

MATANUSKA-SUSITNA BOROUGH INFORMATION MEMORANDUM

IM No. 20-025

SUBJECT: AN ORDINANCE OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY ADOPTING MSB 11.12 DRIVEWAYS STANDARDS IN ORDER TO ENSURE DRIVEWAYS WITHIN BOROUGH RIGHTS-OF-WAY MINIMIZE NEGATIVE IMPACT TO DRAINAGE, MAINTENANCE, AND SAFETY OF THE TRAVELING PUBLIC.

AGENDA OF: August 18, 2020

ASSEMBLY ACTION:

Amended + adopted without objection 9-15-20 (BSM)

MANAGER RECOMMENDATION: Introduce and set for public hearing.

APPROVED BY GEORGE HAYS, ACTING BOROUGH MANAGER:

George Hays

Route To:	Department/Individual	Initials	Remarks
	Originator - A. Strawn & J. Taylor	<i>(S)</i>	
	Public Works Director	<i>TJD</i>	<i>7 Aug. 2020</i>
	Planning and Land Use Director	<i>(A)</i>	
	Finance Director	<i>CX</i>	
	Borough Attorney	<i>NS</i>	
	Borough Clerk	<i>gum 8/11/20</i>	<i>(BSM)</i>

ATTACHMENT(S) : Fiscal Note: YES ____ NO X

- MSB Driveway Design Criteria Guidelines - 2003 (10 pp)
- MSB Subdivision Construction Manual - 1991 (48 pp)
- Planning Commission Resolution 20-25 (3 pp)
- Transportation Advisory Board Resolution 20-02 (3 pp)
- Subdivision Construction Manual Update Working Group Resolution 20-01 (4 pp)
- Local Road Service Area Advisory Board Resolution 20-02 (1 page)
- Letter of support from Alaska Department of Transportation & Public Facilities (3pp)
- Ordinance Serial No. 20-016 (4 pp)

SUMMARY STATEMENT:

The Borough originally adopted the requirement for driveway permitting in 1984 with adoption of MSB 11.10, which created a permitting requirement and gave authority to the Public Works Director to set standards for driveways. Basic driveway standards were adopted within the 1991 Subdivision Construction Manual and additional guidelines were developed by the Public Works Director around 2003.

Existing driveway guidelines do not address the complexities associated with all of the different real-world circumstances that come with installation of driveways. As a result, the existing one-size-fits-all driveway standards can be overly restrictive in some circumstances, and under-restrictive in others.

The new chapter of code outlines a clear permitting process and establishes comprehensive standards for residential and commercial access onto Borough rights-of-way. The standards are intended to protect the safety and movement of the traveling public, minimize the cost of road maintenance, ensure proper drainage, and protect borough infrastructure.

RECOMMENDATION OF ADMINISTRATION:

Staff respectfully recommends adoption of Ordinance 20-016.



MATANUSKA-SUSITNA BOROUGH

Planning and Land Use Department

350 East Dahlia Avenue • Palmer, AK 99645


Phone (907) 861-7822

Email: Planning@matsugov.us

STAFF MEMORANDUM

DATE: September 3, 2020

TO: Matanuska-Susitna Borough Assembly

FROM: Alex Strawn, Planning & Land Use Director 

RE: **Assembly Ordinance 20-016.** An ordinance of the Matanuska-Susitna Borough Assembly adopting MSB 11.12 Driveway Standards in order to ensure driveways within borough rights-of-way minimize negative impact to drainage, maintenance, and safety of the traveling public.

Ordinance 20-016 was reviewed by several boards including the Transportation Advisory Board (TAB), Local Road Service Area Advisory Board, and the Planning Commission. Upon review of the ordinance, the TAB identified several improvements that could be made to the ordinance. Subsequently, the Planning Commission recommended approval of the ordinance and further recommended that staff incorporate most of the changes recommended by the TAB.

It was the intent of staff to incorporate the recommended changes into the ordinance prior to it being taken up by the Assembly. Unfortunately, staff inadvertently submitted the original ordinance without the recommended changes. The changes recommended by staff and the Planning Commission are attached. Additionally, one of the changes references ADOT&PF Central Region Standard Detail CR-T-1.20 which is also attached to this document for inclusion in the record.

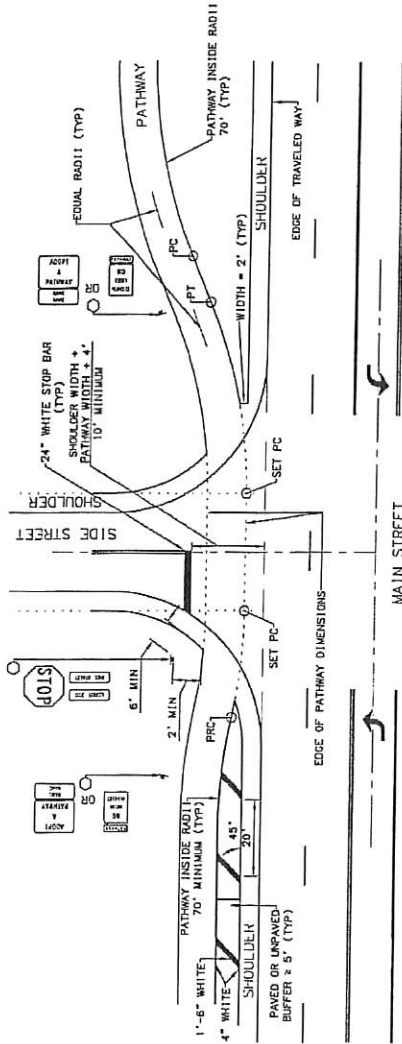
UNCURBED INTERSECTION NOTES: (IN PRIORITY ORDER)

SIGNING:

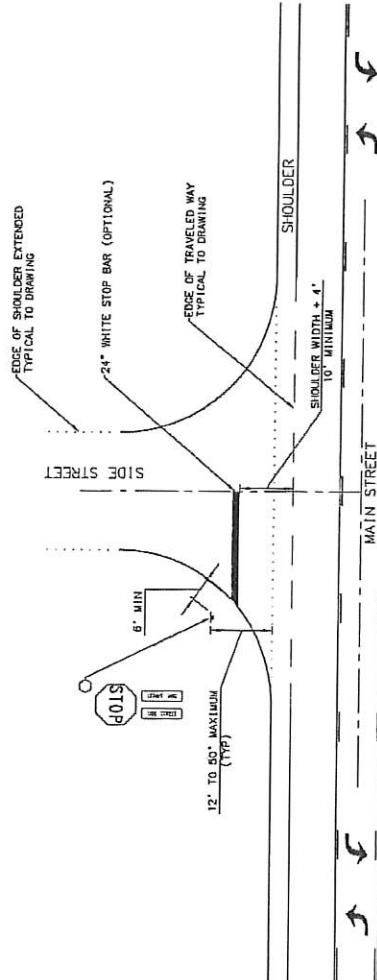
1. Locate STOP sign so it is visible to approaching traffic and near the stop bar.
2. Provide 2' of clearance between edge of STOP sign panel and edge of pathway or sidewalk.
3. Provide 6' of clearance between edge of STOP sign panel and edge of side street.
4. Place pathway regulatory signs at collector or arterial roadway junctions where the collector or arterial roadway is typically greater than 1000 vehicles a day, or connect through traffic to other collectors or arterials.
5. PATHWAY NO MOTOR VEHICLES signs are not required within the Municipality of Anchorage.
6. See plans for pathway signing required at side streets.

STRIPING:

1. Stop bars are not required when no pathway or sidewalk is present. See plans.
2. Locate stop bar 4' minimum behind the width of pathway or sidewalk.
3. Break centerline striping within intersections which have dedicated turn lanes.
4. Continue centerline striping through intersections with center two-way-left-turn-only lanes or when there are no mainline left turn lanes.
5. Continue lane "skip" striping through intersections.
6. Delete out-ways edge of traveled way striping of intersections or wrap striping to side street.
7. Match side street striping if striping is present.



TYPICAL UNCURBED RETURN WITH PATHWAY



TYPICAL UNCURBED RETURN WITHOUT SIDEWALK

State of Alaska DOT&PF
CENTRAL REGION
STANDARD DETAIL
Un-Signalized Intersection:
Non-Curbed Stop and Crossing
Traffic Safety Details

Adopted as a Central
Region Standard Detail by:

John R. Lennan, P.E.

CR Preconstruction Engineer

Adoption Date: 06/30/2020

Last Code and Stds. Review
By: Date:

Next Code and Standards Review date: 06/30/2030



Matanuska - Susitna
Borough

2003

DRIVEWAY DESIGN CRITERIA GUIDELINES

MATANUSKA-SUSITNA BOROUGH PUBLIC WORKS DEPARTMENT

1m 20-025
OR 20-016

Driveway Design Criteria Guidelines

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Foreword

Public rights-of-way or easements located within the Matanuska-Susitna Borough are managed and maintained by one of the following agencies:

- Matanuska -Susitna Borough (MSB) Department of Public Works (DPW)
- State of Alaska Department of Transportation and Public Facilities (AKDOT/PF)
- City of Palmer
- City of Wasilla
- City of Houston

If you have determined that a driveway from your property will gain access from a road or street under the jurisdiction of the MSB Department of Public Works, you are required to apply for a driveway permit.

Generally roads are constructed in the center of a dedicated right-of-way or easement. The driveway you construct will extend outside of your property boundary and intersect a public road maintained by the borough with your Road Service Area's tax dollars. An MSB driveway permit has no authority on the driveway within your property, only on that portion of a driveway contained within the public right-of-way managed by the borough.

MSB Department of Public Works is charged with the responsibility for the public safety and maintenance of the right-of-way and roadbed. A portion of your driveway will be located within the public right-of-way. Therefore DPW has established minimum criteria for the design, construction, and operation of driveways, contained within the public right-of-way.

The staff at the MSB Public Works Department understands your desire for the best possible driveway access to your property. Our goal is to balance your unique access needs with the safety requirements of the motoring public and road maintenance costs associated with driveways connected to roadways within our jurisdiction.

Driveway Permit Application Process

Driveway permit application forms are available online or at the counter of the MSB Public Works Dept.

- Online address – <http://www.matsugov.us/publicworks/pwpublicationsandforms.cfm>
- Department of Public Works address – 350 E. Dahlia Ave.
Palmer, AK 99645
- Department of Public Works phone number - (907) 745-9806

Driveway Permit Application Process (continued)

In addition to submitting a completed driveway permit application form, the following fee schedule adopted by the Borough Assembly applies and must be paid with cash or check at the time of application.

Driveway permit prior to construction

\$25 each

Driveway permit after construction

\$50 each

Application fees are charged to help cover administrative and inspection costs to process the permit.

Note: A continuous driveway with two points of access onto the same road is considered a single driveway. A continuous driveway with two points of access onto two different roads is considered two driveways.

Driveway Design Criteria and Construction Standards

The MSB driveway design and construction standards are listed A through E on page two of the Driveway permit application form.

- A. Minimum driveway width at the traffic way edge shall be 10 (ten) feet with a minimum of 6 (six) foot radius, which equals 22 (twenty-two) feet total.
- B. Driveway to corner lots shall be located not less than 40 (forty) feet from the point of curvature of the radius return on the property line.
- C. Driveways to corner lots or lots that border two roadways shall gain access from the street of lower classification when streets of two different classifications bound a lot.

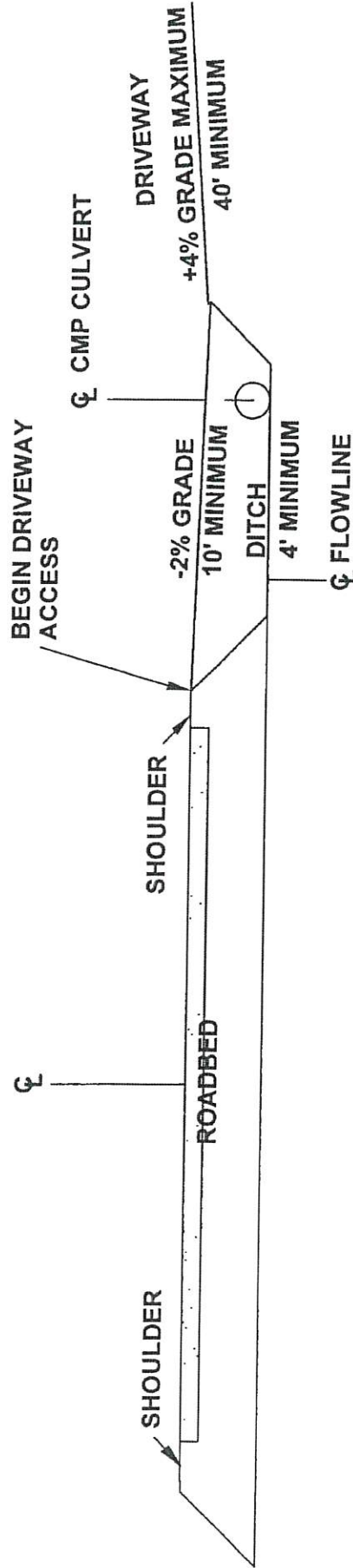
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OR 20-016

Driveway Design Criteria and Construction Standards (continued)

- Corner lots - If your property is bounded by two roads or streets, your driveway must take access on the street or road that has the lower traffic count, as determined by the MSB Department of Public Works. (See figure 1, page 5)
- Driveways to corner lots cannot be located less than 40 feet from the point of curvature that begins the return curve at road intersections. (See figure 1, page 5)
- Driveway width - Driveway width at the intersection with the borough maintained roadbed should be a minimum of 10 feet wide and a maximum of 20 feet wide. In addition, return curves with minimum 6 foot radii and maximum 20 foot radii will complete the driveway transition from borough maintained right-of-way to private driveway access onto your property. Including the tangent length of the return curves, total driveway width at the roadway will be from 22 feet to 60 feet. (See figure 1, page 5)
- Driveway/roadway intersection angle – The driveway angle should be 90 degrees. A driveway/roadway intersection less than 90 degrees may be approved if it is shown that topographic constraints make a 90 degree intersection impractical. (See figure 1, page 5)
- Driveway sight distance triangle - This term refers to the roadway area visible to the driver stopped on a driveway 17 feet perpendicular to the nearer traffic lane's centerline. Check your driveway sight distance by recreating the illustration as shown in Figure 3, page 7 and finding the appropriate distance in the chart. Sight distance is related to the braking distance required by oncoming traffic to stop at a given speed. (See figure 3, page 8)
- Driveway drainage – Water draining from driveways onto the roadbed is the most significant safety hazard and maintenance expense associated with driveway construction. Therefore maximum driveway grade is not to exceed 4% within 50 feet of the road shoulder. The first 10 feet from the road shoulder must be at least -2% grade, sloped away from the road shoulder. Driveway landings should be constructed so that water runs toward the ditch flow line. (See figure 2, page 6)
- Culverts - Unless otherwise specified, a minimum 12 inch diameter CMP (corrugated metal pipe) culvert shall be used, when needed, with at least one foot of culvert visible at the toe of the side slopes on each side of the driveway. Culverts should be placed a minimum of 4 feet away from the ditch flow line measured towards the driveway owner's property. This placement avoids contact with snow removal blades and plows. The driveway owner is responsible for the maintenance of the culvert, including thawing if necessary, to ensure proper drainage. (See figure 2, page 6)
- Driveways intersecting paved roads - When a gravel topped driveway intersects with a paved road, the borough maintained pavement at the edge of gravel is subject to significant wear. In order to reduce the roadway pavement degradation, the driveway owner is required to pave the proposed driveway 2 feet at the roadway/driveway intersection. (See figure 1, page 5)



**Matanuka - Sushina
Borough**



VERTICAL VIEW

NOTES

1. DRIVEWAYS SHALL NOT DRAIN ONTO THE ROADWAY AND SHALL NOT EXCEED 4% GRADE WITHIN 50' OF THE ROAD SHOULDER. THE FIRST 10' FROM THE ROAD SHOULDER SHALL BE -2% SLOPE AWAY FROM THE ROADWAY.
2. UNLESS OTHERWISE SPECIFIED A MINIMUM 12" CMP CULVERT SHALL BE USED, WHEN NEEDED, WITH AT LEAST 1' OF CULVERT VISIBLE AT THE TOE OF THE SLOPE ON EACH SIDE OF THE DRIVEWAY. PERMITEE SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE CULVERT, INCLUDING THAWING, TO ENSURE PROPER DRAINAGE.



