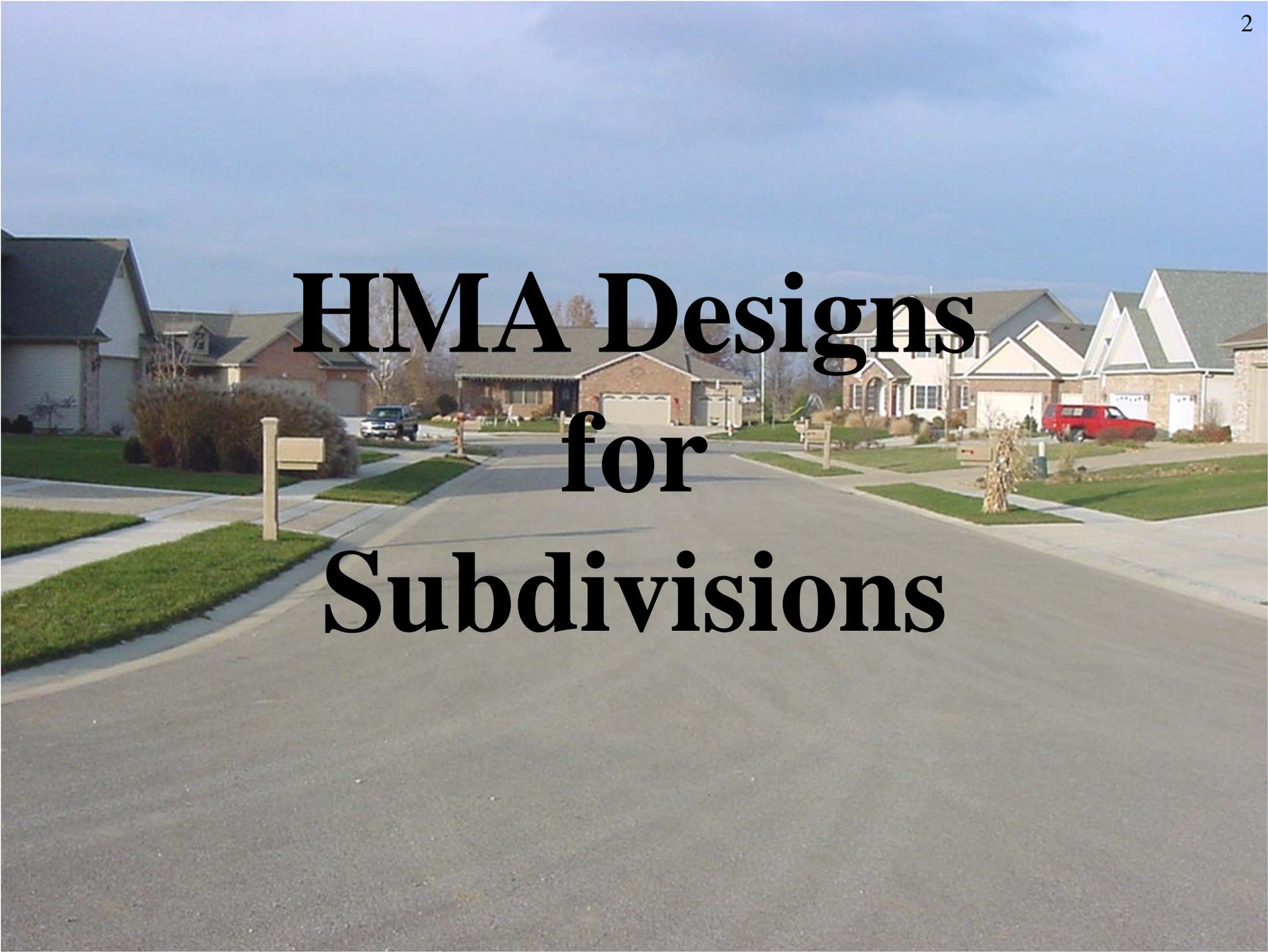




**May 6, 2013**

**Marvin Traylor**



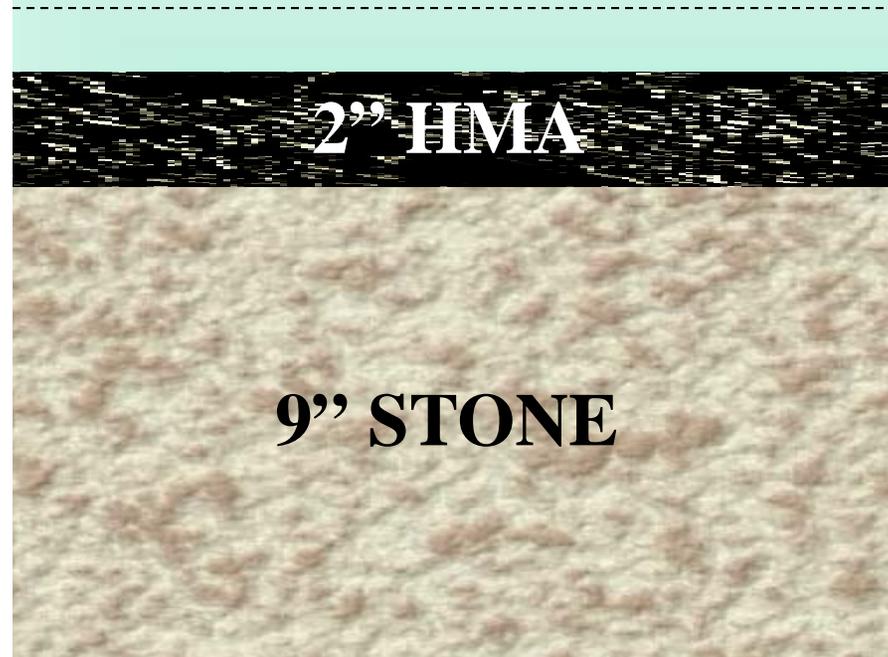
# HMA Designs for Subdivisions

# Poor Subdivision Standard



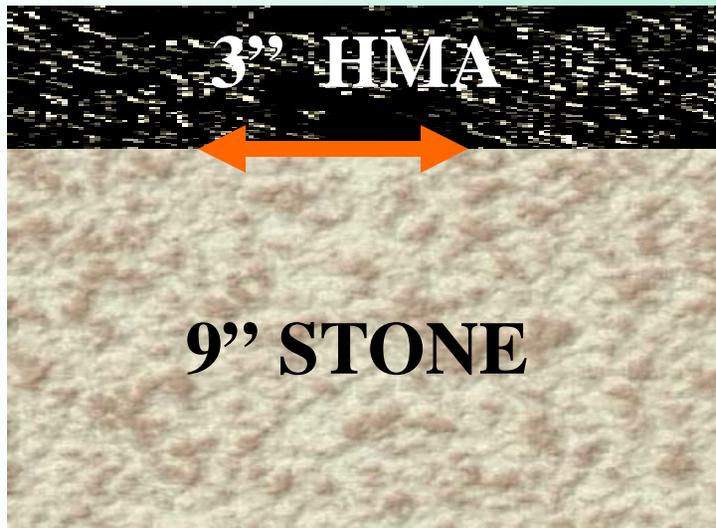
