

Upcoming Utilities Department Projects Anticipated To Have Plans
and Specifications Filed – August, September, October
Report for Council Infrastructure Committee on 7-19-2016

Filing Plans and Specifications

Water and WPC Plant Projects

Filing August 9 – Raw Water Main Relocation (6250044). The Low Lift Pump Station off J Avenue served as the main source of water for the City of Cedar Rapids prior to the early 1960's. Ground water well fields replaced surface water as the primary source of drinking water for the City, and the Low Lift Pump Station is no longer in use. Leaks in piping inside the building have caused flooding in the basement of the structure, adding to the degradation of the building. The Low Lift Pump Station is slated for eventual demolition. To minimize the risk of future leaks and flooding, the Utilities Department will have the pipes connected to the 30-inch raw water intake main disconnected and plugged, and a new raw water line installed to bypass the Low Lift Pump Station structure. The Engineer's opinion of probable cost is currently \$670,000.

Filing September 13 – WPCF Sludge Screen Replacement (615212). The existing primary sludge screen at the WPCF is undersized for some loading conditions, lacks redundancy, and has reached the end of its expected life. The project will include the installation of a new screen and associated appurtenances. The existing screen will be left in place to serve as a backup unit to the new screen. The Engineers opinion of probable cost was \$800,000 at the preliminary design stage.

Water Main Projects

The following water main work has been planned in conjunction with Paving for Progress projects or other Public Works projects. Bid Dates:

Sept. 28 – 3012155 / 2016041 3rd Ave SW from 6th Street SW to 1st Street SW (PfP)
Water Main Replacement Construction Budget \$191,000

Upcoming Public Hearings

August 23 – Raw Water Main Relocation
September 27 – WPCF Sludge Screen Replacement

Maintenance Repair

Design of the repair of the 24-inch F Ave NW Transmission Main crossing the Vinton Ditch is underway. Planning for construction in August or September. Construction Budget: \$65,000



To: City Council Infrastructure Committee
From: Doug Wilson, PE, Paving for Progress Program Manager
Subject: Update – Paving for Progress
Date: June 21, 2016

Background:

Monthly update intended to provide status Paving for Progress.

Project Description:

List of Paving for Progress projects that have items that will be on upcoming agenda Council Agendas.

Update:

Three projects scheduled for 2017 and 2018 will have professional services agreements on the Council agenda for approval:

C Street SW from Bowling Street SW to Wilson Avenue SW
E Avenue NW from Stoney Point Road NW to 80th Street NW
Ellis Boulevard NW from I Avenue NW to O Avenue NW

Work completed on Park Place NE, Leroy St SW and Spencer Drive NW. Works continues on twelve other PfP projects and are on schedule for completion in 2016.

No upcoming bid openings.

Requested time on agenda: 5 minutes.



To: City Council Infrastructure Committee
From: Michael Duffy
Subject: Update – Street Maintenance Projects
Date: July 19, 2016

Background:
Provide information regarding Street Maintenance projects.

Project Description:
Maintenance projects at various locations across the City.

Update:
Burch Avenue NW (P4P)
7th Street SE
Sherman and 47th Street NE
Rolling Green Development SW (P4P)
Shoulder repairs SW
Crack Filling NW
Seal Coat – I Ave, J Ave, and Q Ave NW

Street Sweeping
Point Asphalt repairs

Requested time on agenda: 5 min



To: City Council Infrastructure Committee
From: Matt Myers
Subject: Update – Striping and Two-Way Conversions
Date: July 19, 2016

Background:

Traffic operations includes signals, roadway markings, and signage impacting pedestrian/cyclist movements, and traffic flow.

Project Description:

Striping of streets and two-way conversions.

Update:

Striping Program

Long-line striping has completed 350,013 feet or 25% of the program. There were 2 events which impacted production this past month – crews assisted in traffic control for Freedom Festival parade and fireworks as well as Ellis Park fireworks; the striper required un-scheduled mechanical repairs. Crews are expected to complete the program by October 1st.

We also created a webpage on the city's website devoted to striping. A graph of the number feet completed will be provided along with other details of the program. Link to the webpage is [HERE](#).