Matanuska - Susitna
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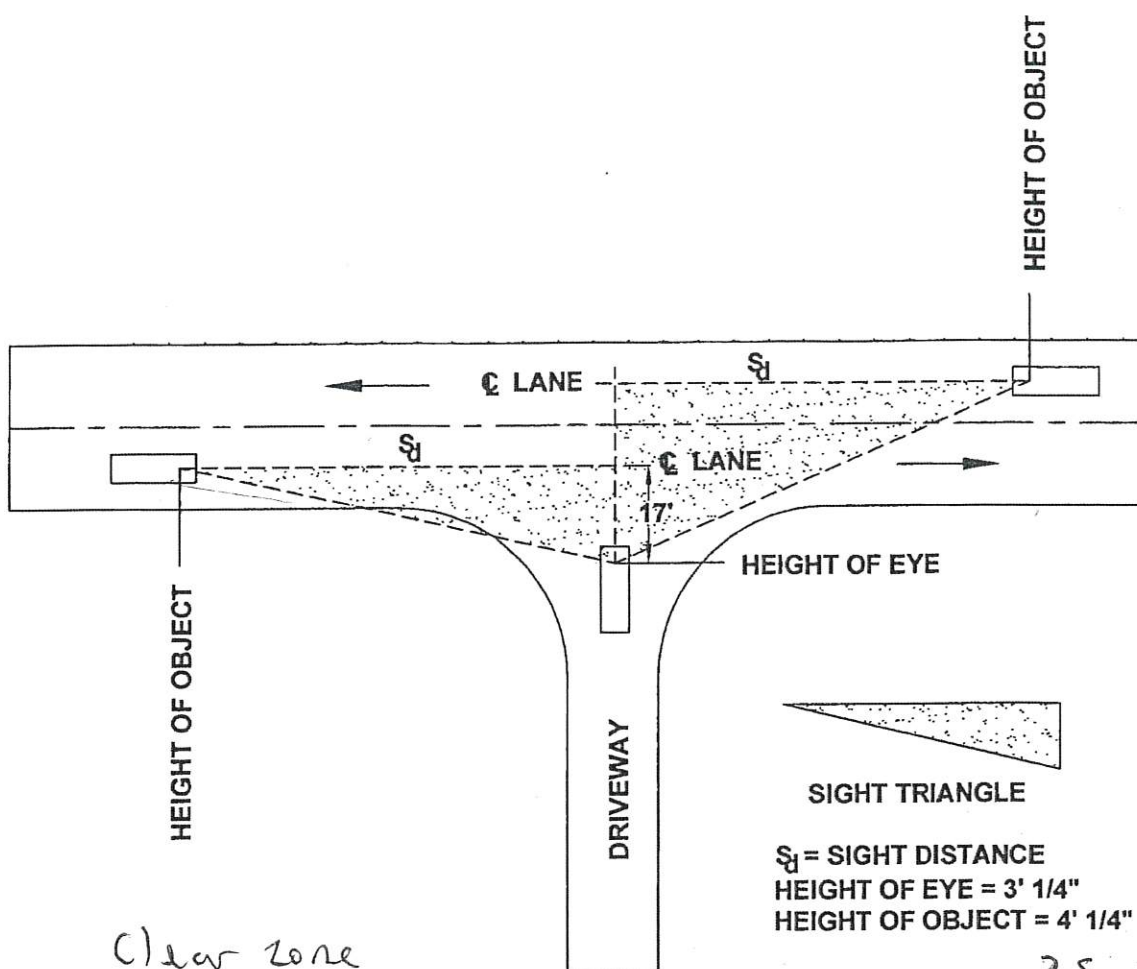
DRIVEWAY DESIGN CRITERIA

MSB DEPARTMENT OF PUBLIC WORKS

FIGURE 2

SCALE : NONE

DATE : 4/22/05



3.5
 3.5
 ↓
 check with Jamie

DESIGN SPEED or POSTED SPEED LIMIT (mph)	SIGHT DISTANCE MINIMUM (ft.)
20	115
25	155
30	200
40	305
45	360
50	425
55	495
60	570
65	645

MATANUSKA-SUSITNA



BOROUGH

SCALE:
NONE

APPROVED:

REVISED:
4/05

MINIMUM DRIVEWAY INTERSECTION SIGHT DISTANCE

FIG.
3

IM 20-025
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Matanuska-Susitna Borough Public Works Department
Application & Permit to Construct and Maintain
Driveway on Public Right-of-Way

Permittee's Name: _____

Permit No.: _____
 (To be issued upon final approval)

Mailing Address: _____

Approved for Construction	Yes	No	Date
Road Maint. Superintendent	<input type="checkbox"/>	<input type="checkbox"/>	_____
Right-of-Way	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tracking No.	TO _____		

Telephone No.: _____

Subdivision: _____

Street: _____

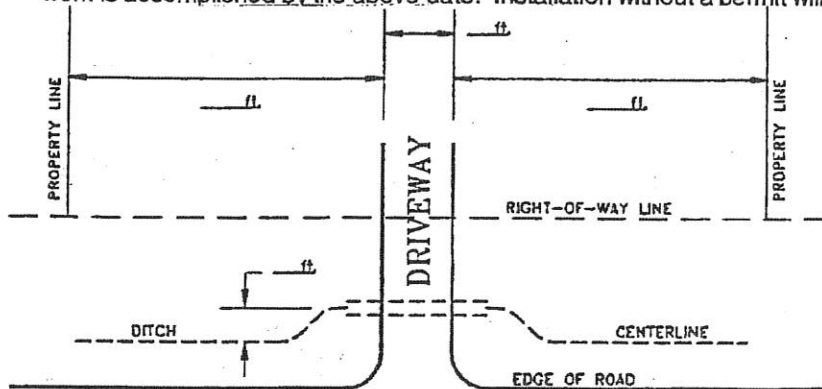
Lot, Block: _____

(or) Tax ID No.: _____

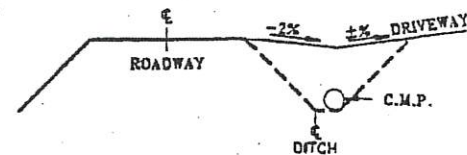
Proposed Start Date: _____

Expected Completion Date: _____

Driveway must be installed in accordance with the below sketches and special conditions. The permit will be void if no work is accomplished by the above date. Installation without a permit will be treated as an unauthorized encroachment.



ROAD SURFACE



DRAINAGE DESIGN

OFFICE USE ONLY

CULVERT LENGTH _____ ft.
 SIZE (I.D.) _____ in.
 DITCH DEPTH _____ ft.
 CULVERT TYPE _____

SHOW NORTH ARROW



ROAD SURFACE TYPE _____
 IF PAVED ROAD, APRON LENGTH _____

The Permittee certifies that he/she is the owner, lessee, or authorized agent of the property, that the conditions, restrictions and regulations of the Borough will be complied with and that he/she will maintain the driveway in accordance with the provisions on the reverse side of this permit. The Permittee agrees not to plow or cause to be placed, snow from driveway onto the above named public way. Once the driveway is completed to the required specifications, notify the Public Works Department at 745-9806 to request an inspection for final approval.

SPECIAL CONDITIONS:

I certify that I have read the conditions on the back and that my proposed driveway complies with all conditions.

PERMITTEE: _____ PERMIT GRANTED BY: _____
 Signature Borough Representative Date

DATE: _____ TITLE: _____
 RSA#

1M 20-025
 OR 20-016

DRIVEWAY PROVISIONS

The Permittee on signing this permit hereby acknowledges and agrees to accept the following provisions:

1. A driveway constructed within the right-of-way of a public roadway is an encroachment into that right-of-way and requires a written permit. This permit shall not grant the Permittee exclusive right to use the area encroached upon. All driveways or road approaches shall be constructed to Borough Standards, referenced below.
2. The Permittee is responsible for removal of snow berms placed in driveway during road maintenance activities. Snow removed from driveway by Permittee shall not be placed in the roadway so as to cause interference with road maintenance activities.
3. All driveways or road approaches constructed under this permit within any Borough lands or rights-of-way shall be the property of the Borough. All costs and liability in their connection or in connection with their maintenance shall be at the sole expense of those lands served and/or persons served.
4. Such facilities shall be constructed and maintained in such a manner that the highway and all its appurtenances or facilities including, but not limited to, all drainage pipe, culverts, utilities and their safety shall not be impaired or endangered in any way by the construction or maintenance of this facility.
5. The Permittee shall adjust, relocate or remove this facility without cost or liability to the Borough, if, at any time, or from time to time the use or safety of the roadway requires this to be done.
6. The Permittee shall assume all liability or costs in connection with the facilities and shall hold the Borough or its officers, agents, employees and contractors harmless in matters pertaining to the facilities.
7. The Borough has the right to inspect and/or reject materials or workmanship, to stop work until corrections are made or to require removal of the facility and to charge time and equipment to the Permittee to correct the facility if it is not installed to Borough Standards.
8. A copy of this permit must be on the construction site. If not, the Borough reserves the right to close the work down until such time as the permit is present.
9. The Permittee certifies that the minimum clearance between the proposed finished driveway grade and the lowest aerial utility conductor is in accordance with the requirements of the National Electrical Safety Code (Sec. 23), but in no case is less than 18 (eighteen) feet.
10. This Driveway Permit shall belong to the property it serves and the terms and conditions shall be binding upon the Permittee, owner of the property, all new owners, and/ lessee. It is the Permittee's responsibility to inform the property owner, new owner, or lessee of the Driveway Permit and conditions.
11. The Permittee agrees to post a surety bond, if required by the Borough, in the amount designated by the Borough. This assurance will be in the form of a check, which will be held by the Borough and released upon final acceptance and approval of the driveway. If the driveway is found unacceptable, the Permittee will forfeit the check, which will be used to correct any deficiencies of the driveway installation.

BOROUGH STANDARDS

- A. Minimum driveway width at the traffic way edge shall be 10 (ten) feet with a minimum of 6 (six) foot radius, which equals 22 (twenty-two) feet total.
- B. Driveways to corner lots shall be located not less than 40 (forty) feet from the point of curvature of the radius return on the property line.
- C. Driveways to corner lots or lots that border two roadways shall gain access from the street of lower classification when streets of two different classifications bound a lot.
- D. Driveways shall not drain onto the roadway and shall not exceed 4% (four percent) grade within 50 (fifty) feet of the road shoulder. The first 10 (ten) feet from road shoulder shall be -2% (negative two percent) slope away from roadway.
- E. Unless otherwise specified, a minimum 12" (twelve inch) diameter culvert shall be used, when needed, with at least one foot of culvert visible at the toe of the side slopes on each side of the driveway. Permittee shall be responsible for maintenance of the culvert, including thawing, to ensure proper drainage.

Matanuska-Susitna Borough
Public Works Department

Subdivision Construction Manual

(Roads, Drainage and Utilities)

6-18-91

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PLATTING

IM 20-025
OR 20-016

MATANUSKA-SUSITNA BOROUGH SUBDIVISION DESIGN AND CONSTRUCTION MANUAL

for

STREETS, DRAINAGE AND UTILITIES

INTRODUCTION

This manual is intended to accomplish several goals; one of which is to provide the subdivider and his engineer with information and guidelines which will help him to understand the requirements necessary for design of roads and utilities within subdivisions of the Matanuska-Susitna Borough. This manual is intended to provide information to both the subdivider, his engineers, and to the borough staff so that there is less uncertainty about requirements. Ultimately, it is intended to provide borough-maintained road systems which are safe throughout the year in all weather conditions. This road system must also have an inherent low maintenance cost, and meet design and construction standards. This manual should eliminate some of the commonly reoccurring problems such as poor drainage, bad intersection sight distances, hills that are too steep to traverse during winter ice conditions, and intersections that are too steep to safely stop. Other problems have been high expenses due to redesign for previous construction outside of rights-of-way, high expenses necessary for reconstruction due to roadbeds prepared with silty-type materials, and roads and rights-of-way that are improperly aligned and continue to provide traffic problems due to the poor locations.

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SECTION A

Residential Street Design

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SECTION A. RESIDENTIAL STREET DESIGN

A01 PURPOSE

A01.1 OBJECTIVE. The purpose of these provisions is to establish appropriate standards for the design of streets in residential subdivisions that will: a) promote the safety and convenience of vehicular traffic, b) protect the safety of neighborhood residents, c) minimize the long term costs for maintenance and repair of streets, d) protect the residential qualities of neighborhoods by limiting traffic volume, speed, noise and fumes, e) encourage the efficient use of land, and f) minimize the cost of street construction and thereby restrain the rise in housing costs.

A02 APPLICABILITY. These Standards shall be applicable to the design and construction of all new residential streets, within the Matanuska-Susitna Borough with the exception of those streets within cities which exercise local road powers by ordinance.

