</b> | 73-036, Case 459          |
| <b>LAST SOI AMEND.</b>  | n/a              | <b>LAFCO RESO.</b> | n/a                       |

7. State Department of Water Resources  
Classification of Water Systems.

# DECISION TREE FOR CLASSIFICATION OF WATER SYSTEMS



- PUBLIC WATER SYSTEMS WITH 200 OR LESS SERVICE CONNECTIONS MAY BE REGULATED BY A LOCAL PRIMARY AGENCY (COUNTY).
- STATE SMALL WATER SYSTEMS ARE NOT PUBLIC WATER SYSTEMS (Refer to CCR Sections 64211-64217).
- YEARLONG RESIDENT → ≥183 DAYS/YEAR

### 3. Discussion of Special Topics.

#### (b) Noise.

1. Draft Three Rivers Community Plan Update Policies Noise.
2. General Plan Policies: Noise.
3. General Plan Table 10.1 Land Use Compatibility for Community Noise Environments.

1. Draft Three Rivers Community Plan Update  
Policies Noise.

2015 DRAFT  
THREE RIVERS COMMUNITY PLAN UPDATE  
NOISE POLICIES

4-13-15

**1.1.3** Limit commercial or recreational uses that generate negative impacts, such as noise, lighting, traffic, odors and emissions in residential and rural residential neighborhoods.

(a) The height, size, mass, scale, and design of new development shall be consistent in size, and compatible with the character of the surrounding natural or built environment. Structures shall be designed to follow natural contours of the landscape and clustered in the most accessible, least visually prominent and most geologically stable portion or portions of a site. Structures will be sited so as not to obstruct significant views.

(b) Implement a development height standard, based on the existing building code, with maximum building height not to exceed 35' as identified in the FGMP page 41).

The following general provisions are recommended:

- (a). Distance: to be determined based on the following factors:
- (b). Stabilization of edge condition,
- (c). Types of operation,
- (d). Types of land uses (i.e. schools, etc.)
- (e). Building orientation,
- (f). Planting of trees for screening,
- (g). Location of existing and future rights-of-way,
- (h). Types of uses allowed inside the project area,
- (i). Unique site conditions,
- (j). Responsibility for maintenance,
- (k). Scale of development.

**1.1.4** Encourage compatible commercial establishments necessary to serve residents and tourists that are commensurate with the scale and intensity of the

community, preserve the environment, and which do not have to the extent feasible, significant traffic, light, noise or visual impacts to the community.

**1.1.6** Protect land uses adjacent to State Highway 198 from noise impacts by requiring adequate landscape screening and buffering.

**1.1.9 LU-1.3 Prevent Incompatible Uses**

The County shall discourage the intrusion into existing residential and rural residential areas of new incompatible land uses that produce significant noise, odors, or fumes.

**1.2.2** Encourage visitor serving uses which are low intensity, and which do not have negative traffic, noise or visual impacts to the community.

**1.3.3** Apply the noise standards found in the Tulare County Health and Safety Element (Part 1 Section 10.8). Utilize recommendations included in the community plan EIR to address and develop feasible noise standards to the extent feasible reflective of a foothill canyon environment.

198 protects scenic resources and provides access to vistas of working and natural landscapes by:

- a. Limiting the construction of sound walls that block views of the County's landscapes (incorporate setbacks to sensitive land uses to avoid noise impacts whenever feasible),
- b. Using regionally-appropriate trees and landscaping and incorporating existing landmark trees,
- c. Preserving historic and cultural places and vistas,
- d. Avoiding excessive cut and fill for roadways along State scenic highways and County scenic routes, and along areas exposed to a large viewing area, and
- e. Promote highway safety by identifying appropriate areas for traffic pull-outs and rest areas.

**1.4.8 HS-8.8 Adjacent Uses**

The County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County.

**4.1.1** Maintain a serene and attractive natural environment by prohibiting land use activities that create excessive and unwanted noise and/or light in the community.

## 2. General Plan Policies: Noise.

# COMMUNITY NOISE

## TULARE COUNTY GENERAL PLAN 2030 UPDATE POLICIES

### LAND USE ELEMENT

#### **LU-1.3 Prevent Incompatible Uses**

The County shall discourage the intrusion into existing urban areas of new incompatible land uses that produce significant noise, odors, or fumes.

#### **LU-3.6 Project Design**

The County shall require residential project design to consider natural features, noise exposure of residents, visibility of structures, circulation, access, and the relationship of the project to surrounding uses. Residential densities and lot patterns will be determined by these and other factors. As a result, the maximum density specified by General Plan designations or zoning for a given parcel of land may not be attained.

### SCENIC LANDSCAPES ELEMENT

#### **SL-4.1 Design of Highways**

The County shall work with Caltrans and Tulare County Association of Governments (TCAG) to ensure that the design of State Highway 99 and other State Highways protects scenic resources and provides access to vistas of working and natural landscapes by:

1. Limiting the construction of sound walls that block views of the County's landscapes (incorporate setbacks to sensitive land uses to avoid noise impacts whenever feasible),
2. Using regionally-appropriate trees and landscaping and incorporating existing landmark trees,
3. Preserving historic and cultural places and vistas,
4. Avoiding excessive cut and fill for roadways along State scenic highways and County scenic routes, and along areas exposed to a large viewing area, and
5. Promote highway safety by identifying appropriate areas for traffic pull-outs and rest areas.

### HEALTH AND SAFETY ELEMENT

#### **HS-8.1 Economic Base Protection**

The County shall protect its economic base by preventing the encroachment of incompatible land uses on known noise-producing industries, railroads, airports, and other sources.