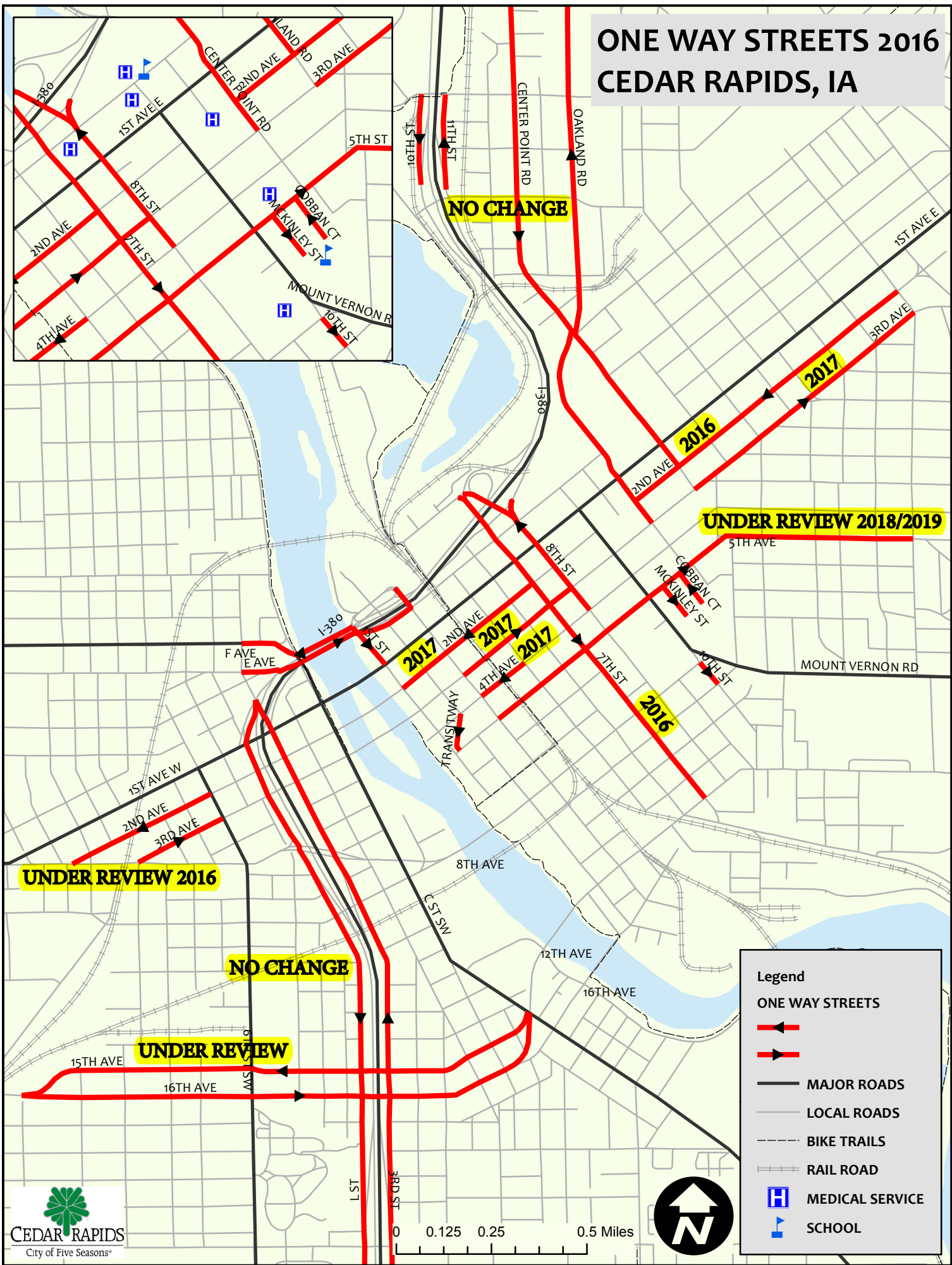
Two-way Conversions

We have finished roadway plans for the 2-way conversion of 2nd Avenue from 12th street to 19th Street. The next step is to submit the plans for letting to the City Clerk's office. A map of other one-way roads noted with a projected date for conversion is provided. Other portions of 2nd and 3rd Avenue are currently being designed for 2016 construction season.

