

EXISTING PLAN SYMBOLS

- PROPERTY LINES/RIGHT-OF-WAY
- UTILITY EASEMENT
- TREE LINE
- SIGN
- DECIDUOUS TREE
- SHRUB
- CONIFEROUS TREE

EXISTING UTILITY SYMBOLS

- STORM SEWER
- CATCH BASIN
- STORM APRON
- STORM SEWER MANHOLE

BASS LAKE ESTATES 2ND ADDITION STREAM RESTORATION PROJECT

CITY OF PLYMOUTH, MN

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

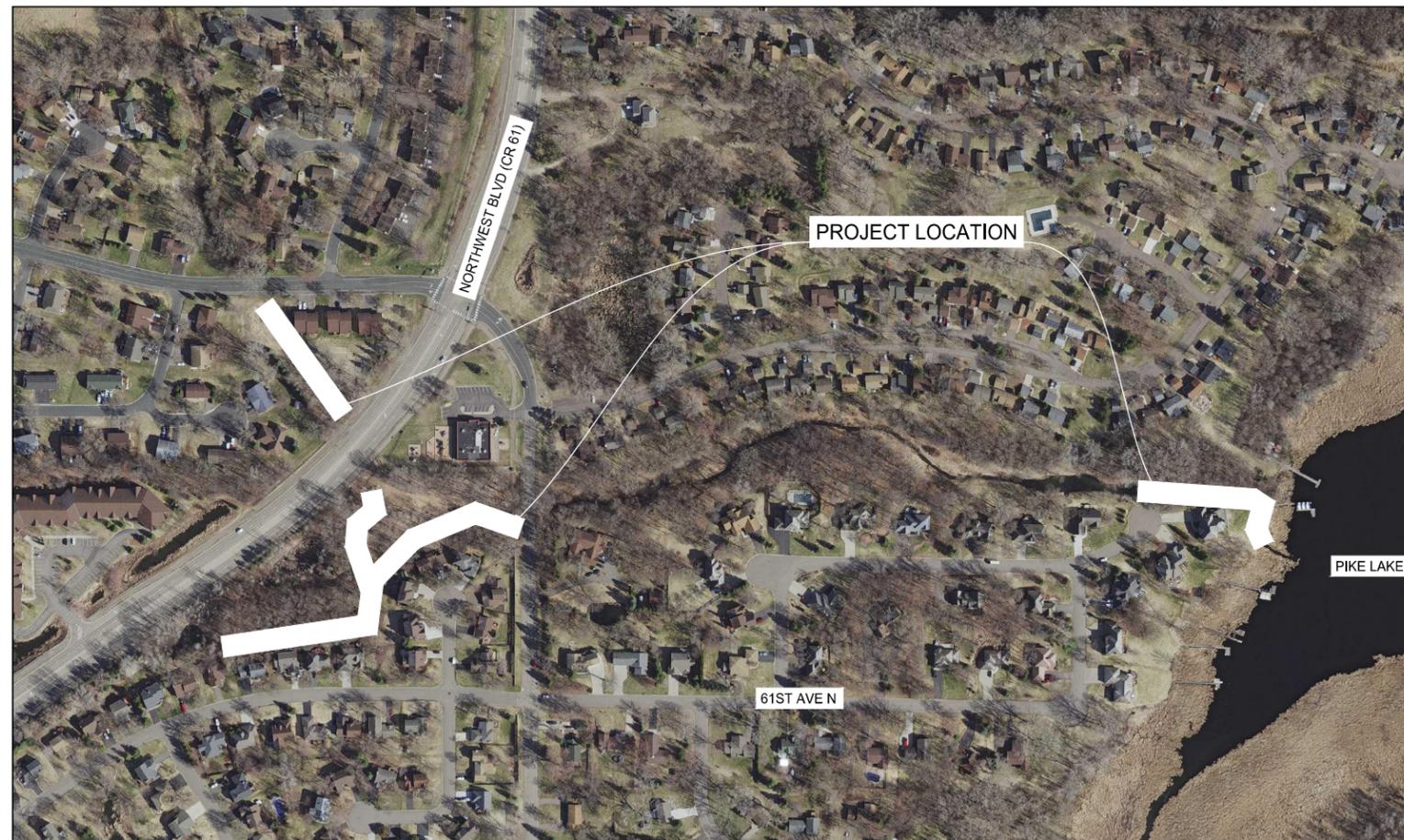
PLAN SET INDEX

SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	GENERAL LAYOUT
3-4	MISCELLANEOUS DETAILS
5-7	EXISTING CONDITIONS & REMOVAL PLANS
8-13	SITE & GRADING PLANS

THIS PLAN SET CONTAINS 13 SHEETS

CONSTRUCTION PLAN FOR CREEK STABILIZATION
 LOCATED ON PIKE CREEK FROM ROBIN RD TO PIKE LAKE

FUNDING FOR THIS PROJECT RECEIVED FROM THE MINNESOTA BOARD OF WATER AND SOIL RESOURCES CLEAN WATER FUND GRANT AND FROM THE SHINGLE CREEK WATERSHED MANAGEMENT COMMISSION.



PROJECT LOCATION MAP



THIS PLAN SET HAS BEEN PREPARED FOR:

CITY OF PLYMOUTH
 3400 PLYMOUTH BLVD
 PLYMOUTH, MN 55447
 (763) 509-5000

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



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.

Jake H. Newhall
 JAKE H. NEWHALL, P.E.

DATE: 09/27/2022

LICENSE NUMBER: 49170

EXCAVATION NOTICE SYSTEM

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



PROJECT LOCATION
 COUNTY: HENNEPIN

SECT 2, TWP 118N, RNG 22W

HORIZONTAL DATUM: NAD83 (2011) ADJUSTMENT
 VERTICAL DATUM: NAVD88

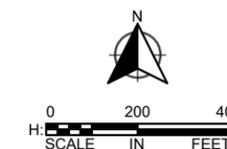
WORK DATES INFORMATION

NO WORK MAY TAKE PLACE WITHIN PIKE CREEK BETWEEN MARCH 15 - JUNE 15. ALL EXPOSED SOIL AREAS WITHIN 200 FEET OF PIKE CREEK'S WATER'S EDGE AND THAT DRAIN TO THESE WATERS MUST BE STABILIZED WITHIN 24 HOURS BETWEEN MARCH 15 - JUNE 15.

UTILITY INFORMATION

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

GOPHER ONE CALL TICKET NUMBER: 222142049-222142050

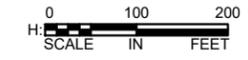
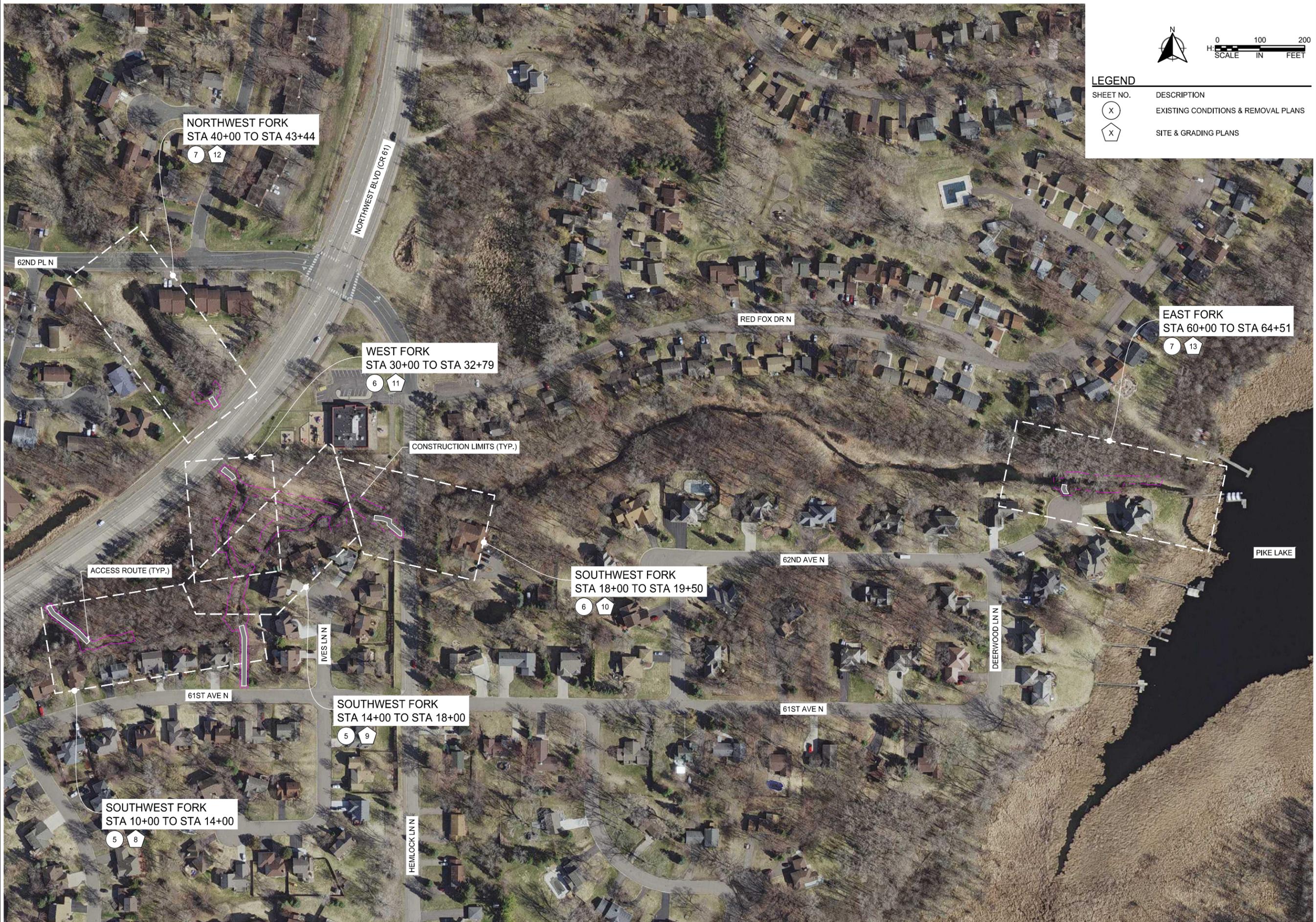


PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

WSB PROJ. NO. 018715-000
 CITY PROJ. NO. WR 22-0001

SHEET
 1
 OF
 13

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LEGEND

SHEET NO.	DESCRIPTION
(X)	EXISTING CONDITIONS & REMOVAL PLANS
(X)	SITE & GRADING PLANS

SCALE: AS SHOWN
 PLAN BY: BPM
 DESIGN BY: KJF
 CHECK BY: JHN

NO.	DATE	DESCRIPTION

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Jake H. Newhall
 JAKE H. NEWHALL
 DATE: 09/27/2022 LIC. NO.: 49170

