

2015 BASSETT CREEK RESTORATION PROJECT

Item 6B.
BCWMC 3-19-15

GOVERNING SPECIFICATIONS

2015 BASSETT CREEK RESTORATION PROJECT SPECIAL PROVISIONS
2015 BASSETT CREEK PLANS
CITY OF GOLDEN VALLEY GENERAL CONDITIONS
CEAM STANDARD SPECIFICATIONS
THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION."

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL COMFORM TO THE MN MUTCD INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, DATED JANUARY, 2004. ALL TRAFFIC CONTROL DEVICES SHALL HAVE RETROREFLECTIVE SHEETING.

STORM SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY ENGINEERS ASSOCIATION OF MINNESOTA STANDARD UTILITIES SPECIFICATIONS.

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE PLAN
3	GENERAL NOTES
4-5	STREAMBANK STABILIZATION DETAILS
6-10	SITE PLAN AND HARD ARMORING OPTION

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

WSB
& Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
www.wsbeng.com
763-541-4800 - Fax 763-541-1700
INFRASTRUCTURE ■ ENGINEERING ■ PLANNING ■ CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGR. _____ PETER R. WILLENBRING
DATE 01/15/2014 LIC. NO. 15998

PLAN REVIEW:

Prepared for:

City of Golden Valley
7800 Golden Valley Road
Golden Valley, Minnesota 55427
(763)-593-8000

PLAN SYMBOLS

STATE LINE	----
COUNTY LINE	-----
TOWNSHIP OR RANGE LINE	-----
SECTION LINE	-----
QUARTER LINE	-----
SIXTEENTH LINE	-----
RIGHT-OF-WAY LINE	-----
SLOPE EASEMENT	SE
PRESENT RIGHT-OF-WAY	-----
CONTROL OF ACCESS LINE	-----
PROPERTY LINES (EXCEPT LAND LINES)	-----
VACATED PLATTED PROPERTY	-----
CORPORATE OR CITY LIMITS	-----
TRUNK HIGHWAY CENTER LINE	-----
RETAINING WALL	-----
RAILROAD	-----
RAILROAD RIGHT-OF-WAY	-----
RIVER OR CREEK	-----
DRY RUN	-----
DRAINAGE DITCH	-----
DRAIN TILE	-----
CULVERT	-----
DROP INLET	-----
GUARD RAIL	-----
BARBED WIRE FENCE	-----
WOVEN WIRE FENCE	-----
CHAIN LINK FENCE	-----
RAILROAD SNOW FENCE	-----
STONE WALL OR FENCE	-----
HEDGE	-----
RAILROAD CROSSING SIGN	-----
RAILROAD CROSSING BELL	-----
ELECTRIC WARNING SIGN	-----
CROSSING GATE	-----
MEANDER CORNER	-----
SPRINGS	-----
MARSH	-----
TIMBER	-----
ORCHARD	-----
BRUSH	-----
NURSERY	-----
CATCH BASIN	-----
FIRE HYDRANT	-----
CATTLE GUARD	-----
OVERPASS (HIGHWAY OVER)	-----
UNDERPASS (HIGHWAY UNDER)	-----
BRIDGE	-----
BUILDING (ONE STORY FRAME)	-----
F - FRAME C - CONCRETE	-----
S - STONE T - TILE	-----
B - BRICK ST - STUCCO	-----
IRON ROD OR PIPE	-----
MONUMENT (STONE, CONCRETE, OR METAL)	-----
WOODEN HUB	-----
GRAVEL PIT	-----
SAND PIT	-----
BORROW PIT	-----
ROCK QUARRY	-----