**NATURAL SUBGRADE**

# Extra-Bad Practice

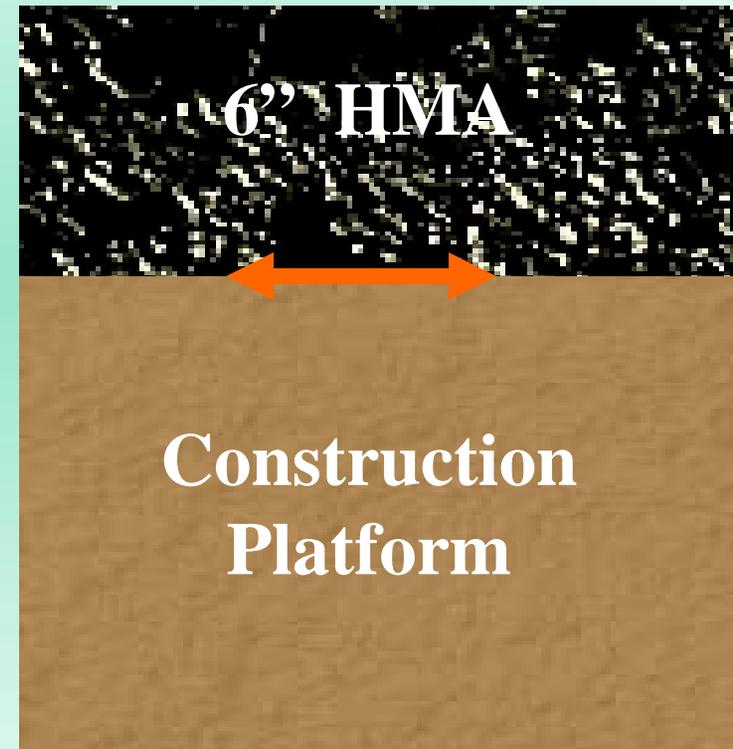


**NATURAL SUBGRADE**

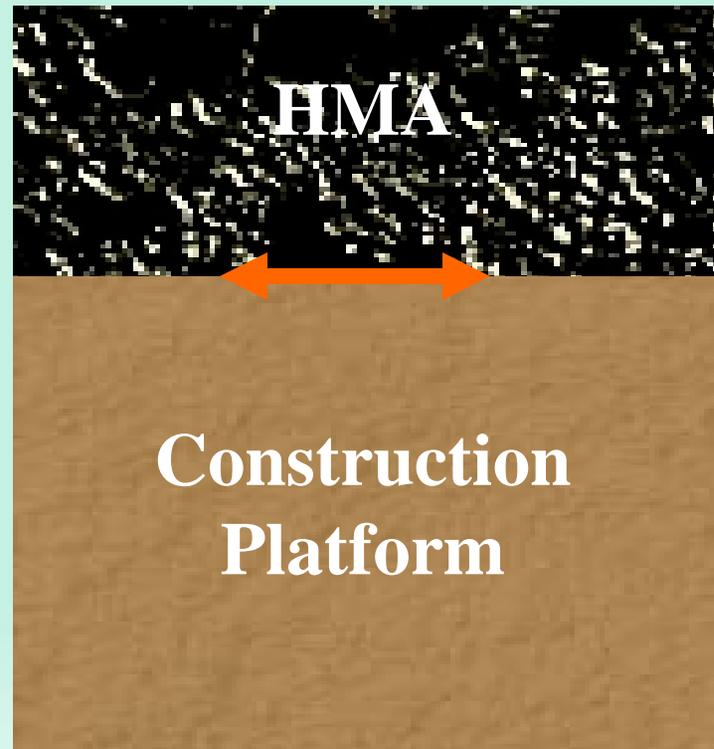
# The Alternatives



**OR**



# Full Depth