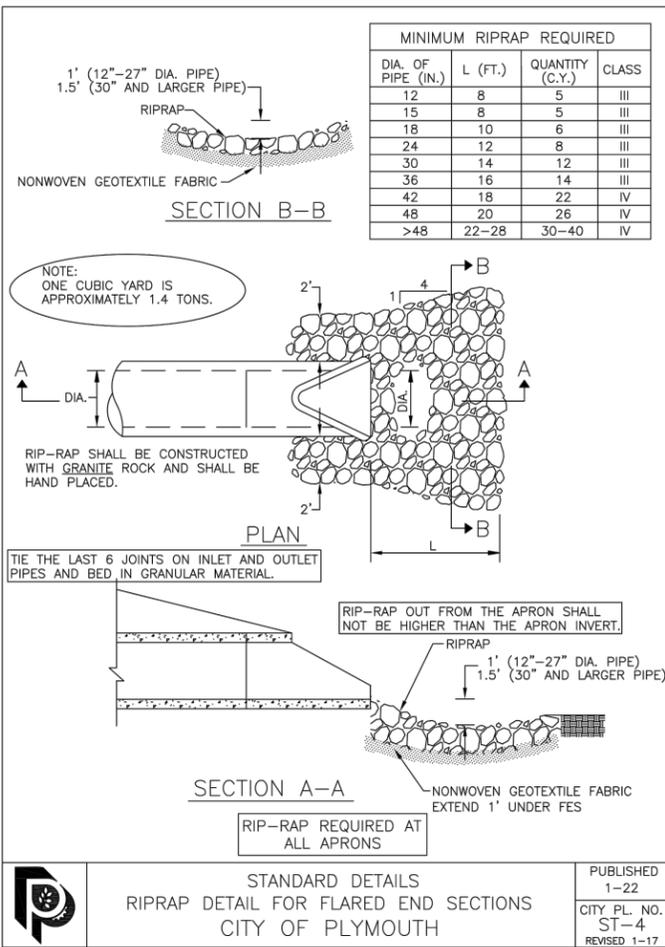
GENERAL LAYOUT

**BASS LAKE ESTATES 2ND ADDITION
 STREAM RESTORATION PROJECT
 CITY OF PLYMOUTH, MN**

CLIENT PROJECT NO.
 WR 22-0001

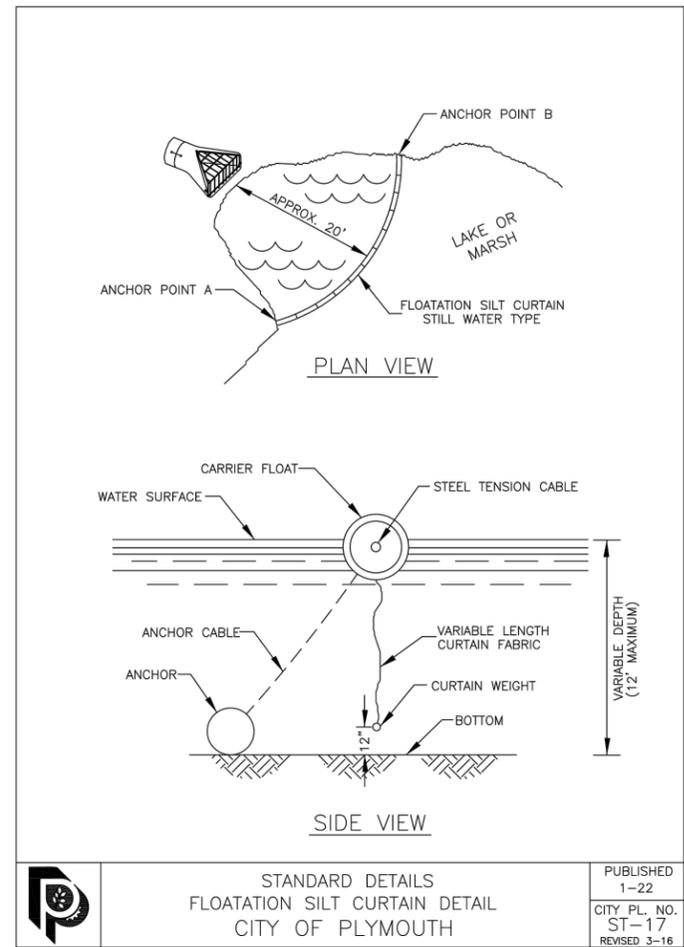
WSB PROJECT NO.
 018715-000

SHEET
 2 OF 13



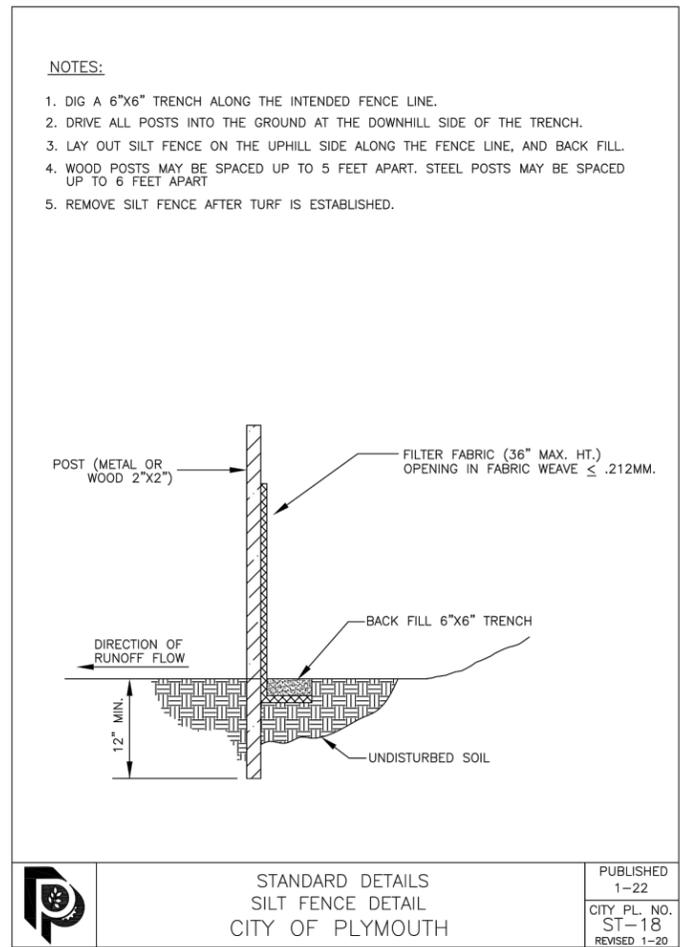
STANDARD DETAILS
RIPRAP DETAIL FOR FLARED END SECTIONS
CITY OF PLYMOUTH

PUBLISHED 1-22
CITY PL. NO. ST-4
REVISED 1-17



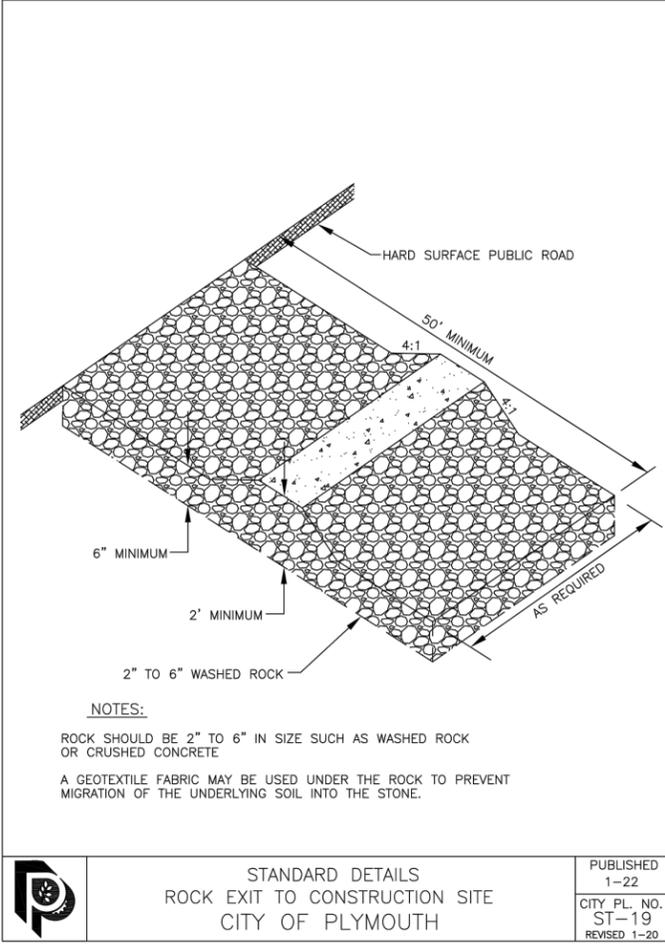
STANDARD DETAILS
FLOATATION SILT CURTAIN DETAIL
CITY OF PLYMOUTH

PUBLISHED 1-22
CITY PL. NO. ST-17
REVISED 3-16



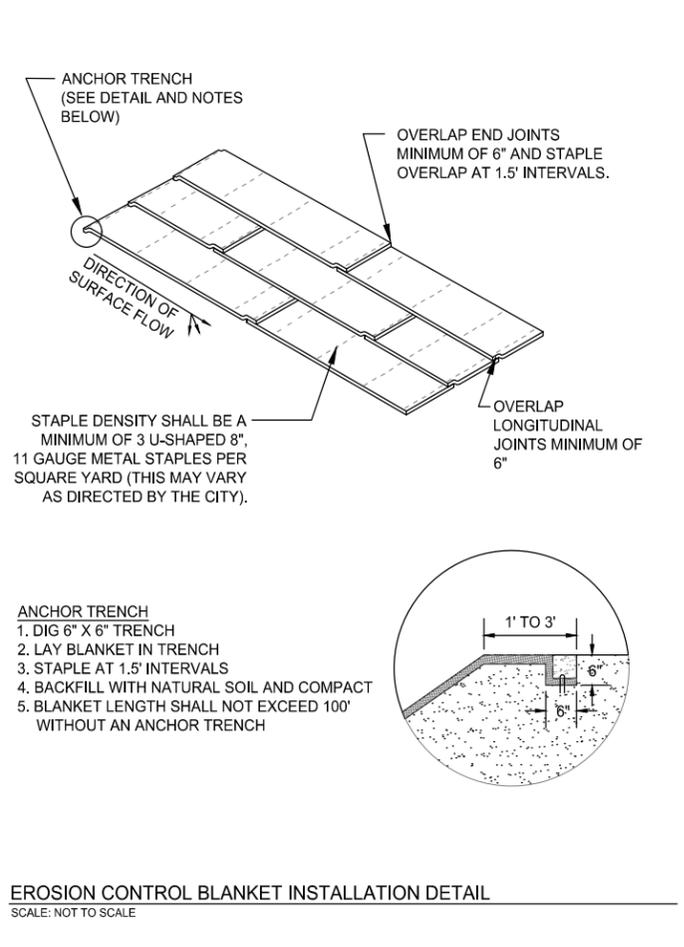
STANDARD DETAILS
SILT FENCE DETAIL
CITY OF PLYMOUTH

PUBLISHED 1-22
CITY PL. NO. ST-18
REVISED 1-20

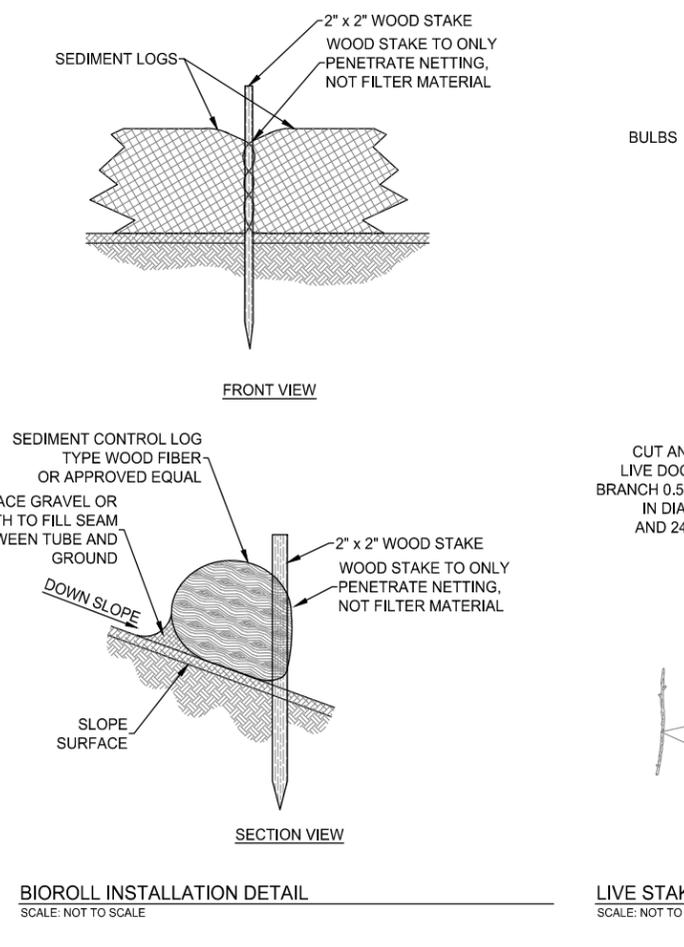


STANDARD DETAILS
ROCK EXIT TO CONSTRUCTION SITE
CITY OF PLYMOUTH

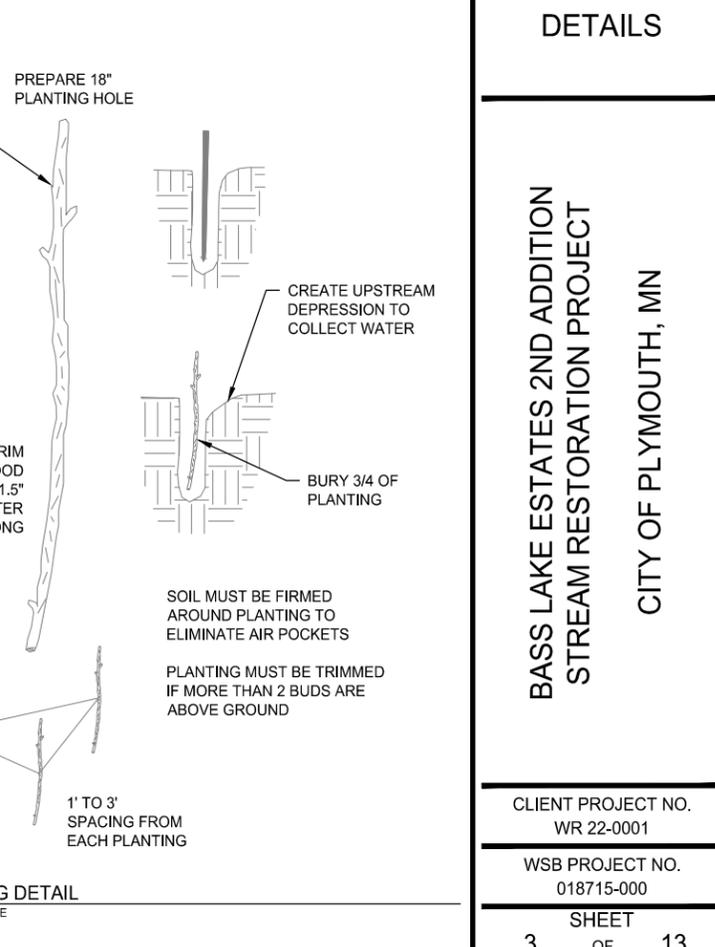
PUBLISHED 1-22
CITY PL. NO. ST-19
REVISED 1-20



EROSION CONTROL BLANKET INSTALLATION DETAIL
SCALE: NOT TO SCALE



BIOROLL INSTALLATION DETAIL
SCALE: NOT TO SCALE



LIVE STAKING DETAIL
SCALE: NOT TO SCALE

wsb City of Plymouth City of Maple Grove

SCALE: AS SHOWN DESIGN BY: KJF

PLAN BY: BPM CHECK BY: JHN

REVISIONS