We have received agreements from Union Pacific for adding lights, gates and medians to the railroad crossings along 4th street. These agreements are being reviewed by Public Works and Finance prior to being executed by the City. These crossings require modifications due to the conversion's and potential quiet zone in the downtown area.

Requested time on agenda: 5 min

ONE WAY STREETS 2016 CEDAR RAPIDS, IA





Infrastructure Committee Meeting Agenda Item Cover Sheet

Submitting Department: Public Works Department

Presenter at meeting: Cara Matteson

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Alternate Contact Person: Jen Winter

Phone Number/Extension: 5803

E-mail Address: J.Winter@cedar-rapids.org

Description of Agenda Item: Request for approval and recommendation to Council of amendment to the following ordinances to create a "topsoil rule": Chapter 71 (Erosion and Sediment Control for Construction Sites) to include a new permit fee schedule for Major and Minor Erosion Control permits; Chapter 72 (Stormwater Management) to include topsoil preservation and restoration requirements for both private and public developments

Background: Chapter 71: Additional SWPPP requirements will ensure erosion control measures are implemented for all construction phases, as well as adequate documentation of erosion control efforts. Minor Erosion Control permit application requirements include additional erosion control plan elements to ensure a site has adequate controls. A permit fee schedule for both Minor and Major Erosion Control permits will support administration of the erosion control and topsoil program; to date, no permit fee has been established. Definition modifications and additions, and statements regarding publically-funded projects, are included to support implementation of the topsoil policy. Chapter 72: The topsoil policy requires that existing topsoil be retained and redistributed on site in a uniform, uncompacted manner, and implementation of a Soil Quality Plan (soil management method(s) selected from Chapter 5, Section 6, Part F of the Iowa Stormwater Management Manual) on private and public development sites requiring a Major or Minor Erosion Control permit. This will preserve benefits of healthy soil that removal of topsoil and construction activity diminishes or eliminates, by infiltrating stormwater and decreasing runoff, resulting in decreased flooding and erosion, water quality protection, and homeowner benefits.

Action / Recommendation: Approve and Recommend to Council.

Alternative Recommendation: Modify based on Committee feedback and place on next month's agenda.

Time Sensitivity: Normal

Estimated Presentation Time: 15 minutes

Budget Information (if applicable): NA

Explanation (if necessary): NA

City of Cedar Rapids Proposed Soil Quality Policy

Background

- Stormwater Management Goals
- State 4" Topsoil Rule modified, 2015
- City topsoil policy drafted summer 2015
- Continued communication & coordination
 - Monthly meetings with Home Builder's Association, Sept 2015-present

Soil Sampling Analysis

	Topsoil	Tested Residential Lots (averages)
Organic Matter	$\geq 3\%$	5%
Clay Content	$< 40\%$	69%
pH	6-8	7.35
Texture	Loose, friable	97% compacted
Dry Density/Porosity	$< 1.3 \text{ g/cm}^3$	1.62g/cm³
Infiltration Capacity	$> 0.5 \text{ in/hr}$	0.14 in/hr

- All samples consisted of predominately clay topsoil
- Majority of the lots were compacted beyond the ideal for root growth ($> 1.58 \text{ g/cm}^3$) and infiltration.
- All sites sampled were heavily compacted