Profile



# IDOT Stability Manual

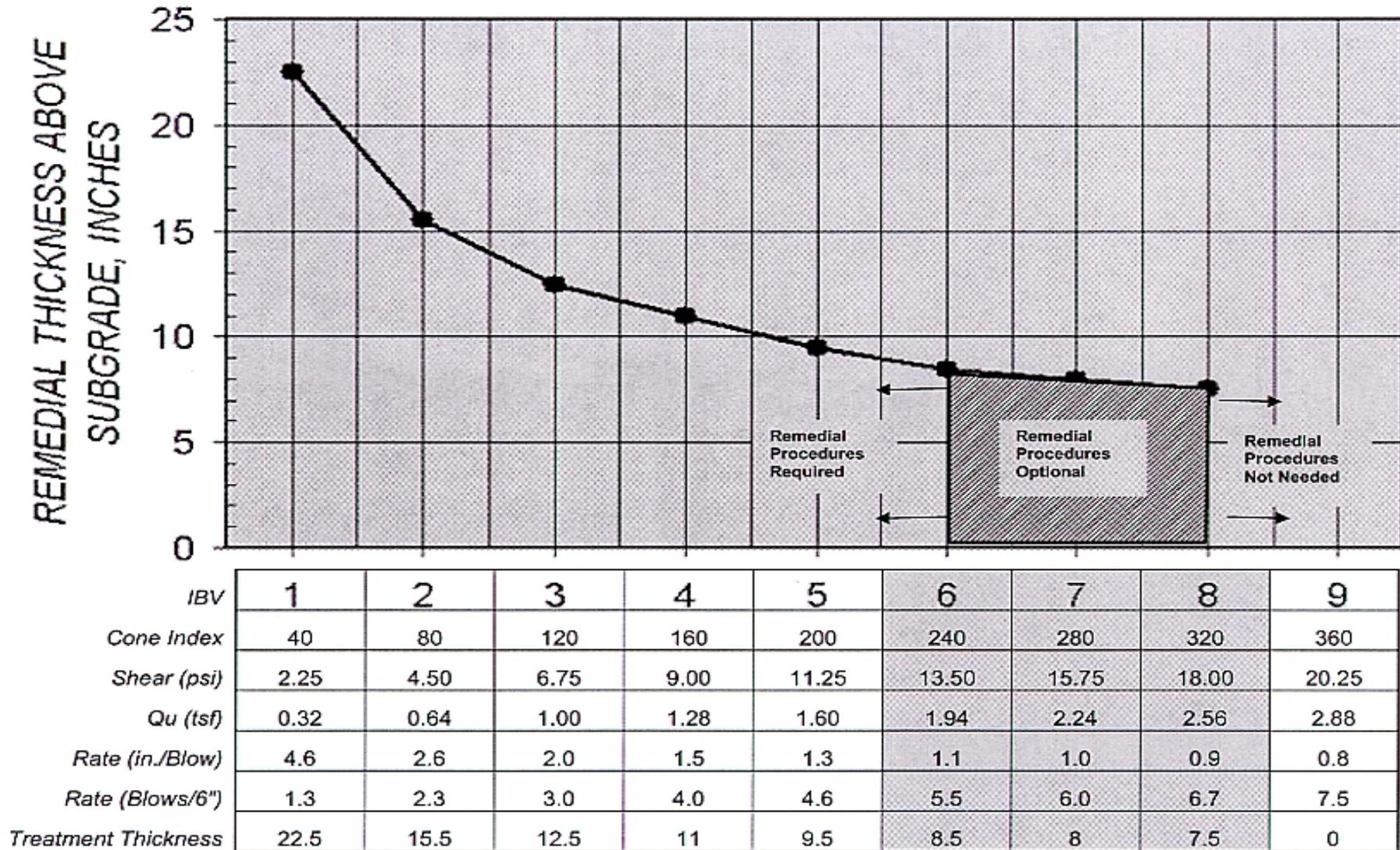


Figure A-2. Thickness design as a function of IBV, CI, and  $Q_u$  for subgrade treatment (granular backfill or modified soil).