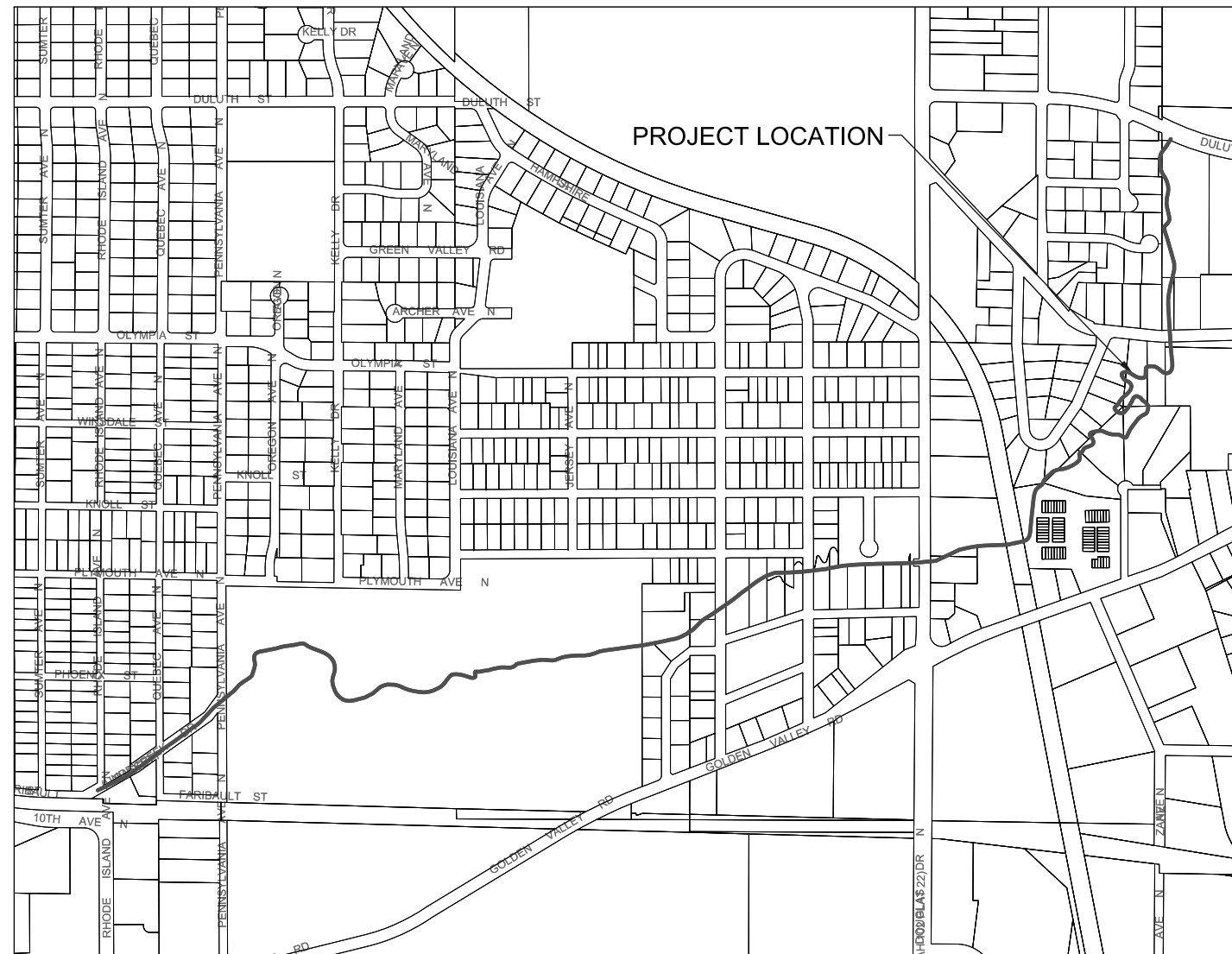
UTILITY SYMBOLS

POWER POLE LINE	-----
TELEPHONE OR TELEGRAPH POLE LINE	-----
JOINT TELEPHONE AND POWER ON POWER POLE	-----
ON TELEPHONE POLES	-----
ANCHOR	-----
STREET LIGHT	-----
PEDESTAL (TELEPHONE CABLE TERMINAL)	-----
GAS MAIN	-----
WATER MAIN	-----
CONDUIT	-----
TELEPHONE CABLE IN CONDUIT	-----
ELECTRIC CABLE IN CONDUIT	-----
TELEPHONE MANHOLE	-----
ELECTRIC MANHOLE	-----
BURIED TELEPHONE CABLE	-----
BURIED ELECTRIC CABLE	-----
AERIAL TELEPHONE CABLE	-----
SEWER (SANITARY OR STORM)	-----
SEWER MANHOLE	-----

SCALES

INDEX MAP	0 500 1000
PLAN	0 30 60
PROFILE HORIZ.	0 30 60
VERT.	0 5 10

FOR THE
CITY OF GOLDEN VALLEY
CONSTRUCTION PLAN FOR: STREAMBANK STABILIZATION AND HABITAT RESTORATION LOCATED ON BASSETT CREEK - 50% PLANS SUBMISSION TO THE BASSETT CREEK WMC
PROJECT LOCATION: WINNETKA AVE AND 10TH AVE NORTH TO DULUTH STREET



THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF PRIVATE UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS TO DETERMINE THE TYPE AND LOCATION OF PRIVATE UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEDICATION OF EXISTING SUBSURFACE UTILITY DATA."

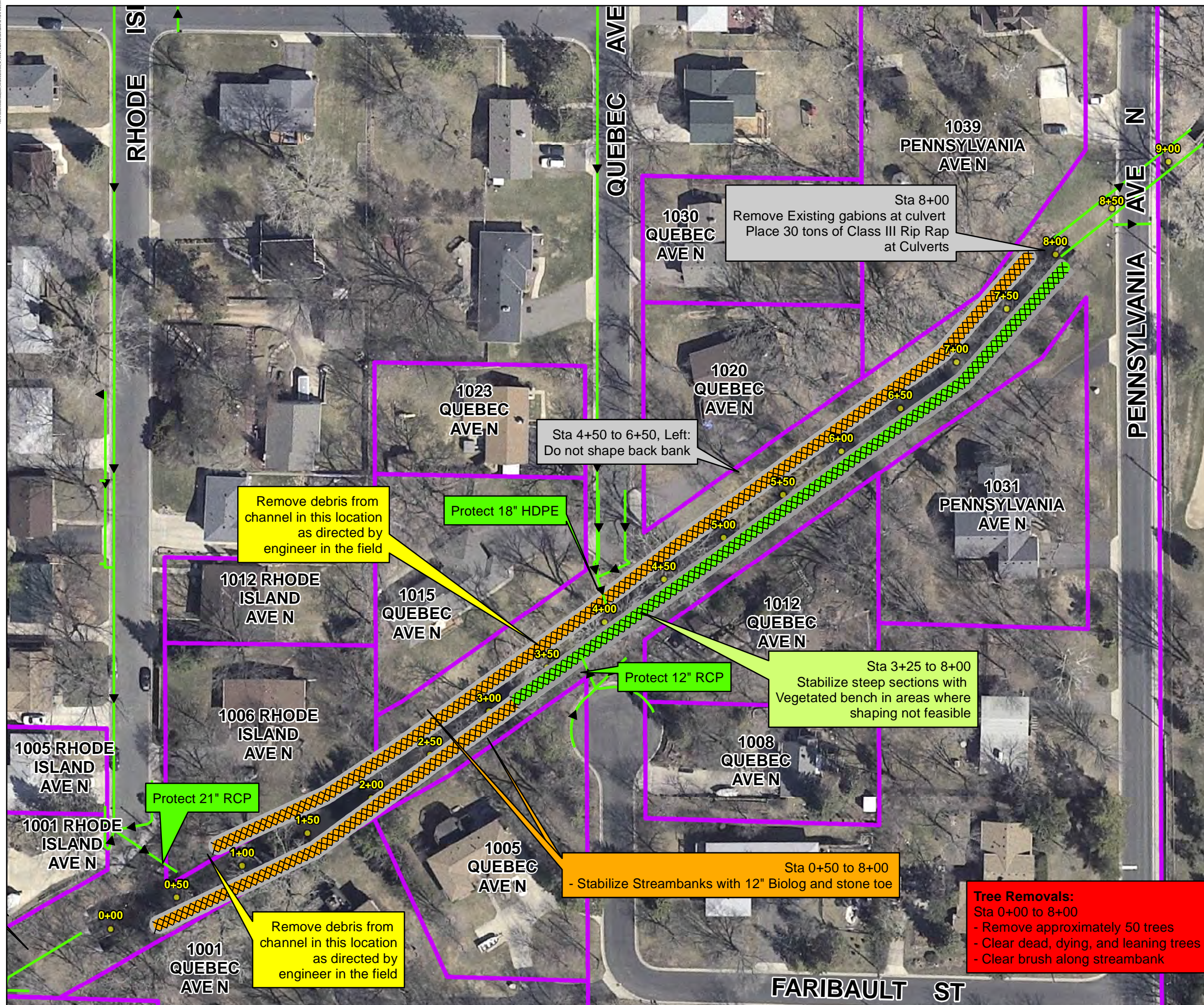
EXCAVATION NOTICE SYSTEM

A CALL TO GOPHER STATE ONE (651-454-0002) IS REQUIRED A MINIMUM OF 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION.