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JAKE H. NEWHALL
DATE: 09/27/2022 LIC. NO.: 49170

MISCELLANEOUS DETAILS

BASS LAKE ESTATES 2ND ADDITION
STREAM RESTORATION PROJECT
CITY OF PLYMOUTH, MN

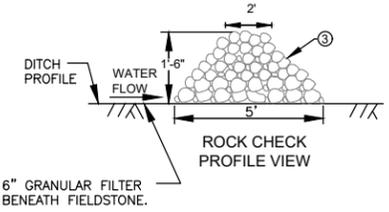
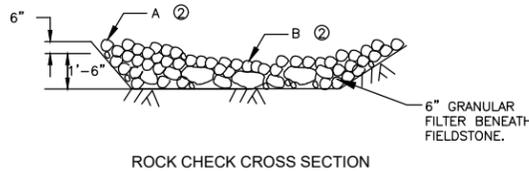
CLIENT PROJECT NO.
WR 22-0001

WSB PROJECT NO.
018715-000

SHEET
3 OF 13

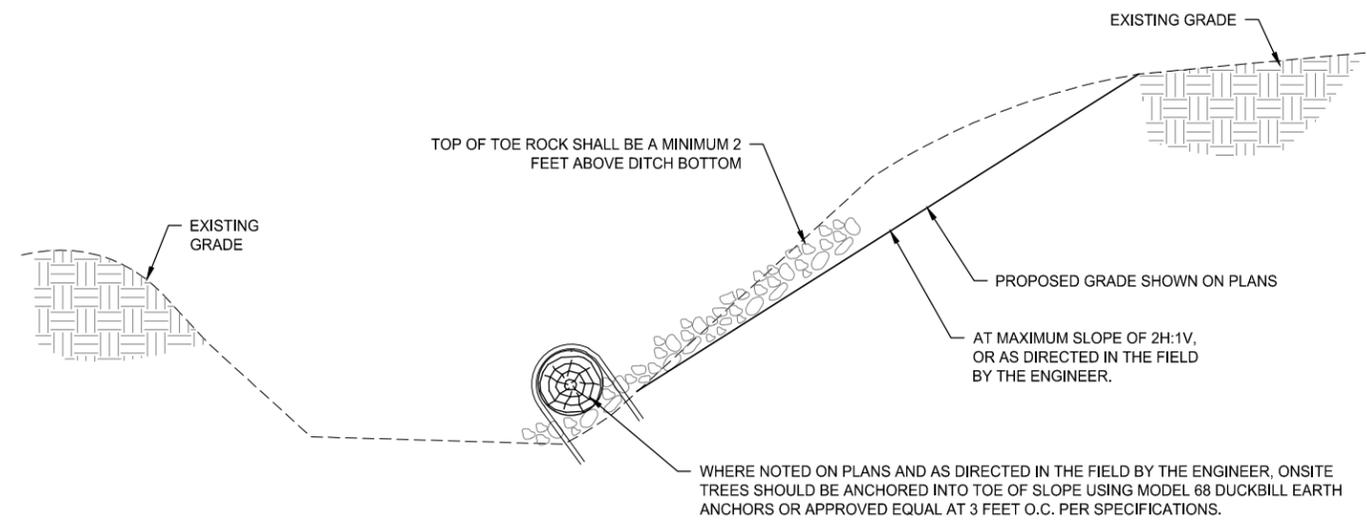
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SCALE: AS SHOWN
 PLAN BY: BPM
 DESIGN BY: KJF
 CHECK BY: JHN



- NOTES:
- SEE MNDOT SPECS 2573, 3601, 3733 & 3889
 - POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DITCH CHECK AND NOT AROUND THE ENDS.
 - CLASS I-IV RIPRAP FIELDSTONE (SPEC. 3601) WITH 6 INCHES OF GRANULAR FILTER (SPEC 3601 & 2511)

ROCK DITCH CHECK DETAIL
 SCALE: NOT TO SCALE



- NOTES:
- TREES USED TO ANCHOR SLOPE MAY NOT BE ROTTEN.
 - TREES USED TO ANCHOR SLOPE MUST A MINIMUM 12" IN DIAMETER.
 - ANCHORS USED MUST BE MODEL 68 DUCKBILL EARTH ANCHORS OR APPROVED EQUAL AND MUST BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

TOE ROCK AND TREE ANCHORED TO SIDE SLOPE
 SCALE: NOT TO SCALE

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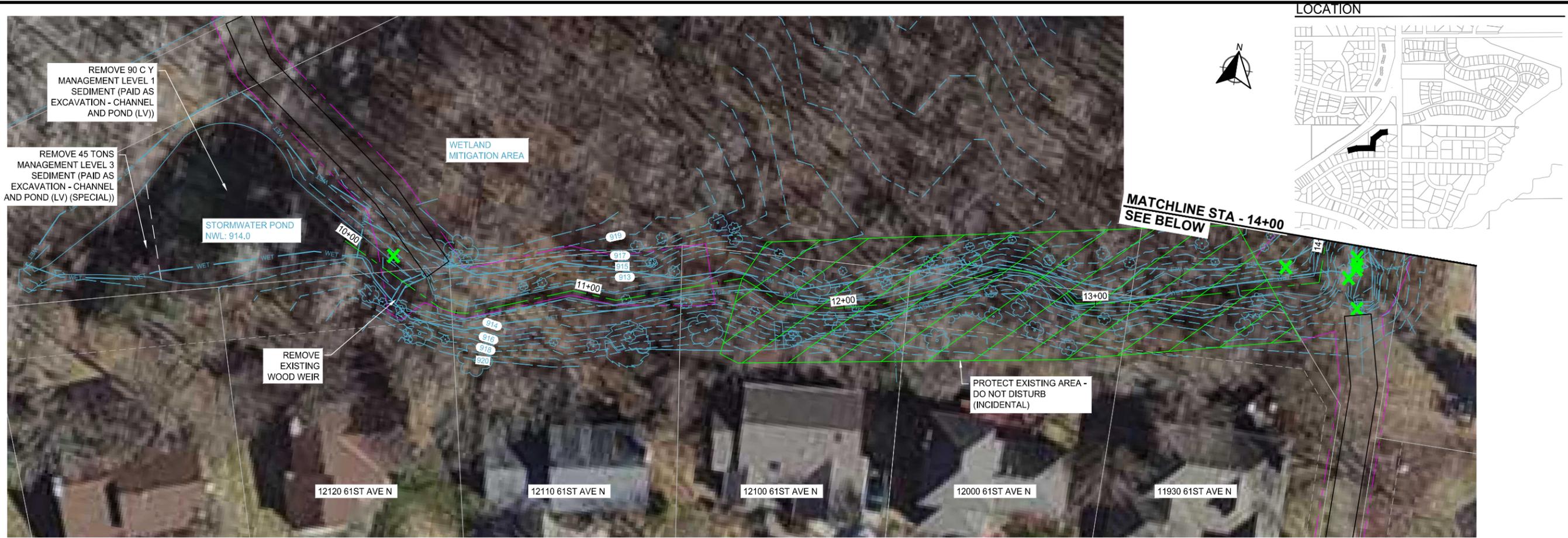
MISCELLANEOUS DETAILS