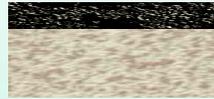




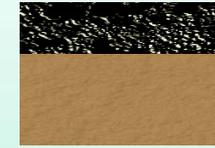


# Soil Modification Prices

<u>Area</u>	<u>\$/SY</u>
1,000 SY	\$8.45
5,000 SY	\$4.30
10,000 SY	\$3.20



3/9



6/CP

<u>Description</u>	<u>Cost</u>
Excavation	\$12,200
Curb & Gutter	\$136,400
Rock	\$67,800
2" HMA Binder	\$41,700
1" HMA Surface	\$22,500
<b>TOTAL</b>	<b>\$280,600</b>

<u>Description</u>	<u>Cost</u>
Excavation	\$6,100
Curb & Gutter	\$116,100
LMS	\$32,500
4" HMA Binder	\$73,500
2" HMA Surface	\$44,700
<b>TOTAL</b>	<b>\$272,900</b>

# Advantages of Full Depth HMA

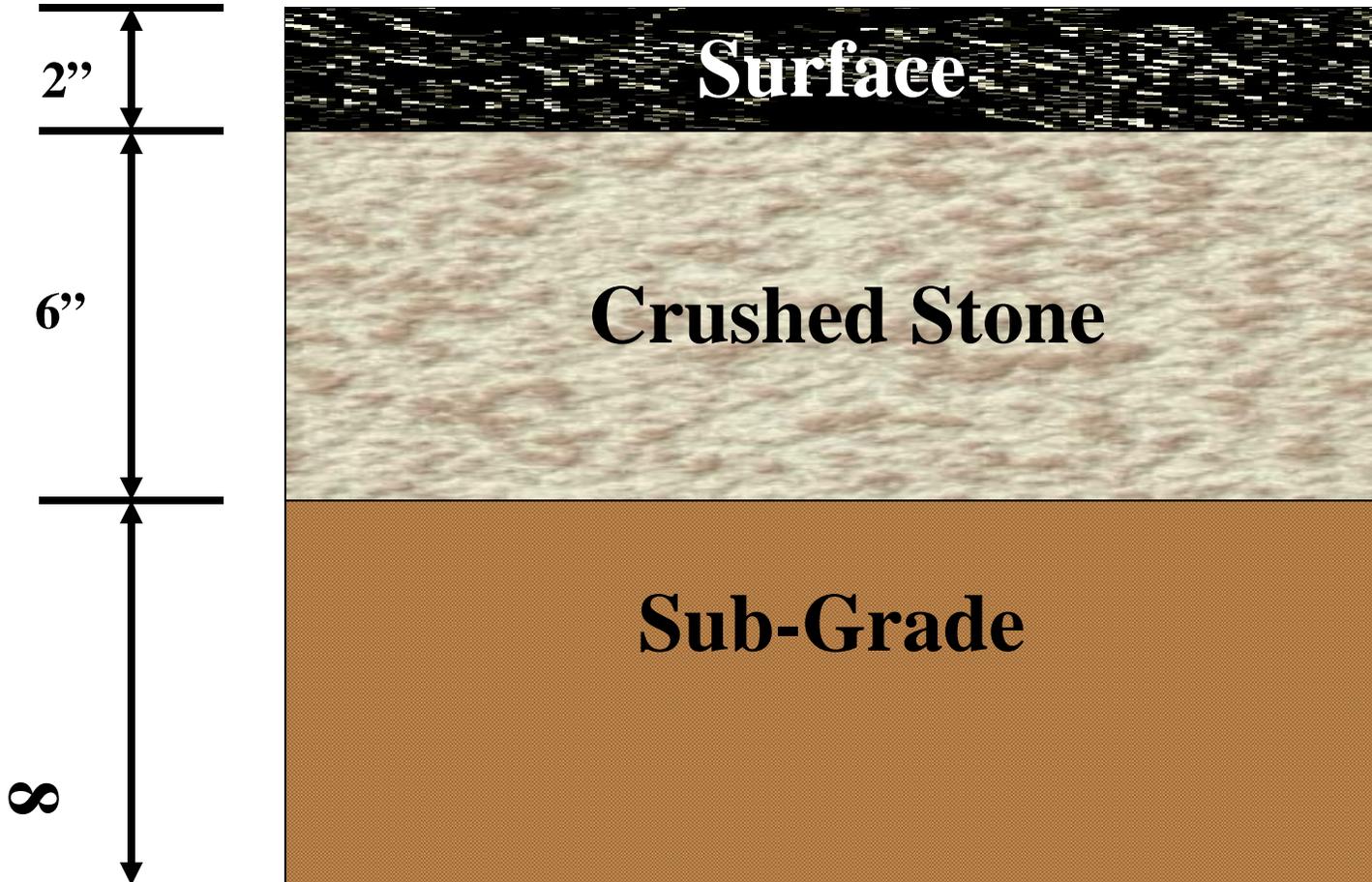
- Longer Life
- No Full-Depth Patching
- Rapid/Inexpensive Rehab
- Permanent Elevations



