

 <p><b>TOWN OF DEWEY- HUMBOLDT DEPARTMENTAL REGULATION</b></p>	
<p><b>Department: Public Works</b></p>	
<p><b>Subject: <i>Minimum design and construction standards for Rural/unpaved roads within Dewey-Humboldt.</i></b></p>	

1. **Scope.** This procedure applies **minimum** standards for the design and construction of Rural/unpaved roads within public and private rights of way and easements in The Town of Dewey-Humboldt, Arizona.
2. **Purpose.** To establish criteria for safe, adequate access to private and public parcels within the Town of Dewey-Humboldt. **(Road and alley width requirements apply to all roads constructed after January 1, 2020.)**
3. **Acceptance and Maintenance.** All roadways conveyed to the public shall require acceptance of the conveyance by the Town Council prior to any responsibility for maintenance by the Town. All unpaved public roadways shall be constructed to these standards prior to approval for maintenance. Approval for maintenance shall be by written documentation signed by the Town Council.
4. **Right-of-Way Requirements.**
  - 4.1. Minimum Right-of-Way Widths for Rural/unpaved roads.
    - 4.1.1. Low Volume Residential Street - 40' wide.
    - 4.1.2. Alleys - 30' minimum.
    - 4.1.3. Cul-de-sacs - 60' radius.
    - 4.1.4. Utility easements - 20' wide.
  - 4.2. The above rights-of-way are minimum width requirements and in instances approved by the Town, the right of way may be adjusted to a sufficient width to contain the complete or future roadway prism.
  - 4.3. Classification of roadways will be determined at time of sketch plan or preliminary review by the Town Public Works Director or Town Engineer.
  - 4.4. Right-of-way widths shown are total widths and shall be equidistant from the survey centerline shown on the final plat.
  - 4.5. Right of way shall be cleared in accordance with AASHTO 2001 clear lane requirements
5. **Road Width Requirements.**
  - 5.1. Minimum drivable surface widths:
    - 5.1.1. Low Volume Residential Street - 22' wide.
    - 5.1.2. Alley - 18' wide.

5.1.3. Cul-de-sacs - 50' radius.

5.2. Adjustments. The above road widths are minimum width requirements and shall only be adjusted by Town Public Works Director or Town Engineer.

6. **Design Standards.**

6.1. All geometric design criteria shall be in conformance with A Policy on Geometric Design of very Low-Volume Roads, 2001 edition, and subsequent editions as adopted by the American Association of State Highway and Transportation Officials (AASHTO), or as approved by the Town.

6.2. A design speed of 20 M.P.H. shall be utilized for the design of residential streets and rural unpaved Low Volume roads.

6.3. Design speeds may be decreased for low volume residential streets as approved by the Town Public Works Director or Town Engineer.

6.4. Vertical Alignment:

6.4.1. Street grades of twelve (12) percent shall have a maximum length of six hundred (600) feet. (Wherever possible)

6.4.2. Shoulders minimum 2' each side of drivable surface.

6.4.3. Roadside drainage channels shall be in accordance with the drainage analysis and the drainage plan as approved by the Yavapai County Flood Control and the Town.

6.4.4. All roads and streets shall have a finished maintainable surface.

6.4.4.1. Special consideration may be given when specifying a road surface type, based upon consideration of the following or a combination of the following: (A) Total build-out, (B) traffic volumes, (C) geometrics, (D) snow removal, (E) location, and/or (F) grades.

6.4.5. Inverted crown streets will not be acceptable without approval of a variance.

6.4.6. All road improvements shall conform to M.A.G. construction standards as approved by the Town.

6.5. Design Criteria for Road Drainage.

6.5.1. A drainage report shall be subject to review and approved by the Yavapai County Flood Control and Town.

6.5.2. All-natural drainages crossing roadways will be culverted unless approved otherwise by Yavapai county Flood Control and/or Town.

6.5.3. All roadside drainage channels will be constructed prior to the laying of the finish material. Driveway culverts shall be a minimum of 15" arch/squash. Inlet and outlet erosion protection shall be implemented to prevent sediment transport.

6.5.4. Whenever possible, storm water shall be conveyed separately from the street system and defined drainage ways shall follow existing alignment.

6.5.5. Minimum cover of fill over culverts must be provided to maintain the structural integrity of the pipe under anticipated loading conditions. Culvert manufacturers provide minimum cover requirements for prefabricated pipe. All culverts shall have a manufacturer's minimum of cover from the top of subgrade. The minimum size culvert allowed across a Town road will be 18" in diameter or arch/squash equivalent. Inlet and outlet erosion protection shall be implemented to prevent sediment transport.

6.6. Roadway Encroachments. All encroachments onto Town roadways shall be done by permit.

6.7. Drainage Reports shall be in accordance with Yavapai County Drainage Criteria Manual and will be subject to review for conformance with regulatory flood control requirements.

## 7. **Construction Standards**.

7.1. All construction shall be in accordance with the approved improvement plans, and any changes in construction from the approved plans shall be preapproved by the Town.

7.2. Any errors or omissions discovered at the time of construction shall be corrected by the responsible party at no cost to The Town.

### 7.3. Construction Inspection and Submittals.

7.3.1. Inspection by Town representative will be done on the following stages:

7.3.1.1. Subgrade Completion - all utilities, culverts, ditches, shaping to finished subgrade, etc. complete in place.

7.3.1.2. A.B.C. or compatible finish material complete in Place.

7.3.1.3. Final.

7.3.2. The Town will inspect on a total-stage completion basis and not on a partial-stage completion basis.

7.3.3. It shall not be assumed that inspection by the Town Engineer's office will in any way eliminate the need for regular inspection during the construction period; it is required that a qualified registered professional engineer and testing firm (approved by the Town Engineer's office) be retained by the developer for quality control for this purpose. These costs shall be borne by the developer and/or contractor.