Compaction Impacts

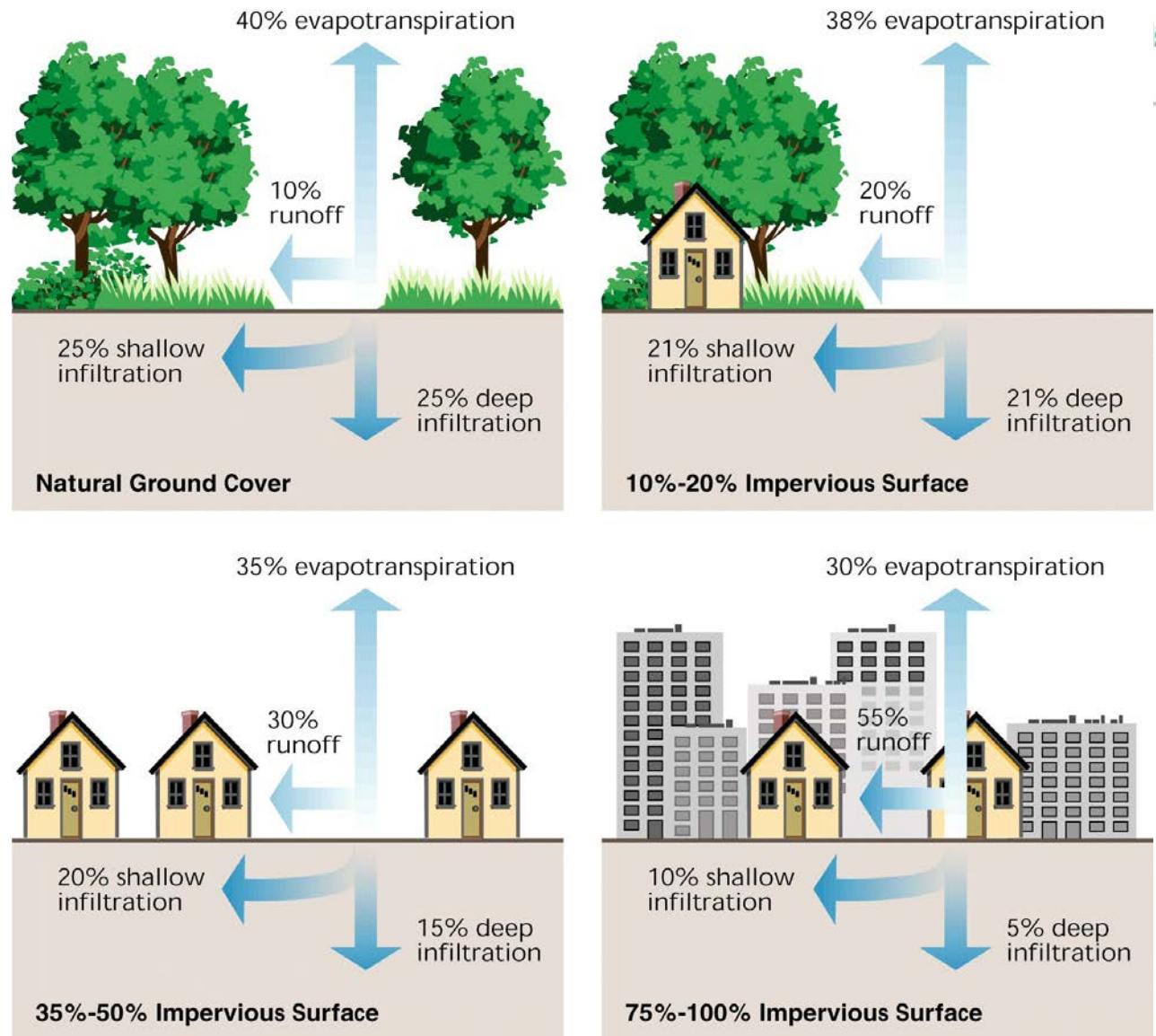


Fig. 3.21 -- Relationship between impervious cover and surface runoff. Impervious cover in a watershed results in increased surface runoff. As little as 10 percent impervious cover in a watershed can result in stream degradation.

In Stream Corridor Restoration: Principles, Processes, and Practices (10/98).

By the Federal Interagency Stream Restoration Working Group (FISRWG) (15 Federal agencies of the U.S.)

Soil Quality Proposal

- Purpose of Policy
 - Retain or Restore Soil QUALITY
 - Light compaction of fertile soil
 - Infiltration of stormwater on site
 - Be flexible, cost-effective, consistent
- Results of Policy
 - Reduced Runoff
 - Enhanced Water Quality
 - Vital Urban Landscapes