**Richard T. Berning, P.E.**  
**Deputy Director/City Engineer**  
**Office of Public Works**  
**City of Springfield**

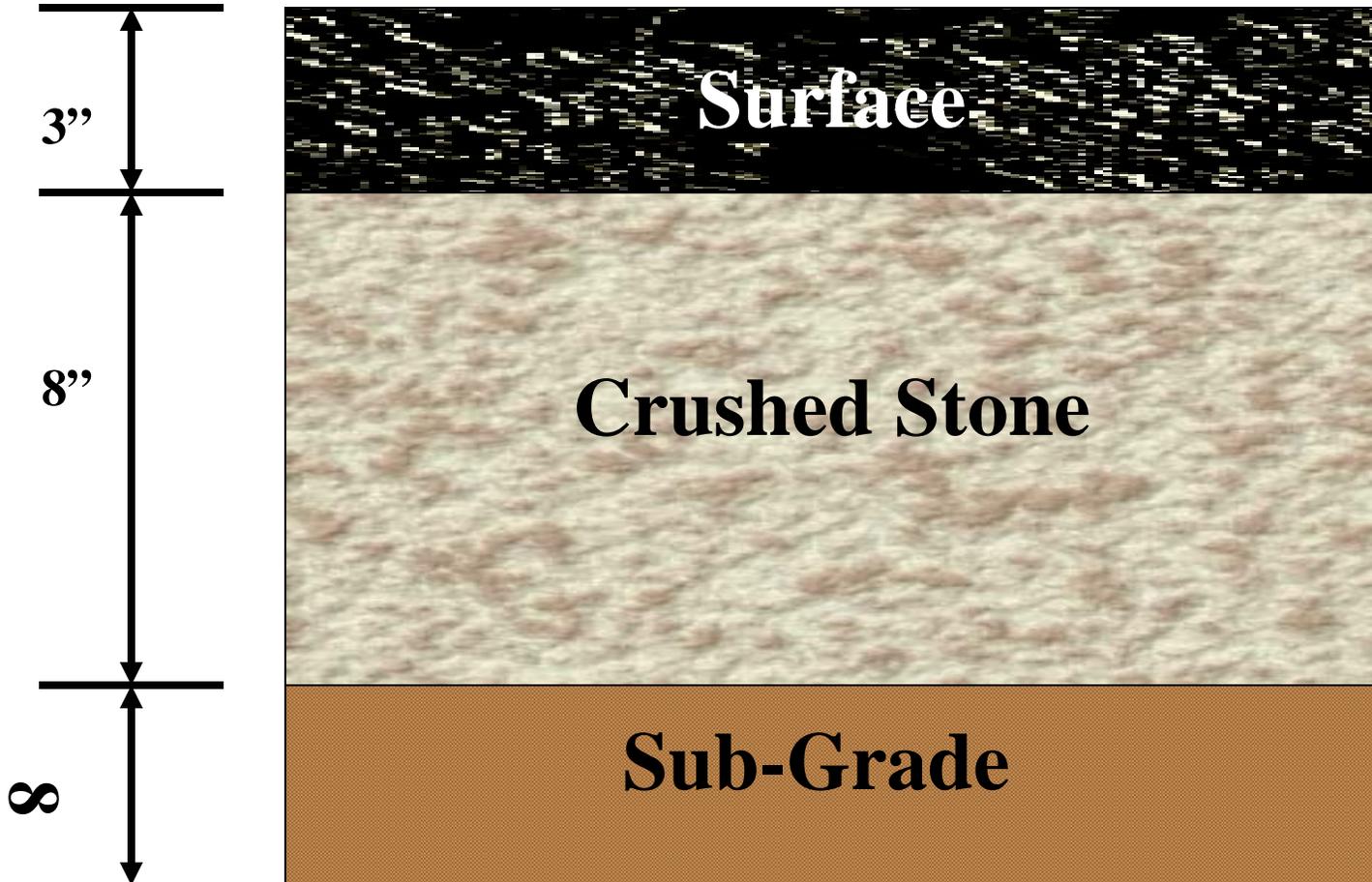


# 1965



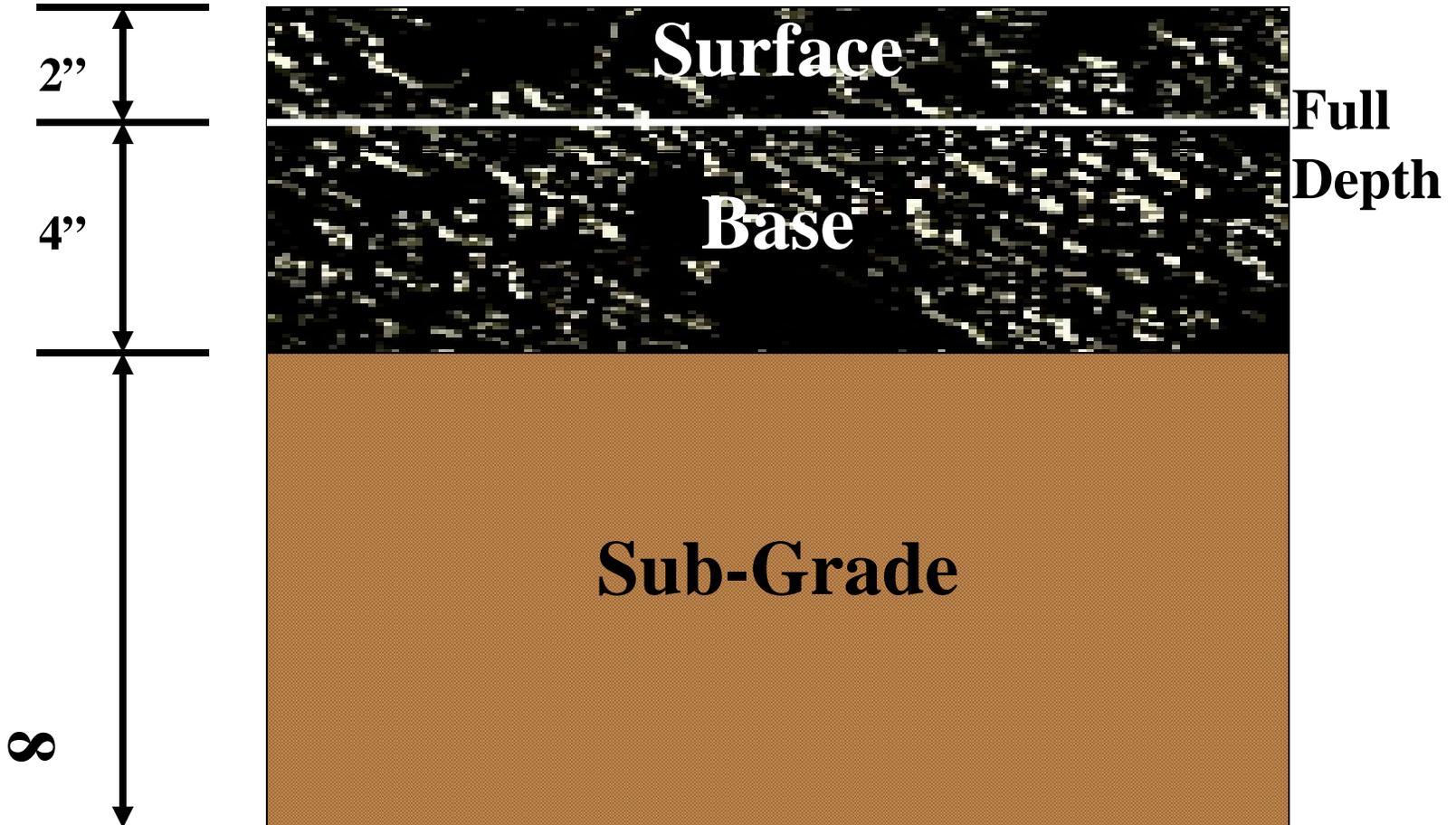


