

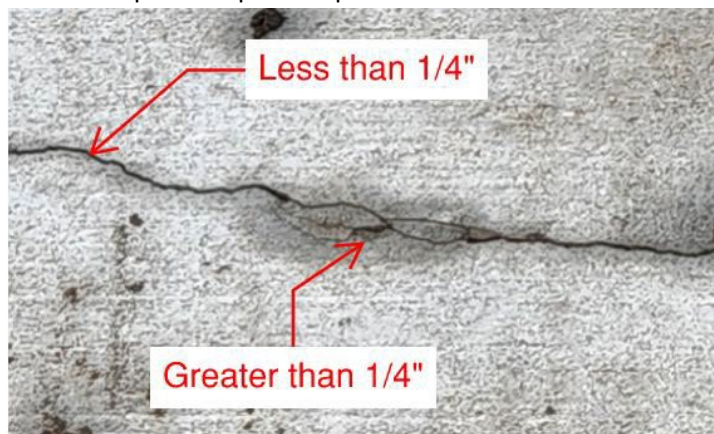
FINAL ENGINEERING INSPECTION REQUIREMENTS

No Sod/Stabilization

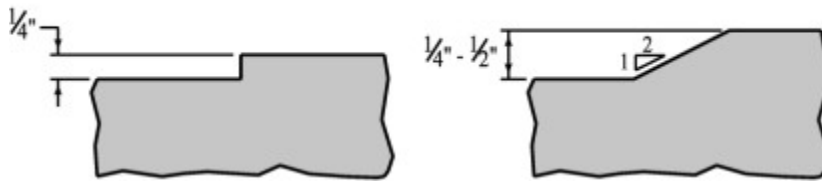
- Engineering inspection cannot take place until stabilization occurs. This means sod must be installed on entire lot or if hydroseeding, 70% germination must be achieved over entirety of construction area/property. (No large bare spots permitted)

Sidewalks:

- Entire sidewalk shall be installed as shown on City approved Site Plans or Construction Drawings and shall extend to the property lines.
- Sidewalk shall be placed 1 foot (12 inches) away from property line/Right-of-Way, unless otherwise shown in approved plans.
- Ensure sidewalk width matches what is shown on the City approved construction plan for property (5' or 8' are typical).
- Ensure saw cuts are provided at adequate spacing along entire length of sidewalk.
 - Except across driveways, panel length cannot exceed sidewalk width (i.e. 5' sidewalk can have a maximum of 5' between saw cuts)
- Ensure sidewalks are cleared of all debris for proper inspection, all forms are removed, and backfilling is completed to the top finished grade (see grading section).
- Ensure cross slope does not exceed 2% and running slope does not exceed 5.0%.
 - Turning spaces cannot exceed 2% in any direction.
 - Ramps slopes cannot exceed 8.3% running slope and 2% cross slope.
- Cracking:
 - Any cracks less than one-quarter inch ($1/4''$) but greater than one-eighth inch ($1/8''$) wide meeting the following criteria can shall be sealed:
 - Does not extend through a saw joint
 - Any cracking less than one-eighth inch ($1/8''$) wide will not require any kind of repair.
 - Any crack greater than one-quarter inch ($1/4''$) wide will require a full sidewalk panel replacement.
 - More than one crack in a single panel shall require full panel replacement.
 - The width of the crack will be measured at the location where the most significant cracking has occurred. See the spalling example to the right from a less than one-quarter inch ($1/4''$) crack that would require panel replacement due to the width requirement.



- Gouging:
 - Any gouges smaller than 4" x 4" or 16 square inches total can be patched.
 - Any gouges larger than 4" x 4" or 16 square inches total require full panel replacement.
 - Gouges greater than one-half inch ($\frac{1}{2}$ ") deep in the panel will require full panel replacement.
- ADA detectable warning ramps:
 - All ramps are observed by City of Ankeny personnel prior to the development being released to builders. If a ramp located on builders' property is broken prior to start of construction, send photographs to devengineering@ankenyiowa.gov.
 - Without photo documentation prior to start of building, builder will be responsible for repair or replacement of ramp and adjacent sidewalk.
- Tripping hazards:
 - Changes in level (vertically higher or lower), including bumps, utility castings, expansion joints, etc. shall be a maximum of one quarter inch ($\frac{1}{4}$ ") without a bevel or up to one-half inch ($\frac{1}{2}$ ") with a 2:1 bevel. Where a bevel is provided, the entire vertical surface of the discontinuity shall be beveled.