**2015 Bassett Creek Main Stem
Restoration Project
City of Golden Valley
Minnesota**

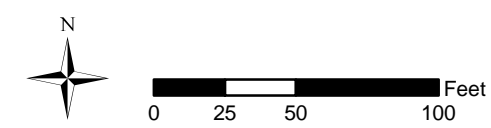
**Construction Plans
Area A**



Legend

- Storm Sewer
- Vegetated Bench
- Biolog with Stone Toe
- Parcels
- Creek Stationing

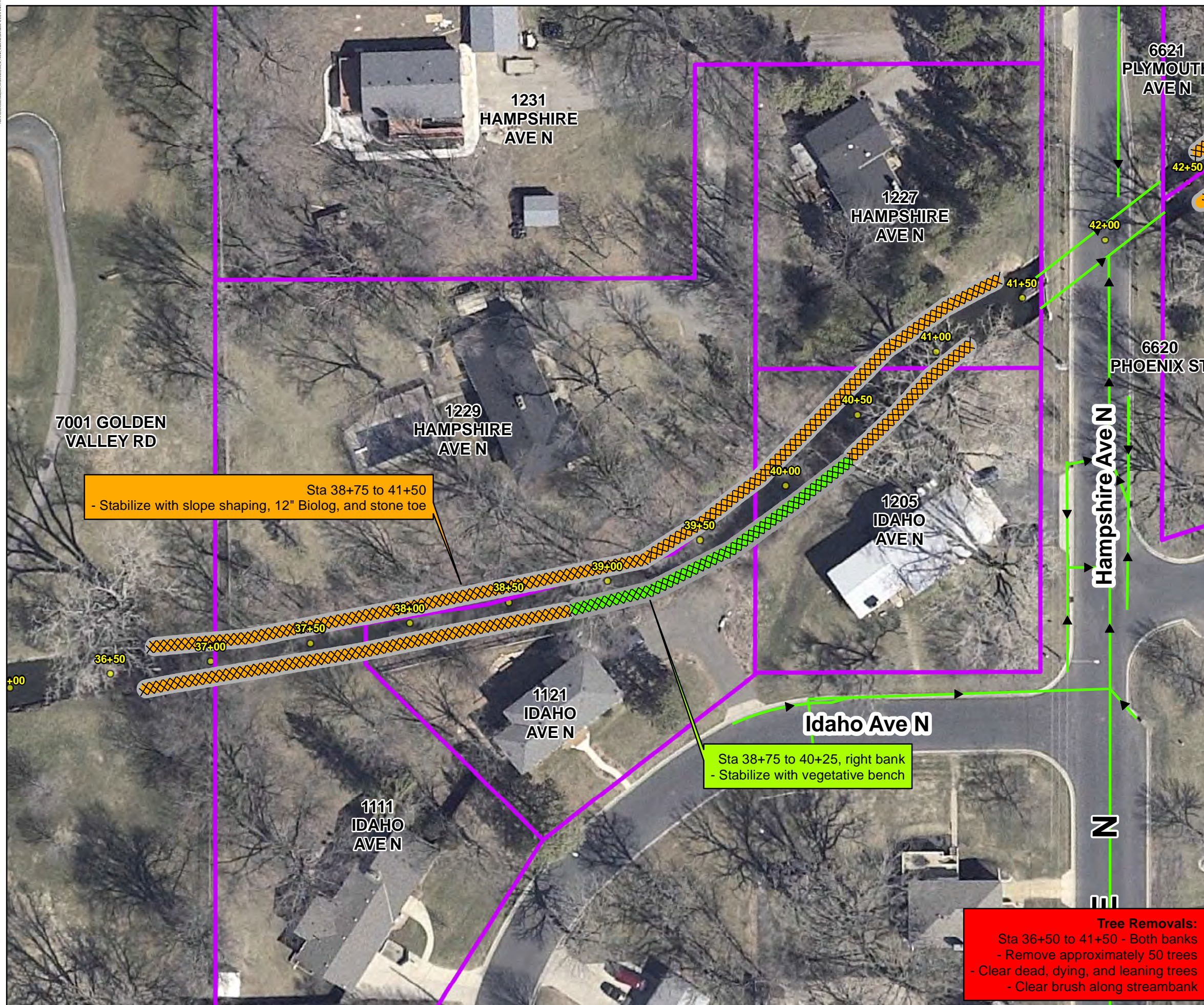
Tree Removals:
Sta 0+00 to 8+00
- Remove approximately 50 trees
- Clear dead, dying, and leaning trees
- Clear brush along streambank





**2015 Bassett Creek Main Stem
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City of Golden Valley
Minnesota**

**Construction Plans
Area B**



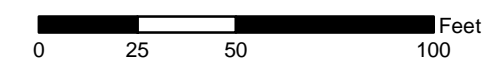
Sta 38+75 to 41+50
- Stabilize with slope shaping, 12" Biolog, and stone toe

Sta 38+75 to 40+25, right bank
- Stabilize with vegetative bench

Tree Removals:
Sta 36+50 to 41+50 - Both banks
- Remove approximately 50 trees
- Clear dead, dying, and leaning trees
- Clear brush along streambank

