The purpose of this memorandum is to describe the process used to determine the “reasonably necessary area for construction” for repair of Branch 1 and Branch 1 Lateral 1 of the Anoka County Ditch 53-62 public drainage system. Legal counsel provided guidance to the Board of Managers and the District Engineer relative to determining the reasonably necessary area for construction by Memorandum dated November 5, 2012. This Memorandum describes the technical approach used to establish the reasonably necessary area for construction and is intended to be consistent with Legal Counsel guidance.

Per MS 103E, the Drainage Authority has an implied right of access to the public drainage system to complete necessary repairs and maintenance, consisting of an area deemed reasonably necessary area for construction. The reasonably necessary for construction essentially represents the “construction limits” for repair of the public drainage system. To provide the landowners adjacent to the public drainage system with an understanding of the planned construction limits, District staff and Houston Engineering have collaborated to generate a series of maps (one for each landowner within the construction limits) that show the reasonable necessary area for construction. The maps also show the type of work to be completed to repair the public drainage system, as the rationale for the amount of area needed.

The reasonably necessary area for construction was determined based on several factors, including the width (bank-to-bank) of the existing open channel, the bank slope, the side of the open channel most practicable for work access, the amount of material to be excavated and the type of work necessary to complete the repair. The construction limits generally consist of the area of the open channel between tops of the banks, plus land adjacent to both sides of the channel used for access and placement of excavated material (i.e., spoil) and vegetation (e.g. trees and woodchips).

Segments of ACD 53-62 Branch 1 to be repaired were categorized into eight distinct work types:

1) No Excavation or clearing. Maintenance may be required.

2) Excavate channel, place spoil at top of bank. No tree removal required.

3) Excavate channel. Clear trees & brush. Place spoil and debris at top of bank.

5) No excavation. Clear trees & brush and place at top of bank.


7) Culvert Replacement.

8) Excavate new channel. Clear trees and brush. Place spoil and debris at top of bank.

The work types for each open channel segment were determined through a field review (i.e., physically walking the channel) conducted by HEI in November, 2014. Locations where the existing open channel bottom is above the “repair profile” (as described in the ACD 53-62 Repair Report) will be excavated to the repair profile. Wooded locations within the construction limits that are immediately adjacent to urban residential yards will be cleared and the debris chipped. Other wooded areas within the construction limits will be cleared and the material placed within the construction limits adjacent to but outside of the channel.

Maps showing the construction limits are included as Attachment A to this memorandum. District staff mailed maps to each landowner adjacent to the public drainage system.
Access Route for Construction

Property Lines (Approximate)

Work Type Number

1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.

Lateral 1 Realignment (By Others)
Lateral 1 Realignment (By the District)
Begin/End Work Limits
Areas Reasonably Necessary for Construction
Work Type Key:
1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.
Work Type Key:
1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.
**Work Type Key:**

1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.
Work Type Key:
1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.
Lateral 1 Realignment (By Others)

Lateral 1 Realignment (By the District)

Begin/End Work Limits

Areas Reasonably Necessary for Construction

Work Type Key:

1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.
Work Type Key:

1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.
Work Type Key:

1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.
Work Type Key:

1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.

Lateral 1 Realignment (By Others)
Lateral 1 Realignment (By the District)
Begin/End Work Limits
Areas Reasonably Necessary for Construction

Property Lines (Approximate)

Work Type Number
Work Type Key:
1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.

Lateral 1 Realignment (By Others)
Lateral 1 Realignment (By the District)
Begin/End Work Limits
Areas Reasonably Necessary for Construction

Property Lines (Approximate)
Work Type Number
**Work Type Key:**

1. No Excavation or Clearing. Maintenance May be Required

2. Excavate channel, place spoil at top of bank. No tree removal required.


5. No Excavation. Clear trees & brush and place at top of bank.


7. Culvert Replacement.

Lateral 1 Realignment (By Others)
Lateral 1 Realignment (By the District)
Begin/End Work Limits
Areas Reasonably Necessary for Construction

Property Lines (Approximate)

Work Type Number

Work Type Key:
1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush, and place at top of bank.
7. Culvert Replacement.
Work Type Key:
1. No Excavation or Clearing. Maintenance May be Required
2. Excavate channel, place spoil at top of bank. No tree removal required.
5. No Excavation. Clear trees & brush and place at top of bank.
7. Culvert Replacement.

Map Book - ACD 53-62 Approximate Construction Areas

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