A03 STREET CLASSIFICATIONS

A03.1 CLASSIFICATIONS. The following street classifications tailor the design of each street to its function:

Street Classification	Minimum R-O-W feet	Paved/ Unpaved Traffic feet	Shoulder Unpaved/Paved ⁽⁷⁾		Minimum Slopes Fore ⁽³⁾		Back ⁽¹⁾
			feet	feet	Unpaved	Paved	
Residential ⁽⁴⁾ Street	50	20	0	2	3:1	2:1	2:1
Residential Subcollector	60	20	1	2	3:1	2:1	2:1
Residential Collector	60	22	1	2	3:1	2:1	2:1
Residential Frontage Access	50	20	0	2	3:1	2:1	2:1
Mountain ⁽⁵⁾ Access	60	⁽⁶⁾ 20	0	0	2:1	2:1	⁽²⁾ 2:1
Pioneer ⁽³⁾ Access	50	18					
Single Lanes ⁽⁵⁾		10	1	1	3:1	2:1	2:1
Alleys	20	10	1	1			

⁽¹⁾ 2:1 Backslopes may be reduced to 1 1/2:1 if cuts exceed 5 feet and Soils Engineer certifies that steeper slopes would be stable, appropriate slope

stabilization is used.

*(2) or actual backslope recommended by Soils Engineer or demonstrated by actual conditions.

*(3) Normal ditch depth shall be 30 inches. Fore slopes 4:1 if ditches are 18 inches or less.

*(4) 50 feet ROW may need one 15 foot utility easement adjacent to be negotiated with the utilities.

*(5) ROW for single lanes shall match the street classification and include additional provisions for median width.

*(6) See A.08.2(e) for wider width requirements.

*(7) Guardrail to be installed if required by application of State of Alaska Highway Preconstruction Manual.

*(8) See E01.5 for maintenance of Pioneer access and Mountain Standard Roads.

A03.2 GENERAL DESIGN STANDARDS. Each proposed residential street shall be classified and designed, for its entire length, to meet or exceed the minimum standards for one of the following street types:

a) Residential Street: Residential streets are intended to carry the least amount of traffic at the lowest speed. The residential street will provide the safest and most desirable environment for a residential neighborhood. Developments should be designed so that all, or the maximum number possible, of the homes will front on this class of street.

b) Residential Subcollector Street: Residential subcollector street will carry more traffic than the residential street. The subcollector should provide an acceptable if not an optimum environment for a residential neighborhood.

c) Residential Collector Street: This is the highest class of street that could be considered as residential. Residential collector street will carry the largest volume of traffic at higher speeds. In large residential developments, this class of street

may be necessary to carry traffic from one neighborhood to another or from the neighborhood to other areas in the community. Residential Collectors are unsuitable for providing direct access to residences.

d) Special Purpose Streets: The Platting Board may require the development to include a Frontage Street or divided street if the circumstances set forth in item 1 and 2 below exist.

(1) Frontage Street: A Frontage Street is a street parallel and adjacent to a residential collector or higher level street which provides access to abutting properties and separation from through traffic. It may be designed using residential street or a residential subcollector standards as anticipated traffic volumes dictate.

(2) Divided Streets: For the purpose of protecting environmental features or avoiding excessive grading, the borough may allow a street to be divided. In such a case, the design standards shall be applied to the appropriate street classification and the single lane width.

A03.3 EXISTING STREETS. Each street abutting or affecting the design of a subdivision or land development, which is not already classified shall be classified according to its function, design and use by the borough at the request of the applicant or during plan review. The classification of existing streets shall include those categories of Section A03.1 and A03.2 above, or higher category as determined by either the adopted borough's street classification system, or current use.

A04 RESIDENTIAL STREETS

A04.1 SERVICE RESTRICTIONS. A residential street is a street which provides access to abutting properties. It shall be designed to carry no more traffic than that which is generated on the street itself but in no case an average daily traffic (ADT) volume greater than 200. Each half of a loop street may be regarded as a single Residential Street. The total calculated traffic volume generated on a loop Residential street shall not exceed 400 ADT, see figure in A05.2.

A04.2 STREET ACCESS. Residential streets may intersect or take access from any equal or higher street type. Both ends of a loop residential street are

any equal or higher street type. Both ends of a loop residential street are encouraged to intersect the same collecting street and be designed to discourage through traffic.

A04.3 SHOULDERS. A two foot wide shoulder on each side will be provided on paved streets.

A04.4 ENGINEERING CRITERIA. The design criteria for residential streets are set forth below. Any unspecified design shall meet or exceed the design criteria for a roadway design speed of 25 miles per hour.

- a) Minimum ditch grade: 0.5%
- b) Maximum centerline grade: 10%
- c) Horizontal curvature: Minimum centerline radius 225 feet (190 ft. min. with Public Works Department's approval)
- d) Minimum tangent length between curves: 100 feet
- e) Stopping sight distances: 150 feet minimum
- f) Maximum grade within 50 feet of "T" intersection: 5% and through intersection 7%
- g) Vertical curves where the algebraic difference in grades exceeds 2.0%

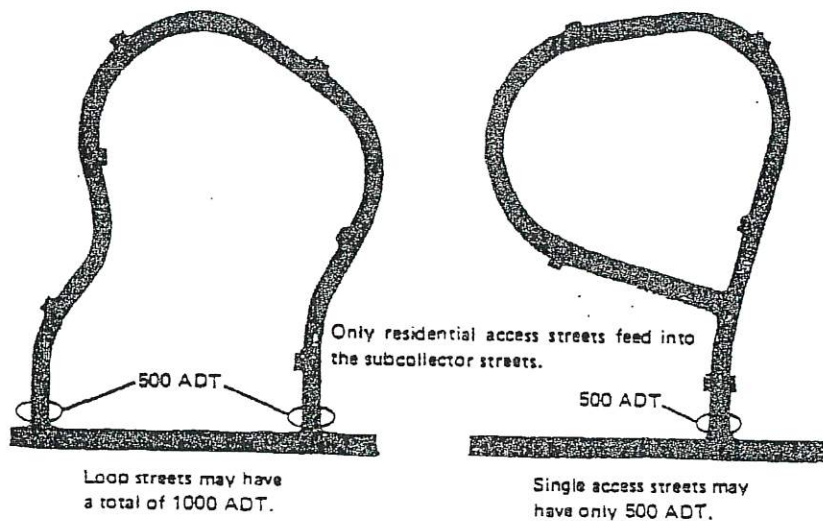
A04.5 CUL-DE-SAC TURNAROUNDS.

- a) A drivable surface diameter of 80 feet centered in a R-O-W diameter of 100 feet shall be provided at the terminus of all cul-de-sacs.
- b) Cul-de-sac are to access 20 lots or less, and not exceed 1000 feet in length.
- c) The grade throughout the turnaround surface of a cul-de-sac shall not exceed 4%.

A05 RESIDENTIAL SUBCOLLECTOR STREETS

A05.1 SERVICE RESTRICTIONS.

- a) A residential subcollector is a street which provides access to abutting properties and which may also move traffic from residential streets that intersect it.
- b) Each Residential subcollector street shall be designed so that no section of it will move a traffic volume greater than 500 ADT. (Each half of a loop residential subcollector street may be regarded as a single residential subcollector street and the total traffic volume moved on a loop street shall not exceed 1000 ADT).
- c) Residential Subcollector streets shall be designed to exclude all external through traffic which has neither origin nor destination on the residential subcollector or its tributary residential access streets. Adjacent parcels may acquire access if proven to be land locked by legal or terrain features or if such residential subcollector access can be demonstrated to be beneficial to the public.



Service restrictions for residential subcollector streets.

A05.2 STREET ACCESS. Every residential subcollector must be provided with no fewer than two access intersections to streets of higher classification if the total traffic volume exceeds 500 ADT on the street. For residential subcollector streets designed for 500 ADT or less, one access intersection to a street of higher classification is allowed.

Residential Subcollectors must take access from a street of higher order in the system - either from residential collectors or arterial roads. This restriction is to avoid the maze-like network of undifferentiated street types commonly found in many subdivisions. This restriction also ensures (when greater than 500 ADT) a multiplicity of access routes to the external street system. The advantages of multiple access points for residential subcollectors include: 1) reducing congestion and internal travel volumes by providing alternate access routes; 2) dispersing the impact of the development on the external road system; 3) providing alternate routes for emergency vehicles; 4) providing continuity in the internal street system for service, delivery, and maintenance vehicles, (such as snow plows); and 5) providing residents with an alternate open exit or access in the event that road or utility construction closes part of the residential subcollector. An additional consideration is that alternate exits and entrances provide greater traffic efficiency and opportunity for residents to get where they want to go by the shortest route.

A05.3 SHOULDERS. A two foot shoulder on each side will be provided on paved streets.

A05.4 MOVING LANES. All residential subcollector streets shall be provided with two continuous moving lanes within which no parking is permitted.

A05.5 ENGINEERING CRITERIA. Design criteria for residential subcollector streets are set forth below. Any unspecified design criteria shall meet or exceed the design criteria for a roadway speed of 30 miles per hour.

- a) Minimum ditch grade: 0.5%
- b) Maximum centerline grade: 10%
- c) Horizontal curvature: min. centerline radius 350 ft. (275 feet with Public Works Department approval).

- d) Minimum tangent length between curves: 100 ft.
- e) Stopping sight distance: 200 feet
- f) Maximum grade within 50 feet of "T" intersection: 5% and through intersection: 7%
- g) Vertical curves where the algebraic difference in grades exceeds 2.0%

A05.6 CUL-DE-SAC. Cul-de-sac residential subcollectors are to provide access to areas that exceed the 1000 foot limit of section A04.5.

- a) A drivable surface diameter of 85 feet centered in R-O-W diameter of 120 feet will be provided at the terminus of all residential subcollector cul-de-sac turnarounds.
- b) Length of cul-de-sac to be governed by the anticipated traffic volume not exceeding 500 ADT. No distance limits are set herein.
- c) The grade throughout the turnaround surface to be 4% or less.

A06 RESIDENTIAL COLLECTOR STREETS

A06.1 SERVICE RESTRICTIONS.

- a) A residential collector street is a street which carries residential neighborhood traffic, but which restricts or limits residential frontage.

Residential collector streets should be designed to have no residential lots directly fronting on them. When this is not possible, the amount of residential frontage shall not exceed the following limits below. Only lots having frontages of 100 feet or greater may front on collector streets and space shall be provided on these lots for turnaround so that vehicles will not have to back out onto residential collector streets.

**PERCENT OF THE TOTAL LENGTH OF COLLECTOR STREETS WHICH
MAY HAVE RESIDENTIAL LOTS FRONTING ON AND TAKING
ACCESS FROM THE RESIDENTIAL COLLECTOR STREET**

ADT Level	1000-1199	1200-1599	1600-1999	2000+
Percent of Allowable Frontage	20%	10%	5%	0%

(The Percent of Allowable Frontage is calculated by taking the total lot frontage and dividing by 2 times the centerline length.)

- b) Residential collector streets are required when the average daily traffic anticipated on the street will exceed the limits for residential subcollectors.
- c) Residential collectors shall be laid out to discourage through traffic unless linkage between streets outside of the subdivision is determined by the Public Works Department to be desirable.
- d) If the anticipated ADT will exceed 3000, the street shall be classified at a higher level than residential collector by the Public Works Department.
- e) On-street parking shall be prohibited on residential collector streets.

A06.2 STREET ACCESS. Every residential collector must be provided with no fewer than two access intersections to streets of equal or higher classification or its termination approved by the Public Works Department.

A06.3 SHOULDERS. A two foot shoulder on each side will be provided on paved streets.

A06.4 MOVING LANES. All collector streets shall be provided with two continuous moving lanes within which no parking shall be permitted.

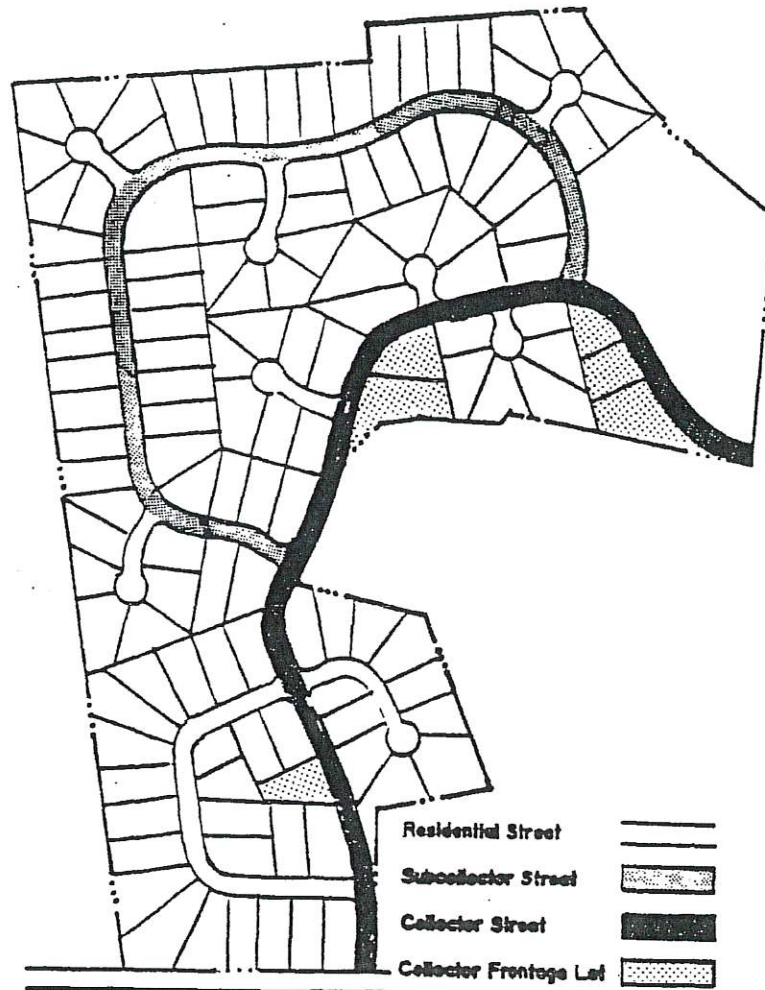
A06.5 ENGINEERING CRITERIA. The design criteria for residential collector streets are set forth below. Any unspecified design criteria for residential collectors shall meet or exceed the design criteria for a roadway design speed of 35 miles per hour.

- a) Minimum ditch grade: 0.5%
- b) Maximum centerline grade: 10%
- c) Horizontal curves: minimum centerline radius of 550 ft. (400 ft minimum with Public Works Department approval.)
- d) Minimum tangent length between curves: 100 feet
- e) Maximum superelevation: 4%
- f) Stopping sight distance: 250 feet
- g) Maximum grade within 50 feet of intersection: 4%
- h) Vertical curves where the algebraic difference in grades exceeds 1.5%.
- i) When streets under this classification are located along section lines at grades exceeding 7%, the trafficway, which includes shoulders, will be 28 feet wide.