# 1975



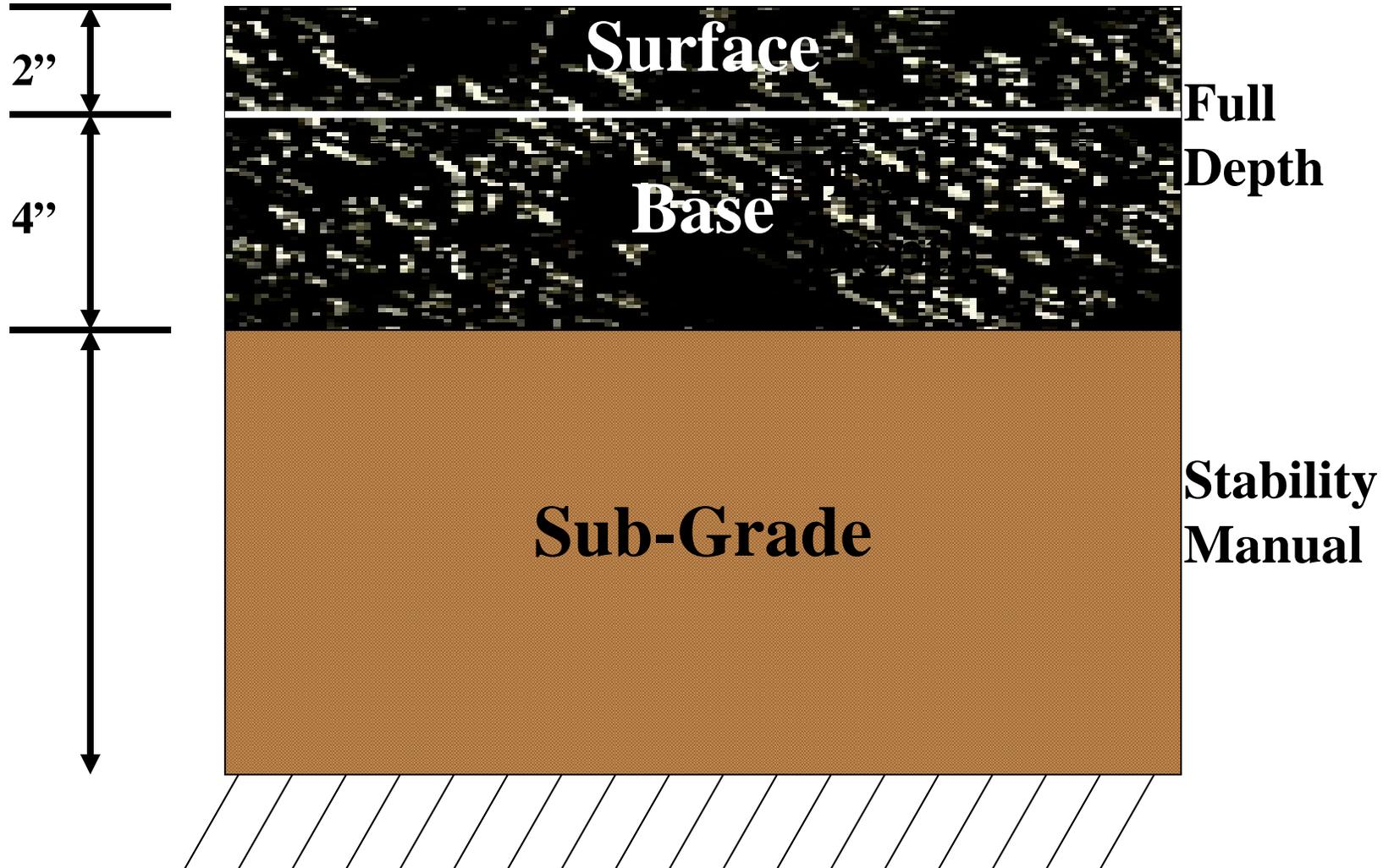


# 1988



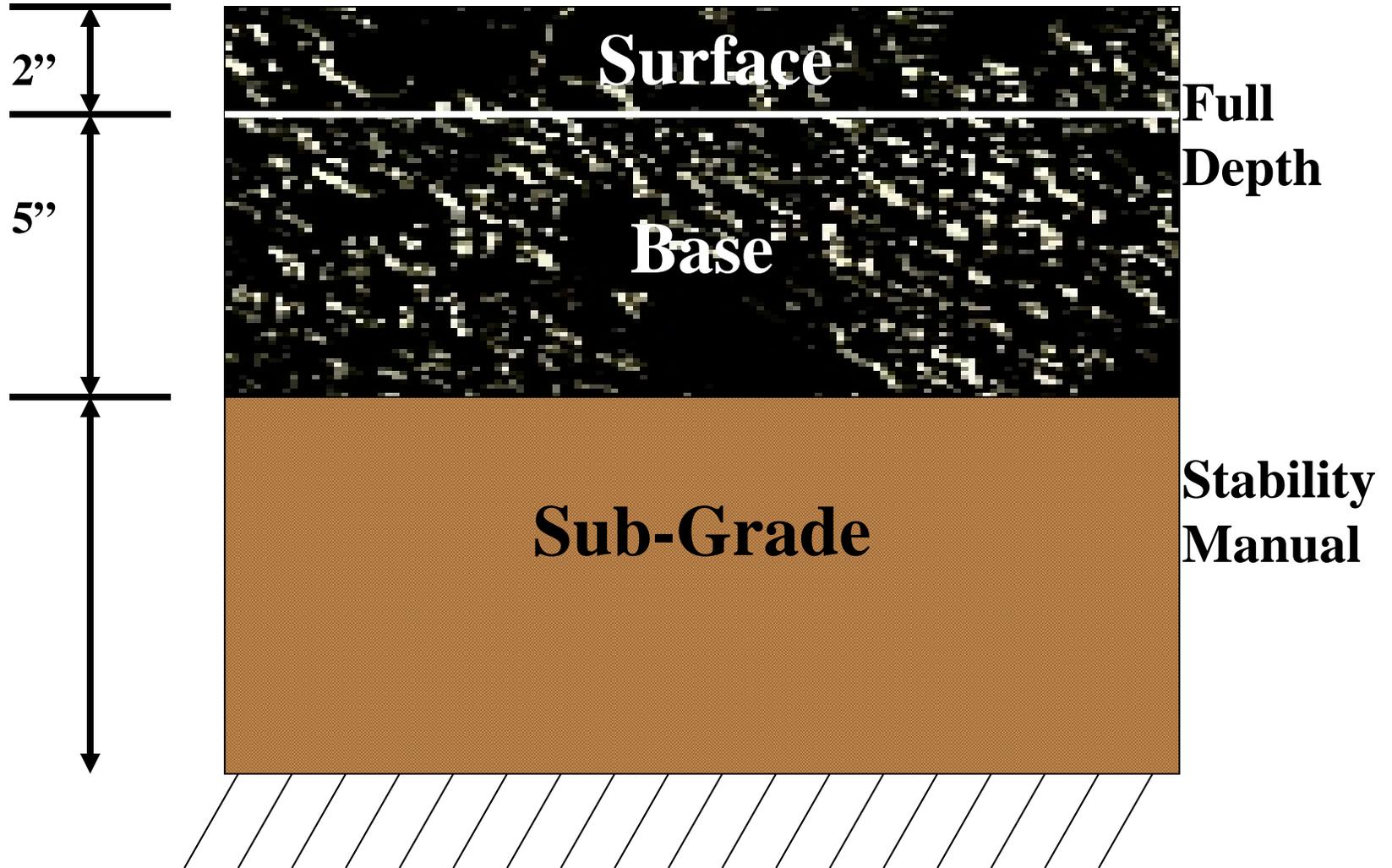