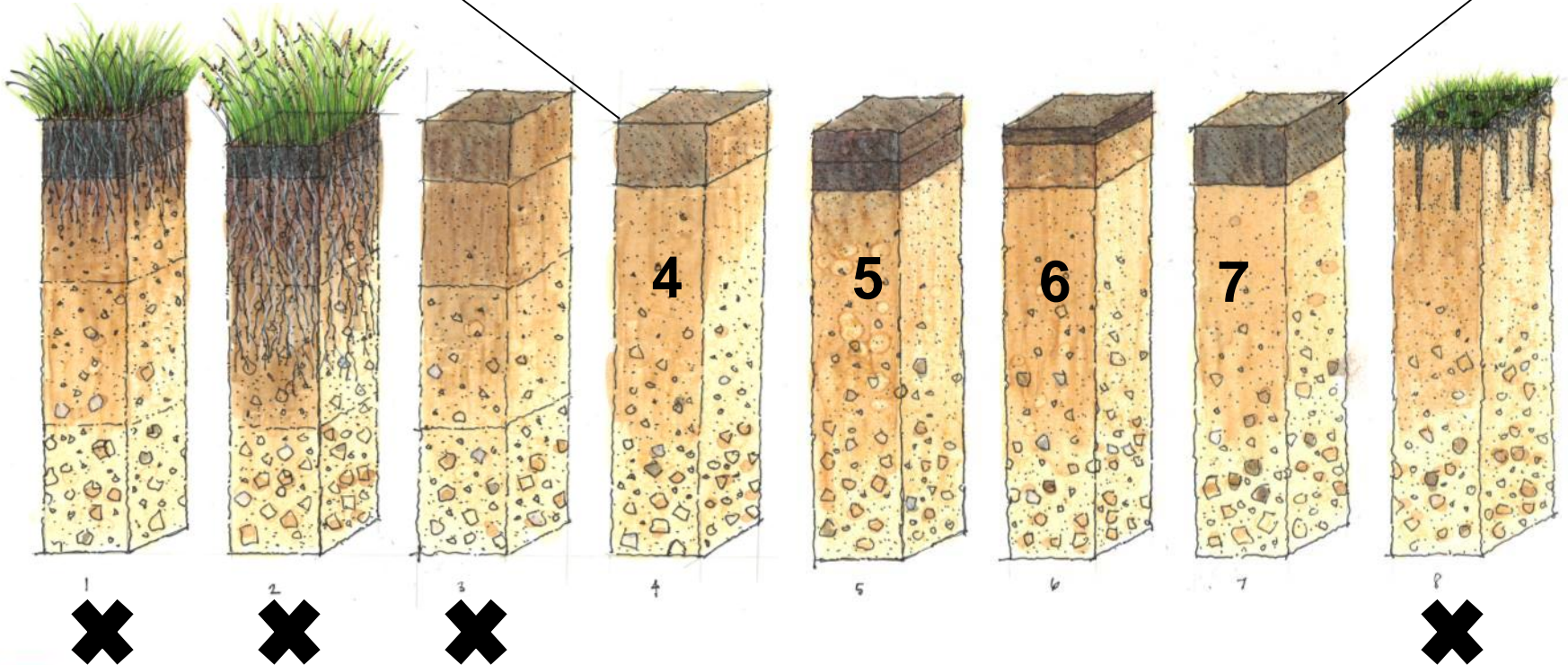


City's Draft Policy

- Select a Soil Quality Plan
 - 1 of 8 soil management methods
 - Iowa Stormwater Management Manual
 - Chapter 5, Section 6, Part F

Methods

Method	Tillage Depth (inches)	Topsoil Depth (inches)	Compost Depth (inches)	Sod
4	0	7	0	1
5	1-6	1-6	0	1
6	5-6	0-1	1	1
7	7-8	0	2	1



Greater Cedar Rapids HBA Development Council Proposal

- *“HBA recognizes the value of healthy lawns, minimization of soil compaction, decreased run off, and the feasible preservation of top soil on-site are worthwhile objectives”*
- Have proposed a 2-step process
 - Retain all topsoil on-site and spread to 4 in.
 - If 4 in. is not available will select 1 of 8 methods available per the Iowa Stormwater Management Manual

Recommended Soil Quality Policy

- Option 1
 - Strip, stockpile, and respread topsoil to a depth of 4"
- Option 2
 - Utilize Iowa Stormwater Manual management methods

Goal of a soil quality policy is to maintain a healthy soil profile and minimize compaction

Questions?