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SAMPLE LAYOUT

It is important to **maximize** the proportion of the dwellings which front upon residential and subcollector streets. Few, if any, dwellings should front upon a collector street.



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A07 ALLEYS

A07.1 GENERAL. Alleys are permitted provided ordinance conforming lot frontage is provided on an approved street.

A08 MOUNTAIN ACCESS

A08.1 DESCRIPTION. In areas where terrain dictates grades in excess of 10%, grades up to 15% may be approved by the Platting Board provided it finds:

- a) Public Safety is not impaired.
- b) Increased maintenance costs are not unduly excessive.
- c) Drainage and erosion control measures are adequately provided.
- d) School bus access is considered as school bus routes require all grades less than 10%.
- e) Average terrain of access is over 25%.

A08.2 ENGINEERING CRITERIA.

- a) Minimum ditch grade: 1%
- b) Maximum centerline grade: Up to 15% with no more than 200' of over 10% with 100' of 10% or less for runout between steeper sections. Maximum grade in a horizontal curve is 10%.
- c) Maximum grade within 50 feet of "T" intersection: 6% and through intersection: 9%
- d) Switch backs will be allowed provided residential subcollector cul-de-sac criteria is met or turning radius is 40 ft at centerline with a 2% grade
- e) Where grades exceed 7% the total roadway width (including shoulders) shall be 24 feet wide for safety purposes.

A09 ACCESS ROADS

A09.1 PIONEER ACCESS FOR WAIVER PARCELS AND RESIDENTIAL SUBDIVISIONS. The purpose of this classification is to establish a minimum requirement for any road providing access to proposed waiver subdivisions. This road, whether it is proposed or existing, shall have a minimum surface width of 18 feet, and a 12" gravel subgrade. Additional gravel thickness may be required to provide a stable road surface. Cross drainage culverts, minimum 24" diameter, will be installed where determined necessary and adequate ditches will be provided for drainage. The Public Works Department may require the upgrading of Access Roads where grades exceed 7% in the interest of public safety.

A10 FRONTAGE STREETS

A10.1 CLASSIFICATION AND DESIGN. Frontage streets are required as an alternative to allowing access to or from lots along existing or proposed collectors or higher classification streets. Frontage streets shall be classified and designed to conform with the design standards and service restrictions of either residential streets or residential subcollector streets as anticipated average daily traffic may dictate.

A10.2 INTERSECTION SPACING. The minimum distance between intersections of the frontage street with residential collectors shall be 300 feet and with higher classification streets shall be determined by the Public Works Department and approved by the Platting Board based upon the traffic characteristics of the higher classification street.

A10.3 DISTANCE BETWEEN TRAFFICWAY. A minimum distance of 30 feet shall be provided between the frontage street shoulder the higher classification street shoulder. This area may be used to provide a visual screen between the roadways by landscaping and/or use of a berm.

A11 STUB STREETS

A11.1 RESIDENTIAL AND RESIDENTIAL SUBCOLLECTOR STUB STREETS. Residential and residential subcollector stub streets may be permitted within subsections of phased development for which the proposed street extension

in its entirety has been included as part of an approved preliminary plat or master plan.

A11.2 RESIDENTIAL COLLECTOR STUB STREETS. Residential Collector stub streets may be required by the Public Works Department provided that the future extension of the street is deemed desirable by the Public Works Department or would conform to the adopted Official Streets and Highway Plan Map in the Transportation element of the Comprehensive Plan.

A11.3 TEMPORARY TURNAROUNDS. All stub streets requiring construction will be provided with a constructed turnaround with an outside diameter of 80 feet. No turnaround construction is required if the stub street is less than 200 feet long and provides access to two or fewer lots, a turnaround easement may be required. See A16.1(2)(4) for signage requirements. A 100 foot diameter temporary easement will be provided at the turnaround which will automatically terminate upon extension of the street.

A11.4 STUB STREET CONSTRUCTION. No construction is required if physical access is provided to all lots by adjoining streets.

A12 HALF STREETS

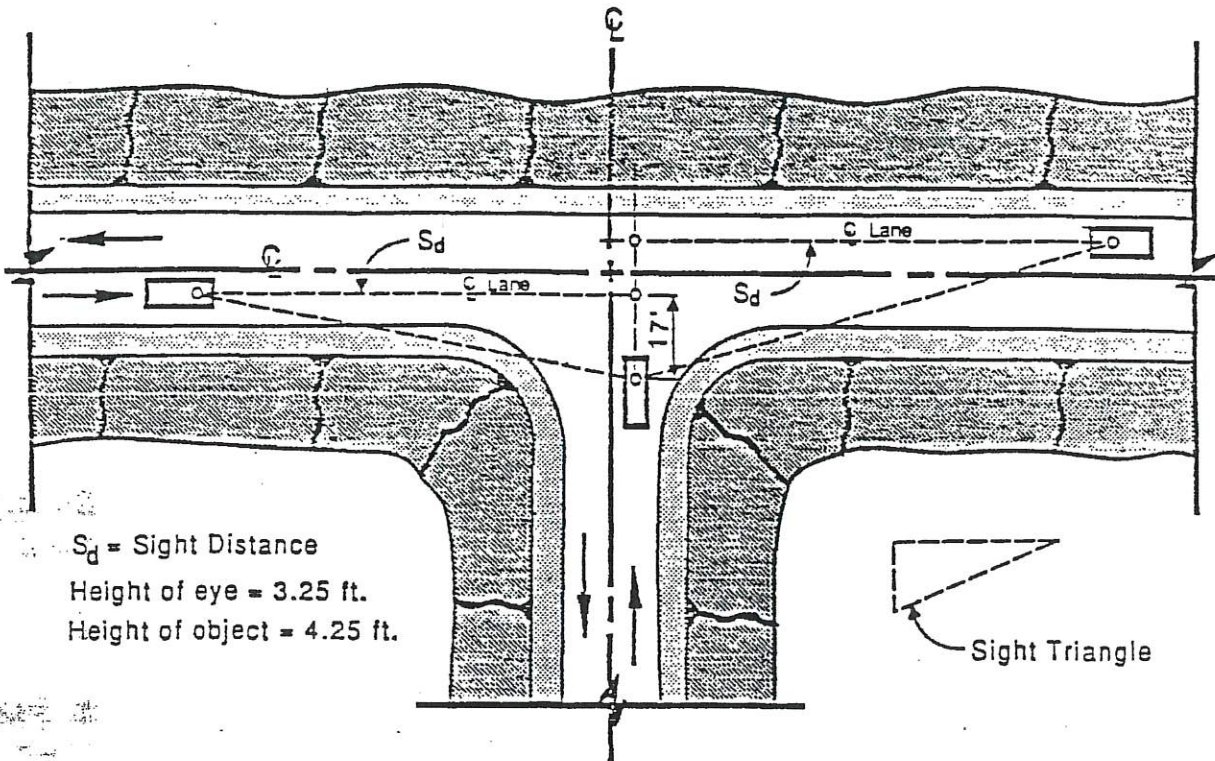
Half width trafficways are prohibited. The full trafficway width for all street classifications will always be provided.

A13 INTERSECTIONS

A13.1 CORNER SIGHT DISTANCE.

a) Whenever a proposed street intersects an existing or proposed street of higher order the street of lower order shall be made a stop street. Both intersecting streets shall be designed to provide a minimum corner sight distance as specified in the accompanying chart:

MINIMUM INTERSECTION SIGHT DISTANCE



Design Speed or
Posted Speed Limit

S_d
Desireable

S_d
Minimum

25 mph	370 feet	150 feet
30	450	200
35	580	250
40	750	325
45	950	400
50	1180	475
55	1450	550
60	1750	650
65	2100	725

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b) The entire area of the sight triangle, shall be designed to provide an unobstructed view from point B to all points 4.25 feet above the roadway along the lane centerlines from point A to point D.

A13.2 TRAFFICWAY CORNER. A corner radius shall be determined according to the classifications specified below:

Residential and access streets:	20 feet
Residential subcollector:	25 feet
Residential collector:	30 feet
Higher order streets:	40 feet

A13.3 INTERSECTION SPACING.

a) Four way intersections shall be minimized.

b) Minimum spacing between intersections shall be:

- (1) 150 feet centerline to centerline/on residential subcollectors or lower, or
- (2) 330' on residential collector or higher class of road.

A13.4 MINIMUM INTERSECTION ANGLE. Streets should intersect at an angle as close to 90° as possible for a minimum of 100 feet from the intersection centerline, but in no event at an angle less than 70°.

A14 RIGHTS-OF-WAY

A14.1 RIGHTS-OF-WAY. Minimum rights-of-way shall be provided as follows:

Residential Street	50 feet
Residential Subcollector	60
Residential Collector	60
Special Purpose streets:	
Frontage Street ¹	50 or 60
Mountain Access	60
Pioneer Access	50
Alleys	20

¹Depending upon design requirements of Sections A04 and A05.

A14.2 INCREASE IN RIGHT-OF-WAY WIDTH.

- a) If proposed lots are large enough for further subdivision or the road provides access to unsubdivided parcels, which, if subdivided, may change the street classification in the future to a higher class of street, the Public Works Department may recommend to the Platting Board that the right-of-way width for a higher classification street be provided.
- b) If terrain dictates, right-of-way widths in excess of the minimum established in Section A14.1 may be required to contain all cut and fill slopes plus at least 5 feet outside the cut or fill catches.

A15 DRIVEWAYS

A15.1 DRIVEWAYS TO SINGLE-FAMILY LOTS.

- a) Driveways shall be located not less than 40 feet from the tangent point of the radius return of any intersection. Driveways to corner lots shall gain access from the street of lower classification when a corner lot is bounded by streets of two different classification.
- b) The standards which shall apply to the driveway apron at the edge of the trafficway are: Minimum curb cut or driveway width at the trafficway edge shall be 10 feet with 6 foot radius which equals 22 feet total.
- c) Driveways are not usually required to be constructed within the rights of way at time of road construction. However, if a developer chooses to construct driveways, driveway permits are required, a sample copy is attached in Appendix A.

A15.2 SHARED RESIDENTIAL DRIVEWAYS FOR MULTI-FAMILY DEVELOPMENT.

- a) All entrance drives serving 4 or fewer dwelling units may be designed to single family driveway standards above.

- b) All entrance drives serving more than 4 dwelling units, but which may be expected to convey less than 200 ADT, shall be laid out to conform to the design, service, and access standards for residential streets.
- c) All entrance drives which may be expected to convey greater than 200 ADT, but less than 1000 ADT, shall be laid out to conform to the minimum design, service, and access standards for residential subcollector streets.
- d) All entrance drives which may be expected to convey greater than 1000 ADT shall be laid out to conform to the minimum design, service, and access standards for residential collector streets.
- e) Driveways shall not drain onto the roadway and should not exceed 4% grade within 50 foot of the road shoulder.

A16 SIGNAGE

A16.1 SIGNS. Signs will be designed and placed in conformance with the Manual of Uniform Traffic Control Devices (MUTCD) with the Alaska Supplement (latest edition) also referred to as the Alaska Traffic Manual.

- a) Subdivision roads will be identified and street signs will be installed by the subdivider.

(1) Each road within a subdivision will be identified and signed at its point of egress and ingress. Cul-de-sac roads will be signed and identified at their point of ingress according to Alaska Manual on Uniform Traffic Control Devices.

(2) Stop signs will be provided at designated intersections within the confines of the subdivision and at the intersection to the access road, if applicable.

(3) If a constructed stub street provides access to two or fewer lots and has no turnarounds a sign indicating a dead-end street shall be posted.

(4) If a dedicated stub street is not constructed, no signs are required.

- b) All sign support columns will be of perforated metal construction 2 1/2 inches square. The size, construction and location will conform to the State of Alaska

MUTCD. Contact Matanuska-Susitna Borough, Public Works Department for details.

A17 TRIP GENERATION RATES. Streets will be designed for specific traffic volumes. The following formula can be used for residential land use traffic determination to determine average daily trips (ADT):

$ADT = \text{Number of dwelling units (potential)} \times 6$ for single-family residential use.

A18 "T" TURNAROUNDS. The trafficway is to be at least 22 feet wide with 30 foot radius. "T" turnarounds are only allowed on Residential Streets. The length of the "T" portion will be at least 100 feet.

A19 DEFINITIONS

A19.1 AVERAGE DAILY TRAFFIC (ADT). Average Daily Traffic is the total volume during a given time period (in whole days greater than one day and less than one year) divided by the number of days in that time period. For new residential streets and driveways, the expected ADT is determined by using the Trip Generation Rates found in Section A17.

A19.2 DRIVEWAY. A private minor vehicular access way between a street and a parking area within a lot or property.

A19.3 STREET. A public thoroughfare used, or intended to be used, for passage or travel by motor vehicles. Streets are further classified according to their intended or actual function or use.

SECTION B

NONRESIDENTIAL ROAD DESIGN

B01.1 PURPOSE. This section provides a guideline for the design and construction of non-residential roads, arterials and highways within the Matanuska-Susitna Borough. Design and construction standards that apply to these classes of roadways are found in the following publications:

- a) "A policy on Geometric Design of Highways and Streets", by AASHTO (current edition).
- b) "Alaska Department of Transportation and Public Facilities, Standard Specifications for Highway Construction, 1988"; with Matanuska-Susitna Borough modifications.
- c) "Matanuska-Susitna Borough Construction Manual" dated 3/3/86
- d) "State of Alaska Highway Preconstruction Manual, Part IV" (latest revision)

B02 RIGHT OF WAY AND SURFACE WIDTHS

Classification	Min. R-O-W	Pavement Width	Shoulders Width
Arterial	100 ft.	24 ft.	4 ft.

B03 FUTURE CORRIDORS. Streets that are located along routes proposed for future upgrade as designated in the Comprehensive Development Plan: Transportation shall have rights of ways established up to a maximum of 100 feet in width plus slope easements. Additional widths as designated in the Comprehensive Development Plan: Transportation shall be reserved by building setbacks which will prohibit the location of any permanent structure within the setback area. The area within the setback shall be excluded from any minimum useable area calculations. These areas shall be labeled on the Final Plat as "Proposed Road Corridor."

SECTION C

CONSTRUCTION REQUIREMENTS

C01 GENERAL. This section establishes minimum construction requirements to be followed by the developer.