BASS LAKE ESTATES 2ND ADDITION
 STREAM RESTORATION PROJECT
 CITY OF PLYMOUTH, MN

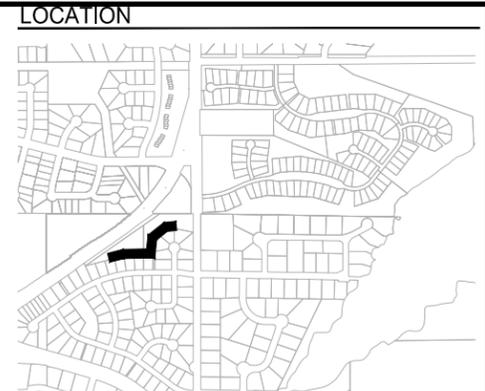
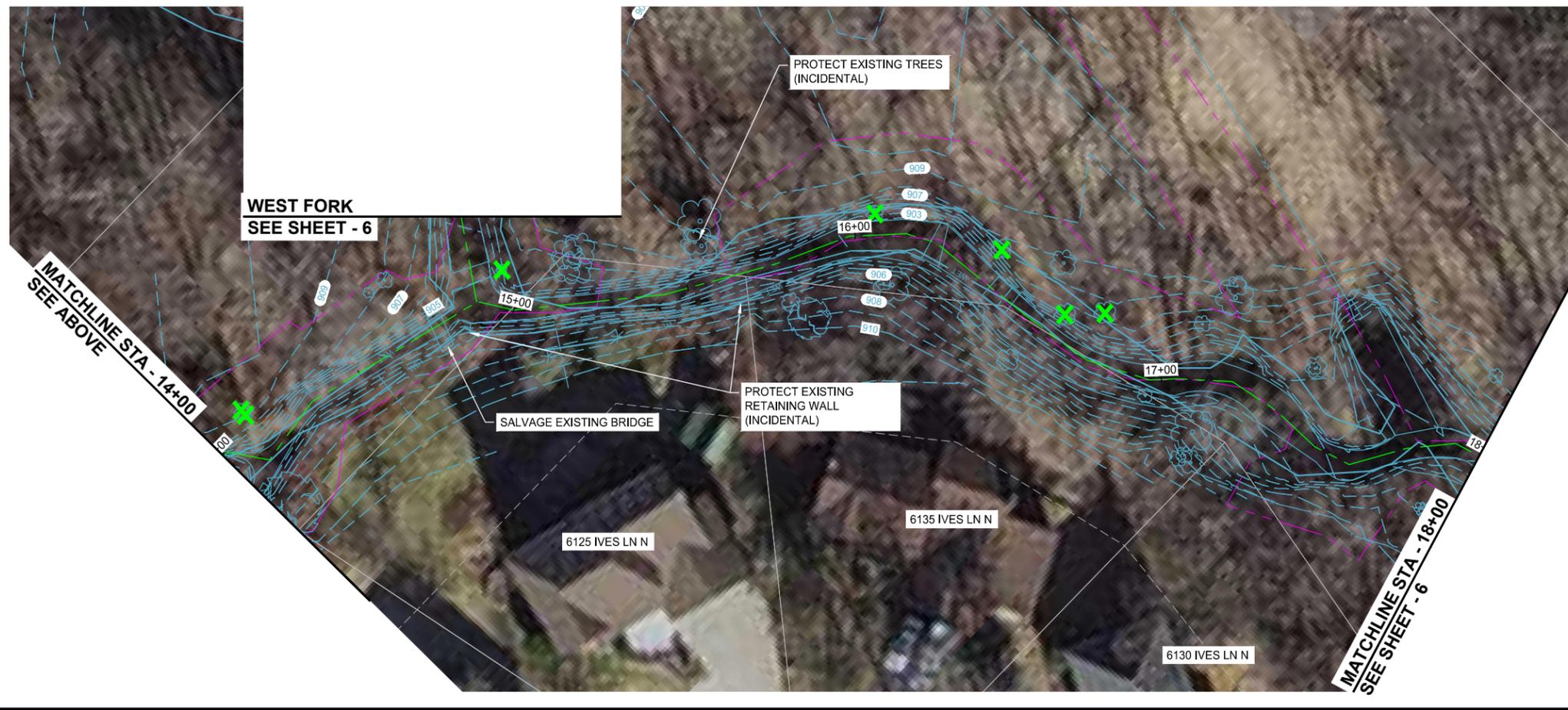
CLIENT PROJECT NO.
 WR 22-0001

WSB PROJECT NO.
 018715-000

SHEET
 4 OF 13



SOUTHWEST FORK



wsb City of Plymouth City of Maple Grove

SCALE: AS SHOWN
 PLAN BY: BPM
 DESIGN BY: KJF
 CHECK BY: JHN

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Jake H. Newhall
 JAKE H. NEWHALL
 DATE: 09/27/2022 LIC. NO.: 49170

EXISTING CONDITIONS & REMOVAL PLANS

- NOTES**
1. REMOVAL OF DOWNED TREES AND OTHER DEBRIS WITHIN DITCH SHALL BE INCIDENTAL TO PROJECT. TREES 6" IN DIAMETER OR LARGER TO BE REMOVED ARE SHOWN IN THE PLANS AND SHALL BE MARKED IN THE FIELD BY THE ENGINEER. TREES UNDER 6" IN DIAMETER SHALL BE REMOVED WHERE PROPOSED GRADING DICTATES AND AS DIRECTED BY THE ENGINEER IN THE FIELD. KNOWN TREE REMOVAL IS SHOWN ON THE PLANS. ADDITIONAL TREE REMOVAL MAY BE REQUESTED BY THE ENGINEER IN THE FIELD.
 2. ONSITE TREES TO BE ANCHORED INTO TOE OF SLOPE WHERE NOTED. MAY NOT BE ROTTEN. TREES WILL BE ANCHORED USING MODEL 68 DUCKBILL EARTH ANCHORS.
 3. BIOENGINEERING TECHNIQUES USED INCLUDE LIVE STAKES AND SEEDING SPECIAL (SEE SPECIFICATIONS).
 4. CONTRACTOR TO GRADE AROUND EXISTING STORM SEWER STRUCTURES AS DIRECTED BY THE ENGINEER.
 5. CONTRACTOR RESPONSIBLE FOR THE DAMAGE TO STREETS, CONCRETE CURB & GUTTER, TRAILS AND TREES NOT SHOWN FOR REMOVAL.
 6. CONTRACTOR TO COORDINATE ACCESS LIMITS WITH THE ENGINEER IN THE FIELD.
 7. WORK ASSOCIATED WITH PROTECTING AND/OR REMOVING AND REINSTALLING FENCES, RETAINING WALLS, STREET SIGNS, LAWN IRRIGATION SYSTEMS AND OTHER ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