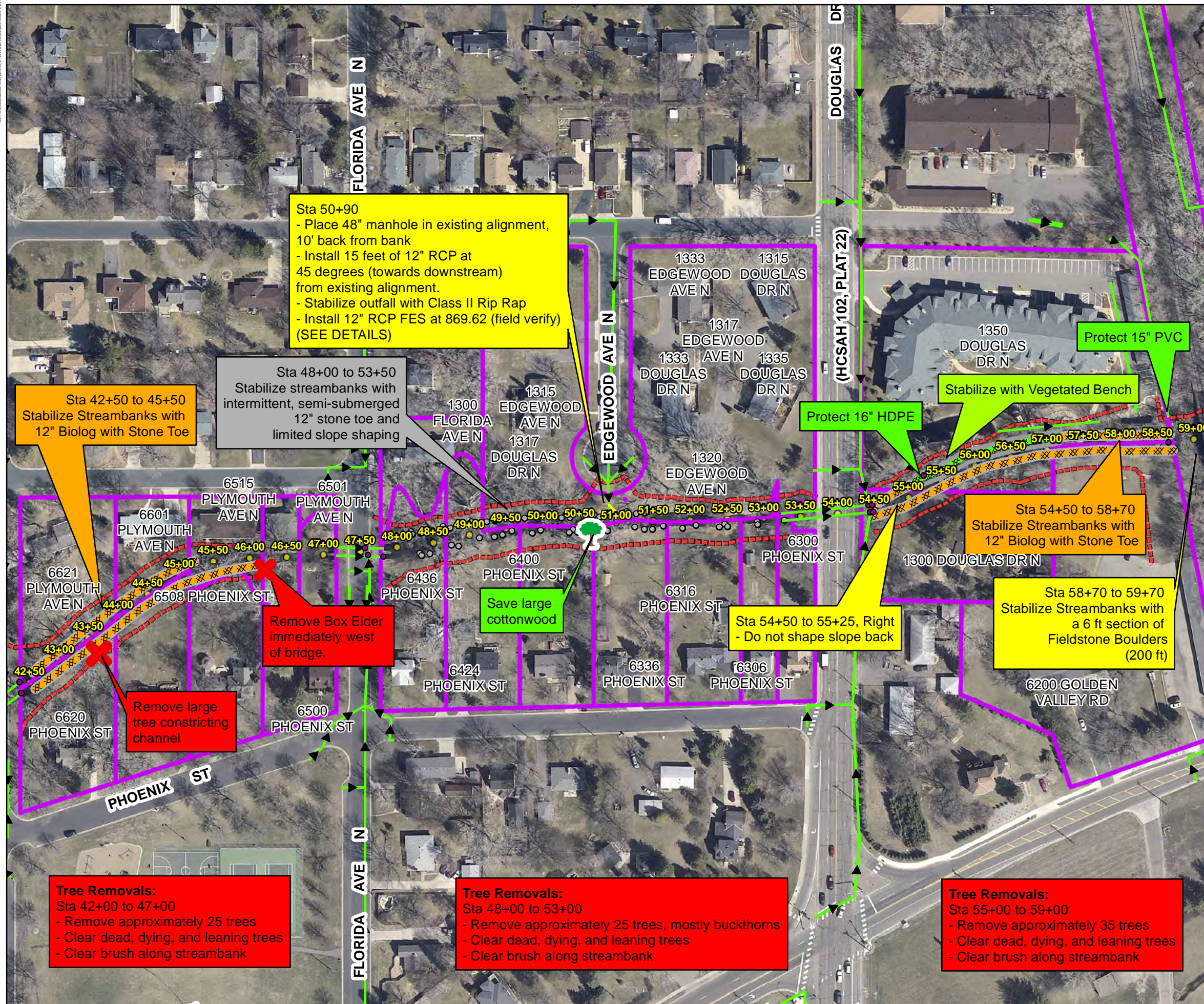
Legend

- Storm Sewer
- Vegetated Bench
- Biolog with Stone Toe
- Parcels
- Creek Stationing



**2015 Bassett Creek Main Stem
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Minnesota**

**Construction Plans
Area C**



Sta 50+90
- Place 48" manhole in existing alignment, 10' back from bank
- Install 15 feet of 12" RCP at 45 degrees (towards downstream) from existing alignment.
- Stabilize outfall with Class II Rip Rap
- Install 12" RCP FES at 869.62 (field verify) (SEE DETAILS)

Sta 48+00 to 53+50
Stabilize streambanks with intermittent, semi-submerged 12" stone toe and limited slope shaping

Sta 42+50 to 45+50
Stabilize Streambanks with 12" Biolog with Stone Toe

Protect 15" PVC

Stabilize with Vegetated Bench

Protect 16" HDPE

Sta 54+50 to 58+70
Stabilize Streambanks with 12" Biolog with Stone Toe

Sta 58+70 to 59+70
Stabilize Streambanks with a 6 ft section of Fieldstone Boulders (200 ft)

Remove Box Elder immediately west of bridge.

Remove large tree constricting channel

Save large cottonwood

Sta 54+50 to 55+25, Right
- Do not shape slope back

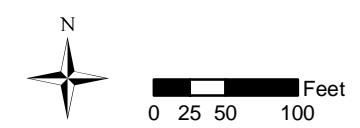
Tree Removals:
Sta 42+00 to 47+00
- Remove approximately 25 trees
- Clear dead, dying, and leaning trees
- Clear brush along streambank

Tree Removals:
Sta 48+00 to 53+00
- Remove approximately 25 trees, mostly buckthorns
- Clear dead, dying, and leaning trees
- Clear brush along streambank

Tree Removals:
Sta 55+00 to 59+00
- Remove approximately 35 trees
- Clear dead, dying, and leaning trees
- Clear brush along streambank

Legend

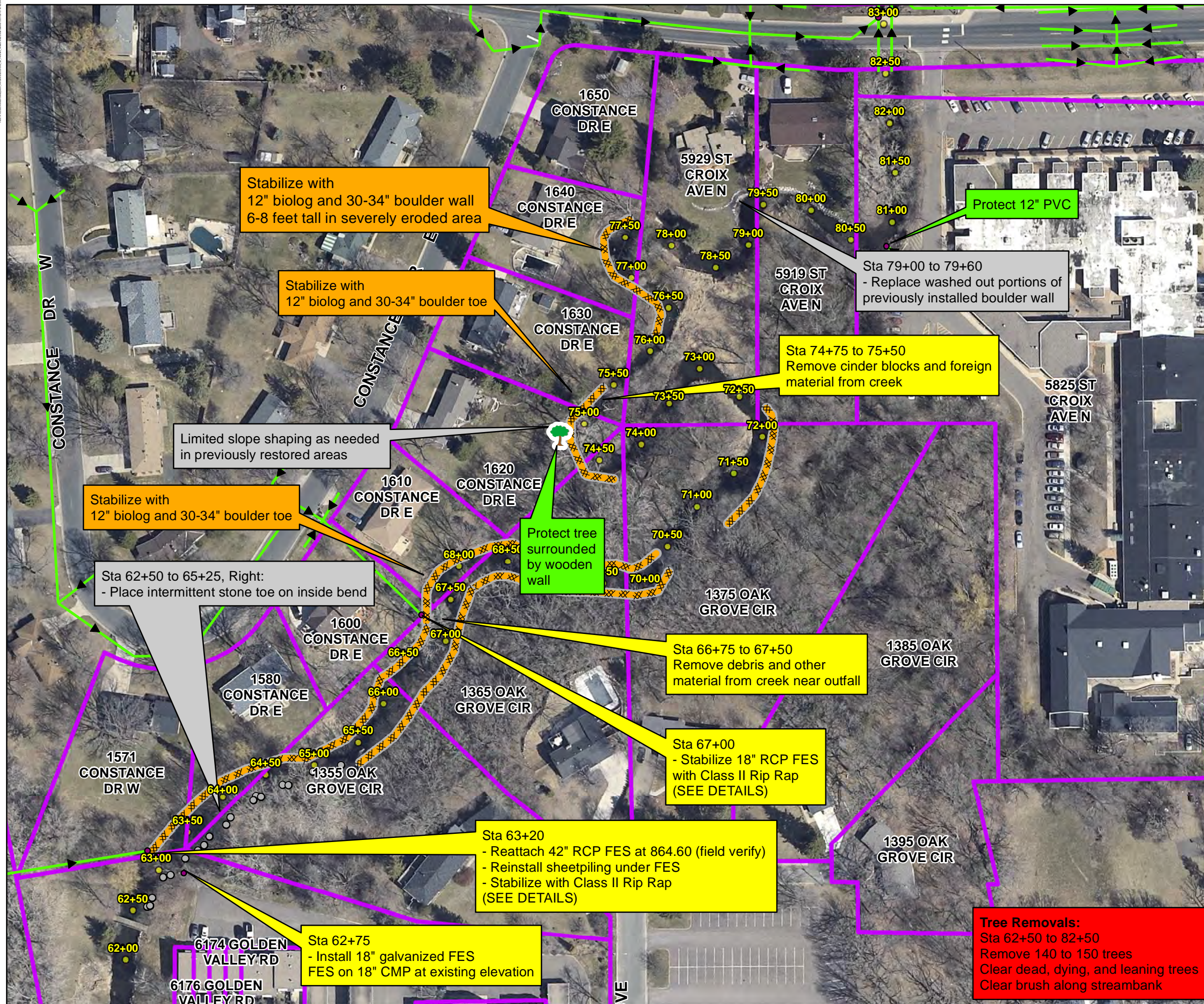
- Storm Sewer
- Vegetated Bench
- Biolog with Stone Toe
- Intermittent Stone Toe
- Parcels
- 20' Construction Zone and Access
- Creek Stationing