C01.1 CLEARING AND GRUBBING. The area within the Rights of Way, slope easements and utility easements is to be cleared and grubbed at the time of road construction. Debris is to be disposed of in an area designated by the developer, or his engineer, outside of all rights of way and utility easements. Slit trenches may be utilized for disposal within the utility easement if 4 feet of top soil or other non deleterious material is provided for cover and approval obtained from the Public Works Department. Slit trenches must not be within the road prism or within a 2:1 extension of the road prism. Organic material within the slit trench must be walked down with heavy equipment. Finished surface of a slit trench must be no lower than 2-1/2 feet below original grade and have positive drainage. Slit trench design and locations must be approved by Public Works Department prior to construction.

C01.2 ROAD CONSTRUCTION. Top soil is to be removed and disposed of as appropriate where overlay embankment is not proposed. Slit trenches may be utilized for top soil disposal provided the location is outside of the ditch line for residential streets and residential subcollectors. Slit trenches along residential collectors are to be located greater than five feet from the ditch line. The top 24 inches of the road surface is to meet NFS criteria (ADOT) with the upper 6 inches being a gravel having no material larger than 3 inches in its largest diameter. Binder between 5% and 15% passing 200 is required in upper 6 inches. The entire road prism is to be compacted to at least 90%. The finish surface to a depth of 12" is to be compacted to 95%. The use of a grid or sheeps foot compactor is highly recommended but not required. All loose material exceeding 6 inches in size is to be removed from the right of way especially along the ditches and foreslopes.

C01.3 LOW AREA. In areas that show peat or other types of wet material, a minimum of 24 inches of material meeting NFS criteria is to be utilized. The final grade is to be a minimum of 12 inches above the surrounding ground and embanked to a depth that will produce a stable surface.

C01.4 WINTER CONSTRUCTION. Winter construction may be allowed. The Public Works Department will not accept any roads until all ground has thawed and any settlement areas corrected. Generally no road inspections will be performed by the Public Works Department from October 15 to May 1.

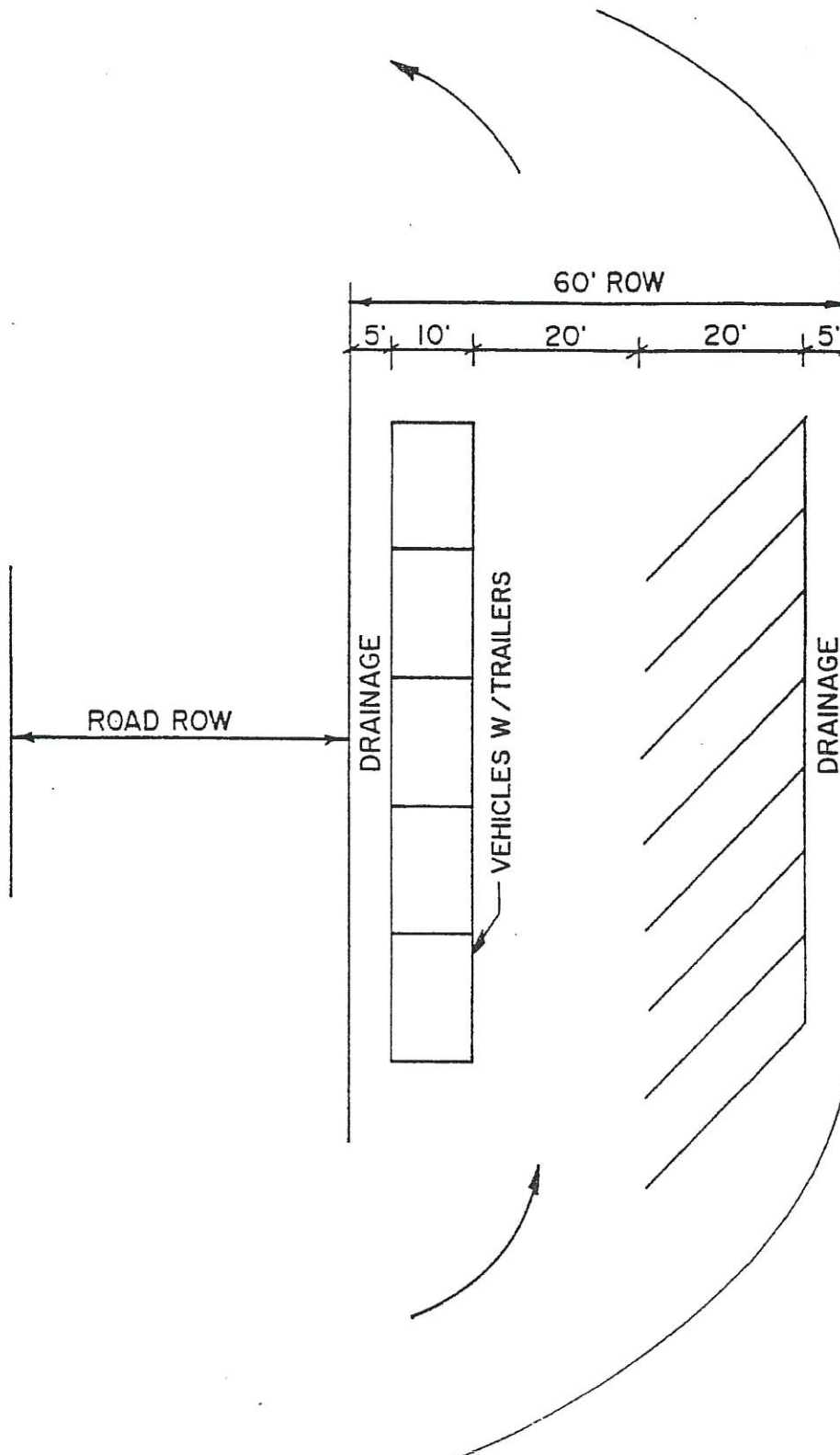
C01.5 ADDITIONAL APPROVAL. Alternate road construction criteria, except for road widths, may be submitted by the developer, or his surveyor or engineer that will more appropriately fit the conditions of the specific road locations, following general engineering practices. Final acceptance of such plans must be approved by the Public Works Department and Platting Board.

C02 TRAIL HEAD. For access to subdivision without a constructed road. (see drawing)

C03 LAKE ACCESS. Easement or other public access to lakes. (see drawing)

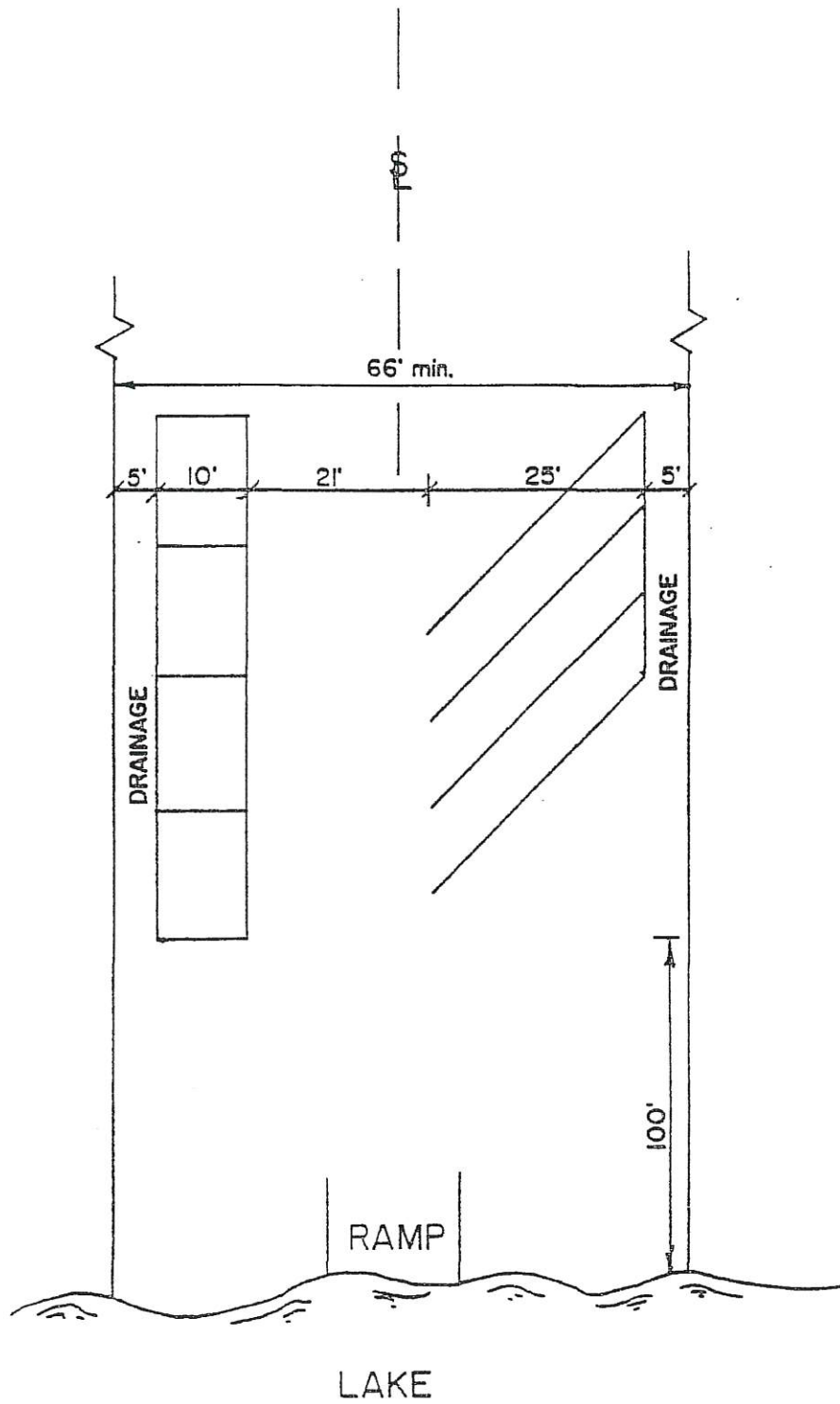
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TRAIL HEAD PARKING EXAMPLE



C03.0

LAKE ACCESS PARKING EXAMPLE



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SECTION D

DRAINAGE REQUIREMENTS

D01 GENERAL. A topographic map of the proposed subdivision is to be submitted with the preliminary plat showing the following:

- a) 5 foot contour interval
- b) Drainage swales
- c) Proposed drainage routing with necessary drainage easements to show positive drainage. Any drainage changes that may affect adjacent property.
- d) Culvert sizing calculations for any actively flowing streams that exceed the culvert size 24" for a 10 year storm may be identified only at this submittal. Calculations are to be submitted with construction plans.

D02 DRAINAGE DITCHES. The depth of ditches along the two lowest classifications of streets (residential street and residential subcollector) may be reduced to one foot provided the following conditions exist:

- a) Drainage is demonstrated to be contained within ditches.
- b) Adequate drainage routes are provided and constructed within designated drainage easements.
- c) The ditch line to be established 5 feet from the edge of trafficway shoulder.
- d) Driveways to be swaled below trafficway shoulder to provide longitudinal drainage.
- e) Ditches to be deepened to provide drainage through culverts 24" min. crossing streets.
- f) The minimum culvert for a driveway is to be 18" in diameter, if used.
- g) Snow storage at least equal to regular ditches is provided.

SECTION E

DEVELOPMENT IMPLEMENTATION

E01 GENERAL. This section describes the procedure that the developer or his surveyor or engineer is to follow to construct any improvements required for filing a subdivision plat.

E01.1 PRELIMINARY PLAT SUBMITTAL. The preliminary plat submittal is to be accompanied by a topographic map (per Section D Drainage). Centerline profiles to be provided if grades exceed 6% and/or cut/fills exceed 5 feet at the ditch line.

E01.2 CONSTRUCTION PLANS. Plans that clearly depict all improvements shall be at a scale of 100 feet per inch or larger if more detail is needed. Cost estimate is to be included. The Public Works Department will not approve the construction plans but will issue a letter of acceptance for construction when all review comments are satisfied.

E01.3 PRECONSTRUCTION CONFERENCE. When the developer, or his surveyor or engineer, has a letter of acceptance for construction or is notified that the Chief of Platting is ready to issue a Notice to Proceed and the developer has selected his contractor, he is to request scheduling of a preconstruction conference with the Platting Division. Public Works Department Engineering staff will be present to discuss scheduling, and method of construction. The developer will designate which inspection fee he chooses to utilize. The Notice to Proceed will be issued at this conference or within two working days.

E01.4 INTERIM INSPECTIONS. Periodic interim inspections may be conducted on all projects whether or not construction plans have been required by the Public Works Department.

Interim inspections may also be made at the request of the developer or his engineer.

E01.5 FINAL INSPECTION. When the developer, or his surveyor or engineer, submits in writing, to Platting Division, that the improvements have been constructed according to the borough standards or according to the accepted

construction plans, the Public Works Department staff will conduct a Final Inspection. If a "punch list" is issued by the Public Works Department, a final acceptance of the improvements will be issued upon completion of the "punch list." All work is to be guaranteed for one year after final acceptance. Accepted roads within road service areas may be certified for maintenance the following calendar year. During the one year warranty period the developer is responsible for any road maintenance. Pioneer Access and Mountain Standard Roads may not be accepted for maintenance by the road service areas, even though they may meet the design standards.

SECTION F

SUBDIVISION AGREEMENT

F01 GENERAL. Subdivision agreements are available for use by the developer as referenced in the Platting Regulations.

F01.1 CONFERENCE. A conference will be conducted upon the developer's request to determine procedure for utilizing the Subdivision Agreement.

F01.2 LIMITATIONS. The Notice to Proceed (NTP) will be issued after the Subdivision Agreement has been approved.

SECTION G

COMMERCIAL AND INDUSTRIAL SUBDIVISIONS

G01. GENERAL. The use of the land will be identified by the developer, or his surveyor or engineer along with the appropriate industrial and commercial traffic rates per the American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets" (current edition) or an approved equal. Trafficway widths will be established as the potential traffic rates relate to the roadway classifications and criteria in Sections A & B. Parking will also require consideration in establishing widths unless off street parking is to be provided. Residential collector streets will be the lowest classification permitted.

SECTION H

INSPECTION FEES

H01. FEES. Inspection fees are to be as follows:

H01.1 1% FEE. Developer's Professional Registered Engineer provides the interim inspection and issues a written statement that the improvements have been constructed according to the accepted construction plans or according to borough standards if no plans have been prepared.

H01.2 2% FEE. This fee is required for improvements not covered in H01.1 above and when a Subdivision Agreement is utilized. The Public Works Department will provide all inspections.

SECTION I

UTILITIES

I01 UTILITIES. The location of utilities in Subdivisions are to be encouraged within established rights of way wherever possible. The developer or his representative will be responsible for satisfying any conflicts that may occur in the request for easements from any utility company during the platting process. Easements are to be clear of wells, septic systems, house, decks, buildings or other structures; unless the Developer has obtained a "Non-Objection to Easement Encroachment" from the utilities. Utility easements are to be fully useable for utility installation where installation equipment can safely work. Utility easements are not to be placed in swamps, steep slopes, or other unusable areas.