#### **HS-8.2 Noise Impacted Areas**

The County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB Ldn (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.

**HS-8.3 Noise Sensitive Land Uses**

The County shall not approve new noise sensitive uses unless effective mitigation measures are incorporated into the design of such projects to reduce noise levels to 60 dB Ldn (or CNEL) or less within outdoor activity areas and 45 dB Ldn (or CNEL) or less within interior living spaces.

**HS-8.4 Airport Noise Contours**

The County shall ensure new noise sensitive land uses are located outside the 60 CNEL contour of all public use airports.

**HS-8.5 State Noise Standards**

The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC). Title 24 requires that interior noise levels not exceed 45 dB Ldn (or CNEL) with the windows and doors closed within new developments of multi-family dwellings, condominiums, hotels, or motels. Where it is not possible to reduce exterior noise levels within an acceptable range the County shall require the application of noise reduction technology to reduce interior noise levels to an acceptable level.

**HS-8.6 Noise Level Criteria**

The County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC).

**HS-8.7 Inside Noise**

The County shall ensure that in instances where the windows and doors must remain closed to achieve the required inside acoustical isolation, mechanical ventilation or air conditioning is provided.

**HS-8.8 Adjacent Uses**

The County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County.

**HS-8.9 County Equipment**

The County shall strive to purchase equipment that complies with noise level performance standards set forth in the Health and Safety Element.

**HS-8.10 Automobile Noise Enforcement**

The County shall encourage the CHP, Sheriff's office, and local police departments to actively enforce existing sections of the California Vehicle Code relating to adequate vehicle mufflers, modified exhaust systems, and other amplified noise.

**HS-8.11 Peak Noise Generators**

The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.

**HS-8.12 Foothill and Mountain Noise**

For areas designated by Tulare County as being within Foothill and Mountain Planning Areas and outside Foothill Development Corridors, the hourly Leq resulting from the development or new noise-sensitive land uses or new noise-generating sources shall not exceed 50 dB during the day (7:00 a.m.-10:00 p.m.) or 40 dB during the night (10:00 p.m.-7:00 a.m.) when measured at the boundary of areas containing or planned and zoned for residential or other noise-sensitive land uses. For these same areas and under the same circumstances, the maximum A-weighted noise level (Lmax) shall not exceed 70 dB during the day or 60 dB during the night.

**HS-8.13 Noise Analysis**

The County shall require a detailed noise impact analysis in areas where current or future exterior noise levels from transportation or stationary sources have the potential to exceed the adopted noise policies of the Health and Safety Element, where there is development of new noise sensitive land uses or the development of potential noise generating land uses near existing sensitive land uses. The noise analysis shall be the responsibility of the project applicant and be prepared by a qualified acoustical engineer (i.e., a Registered Professional Engineer in the State of California, etc.). The analysis shall include recommendations and evidence to establish mitigation that will reduce noise exposure to acceptable levels (such as those referenced in Table 10-1 of the Health and Safety Element).

**HS-8.14 Sound Attenuation Features**

The County shall require sound attenuation features such as walls, berming, heavy landscaping, between commercial, industrial, and residential uses to reduce noise and vibration impacts.

**HS-8.15 Noise Buffering**

The County shall require noise buffering or insulation in new development along major streets, highways, and railroad tracks.

**HS-8.16 State Noise Insulation**

The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code.

**HS-8.17 Coordinate with Caltrans**

The County shall work with Caltrans to mitigate noise impacts on sensitive receptors near State roadways, by requiring noise buffering or insulation in new construction.

**HS-8.18 Construction Noise**

The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

**HS-8.19 Construction Noise Control**

The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

## HOUSING ELEMENT

**Housing Policy 3.17** Discourage developments of residential housing units in areas with high noise levels, as determined by State Noise Standards, or require mitigation measures to diminish the effects.

### 3. General Plan Table 10.1 Land Use Compatibility for Community Noise Environments.

Table 10.1 Land Use Compatibility for Community Noise Environments

| Land Use Category   | Community Noise Exposure- $L_{dn}$ or CNEL (dB) |   |                          |    |    |                       |    |
|---|---|---|--------------------------|----|----|-----------------------|----|
|   | 50  | 55  | 60                       | 65 | 70 | 75                    | 80 |
| Residential - Low Density Single Family, Duplex, Mobile Homes | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
| Residential - Multi-Family                                    | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
| Transient Lodging - Motels, Hotels                            | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
| Schools, Libraries, Churches, Hospitals, Nursing Homes        | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
| Auditoriums, Concerts Halls, Amphitheaters                    | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
| Sports Arenas, Outdoor Spectator Sports                       | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
| Playgrounds, Neighborhood Parks                               | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
| Golf Courses, Riding Stables, Water Recreation, Cemeteries    | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
| Office Buildings, Business Commercial and Professional        | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
| Industrial, Manufacturing, Utilities, Agriculture             | Normally Acceptable                             |   | Conditionally Acceptable |    |    | Normally Unacceptable |    |
|   | Normally Acceptable                             | Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.   |                          |    |    |                       |    |
|   | Conditionally Acceptable                        | New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. |                          |    |    |                       |    |
|   | Normally Unacceptable                           | New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.   |                          |    |    |                       |    |
|   | Clearly Unacceptable                            | New construction or development generally should not be undertaken.   |                          |    |    |                       |    |

[Source: Figure Noise-1. State Land Use Compatibility Standards for Community Noise Environment: California Governor's Office of Planning and Research, October 2003]