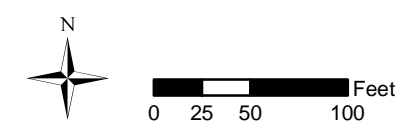
**2015 Bassett Creek Main Stem
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Minnesota**

**Construction Plans
Area D**



Legend

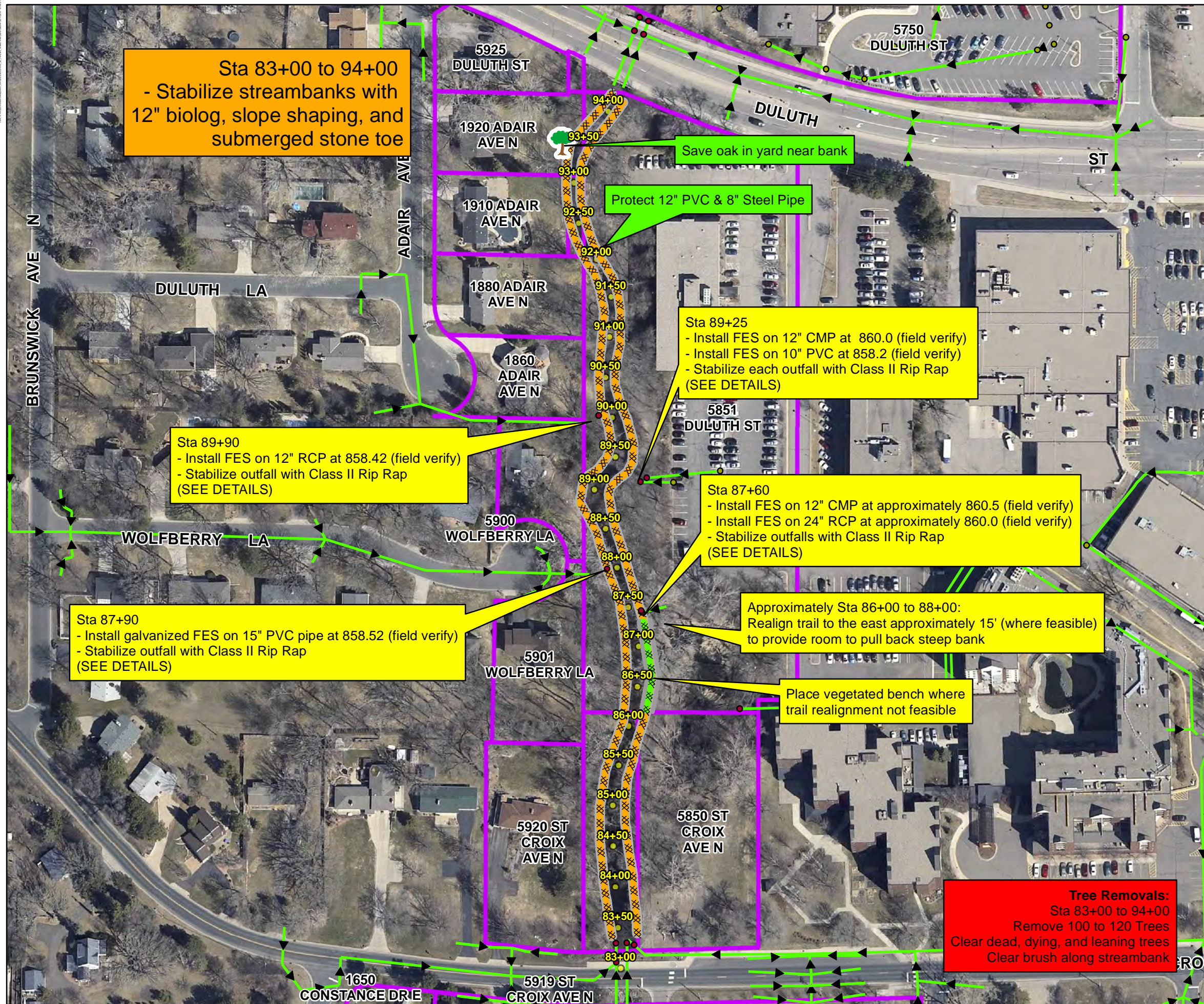
- Storm Sewer
- Biolog with Boulder Toe
- Intermittent Stone Toe
- Parcels
- Creek Stationing



Tree Removals:
Sta 62+50 to 82+50
Remove 140 to 150 trees
Clear dead, dying, and leaning trees
Clear brush along streambank

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**Construction Plans
Area E**



Sta 83+00 to 94+00
- Stabilize streambanks with 12" biolog, slope shaping, and submerged stone toe

Save oak in yard near bank

Protect 12" PVC & 8" Steel Pipe

Sta 89+25
- Install FES on 12" CMP at 860.0 (field verify)
- Install FES on 10" PVC at 858.2 (field verify)
- Stabilize each outfall with Class II Rip Rap (SEE DETAILS)

Sta 89+90
- Install FES on 12" RCP at 858.42 (field verify)
- Stabilize outfall with Class II Rip Rap (SEE DETAILS)

Sta 87+60
- Install FES on 12" CMP at approximately 860.5 (field verify)
- Install FES on 24" RCP at approximately 860.0 (field verify)
- Stabilize outfalls with Class II Rip Rap (SEE DETAILS)

Sta 87+90
- Install galvanized FES on 15" PVC pipe at 858.52 (field verify)
- Stabilize outfall with Class II Rip Rap (SEE DETAILS)