LEGEND

	CONSTRUCTION LIMITS
	CLEARING AND GRUBBING (BY TREE)
	REMOVE STORM SEWER
	SALVAGE FENCE
	ACCESS ROUTE

**BASS LAKE ESTATES 2ND ADDITION
 STREAM RESTORATION PROJECT**

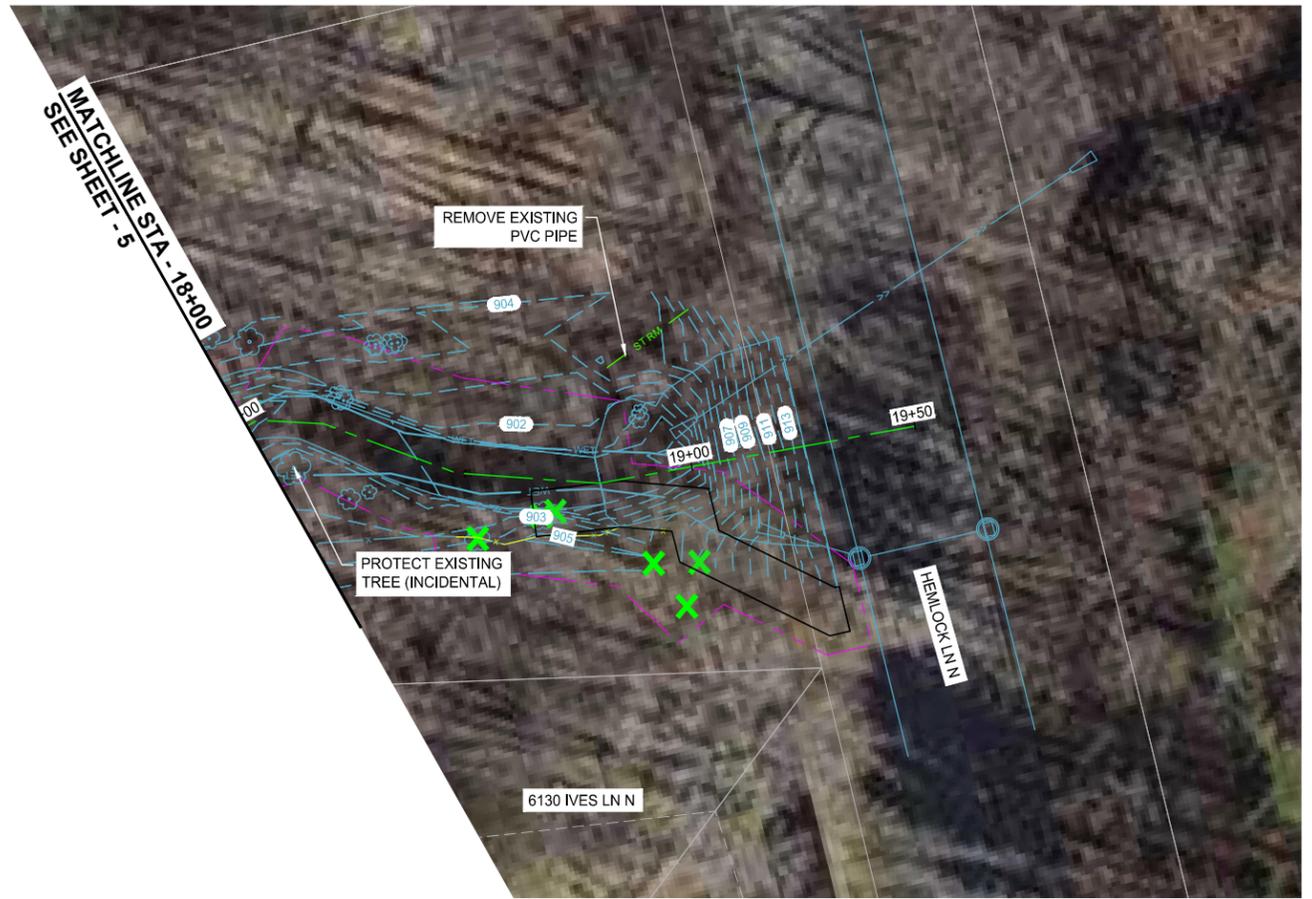
CITY OF PLYMOUTH, MN

CLIENT PROJECT NO.
 WR 22-0001

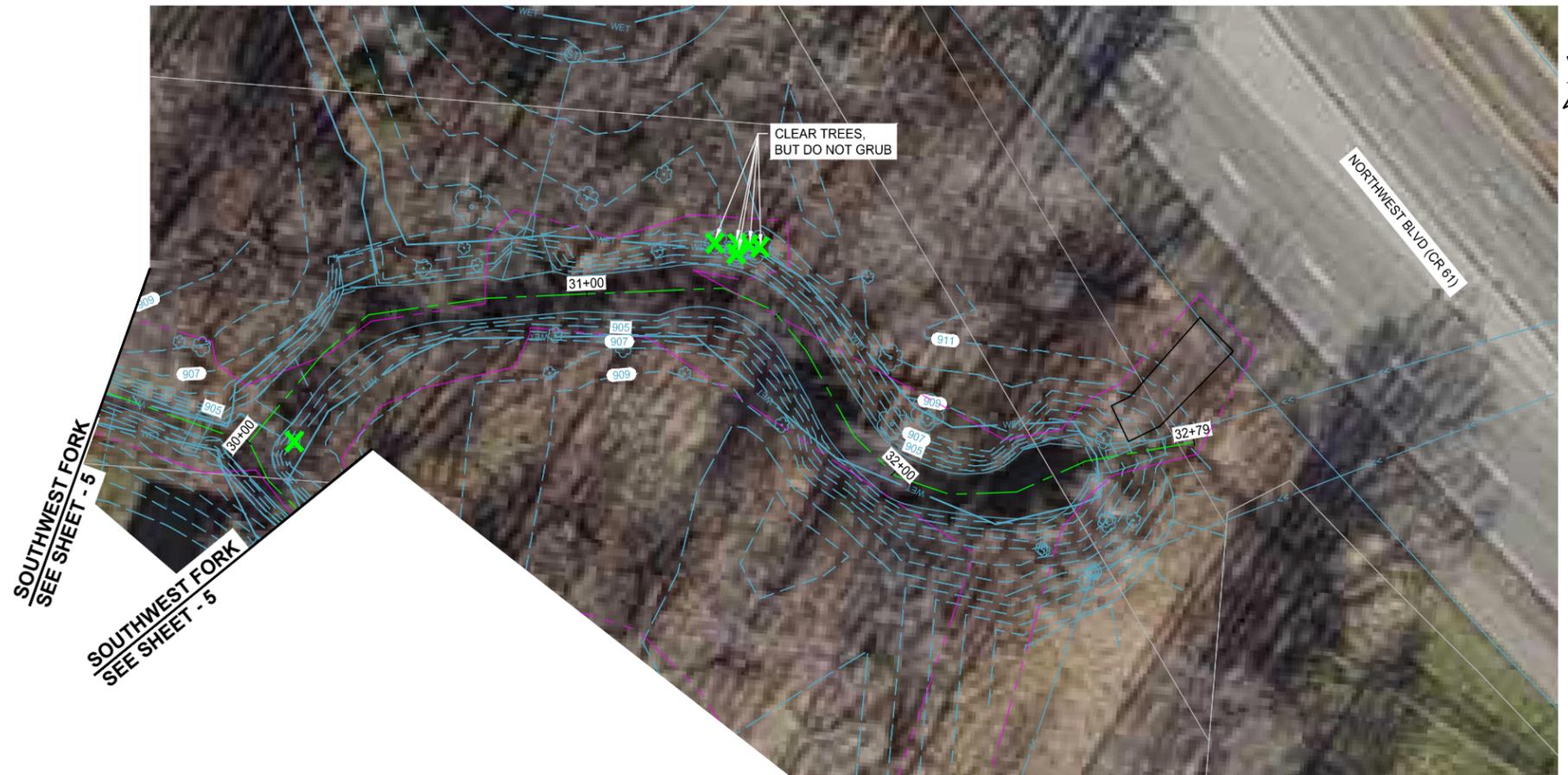
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SHEET
 5 OF 13

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SOUTHWEST FORK & WEST FORK



0 20 40
SCALE IN FEET

NOTES

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	CONSTRUCTION LIMITS
	CLEARING AND GRUBBING (BY TREE)
	REMOVE STORM SEWER
	SALVAGE FENCE
	ACCESS ROUTE

SCALE: AS SHOWN
DESIGN BY: KJF
PLAN BY: BPM
CHECK BY: JHN

REVISIONS

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JAKE H. NEWHALL
DATE: 09/27/2022 LIC. NO.: 49170

EXISTING CONDITIONS & REMOVAL PLANS

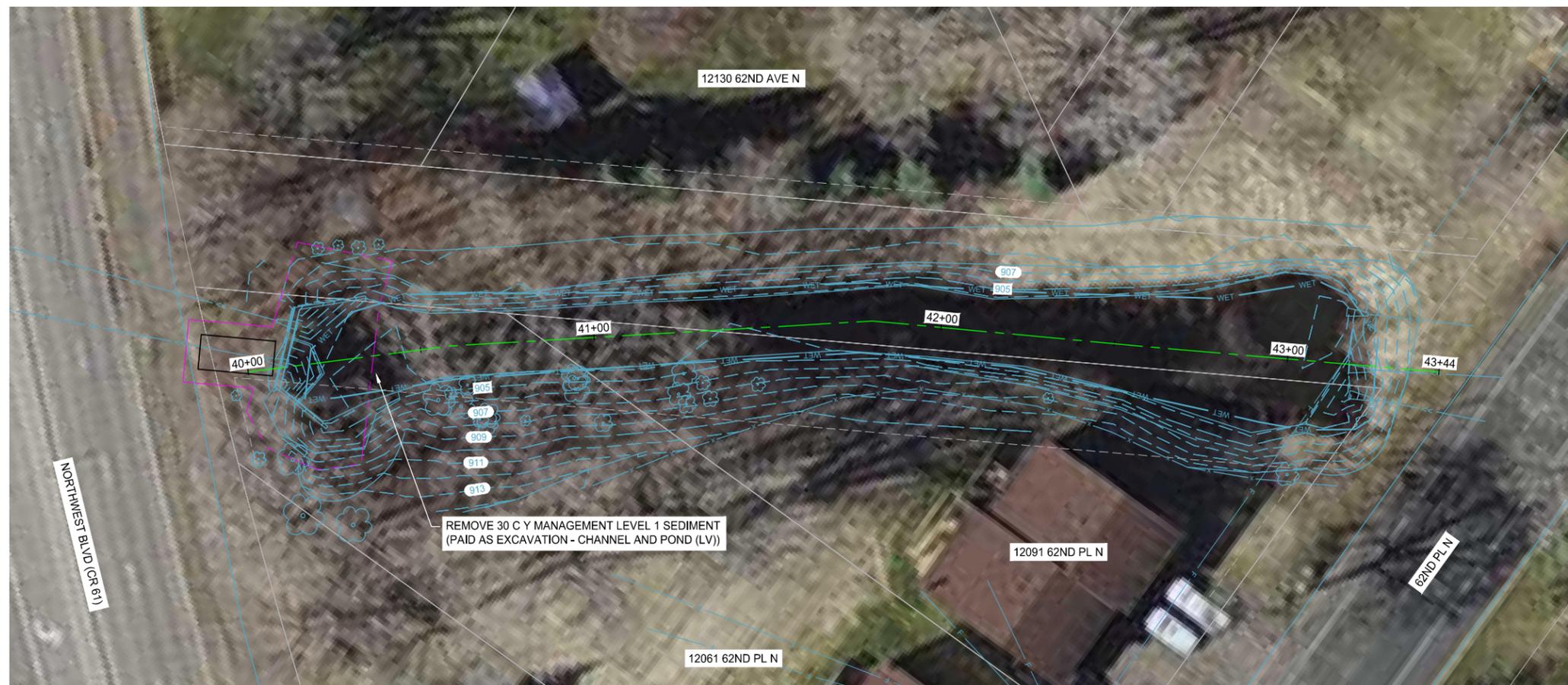
BASS LAKE ESTATES 2ND ADDITION
STREAM RESTORATION PROJECT
CITY OF PLYMOUTH, MN

CLIENT PROJECT NO.
WR 22-0001

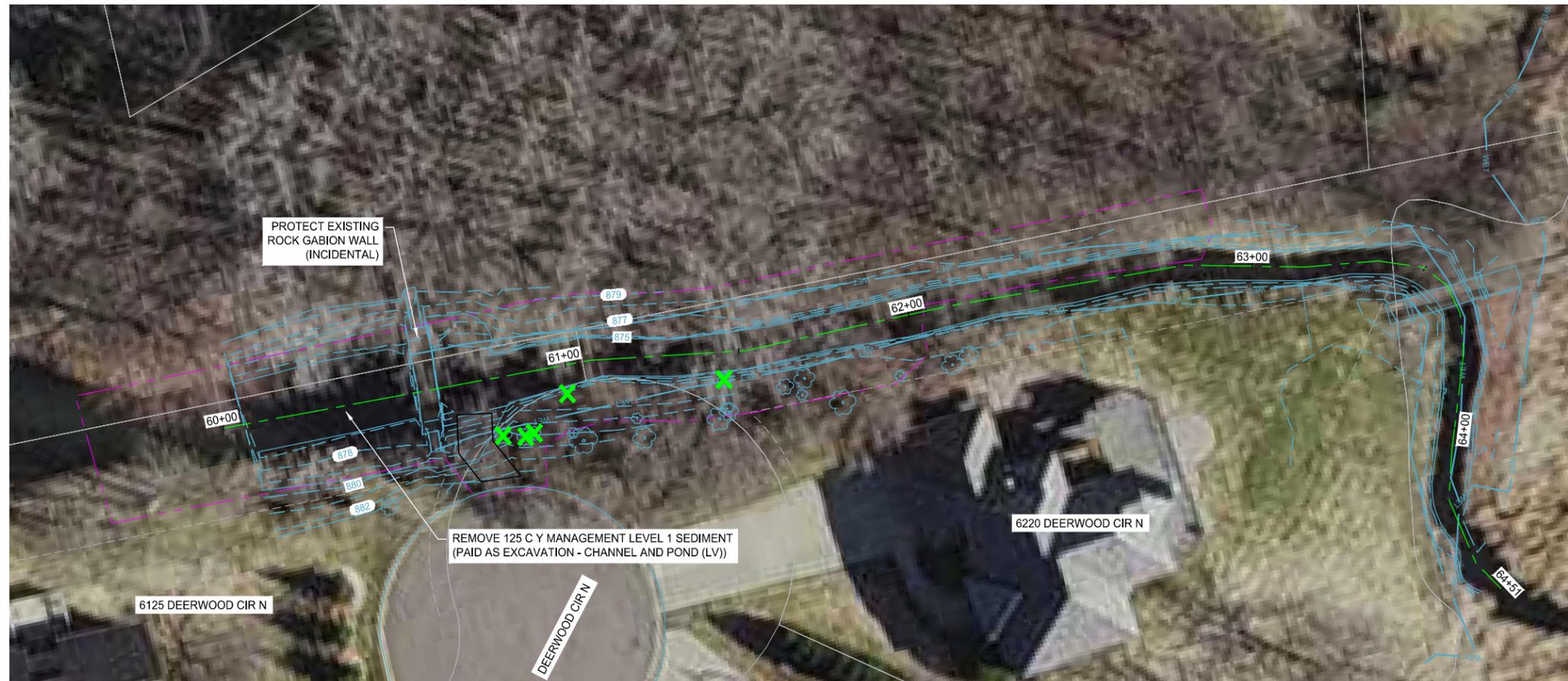
WSB PROJECT NO.
018715-000

SHEET
6 OF 13

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NORTHWEST FORK & EAST FORK



LOCATION



wsb City of Plymouth City of Maple Grove
 SCALE: AS SHOWN
 PLAN BY: BPM
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EXISTING CONDITIONS & REMOVAL PLANS

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1. REMOVAL OF DOWNED TREES AND OTHER DEBRIS WITHIN DITCH SHALL BE INCIDENTAL TO PROJECT. TREES 6" IN DIAMETER OR LARGER TO BE REMOVED ARE SHOWN IN THE PLANS AND SHALL BE MARKED IN THE FIELD BY THE ENGINEER. TREES UNDER 6" IN DIAMETER SHALL BE REMOVED WHERE PROPOSED GRADING DICTATES AND AS DIRECTED BY THE ENGINEER IN THE FIELD. KNOWN TREE REMOVAL IS SHOWN ON THE PLANS. ADDITIONAL TREE REMOVAL MAY BE REQUESTED BY THE ENGINEER IN THE FIELD.
2. ONSITE TREES TO BE ANCHORED INTO TOE OF SLOPE WHERE NOTED. MAY NOT BE ROTTEN. TREES WILL BE ANCHORED USING MODEL 68 DUCKBILL EARTH ANCHORS.
3. BIOENGINEERING TECHNIQUES USED INCLUDE LIVE STAKES AND SEEDING SPECIAL (SEE SPECIFICATIONS).
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LEGEND