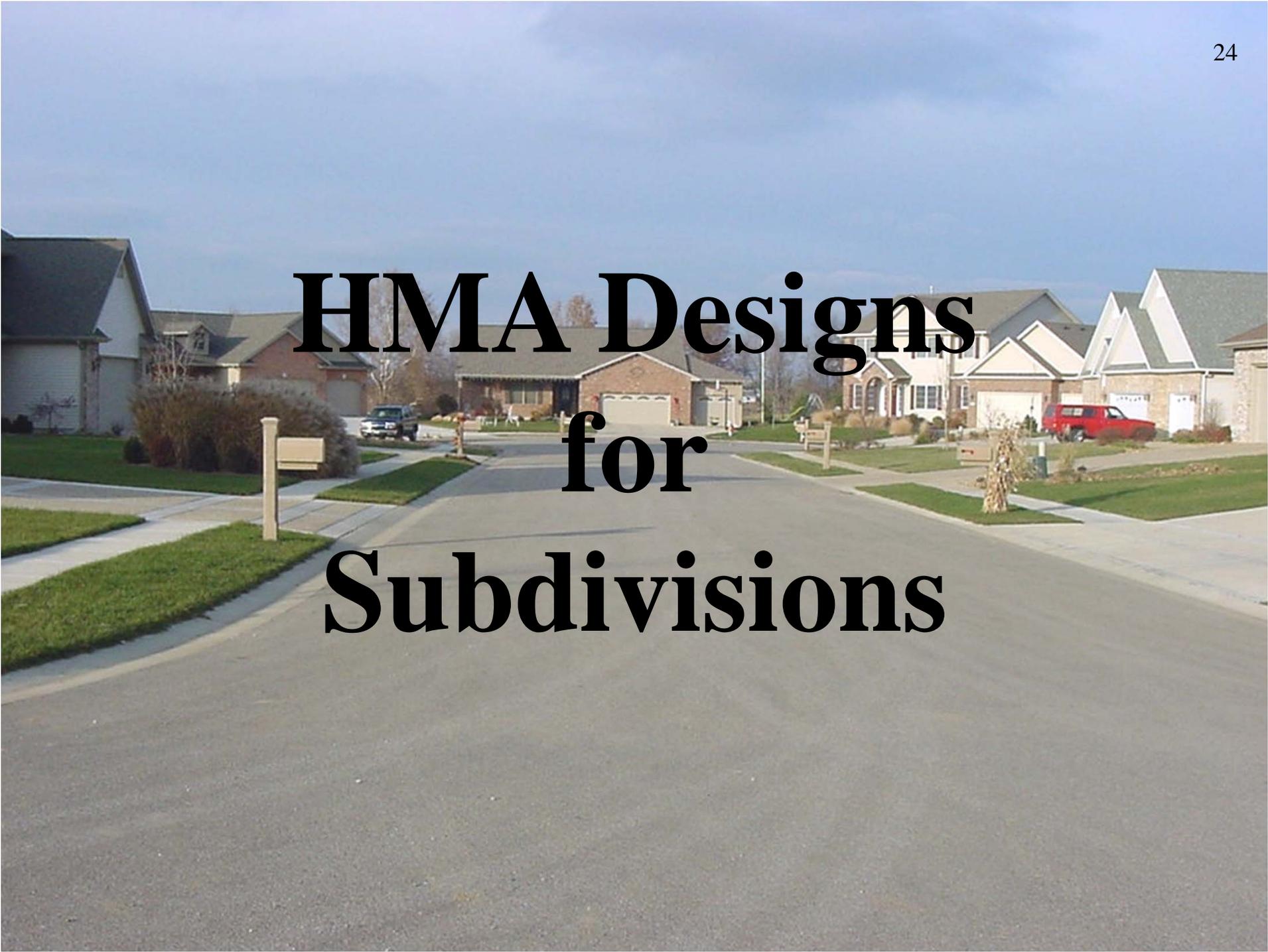
# 1993





# 1998





# HMA Designs for Subdivisions



**May 6, 2013**

**Marvin Traylor**