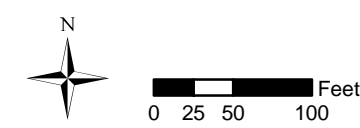
Approximately Sta 86+00 to 88+00:
Realign trail to the east approximately 15' (where feasible) to provide room to pull back steep bank

Place vegetated bench where trail realignment not feasible

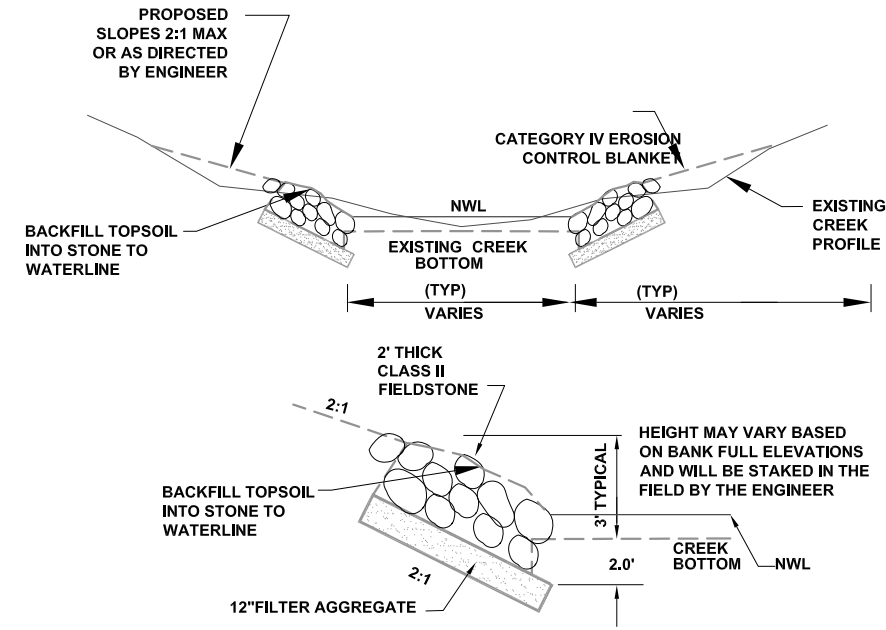
Tree Removals:
Sta 83+00 to 94+00
Remove 100 to 120 Trees
Clear dead, dying, and leaning trees
Clear brush along streambank

Legend

- Storm Sewer
- Vegetated Bench
- Biolog with Stone Toe
- Parcels
- Creek Stationing



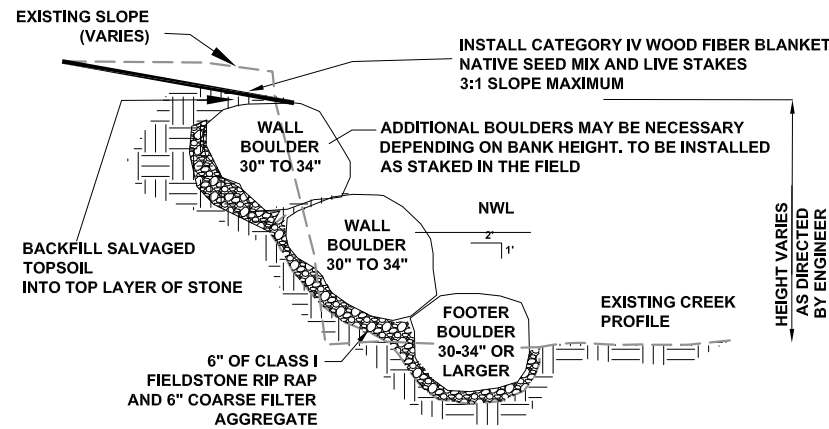
FIELDSTONE RIP RAP STABILIZATION



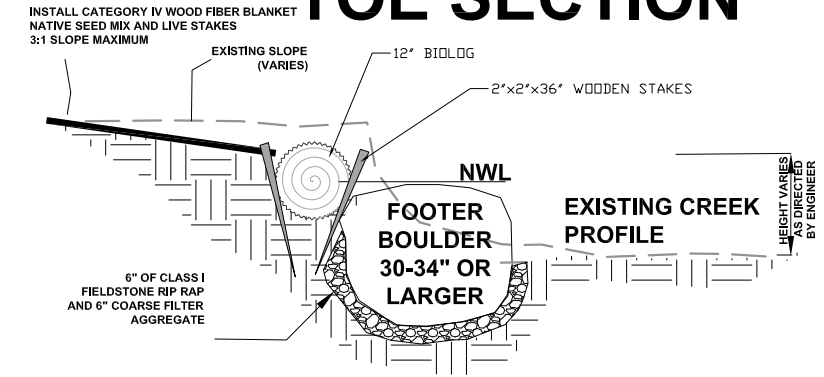
NOTES:

1. NO NET CUT/FILL ALLOWED WITHIN CHANNEL CROSS SECTION, EXISTING CHANNEL SECTION AREA MUST BE MAINTAINED
2. ALL IMPROVEMENTS SHALL FOLLOW THE MEANDERS AND CURVES OF THE EXISTING STREAMBANK AS INDICATED ON PLANS AND AS STAKED/DIRECTED IN THE FIELD.