7.3.3.1. The engineering firm and/or inspecting firm shall document, verify and report to the Town Engineer's office all pertinent information relative to quality control for all improvements being installed, and in accordance with the quality control and testing section of this document.

7.3.3.2. The term "all improvements" shall be understood to be any required utility, roads, or other improvements, for subdivision approval or any use of the public roadway and easements.

7.3.3.3. All laboratory reports deemed necessary for quality control and testing and as specified in the documents, along with compaction test results, will be submitted to the

Town Engineer's office by the inspecting firm as backup data for the bi-monthly progress report.

7.3.3.4. The responsibility for the construction of all projects shall lie with the contractor/developer. The contractor developer shall be responsible for the necessary adjustments and/or repairs due to any failure for a minimum period of two years.

7.3.3.5. The costs for the above required quality control shall be borne by the developer and/or contractor.

7.3.3.6. Any questions as to construction standards, interpretation of results, or methods of construction, shall be brought to the Town Public Works Director attention for interpretation.

7.4. Testing and Sampling. All testing and sampling will be performed by a qualified and approved laboratory and/or engineering firm, in accordance with the applicable provisions of ASTM and the quality control and testing section of this document, with the results submitted to The Town Engineer's office.

## 8. Utilities.

8.1. All utilities required in public rights-of-way will be designed in accordance with the standards specified by the respective utility company and approved by the proper regulatory agency with placement location reviewed and approved by the Town.

8.2. Utility depth, separation, and requirements shall conform to applicable standards (e.g., Arizona Administrative Code, Arizona Department of Environmental Quality, private utility companies). The Town shall review and approve placement, horizontal and vertical, prior to construction.

8.3. All above ground devices shall be outside of the roadway template and located as near to the right of way as feasible.

8.3.1. No closures, transformers, standpipes, poles, etc., will be allowed in any surface drainage ditch.

8.3.2. Utility ditches outside of roadway prism must be compacted to 95% proctor.

8.4. As-built utility plans sealed by a Professional Engineer registered in the State of Arizona will be submitted to the proper utility company as required by the respective utilities and The Town.

## 9. Variances. Procedure for variance from these specifications shall be as follows:

9.1. A written statement to the Town requesting variance, with reasons for variance. The Town shall investigate the request and present the variance request to the Town Council at the time the plat is considered at the public hearing.

9.2. Recommendation by Town staff will be submitted to the Town Council for action.

9.3. The Town Council shall recommend approval, approval in a modified form, or denial of the request for waiver in a separate council action.

9.4. NO VARIANCE MAY BE MADE, AND NO ACCEPTANCE EXPECTED, UNLESS THE VARIANCE HAS BEEN APPROVED IN WRITING BY THE TOWN COUNCIL.

**10. Town Acceptance.**

10.1. When roads have been constructed to Town standards and verified as such by the Town office, recommendation will be made to the Town Council that these roads be accepted into the Town system for total maintenance for the stage to which they were constructed. Once the improvements for an unpaved road have been approved and surety released, the Town Council will review the roadway for acceptance for maintenance.

10.2. Action by the Town Council.

10.3. Response in writing to developer, inspecting firm and/or contractor as to Board action.

10.4. Inspection and release of assurances shall be done in accordance with Article V of The Town Subdivision Regulations.

**11. Material Specifications.**

11.1. Subgrade. The subgrade of the street shall be thoroughly compacted to at least 95% of maximum density, based on standard proctor, by wetting and rolling. The compacted depth shall not be less than 6". In fill sections, subgrade material shall be worked in layers (not to exceed 6" in depth) and compaction tests taken on each layer.

11.1.1. The materials for the subgrade of a road shall meet and be constructed in accordance with M.A.G. Standard Specification 702.

11.2. Select Material. Select material shall conform to M.A.G. Standard Specification 702 for processed natural materials and decomposed granite.

11.3. Aggregate Base Course. The base material shall be sand and gravel, crushed rock and/or decomposed granite with enough binder material so that it can be tightly compacted and shall have a plasticity index not in excess of 6 and shall conform to gradation as required by the Town Engineer. The work and construction shall be in accordance with Section 702 of M.A.G. Standard Specifications or Section 303 of ADOT Standard Specifications, and as modified herein. Section 303-2 of ADOT Standard Specifications shall be modified as follows:

Materials: Table 303-1 is modified to add:

Sieve Size	Percent Passing
1 1/8"	100
3/4"	80-100
3/8"	55-65
No. 8	30-45
No. 200	0-10
Class of Aggregate - 3	Maximum Plasticity Index – 6

Base material shall be placed in uniform layers not to exceed 6" in depth. Each layer shall be bladed to a smooth surface conforming to the cross section shown on the plans and shall be

watered and thoroughly rolled in a manner satisfactory to obtain a minimum compaction of 95% of maximum density, based on a standard proctor. Testing shall be in accordance with the quality control and testing section of this document.

12. **Guarantee.** All work shall be guaranteed for a period of two years beginning at the time of final acceptance by the Town Council.

<b>TOWN MANAGER APPROVAL</b>	Initial: <u>EM</u>
Notes: <u>Approved by Council on December 17, 2019.</u>	

S:\Legal Counsel laws and regulations\Departmental Regulations\Engineering\ENG10-01 Road Standards.doc