- CONSTRUCTION LIMITS
- CLEARING AND GRUBBING (BY TREE)
- REMOVE STORM SEWER
- SALVAGE FENCE
- ACCESS ROUTE

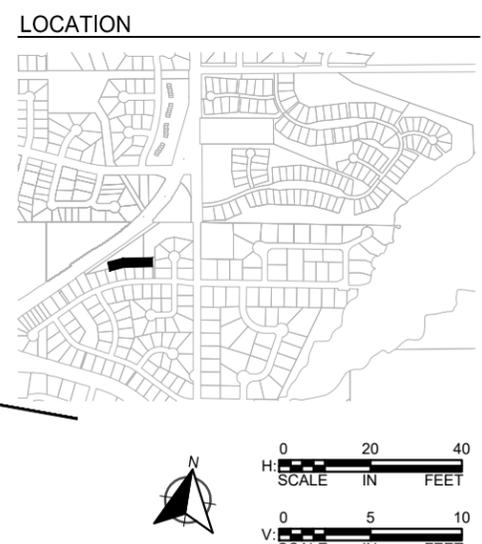
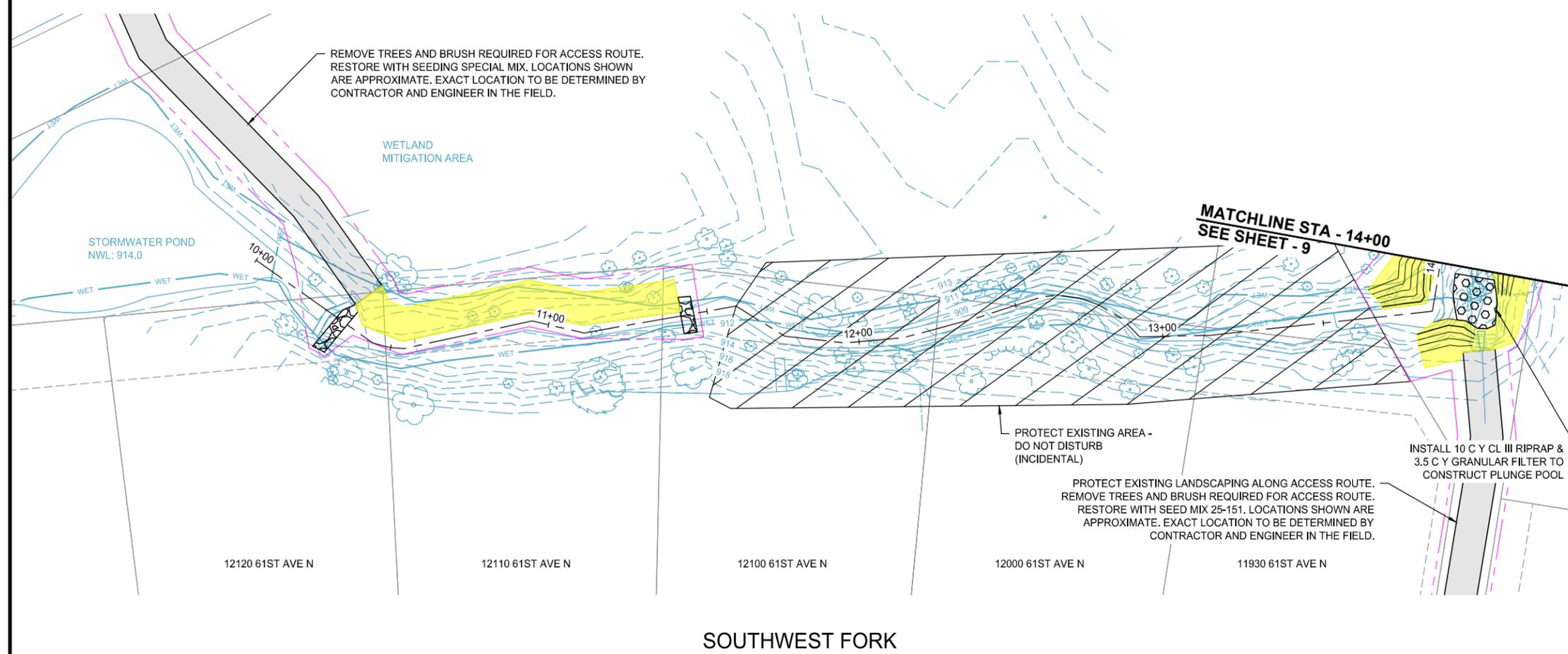
BASS LAKE ESTATES 2ND ADDITION
 STREAM RESTORATION PROJECT
 CITY OF PLYMOUTH, MN

CLIENT PROJECT NO.
 WR 22-0001

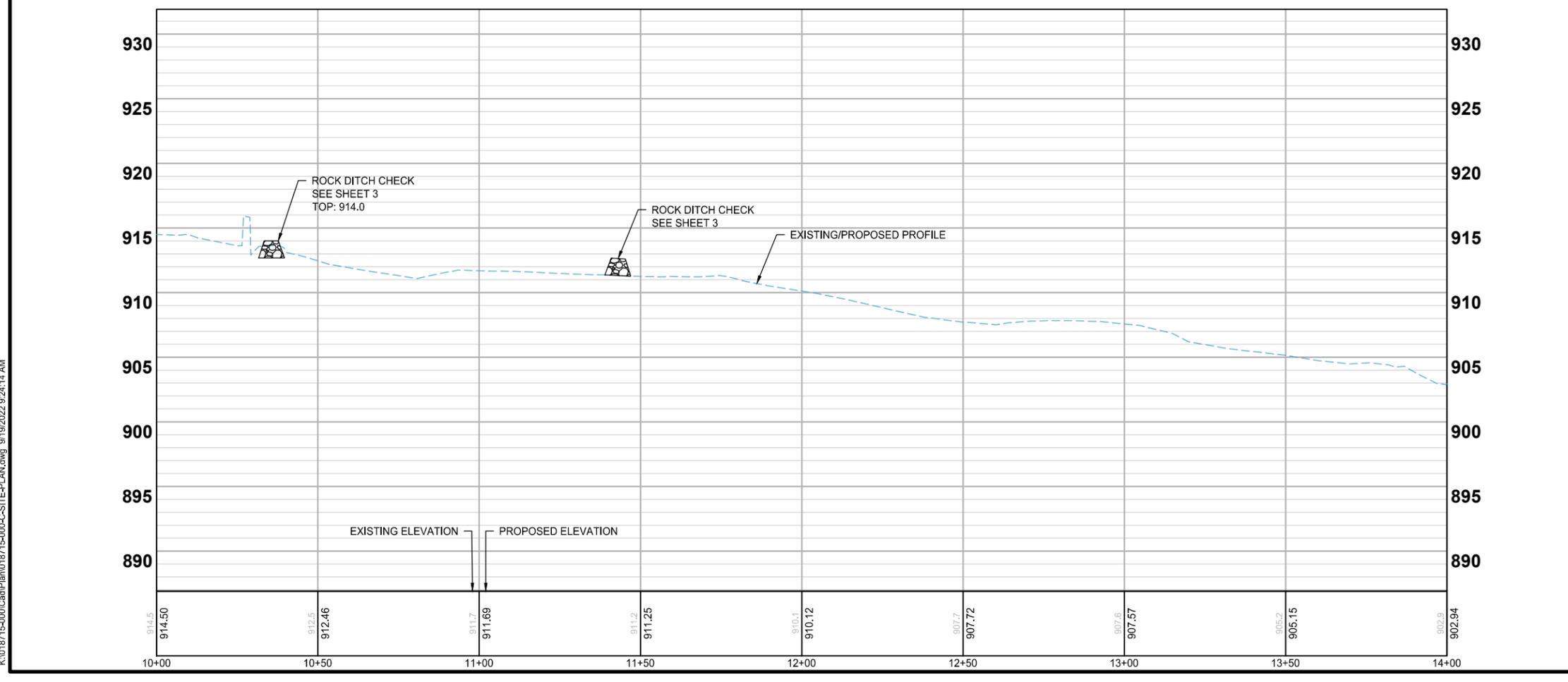
WSB PROJECT NO.
 018715-000

SHEET
 7 OF 13

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- NOTES**
1. ONSITE TREES TO BE ANCHORED INTO TOE OF SLOPE WHERE NOTED. MAY NOT BE ROTTEN. TREES WILL BE ANCHORED USING MODEL 68 DUCKBILL EARTH ANCHORS.
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 3. CONTRACTOR TO GRADE AROUND EXISTING STORM SEWER STRUCTURES AS DIRECTED BY THE ENGINEER.
 4. CONTRACTOR TO COORDINATE ACCESS LIMITS WITH THE ENGINEER IN THE FIELD.
 5. SOILS TRACKED FROM SITE MUST BE REMOVED FROM ALL PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY DURING CONSTRUCTION.
 6. EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE BUT IN NO CASE LATER THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. AREAS SHOULD BE RESTORED WITH SEED MIXES AS SHOWN ON THE PLANS & LEGEND IN ACCORDANCE WITH THE MNDOT SEEDING MANUAL.
 7. SCRAPED INVASIVE VEGETATION CANNOT BE STOCKPILED IN A WETLAND OR STREAM AREA AND SHOULD BE HAULED OFFSITE.
 8. FOR ALL RESTORATION PERFORMED PRIOR TO APRIL 15, RESTORE ALL DISTURBED AREAS WITH OATS COVER CROP (MNDOT SEED MIX 21-111, 100 LBS/ACRE).
 9. FOR RESTORATION PERFORMED AFTER APRIL 15, RESTORE ALL POND EDGES, WOODED AREAS WHERE DISTURBED OR AS DIRECTED BY THE ENGINEER IN THE FIELD WITH SEED MIXES OR SOD AS SHOWN IN THE PLANS AT THE MNDOT SPECIFIED RATE. TYPE 21-111 SEED (100 LBS/ACRE) AND CATEGORY 3N EROSION CONTROL BLANKET SHALL BE INSTALLED ALONG POND EDGES, BUFFERS, AND NON-MOWABLE SLOPES AS DIRECTED BY THE ENGINEER IN THE FIELD.



- LEGEND**
- CONSTRUCTION LIMITS
 - x-x- INSTALL FENCE
 - SF FLOATING SILT CURTAIN
 - ACCESS ROUTE
 - PLUNGE POOL
 - ROCK DITCH CHECK
 - BLEND SIDE SLOPE INTO DITCH BOTTOM, ADD RIPRAP TO TOE OF SLOPE (2 FEET HIGH) (HARD ARMORING)
 - BLEND SIDE SLOPE INTO DITCH BOTTOM (BIOENGINEERING)
 - RIPRAP CL III
 - TREE FROM ONSIDE ANCHORED INTO TOE OF SLOPE
 - 1019- EXISTING CONTOUR (MAJOR)
 - 1019- EXISTING CONTOUR (MINOR)
 - 1019- PROPOSED CONTOUR (MAJOR)
 - 1019- PROPOSED CONTOUR (MINOR)

wsb City of Plymouth City of Maple Grove

SCALE: AS SHOWN PLAN BY: BPM DESIGN BY: KJF CHECK BY: JHN

NO.	DATE	DESCRIPTION

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JAKE H. NEWHALL
DATE: 09/27/2022 LIC. NO.: 49170