- All changes in level greater than one half ($\frac{1}{2}$) inch will require full panel replacement.

*** All hazards will be measured from the most extreme elevation change. Example: curb stop caps will be measured at side of cap near concrete, not the center of the cap.

- Bond Breakers/Forms:
 - Per Ankeny Supplemental Specifications Section 5, Part 3.10 (A) no bond breakers are allowed. The City of Ankeny specifies the use of A.Y. McDonald 5607 cap, which is designed to be poured into concrete.
 - Bond breakers include but are not limited to: tapes of all kinds, plastics, pipes or expansion form.
- Overflows:
 - Verify with grading plan if an overflow needs to be installed in sidewalk and follow grading plan for shaping.

Utilities:

- Water:
 - Curb Stop:
 - The City of Ankeny specifies the use of A.Y. McDonald 5607 cap.
 - Cap shall be surrounded with a minimum of 6 inches of concrete around the outside of the cap in all directions and is a minimum of 4 inches thick.
 - All multi-unit housing that has curb stops in a cluster (manifold), instead of at each unit, will require all to be permanently labeled (etched into the concrete) with each

unit's number. See Figure ANK 5010.3.10.D in the City of Ankeny Supplemental Specifications.

- Cap shall be level and flush with surrounding concrete.
 - Changes in level (vertically higher or lower), including bumps, utility castings, expansion joints, etc. shall be a maximum of one quarter inch ($\frac{1}{4}$ ") without a bevel or up to one half inch ($\frac{1}{2}$ ") with a 2:1 bevel. Where a bevel is provided, the entire vertical surface of the discontinuity shall be beveled.
 - All changes in level greater than one half ($\frac{1}{2}$) inch will require full panel replacement.

***Example: curb stop caps will be measured at side of cap near concrete, not the center of the cap.

***A great way to check if flush is to place a level object from form to form. If the object won't touch forms or there is a large gap between forms and cap, adjust accordingly. If unable to adjust, contact City of Ankeny Water Department for assistance. ***

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 - Bond breakers include but are not limited to: tapes of all kinds, plastics, pipes or expansion form
- If cap is damaged during grinding of surrounding concrete, replacement of cap and surrounding concrete will be required. Damage includes any removal of metal from the cap.
- Ensure nut in cap is screwed down and flush with rest of cap and that it is accessible (remove concrete as needed).
- Water Main Valve:
 - Casings are screw type and elevation can be adjusted by turning.
 - Ensure no damage has been done to casing or lid, the casing is straight to allow access to shut off nut on water line and casing is free of debris.
 - Ensure lid/casing is flush with surrounding final grade to prevent future damage.
 - If in concrete, ensure lid/casing is flush with surrounding concrete and that cap can be removed.
 - Refer to tripping hazards for elevation change requirements and corrective actions.
 - Ensure lid sits flush with the top of casing. (If turned too far, the lid does not fit correctly)
- Fire Hydrant/Auxiliary Valve:
 - Fire Hydrant shall have trace wire box that is free of damage. If damaged, replacement will be needed.
 - Auxiliary Valve shall follow the same requirements as water main valve section and will be located a minimum of 18-inches from hydrant, between the hydrant and the water main.