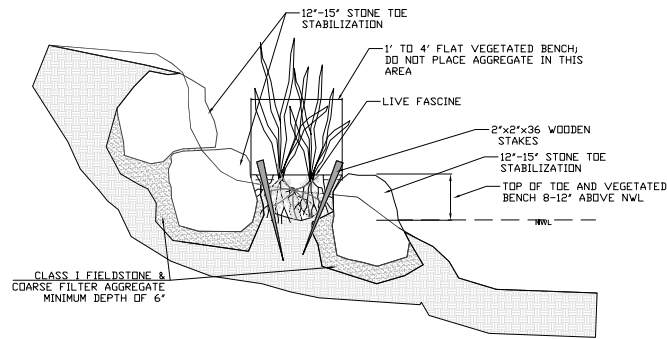
BOULDER WALL SECTION



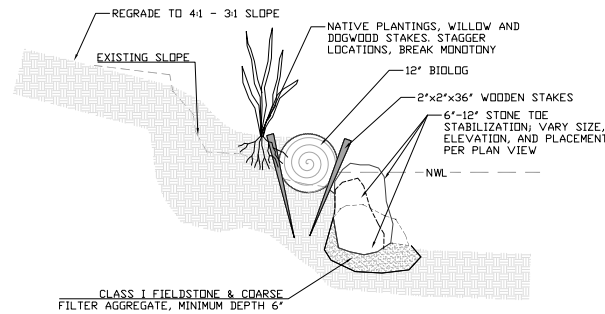
BIOLOG & BOULDER TOE SECTION



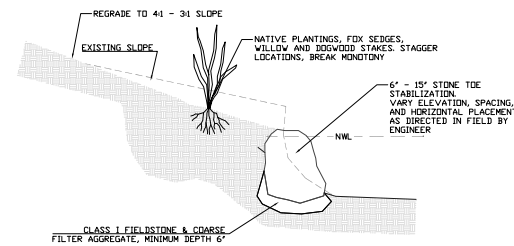
VEGETATED BENCH SECTION



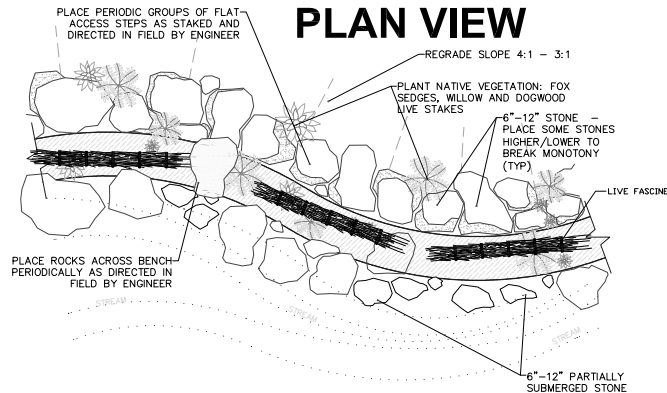
BIOLOG & STONE TOE SECTION



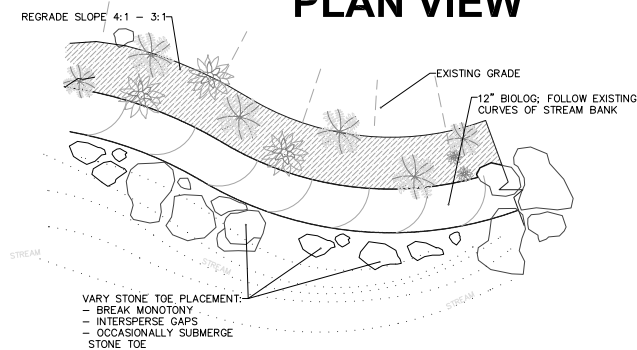
INTERMITTENT STONE TOE SECTION



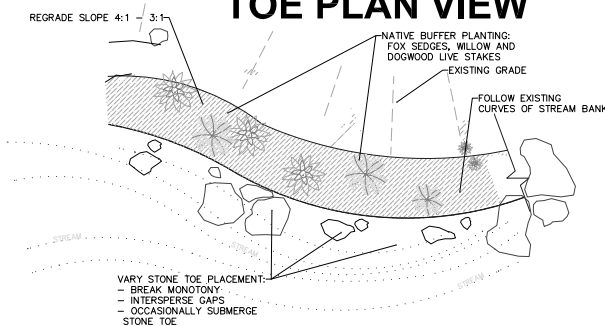
VEGETATED BENCH PLAN VIEW



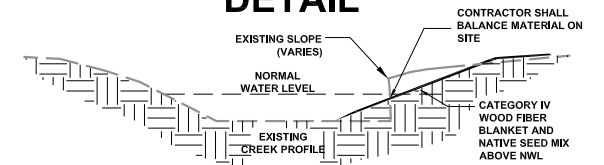
BIOLOG & STONE TOE PLAN VIEW



INTERMITTENT STONE TOE PLAN VIEW



SLOPE PREPARATION DETAIL



PERSON NO. DATE	EXPLANATION
AS NOTED	
SCALE:	
DESIGN BY: JHA	
PROJECT NO: 02032-09	
CHECKED BY: JS	
RECORD COPY BY:	
DATE: 10/15/2013	
ENGINEER: JHA	
LIC. NO: 15998	

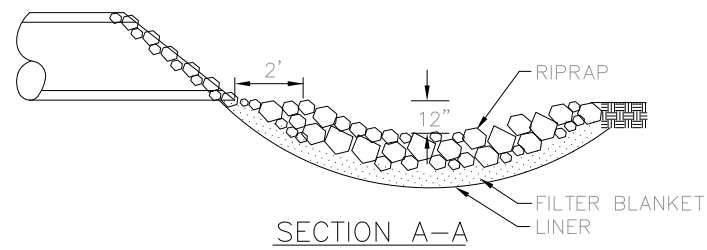
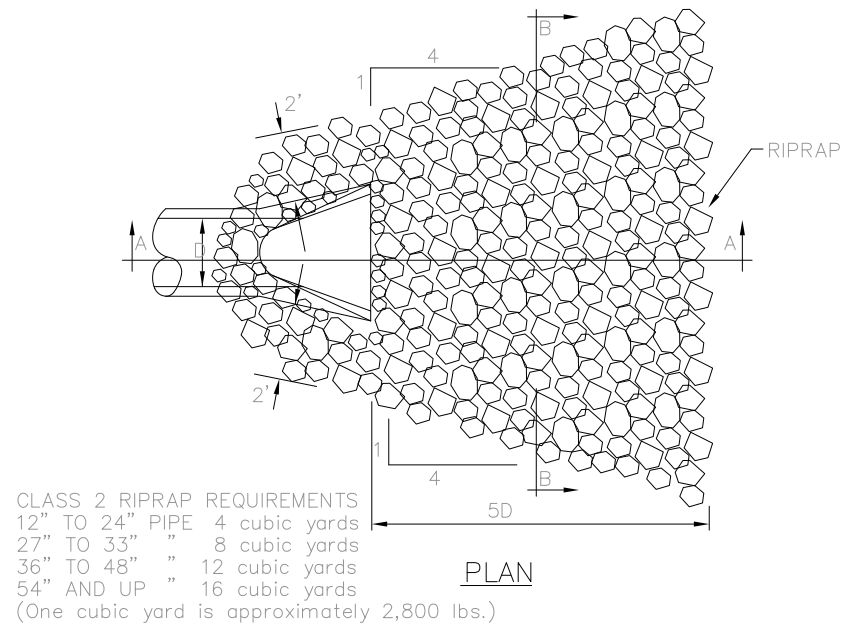
2015 MAIN STEM OF BASSETT CREEK RESTORATION PROJECT
CITY OF GOLDEN VALLEY