SITE & GRADING PLANS

**BASS LAKE ESTATES 2ND ADDITION
STREAM RESTORATION PROJECT**

CITY OF PLYMOUTH, MN

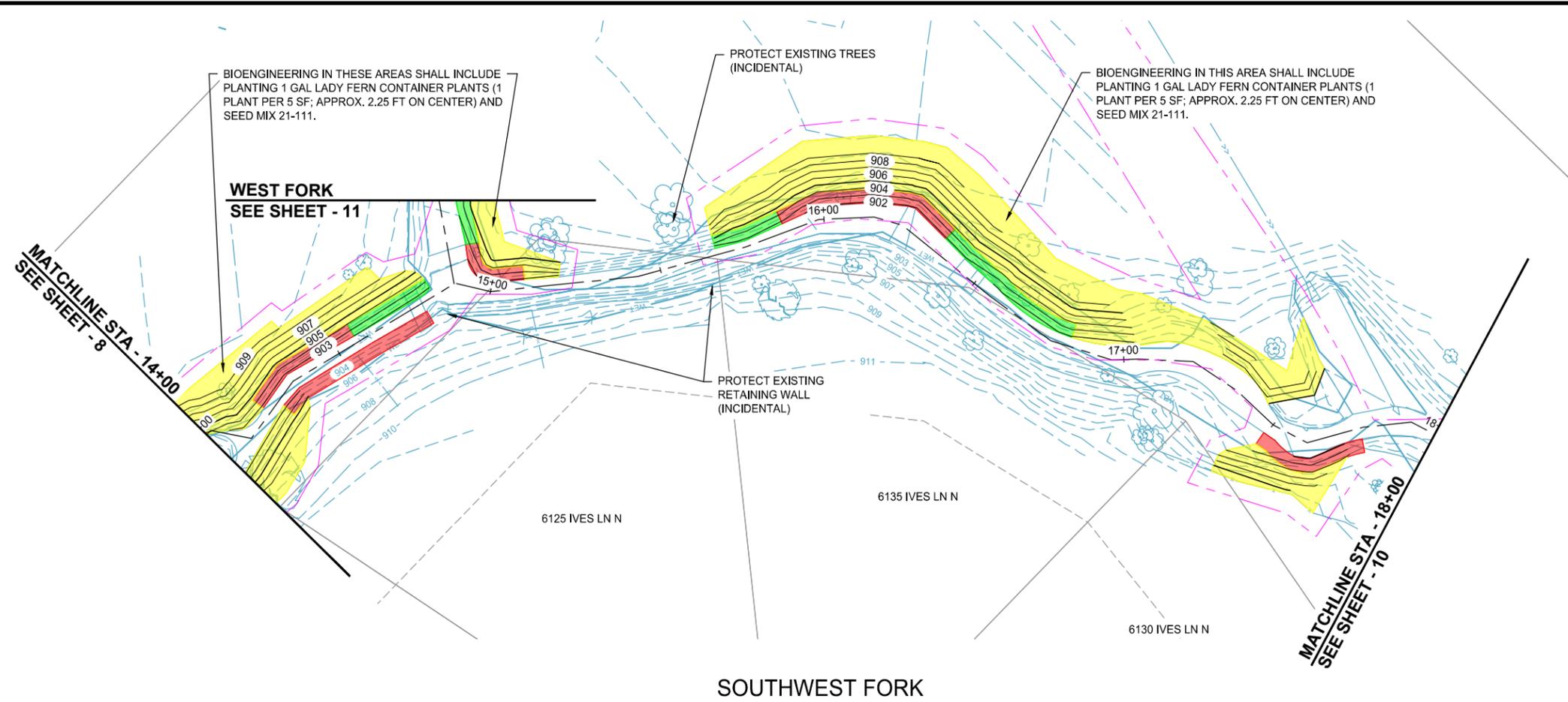
CLIENT PROJECT NO. WR 22-0001

WSB PROJECT NO. 018715-000

SHEET 8 OF 13

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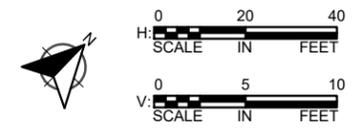


LOCATION



SCALE: AS SHOWN PLAN BY: BPM
 DESIGN BY: KJF CHECK BY: JHN

REVISIONS	
NO.	DESCRIPTION

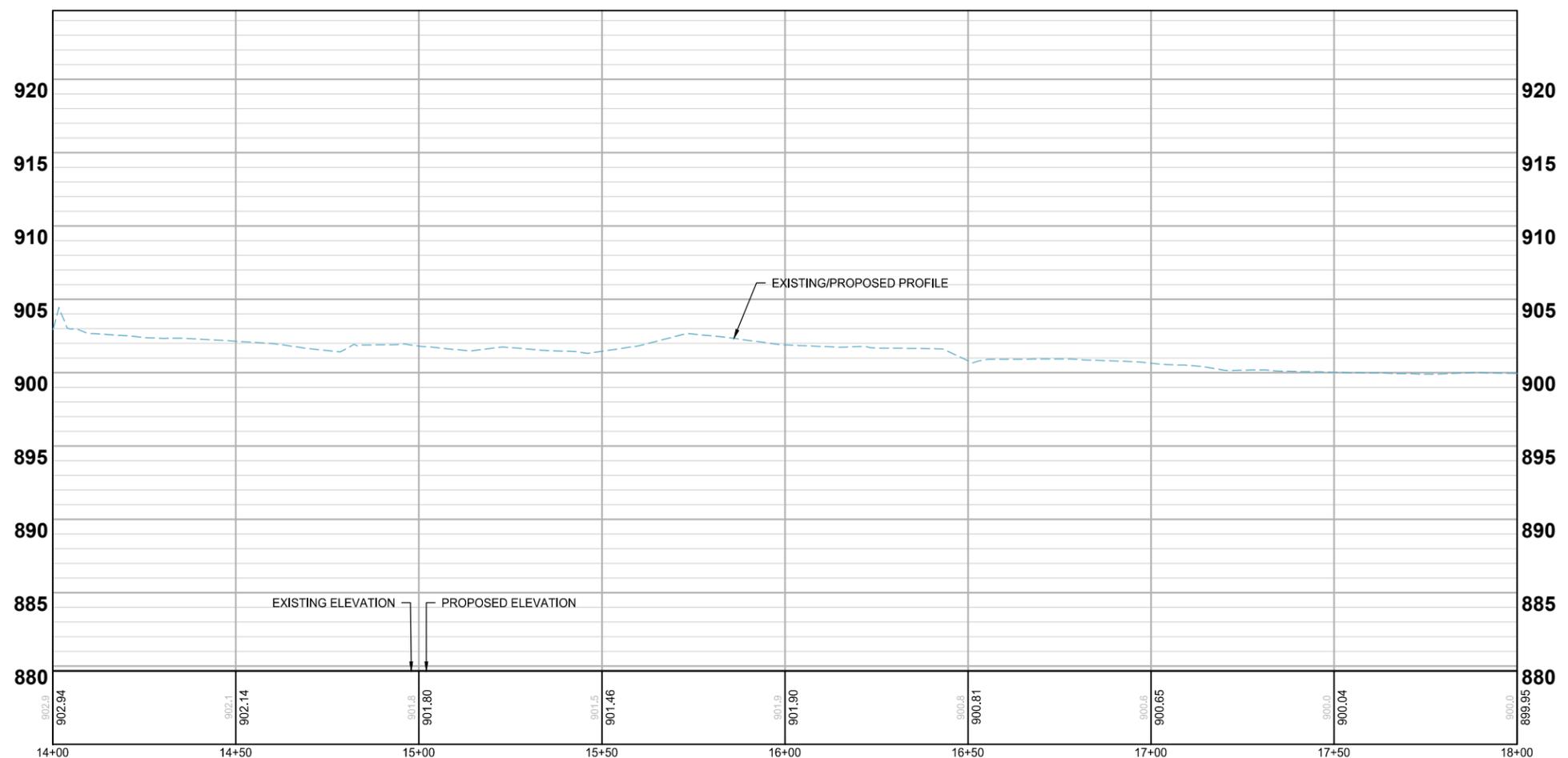


NOTES

- ONSITE TREES TO BE ANCHORED INTO TOE OF SLOPE WHERE NOTED. MAY NOT BE ROTTEN. TREES WILL BE ANCHORED USING MODEL 68 DUCKBILL EARTH ANCHORS.
- BIOENGINEERING TECHNIQUES USED INCLUDE LIVE STAKES AND SEEDING SPECIAL (SEE SPECIFICATIONS).
- CONTRACTOR TO GRADE AROUND EXISTING STORM SEWER STRUCTURES AS DIRECTED BY THE ENGINEER.
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- SF- FLOATING SILT CURTAIN
- ACCESS ROUTE
- PLUNGE POOL
- ROCK DITCH CHECK
- BLEND SIDE SLOPE INTO DITCH BOTTOM, ADD RIPRAP TO TOE OF SLOPE (2 FEET HIGH) (HARD ARMORING)
- BLEND SIDE SLOPE INTO DITCH BOTTOM (BIOENGINEERING)
- RIPRAP CL III
- TREE FROM ONSIDE ANCHORED INTO TOE OF SLOPE
- 1019- EXISTING CONTOUR (MAJOR)
- 1019- EXISTING CONTOUR (MINOR)
- 1019- PROPOSED CONTOUR (MAJOR)
- 1019- PROPOSED CONTOUR (MINOR)



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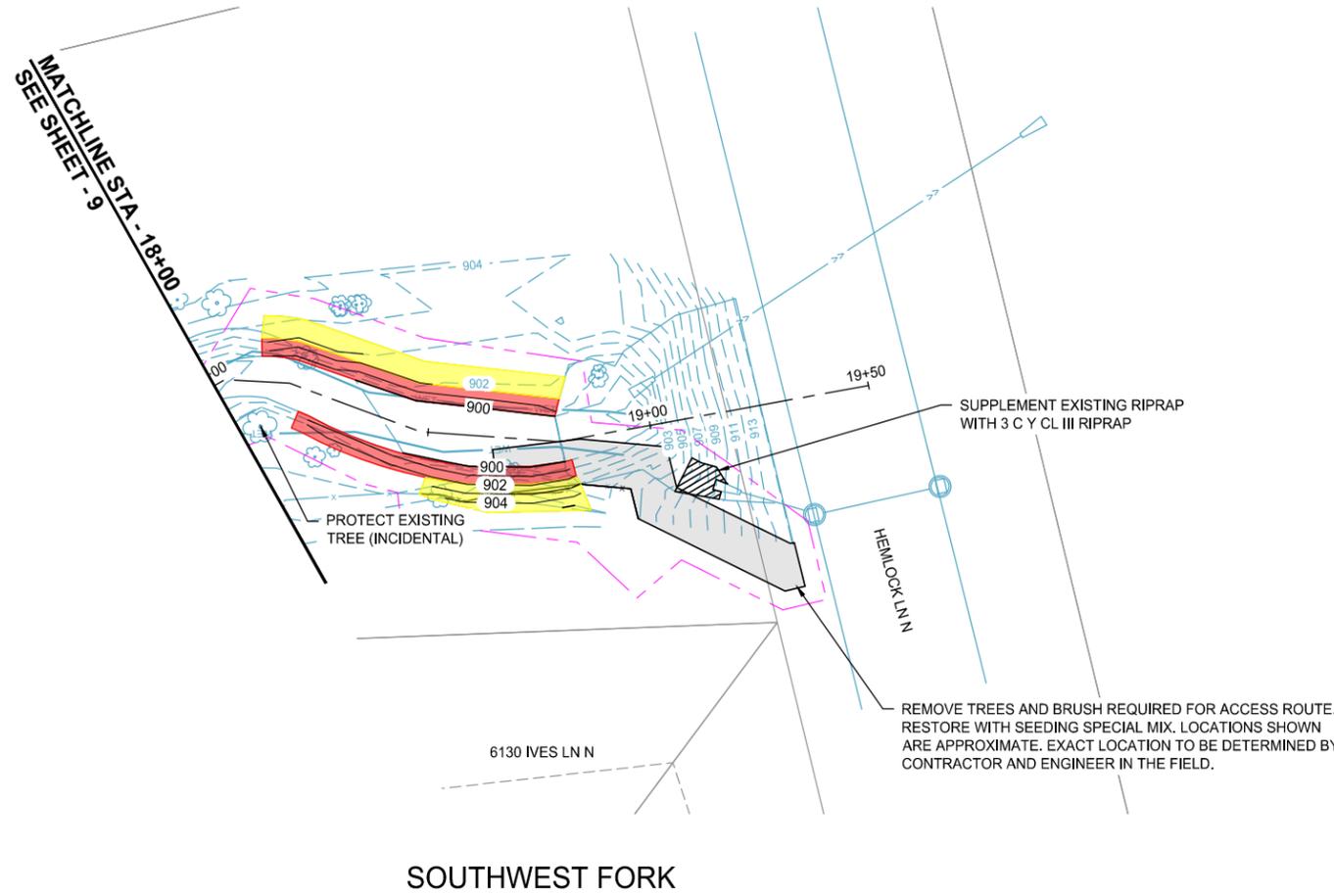
JAKE H. NEWHALL
 DATE: 09/27/2022 LIC. NO.: 49170