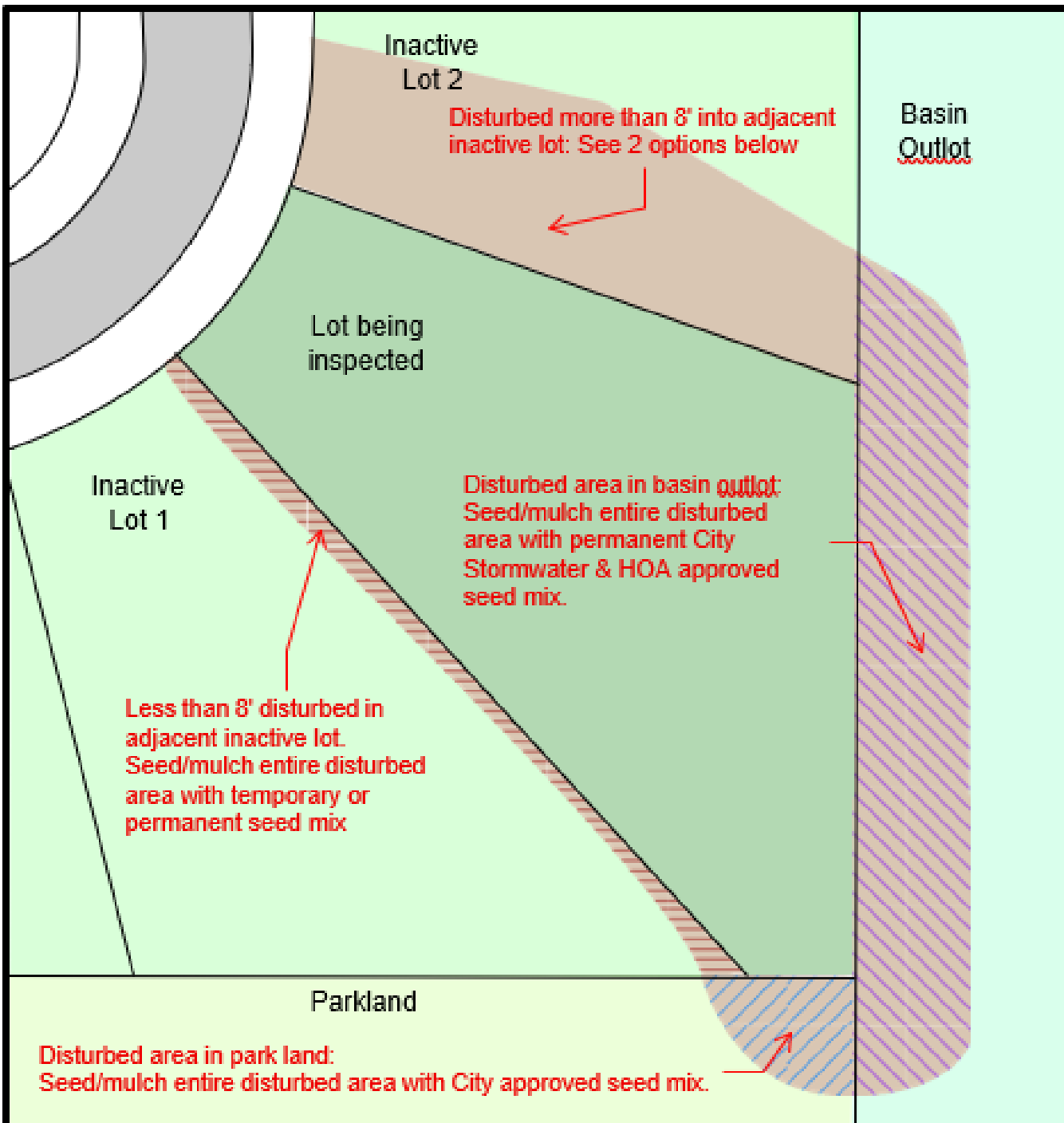
- Storm:
 - Ensure all manholes are completely uncovered, accessible, and flush with top of finished grade.
 - Ensure all manhole castings are centered and adjusting rings are not damaged.
 - If uncentered, move casting back to center.
 - If adjusting rings are damaged, they will need to be replaced.
 - Ensure manhole is free of debris; if not, clean out.
 - Intakes/Aprons should be free of debris or damage with grates in place and undamaged.
 - For commercial & multi-unit construction, remove any filter fabric once stabilization in area has occurred.
 - Any damage shall be replaced or repaired and debris should be removed.
 - Manholes or intakes should NOT be located in driveways.
- Sanitary:
 - Ensure all manholes are completely uncovered, accessible, and flush with top of finished grade.
 - Ensure all manhole castings are centered and adjusting rings/barriers are not damaged.
 - If uncentered, move casting back to center.
 - If adjusting rings or barrier is damaged, they will need to be replaced.
 - Ensure manhole lid seal is intact for entire circumference.
 - If damaged, will need reinstalled or replaced.
 - Ensure manhole is free of debris, if not clean out.
 - Clean out lids shall be uncovered, accessible, and flush with top of finished grade.