I01.1 UTILITY LOCATION GUIDELINES.

a) Rural Areas:

(1) When utility facilities are placed **within** the road right of way:

(a) Utility facilities should generally be located as shown in the attached drawing entitled LOCATIONS FOR UTILITIES.

(b) Back slopes or foreslope which extend into a utility easement should not exceed 4:1. These limits are necessary for construction equipment for utility installation.

(c) Utility facilities paralleling the ditch line may not be placed closer than five feet from the ditch bottom.

(d) No shallow utility installation paralleling the road surface will be allowed within the road surface or shoulder areas due to road compaction and/or designated fill requirements. This restriction is not applicable to underground road crossings.

(e) Underground road crossings require compaction according to the requirements of the permit issued to the utility by the borough.

(2) When utility facilities are placed outside the road right of way:

(a) Utility easements as deemed necessary by utility companies will be required.

(b) A fifteen foot utility easement is needed outside the road right of way to allow for utility installation and maintenance.

b) Urban Area - Paved streets with curbs and/or sidewalks:

Utilities installed in urban areas shall meet the requirements of the City, or if not in a City, shall be by an approved engineered design.

c) Separation of Utilities:

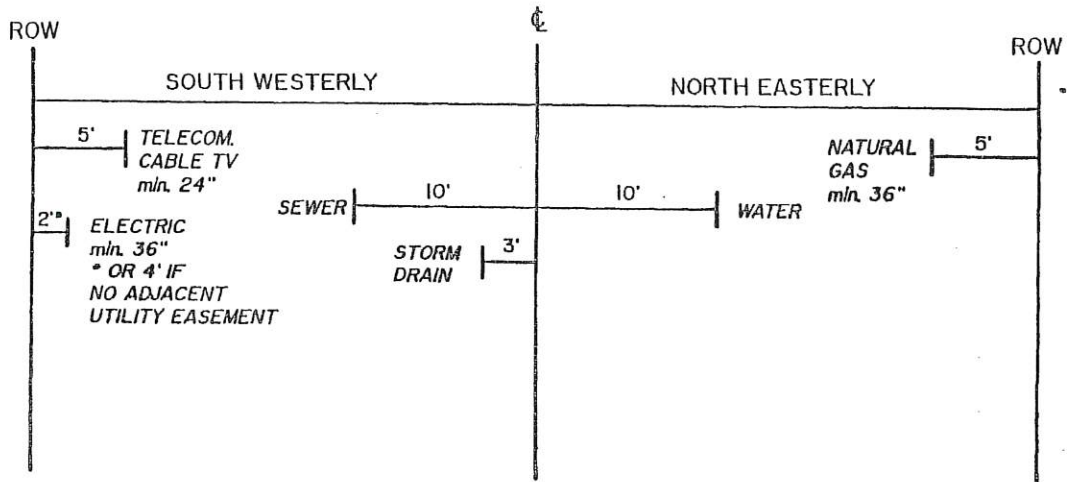
(1) Overhead - Recommend five (5) feet distance horizontally (power pole from underground cable).

(2) Underground - Recommend minimum one (1) foot separation horizontally between telephone, TV and electric utilities when all are underground.

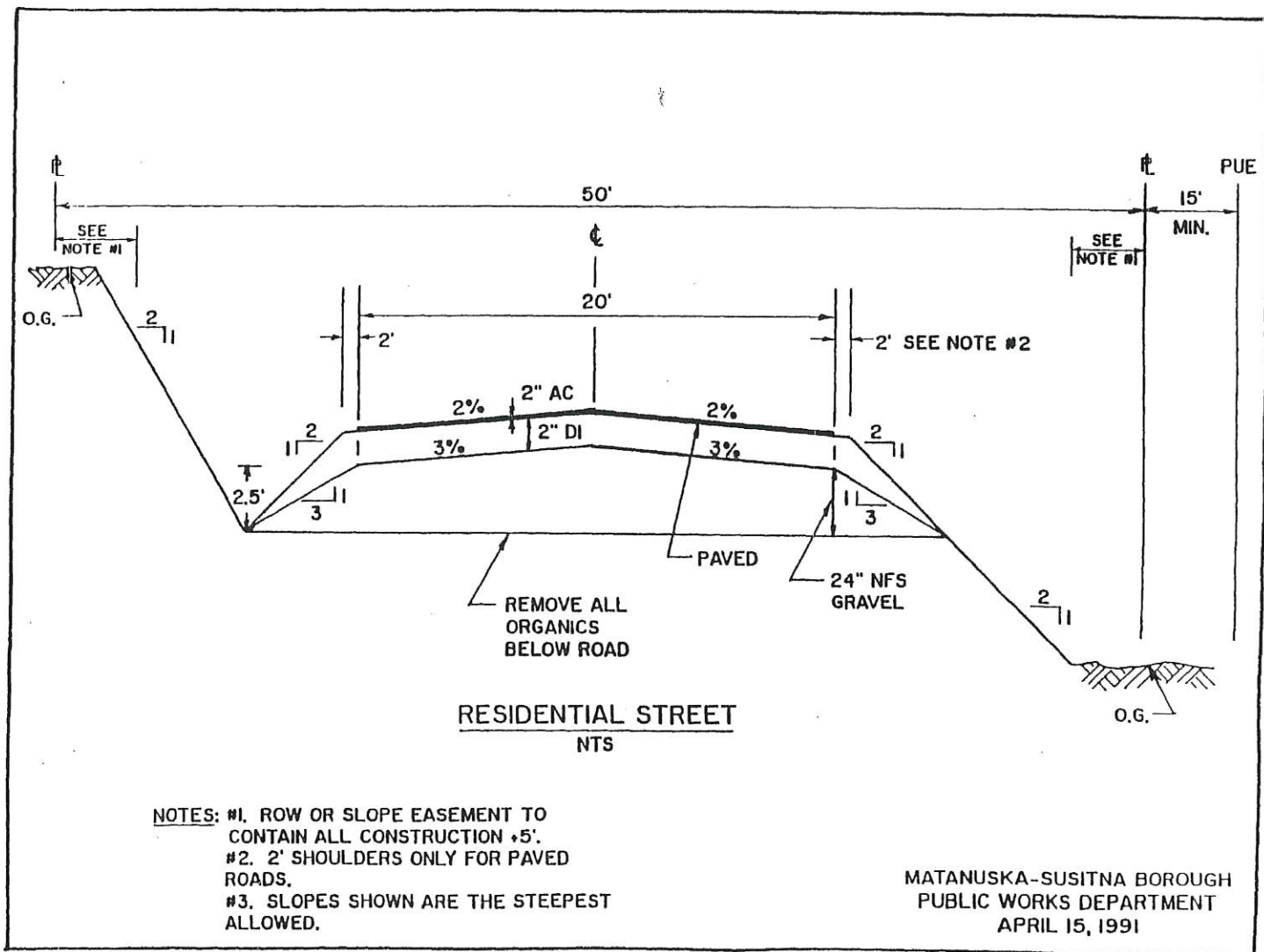
(3) Depth of burial - Electric depth of burial is (36) inches except deeper where driveways are planned, etc. TV and telephone burial is (24) inches except 48 inches on crossings.

Appendix "A"