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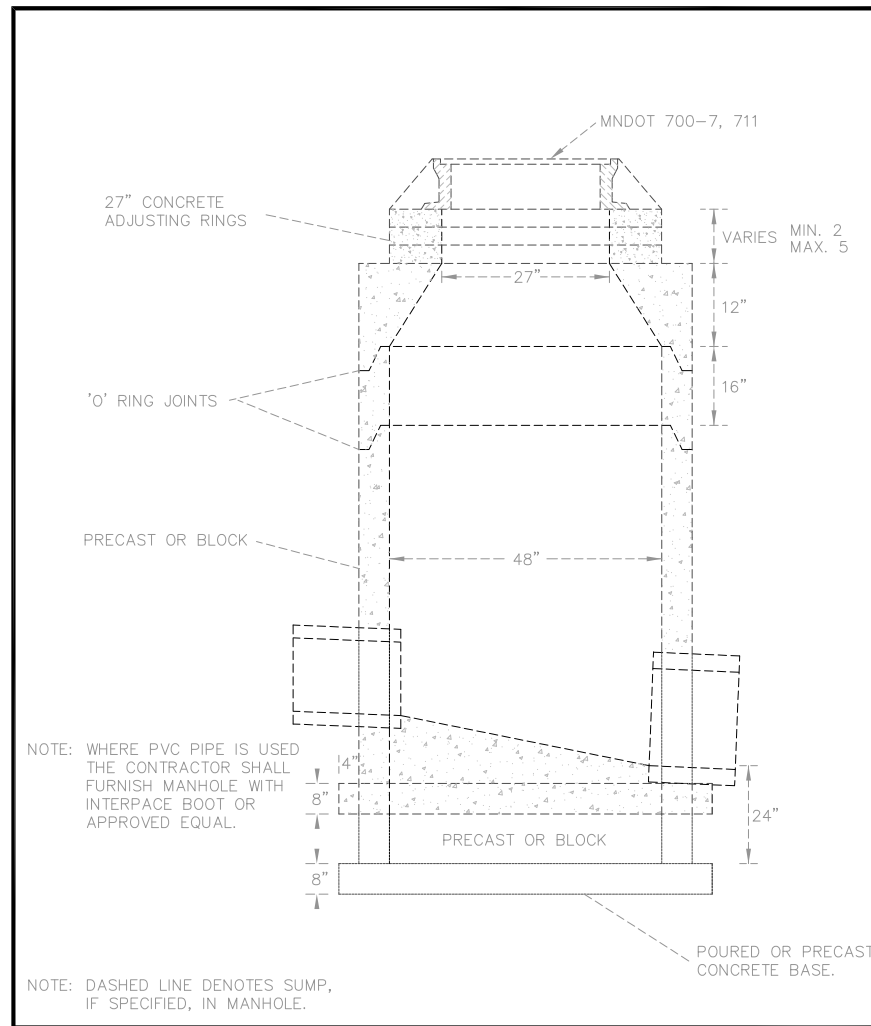
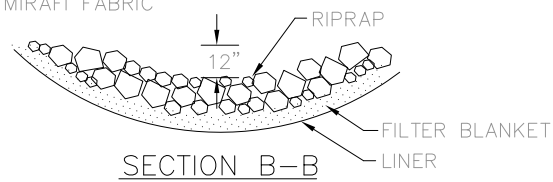
RIP RAP AT FES DETAIL

TYPICAL MANHOLE DETAIL

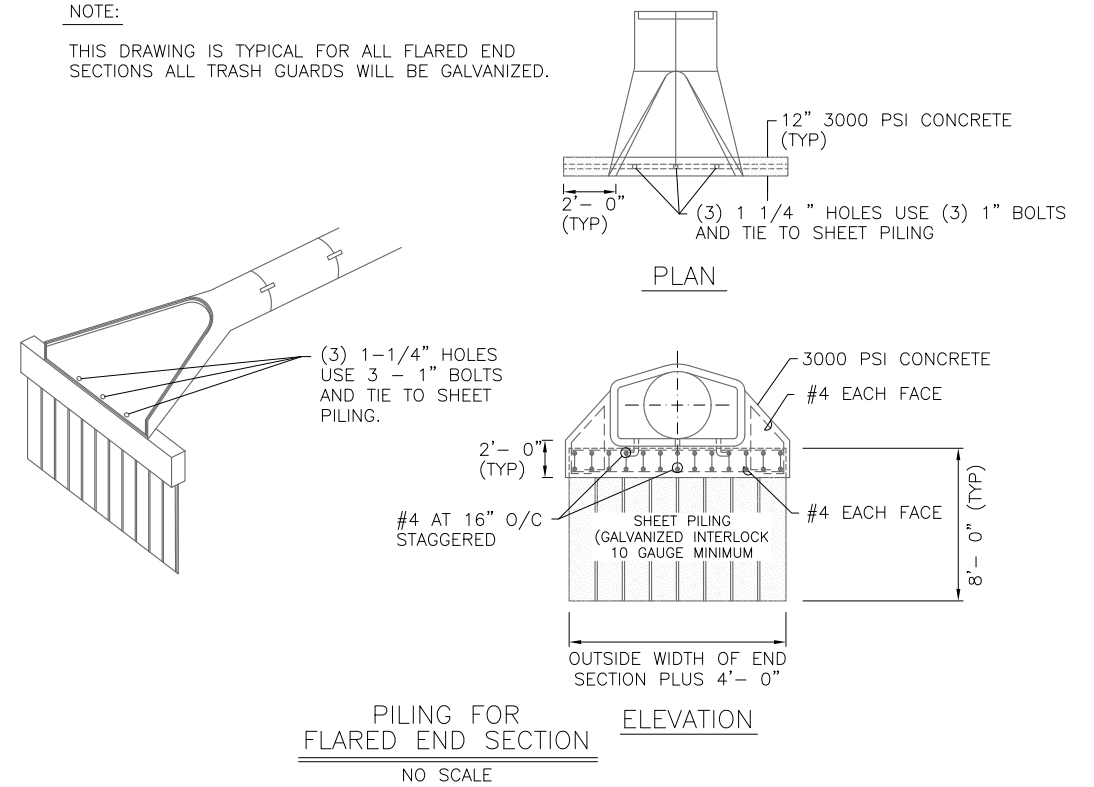
FES SHEETPIILING DETAIL



NOTE
 FILTER BLANKET REQUIRED UNDER RIPRAP
 OR 2 LAYERS OF 500X MIRAFI FABRIC
 OR EQUAL



NOTE:
 THIS DRAWING IS TYPICAL FOR ALL FLARED END SECTIONS ALL TRASH GUARDS WILL BE GALVANIZED.



PERSON NO.	DATE	EXPLANATION
AS NOTED		
SCALE:	DESIGN BY: JHA	PROJECT NO: 02032-09
TEAM BY: JHA	CHECKED BY: JS	RECORD COPY BY:
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA		ENGINEER
		DATE: 10/15/2013 LIC. NO.: 15998

2015 MAIN STEM OF BASSETT CREEK RESTORATION PROJECT
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