Grading:

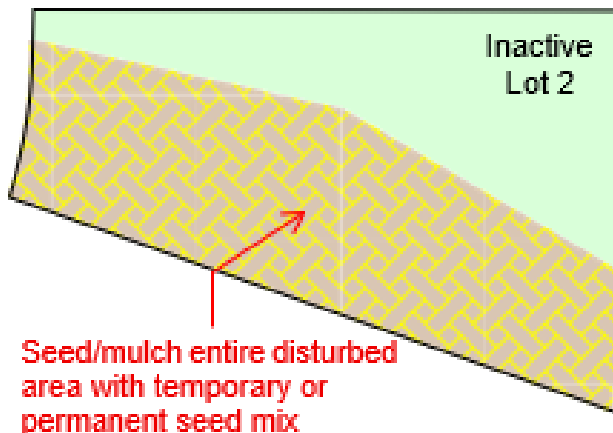
- Grading shall be done so it follows the approved grading plan for the plat. Contact devengineering@ankenyiowa.gov if you need a copy of the grading plan.
 - All swales should be in place.
 - Runoff should flow in the proper direction.
- Grading shall not shed runoff directly into neighboring property buildings.
- Ponding areas not called out in grading plan will need to be regraded.
- Backfill around sidewalks and utilities to the top of finished grade to remove elevation change.
- Some plats require elevation shots to be taken by a licensed land surveyor and will need to be submitted to devengineering@ankenyiowa.gov for review before acceptance. The approved Final Plat and the approved Grading Plan can be used to verify if these are needed.
- Any altering of grading plan requires prior approval of City of Ankeny Development Engineering department.
- Any structure placed in a drainage easement shall be removed.
- If final positive drainage is uncertain, the grading shall be modified or proof of positive drainage by survey grade elevations shall be provided to the City for approval.
- Refer to the Miscellaneous items & Off-Site Stabilization Figure for how to address any areas disturbed beyond the property during grading

Miscellaneous:

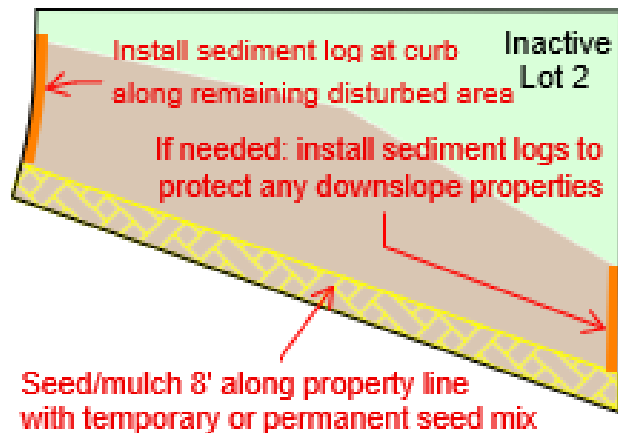
- Once stabilization has taken place, all erosion control devices on property need to be removed.
 - If building on adjacent properties, sediment logs can remain in place if properly installed at property lines. No piles of controls will be allowed.
- Areas outside of construction limits or property lines (unless has same owner as address being inspected):
 - All debris piles will need to be removed. This includes, but is not limited to, excess soil, erosion control device piles, concrete, building materials, dumpsters and porta potties.
- All construction stakes and t-posts should be removed.
- If a light pole on builders' property is damaged prior to start of construction, send photographs to devengineering@ankeyniowa.gov prior to start of construction. Without photo documentation received prior to start, builder will responsible for repair/replacement costs.
- Areas that are not stabilized due to the homeowner installing special landscaping require a signed document from the homeowner.
- Areas disturbed on any adjacent lot without an active building permit:
 - *Refer to the off-site stabilization figure on the next page.
 - Grade the disturbed area to remove any ruts and ensure it drains properly
 - Seed and stabilize the entire disturbed area (or at least 8' adjacent to the shared lot line, whichever is less for lots that will be built on in the future).
 - Either temporary or permanent types are acceptable for lots that will be built on in the future.
 - For parklands, basin areas, outlots, or established lots, permanent seeding is required.
 - *Areas near basins and City-owned properties typically require specific types of seeding, and a seed ticket will need to be provided showing this was used. Contact City Stormwater staff for specific seed mixes.
 - All seeding requires mulch to hold the seed in place. Straw matting (securely stapled/staked down), evenly spread loose straw, or hydro-mulching are acceptable mulching types.
 - Install sediment logs along the curb front for remaining disturbed areas beyond the 8' adjacent to the shared lot line. Sediment logs may need to be installed along the downslope side(s) in addition to this if deemed necessary.



OVER 8' DISTURBED, OPTION 1:



OVER 8' DISTURBED, OPTION 2:



OFF-SITE STABILIZATION REQUIREMENTS FIGURE

DATE
06/23