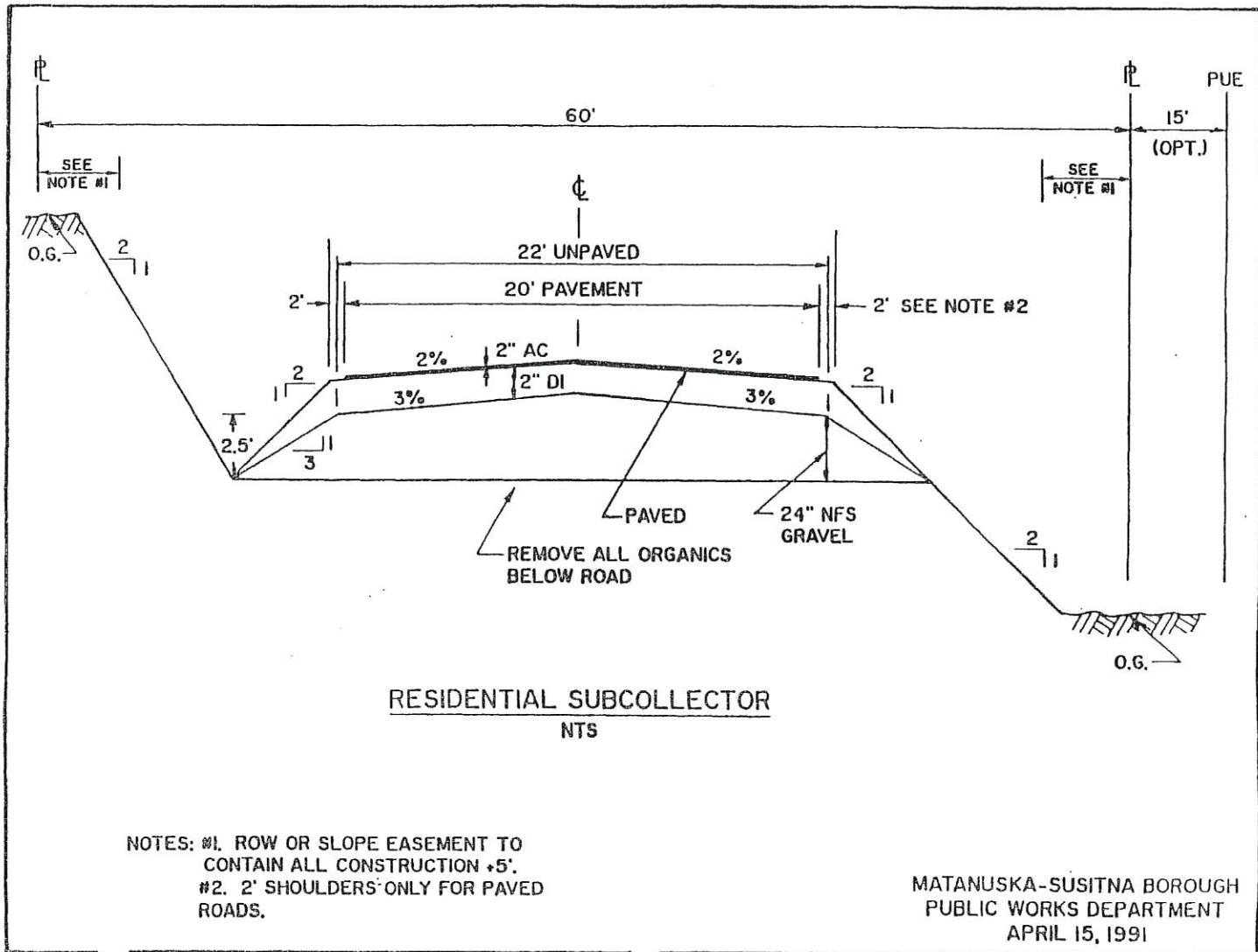
LOCATIONS FOR UTILITIES



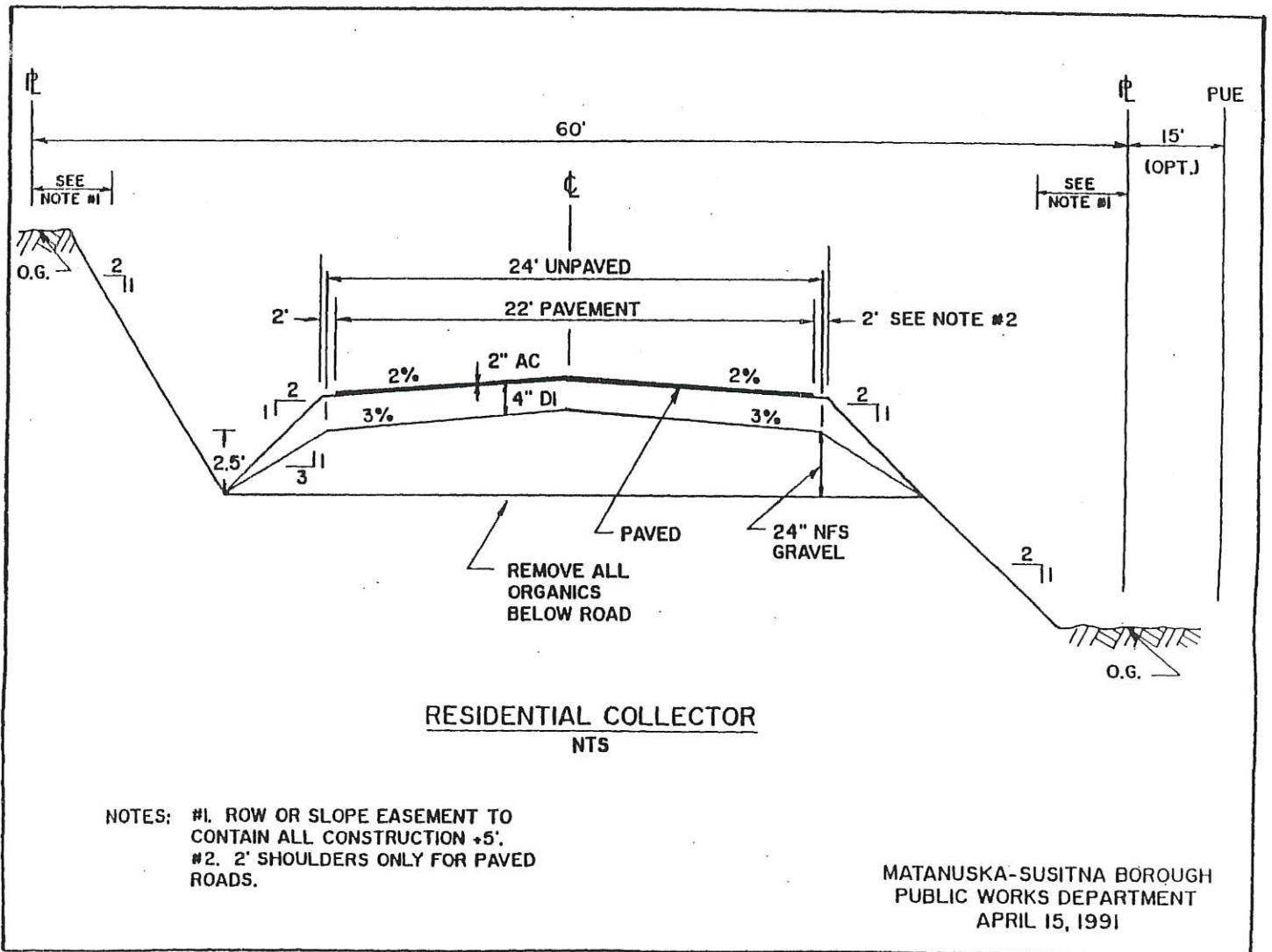
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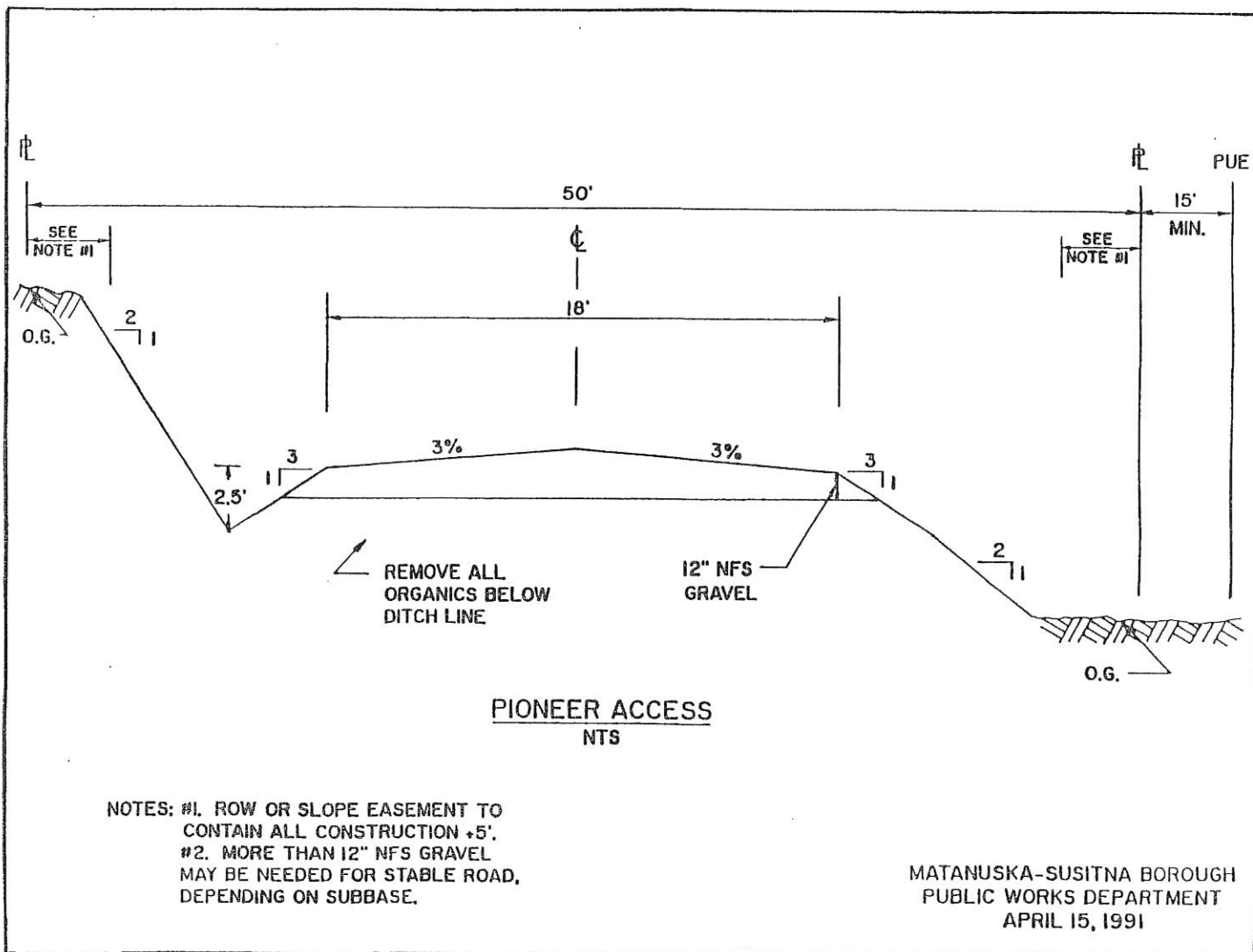
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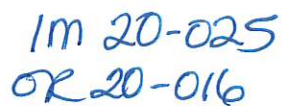
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OR 20-016



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OR 20-016



**MATANUSKA-SUSITNA BOROUGH
ENGINEERING DEPARTMENT**

**APPLICATION & PERMIT TO CONSTRUCT & MAINTAIN
DRIVEWAY ON PUBLIC RIGHT OF WAY**

Permittee's Name: _____

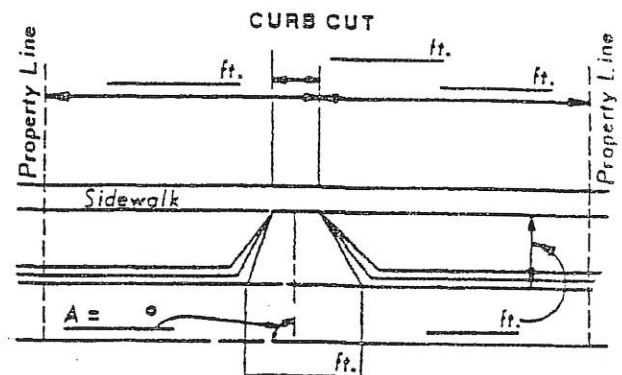
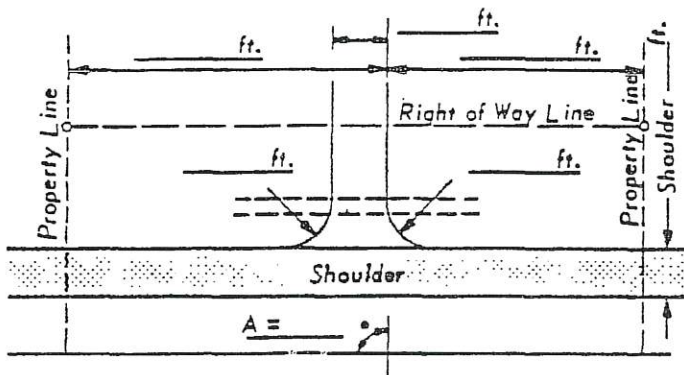
Address: _____

_____ Phone: _____


LOCATION: RSA # _____

PERMIT NO. : _____

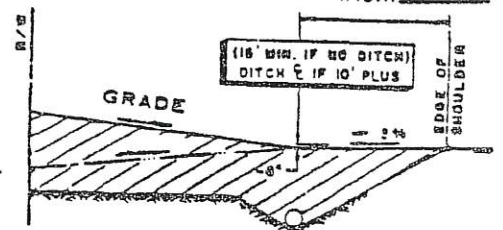
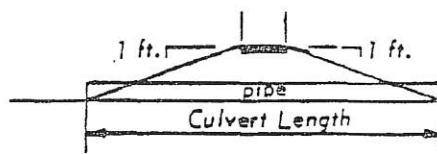
Work to be completed by _____ in accordance with the below sketch and/or attached plans. The permit will be void if no work is accomplished by this date. Any installation without a valid permit will be treated as an encroachment.



Show North Arrow  Pavement Type _____
Shoulder Type _____

Show North Arrow  Pavement Type _____
Width _____ ft.

DRAINAGE
Culvert Length _____ ft.
Size (inside diameter) _____ in.
Culvert Type _____
Ditch Depth _____ ft.



The Permittee certifies that he is the (circle one) owner leasee, or authorized agent of the property, that the conditions, restrictions and regulations of the Department will be complied with and that he will maintain the driveway in accordance with the provisions on the reverse side of this permit.

SPECIAL CONDITIONS:

Permittee: _____

Date: _____

PERMIT GRANTED: _____

DATE

BY: _____

TITLE: _____

1M 20-025
OR 20-016

BOROUGH ASSEMBLY DOCUMENT
CONTROL & AM/IM FORM

Matanuska-Susitna Borough
350 E. Dahlia Avenue
Palmer, Alaska 99645-6488

For Agenda of: June 18, 1991

No. AM 91-173

SUBJECT: SUBDIVISION CONSTRUCTION MANUAL

ATTACHMENTS: Resolution No. 91- 048
Platting Board Resolution No. 91-002
Subdivision Construction Manual

Route to:	Dept/Committee/Individual	Initials	Remarks
	(Please review & return to		
	originator)		
5	Dep. Dir. of Engineering	<i>WJ</i>	Originator
	Planning Director		
	Assessor		
1	Public Works Director	<i>WJ 6-7-91</i>	
2	Finance Director	<i>WJ</i>	
3	Attorney		
4	Assistant to the Manager		
	Mayor		

SUMMARY STATEMENT:

The Subdivision Construction Manual was last revised in April, 1988. The Platting Board has been reviewing revisions to the Manual since March, 1990, and have held many public work sessions and public hearings on the scope and details of the Manual. At the June 6, 1991 Platting Board Meeting, the Manual was accepted with a unanimous vote, and no objection from the audience.

The Manual is being submitted to the Planning Commission for adoption at their June 17, 1991 meeting.

The Manual is being revised to bring the roads closer to State safety standards, and to help solve problems that have come before the Board and Staff.

RECOMMENDED ACTION: Accept the MSB-DPW Subdivision Construction Manual with the revisions shown in the June 6, 1991 draft.

APPROVED:

Donald L. Moore
Donald L. Moore, Borough Manager

Page 1 of 1

Number: AM 91-173
RESO 91-048

pw/vr/am/91-173

IM 20-025
OR 20-016

MATANUSKA-SUSITNA BOROUGH
PLATTING BOARD

RESOLUTION SERIAL NO. 91-002

A RESOLUTION OF THE PLATTING BOARD RECOMMENDING ADOPTION OF THE REVISED
SUBDIVISION CONSTRUCTION MANUAL.

WHEREAS, the subdivision construction manual was last rewritten and approved on April 21, 1988;

WHEREAS, the platting board has held several work sessions and public hearings to consider revisions and modifications to the subdivision construction manual;

WHEREAS, the subdivision construction manual needs revision to upgrade the development criteria;

BE IT RESOLVED that the Matanuska-Susitna Borough Platting Board approves the revisions to the subdivision construction manual;

BE IT FURTHER RESOLVED that the platting board recommends that the planning commission and the assembly approve the updated subdivision construction manual.

PASSED AND APPROVED this 6th day of June 1991.



ATTEST:

Marilyn McGuire
Marilyn McGuire, Platting Clerk

Robert L. Tucker
Robert Tucker, Chairman

MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION

RESOLUTION 91-32

A RESOLUTION OF THE PLANNING COMMISSION OF THE MATANUSKA-SUSITNA
BOROUGH RECOMMENDING ADOPTION OF THE REVISED SUBDIVISION
CONSTRUCTION MANUAL

WHEREAS, the subdivision construction manual was last rewritten and approved on April 21, 1988; and

WHEREAS, the subdivision construction manual needs revision to upgrade the development criteria; and

WHEREAS, the platting board has held several work sessions and public hearings to consider revisions and modifications to the subdivision construction manual; and

WHEREAS, the platting board passed Resolution No. 91-002 recommending adoption of the revised subdivision construction manual on June 6, 1991.

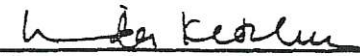
NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Planning Commission approves the revisions to the subdivision construction manual; and

BE IT FURTHER RESOLVED that the planning commission recommends that the assembly approve the updated subdivision construction manual.

ADOPTED AND APPROVED by the Matanuska-Susitna Borough Planning Commission, this 17th day of June, 1991.


Carl DePreest, Chairman

ATTEST:


Linda Ketchum, Planning Clerk

PLN/ldk/RES091-32

1m 20-025
OR 20-016

MATANUSKA-SUSITNA BOROUGH

RESOLUTION SERIAL NO. 91- 048

A RESOLUTION OF THE ASSEMBLY OF THE MATANUSKA-SUSITNA BOROUGH TO APPROVE THE REVISIONS TO THE SUBDIVISION CONSTRUCTION MANUAL.

WHEREAS, the subdivision construction manual was last rewritten and approved on April 21, 1988; and

WHEREAS, the Matanuska-Susitna Borough Platting Board has held several public work sessions and public hearings to consider revisions and modifications to the technical provisions included in the subdivision construction manual; and

WHEREAS, the subdivision construction manual needed revision to update the development criteria; and

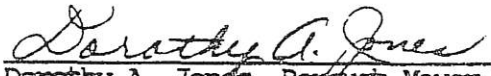
WHEREAS, MSB Ordinance 16.05.015(C) requires that modification to the construction manual be approved by the platting board, planning commission, and assembly; and

WHEREAS, the Matanuska-Susitna Borough Platting Board approved the revisions to the subdivision construction manual by unanimous vote at their June 6, 1991 meeting; and


WHEREAS, the Matanuska-Susitna Borough Planning Commission approved the modifications to the subdivision construction manual at their June 17, 1991 meeting.

BE IT RESOLVED that the Matanuska-Susitna Borough Assembly approve the revisions to the subdivision construction manual as shown in the June 6, 1991 draft.

PASSED AND APPROVED this 18th day of June 1991.


Dorothy A. Jones, Borough Mayor

ATTEST:


Linda A. Dahl, Borough Clerk

pw/vr/am/91-173

NUMBER: RESO 91- 048
AM 91-173

pw/vr/am-91-173

IM 20-025
OR 20-016

By: Alex Strawn
Introduced: July 6, 2020
Public Hearing: July 20, 2020
Action: APPROVED

**MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION RESOLUTION NO. PC 20-25**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION RECOMMENDING ASSEMBLY APPROVAL AN ORDINANCE ADOPTING MSB 11.12 DRIVEWAY STANDARDS IN ORDER TO ENSURE DRIVEWAYS WITHIN BOROUGH RIGHT-OF-WAYS MINIMIZE NEGATIVE IMPACT TO DRAINAGE, MAINTENANCE, AND SAFETY OF THE TRAVELING PUBLIC.

WHEREAS, The Borough originally adopted the requirement for driveway permitting in 1984 with adoption of MSB 11.10; and

WHEREAS, MSB 11.10 gives authority to the Public Works Director to set standards for driveways; and

WHEREAS, basic driveway standards were adopted within the 1991 Subdivision Construction Manual and additional guidelines were developed by the Public Works Director around 2003; and

WHEREAS, in April of 2016 the Mat-Su Borough Assembly signed Resolution 17-003 supporting the rewrite of the 1991 Subdivision Construction Manual (SCM); and

WHEREAS, a group of subject matter experts was formed to review the document, consisting of local Land Surveyors, Civil Engineers, Developers, Homebuilders, Board Members and borough staff; and

WHEREAS, their review meetings began in June of 2018. They met 27 times over the next 18 months, and finalized the 2020 Subdivision Construction Manual; and

WHEREAS, one of the major recommendations of the group was to remove driveway standards from the Subdivision Construction Manual and to create a new MSB Chapter of code specific to driveway standards; and

WHEREAS, the draft ordinance was reviewed and approved by the SCM working group, posted on the project web page and advertised on the Planning Department and MSB Facebook pages; and

WHEREAS, the proposed ordinance creates a clear permitting process and comprehensive standards for residential and commercial access onto Borough rights-of-way; and

WHEREAS, the proposed ordinance creates standards which protect the safety and movement of the traveling public, minimize the cost of road maintenance, ensure proper drainage, and protect Borough infrastructure; and

WHEREAS, the Planning Commission held a public hearing on the ordinance on July 20, 2020.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Planning Commission hereby approves Resolution 20-25, recommending adoption of Ordinance Serial No. 20-16.

ADOPTED by the Matanuska-Susitna Borough Planning Commission
this 20th day of July, 2020.

Mary P. Anderson
~~COLLEEN VAGUE, Chair~~
Mary P. Anderson, Acting Chair

ATTEST

Karol H. Riese
KAROL RIESE, Planning Clerk

(SEAL)

YES: 6

NO: 0

**MATANUSKA-SUSITNA BOROUGH
TRANSPORTATION ADVISORY BOARD
RESOLUTION NO. TAB 20-02**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH TRANSPORTATION ADVISORY BOARD RECOMMENDING ASSEMBLY APPROVAL AN ORDINANCE ADOPTING MSB 11.12 DRIVEWAYS STANDARDS IN ORDER TO ENSURE DRIVEWAYS WITHIN BOROUGH RIGHT-OF-WAYS MINIMIZE NEGATIVE IMPACT TO DRAINAGE, MAINTENANCE, AND SAFETY OF THE TRAVELING PUBLIC

WHEREAS, in April of 2016 the Mat-Su Borough Assembly signed Resolution 17-003 supporting the rewrite of the 1991 Subdivision Construction Manual (SCM); and

WHEREAS, a group of subject matter experts was formed to review the document, consisting of local Land Surveyors, Civil Engineers, Developers, Homebuilders, Board Members, two members of the Transportation Advisory Board and borough staff; and

WHEREAS, their review meetings began in June of 2018. They met 27 times over the next 18 months, and finalized the 2020 Subdivision Construction Manual; and

WHEREAS, one of the major changes to the document was that the section on Driveways was removed from the Subdivision Construction Manual and a new MSB Chapter 11.12 Driveways was created; and

WHEREAS, the draft ordinance was reviewed and approved by the SCM working group, posted on the project web page and advertised on the Planning Department and MSB Facebook pages.

1M 20-025
OR 20-016

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Transportation Advisory Board hereby recommends the following:

11.12.040 A 2(h)(iii) - require the determination be accompanied by supporting calculations.

11.12.070 A(3) - include a maximum driveway width determination similar to 11.12.060.

11.12.090 D (4) - revise to "Improvements needed for internal circulation and to prevent traffic from queueing on borough roadways."

11.12.090 G (1) - revise to "roadway and intersection achieve an acceptable LOS under MSB 11.12.080 (A) (3) but would likely fall below an acceptable LOS within five years without the traffic generated by the development."

11.12.090 G (3) The borough adopt thresholds that define disproportionate costs.

11.12.110 - add item (C) Driveway encroachments existing prior to July 3, 1984 shall be automatically granted a permit upon request.

BE IT FURTHER RESOLVED, that the Transportation Advisory Board recommends adoption of an ordinance adopting MSB 11.12 driveways standards provided our recommendations are addressed in the final ordinance.

ADOPTED by the Matanuska-Susitna TRANSPORTATION ADVISORY
BOARD this 10 day of July 2020.



Joshua Cross, Chair

ATTEST



Kim Sollien, Planning Services
Manager, Staff Support

**MATANUSKA-SUSITNA BOROUGH
SCM UPDATE WORKING GROUP
RESOLUTION 20-01**

A RESOLUTION OF THE MSB SUBDIVISION CONSTRUCTION MANUAL UPDATE WORKING GROUP RECOMMENDING ADOPTION OF THE 2020 SUBDIVISION CONSTRUCTION MANUAL AND ADDITIONAL RECOMMENDATIONS.

WHEREAS, the Assembly adopted Resolution 17-003 requesting an update of the 1991 subdivision construction manual; and

WHEREAS, the MSB planning department, capital projects department and public works department worked together and created a "first revision" public review draft document and distributed it for public review and comment; and

WHEREAS, as a result of the first revision draft, an informal working group was formed, consisting of MSB staff and TAB representatives, utilities, engineers, surveyors, road builders and developers; and

WHEREAS, the working group met 26 times between July 2018 and January 2020 and created a second revision draft document, for further public review and submittal to the Local Road Service Area Advisory Board, Transportation Advisory Board, Platting Board, and Planning Commission; and

WHEREAS, the working group is committed to ensuring that quality residential development and road construction occurs in the borough; and

WHEREAS, the working group strove to create a document that would:

1. Keep the cost of housing affordable in the valley,
2. Ensure that future roads are designed and constructed in a way that will not inhibit efficient maintenance;
3. Ensure that connectivity of subdivision roads is considered during subdivision design;
4. Reduce the cost burden of road maintenance and upgrades .

NOW, THEREFORE, BE IT RESOLVED, that the MSB SCM working group recommends assembly adoption of the 2020 Subdivision Construction Manual.

BE IT FURTHER RESOLVED that the working group recommends adoption of an ordinance amending MSB Title 11 Roads, Streets, Sidewalks and Trails, to add a section that specifically addresses driveways.

BE IT FURTHER RESOLVED that the working group recommends further actions that the assembly should take, including but not limited to:

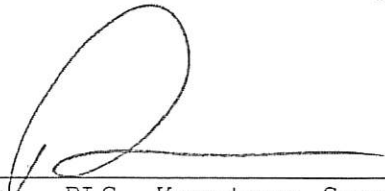
1. Reinstitute the mandatory land use permit.
2. Fund an update to the current Official Streets and Highways Map.
3. Create a more detailed Design Criteria Manual that would include regulations for current and future borough roads as well as bridges, etc.
4. Continue to review the subdivision code and subdivision construction manual to identify areas for improvement.

5. Review options for improving the structure for funding of road construction and maintenance including but not limited to:

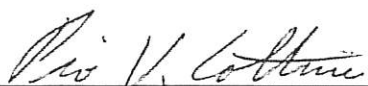
- a. Implement some type of an impact fee or transaction fee that could be designated for road maintenance/improvements, to supplement the current RSA tax structure.
- b. Review the current RSA tax structure for more funding flexibility (i.e. fewer RSA's covering the same area).
- c. Pursue adoption of road powers by putting the question on the ballot.

BE IT FURTHER RESOLVED that if substantial changes are proposed to the document following its distribution for review, the SCM working team reserves the opportunity to review the changes prior to final assembly approval

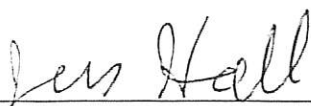
ADOPTED by the MSB SCM working group this 14th day of January, 2020.



Gary LoRusso, PLS, Keystone Surveying



Pio Cottini, PLS, Cottini Land Surveying



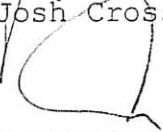
Jess Hall, Hall Quality Homes



Dan Elliott, Local RSA Advisory Board and TAB Member



Josh Cross, PE, PTOE, Kinney Engineering LLC, and TAB Member



Curt Holler, PE, Holler Engineering

Signature Pending

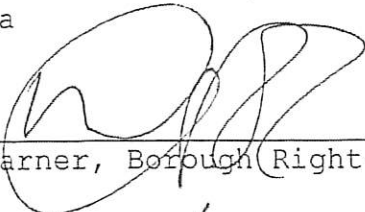
Dave Miller, Summit Development



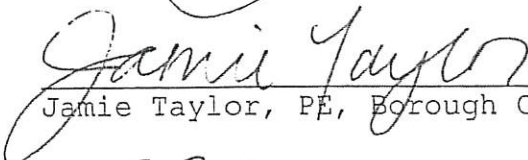
Robert Yundt, Robert Yundt Homes, and Mat-Su Homebuilders Past Chair



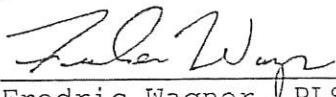
Bill Klebesadel, PE, Pioneer Engineering and previously City of Wasilla



Matt Garner, Borough Right-Of-Way Inspector



Jamie Taylor, PE, Borough Civil Engineer



Fredric Wagner, PLS, Platting Officer



Eileen Probasco, Planning Director

RECEIVED

JUL 24 2020

CLERKS OFFICE

LOCAL ROAD SERVICE AREA ADVISORY BOARD
RESOLUTION 20-02

A RESOLUTION BY THE MATANUSKA-SUSITNA BOROUGH LOCAL ROAD
SERVICE AREA ADVISORY BOARD TO THE BOROUGH PLANNING DIRECTOR
REGARDING APPROVAL OF THE DRAFT MSB CODE 11.12 DRIVEWAYS
STANDARDS (Conditioned on Amendment?)

WHEREAS: The current Draft of MSB 11.12 is found to be generally acceptable; and

WHEREAS: The Driveways Standards have application to both new construction and long-existing driveways, and this Code is regularly cited as controlling in the current draft Subdivision Construction Manual; Now Therefore

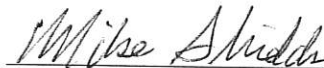
BE IT RESOLVED: That the LRSAAB supports the draft 11.12 DRIVEWAYS STANDARDS in its current form.

APPROVED BY MAJORITY VOTE ON July 23, 2020

Stephen Edwards, chair



Mike Shields, secretary



1M 20-025
OR 20-016



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Transportation and
Public Facilities

DESIGN & ENGINEERING SERVICES
CENTRAL REGION

PO Box 196900
Anchorage, AK 99519-6900
Phone Number: 907 269 0400
Toll Free: 800 770 5263
TDD: 907 269 0473
TTY: 800 770 8973
Fax Number: 907 269 0425
Web Site: dot.state.ak.us

February 18, 2020

Attn: Eileen Probasco,
Planning and Land Use Director
350 E Dahlia Ave
Palmer, AK 99645



RE: Subdivision Construction Manual and Chapter 11.12 Driveways

Dear Director:

Central Region DOT&PF supports the Borough's draft Driveway Code and Subdivision Construction Manual. These new standards are a huge step forward equal to and above existing state standards. We see how they align common transportation goals. We are sure this effort is worth the benefit to the public and developers. These codes will save time and money for many reasons:

- Consistent criteria is used on state and borough roads.
- Public mobility and safety is maximized through a road hierarchy.
- Solutions are reasonable for the greatest public good at the least private cost.
- Development timelines can be faster with more certainty of expectations and outcomes.
- Development costs will be lower due to certainty and timelines.
- Roadway infrastructure costs will be lower by planning ahead for growth.
- Roadway operations will be more efficient and cost less by planning ahead for growth.
- Capital road dollars go further with planning for efficient systems.

Thank you again for the opportunity for DOT&PF to participate and comment. We believe these new codes will have good outcomes for the transportation system and for business in the long term.

Sincerely,

John Linnell, P.E.
Regional Preconstruction Engineer

"Keep Alaska Moving through service and infrastructure."

Im 20-025
OR 20-016

Mat-Su Borough Driveway Code and Subdivision Construction Manual

Central Region DOT&PF Review
February 2020

DOT&PF supports new MSB codes. They will save time and money for many reasons:

Consistency. The same criteria is used on state roads and Anchorage roads. It has resulted in reasonable access development. Developers around the state already know what to expect. They have experience solving and preventing common traffic and safety problems to benefit development.

Mobility and Safety. Organized intersection spacing and offset promotes “one decision at a time” and saves travel time and reduces serious crashes on main highways. Sight distance is the number one component of access and making safe decisions. Backstreets are included to minimize conflicts with high speed traffic. School bus stops are enabled in neighborhoods. Alternative ways to home and business are possible when there are closures and detours. Emergency response is improved with more than one point of access. Neighbors can walk to visit each other instead of being blocked and forced to main highways. Children can walk to school and school events with better connectivity, shoulders, and pathways.

Reasonable solutions. The proposed code requires the greatest public good at the least private cost as a proven governing principle. Big box stores will reasonably result in signals and more road lanes commensurate with rapid traffic increases. Midsize developments may need turn lanes or interim improvements prior to the next major highway project. Small businesses and single family homes with light traffic will primarily focus on a basic driveway, culverts, and good visibility for safety.

Faster timelines. Private development timelines can be faster with more certainty of expectations and outcomes outlined in the manual and code. There is less need for applications to be revised and resubmitted. At the same time, we see these codes are providing the Borough flexibility for context and allows consideration of feasibility in all cases.

Lower private costs. Private development costs will be lower with this code in place. Developers will know what is required to serve driveway spacing and design dimensions. Larger developments know what is required for improvements. Pre-applications would not have to guess at scope of work. Site plans should only have to be done once rather than “fishing” for what the agency wants. Solving the plan once and getting to construction faster is the goal of having a manual and standards. It costs less to agree on common outcomes early than it does to submit plans back and forth. The standards are notable in allowing for site specific feasibility. There is flexibility if a standard can be documented that it doesn’t fit.

Lower public costs. Public infrastructure costs will be lower. Instead of Palmer-Wasilla Highway type outcomes – where one side of the road is not subdivided like the other and it takes twice as many signals and turn lanes to access the highway, our agencies can serve more people on both sides of the road for every one intersection rather than two. This has become a very expensive corridor to solve and remains disjointed and disconnected internally. Millions of dollars in projects are saved every mile we can plan ahead with good code and manuals like these.

More efficient roads. Public infrastructure operations will be more efficient. Urbanizing areas can expect intersection conflicts lead to one signal per 10,000 residents. Poor subdividing and access alignment without this new manual has resulted in doubling our signals unnecessarily in some cases. When we do align major intersections, our joint investment in signals and turn lanes benefit both sides of the road. With less major intersections back to back, roads move more efficiently for through traffic. Intersections circulate more efficiently moving both sidestreets at the same time. There would be no more Midtown/Golden Hills double signals, or Shoreline/Shennum signal pairs. Instead there would be half the signals with good planning. Even with traffic growth, this plan means some means of reasonable access would be served better in the long term. Better alignment and connectivity reduces the risk of congestion or crashes causing blockages to available access.

More road projects. Saving on the cost of each intersection or each turn lane means more of them can be built elsewhere. Even the federal funding program is limited in the amount of projects possible. The Borough and State's Long Range Transportation Plan is financially constrained over time. The more efficiently we plan the subdivision of lands next to each other, choose Collectors, and share and align access, the further our intersection investments will go. As per above, if we only need half as many signals, we can build more of what is needed in the Mat-Su.