SITE & GRADING PLANS

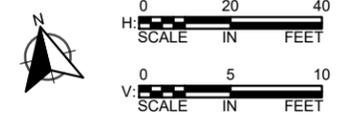
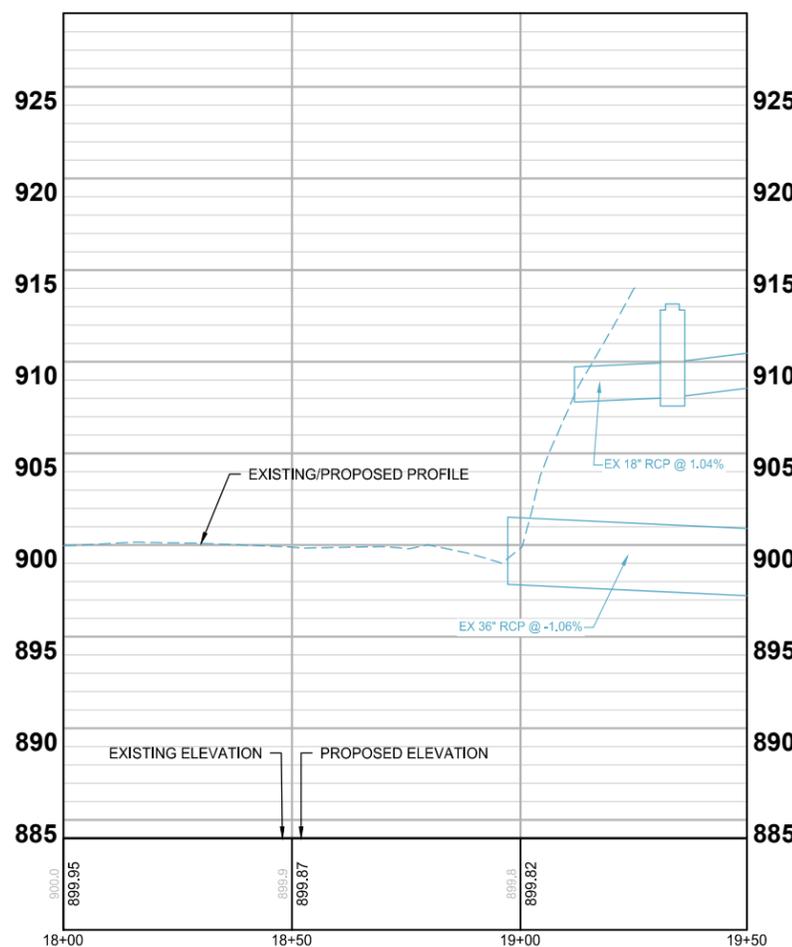
**BASS LAKE ESTATES 2ND ADDITION
 STREAM RESTORATION PROJECT**
 CITY OF PLYMOUTH, MN

CLIENT PROJECT NO. WR 22-0001

WSB PROJECT NO. 018715-000



SOUTHWEST FORK



NOTES

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wsb City of Plymouth City of Maple Grove

SCALE: AS SHOWN PLAN BY: BPM
 DESIGN BY: KJF CHECK BY: JHN

REVISIONS	
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SITE & GRADING PLANS

**BASS LAKE ESTATES 2ND ADDITION
 STREAM RESTORATION PROJECT**

CITY OF PLYMOUTH, MN

CLIENT PROJECT NO. WR 22-0001

WSB PROJECT NO. 018715-000

SHEET 10 OF 13

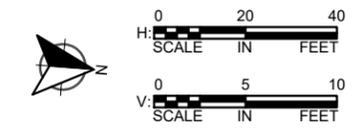
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LOCATION

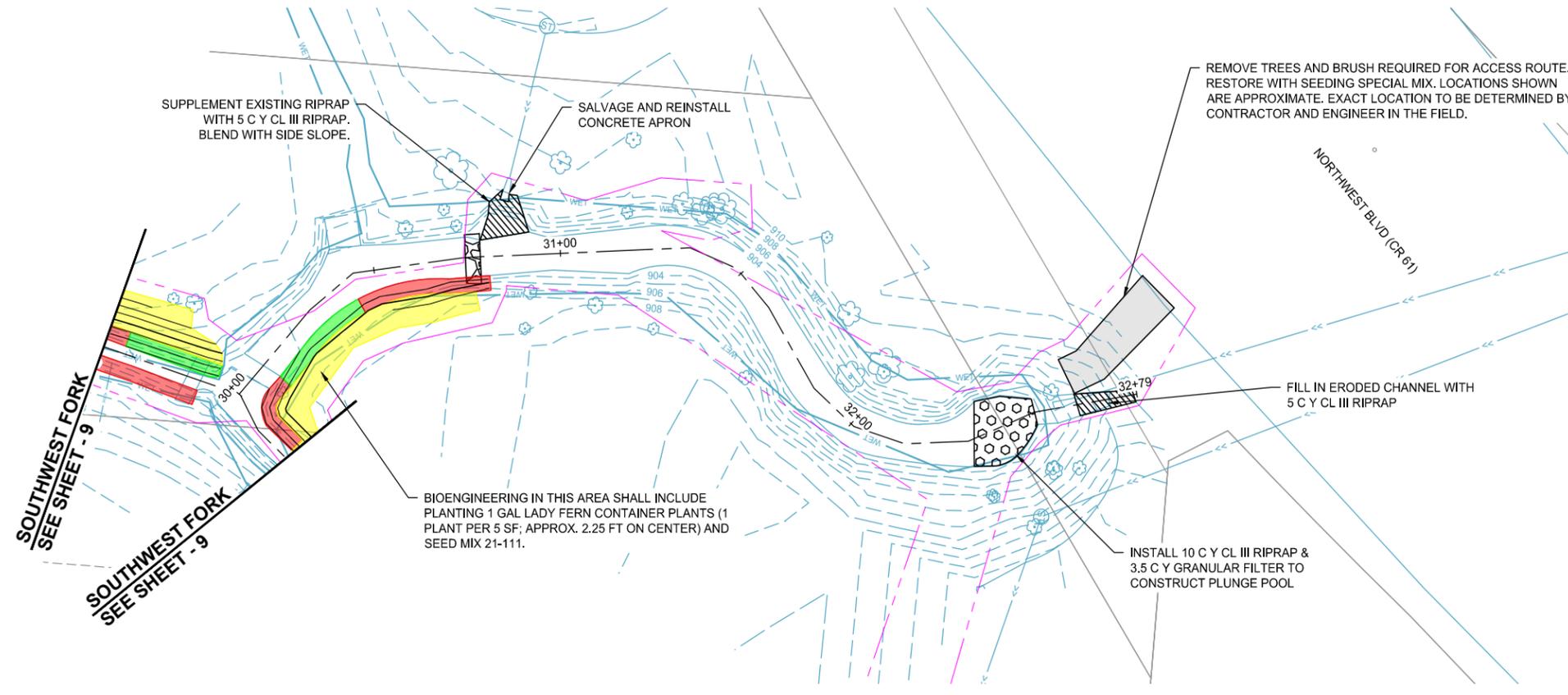


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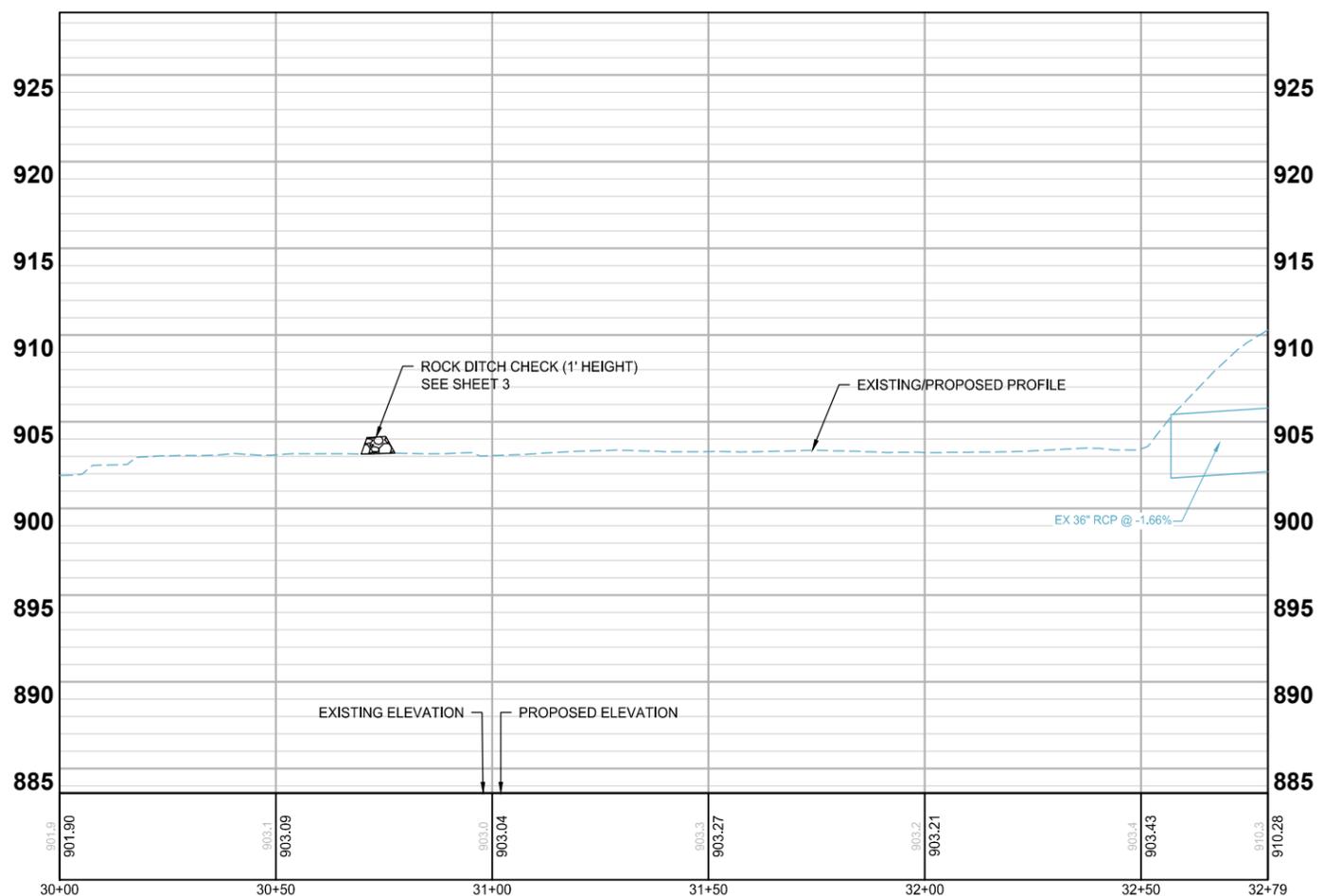
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WEST FORK



SITE & GRADING PLANS

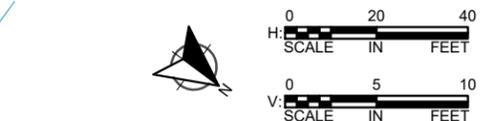
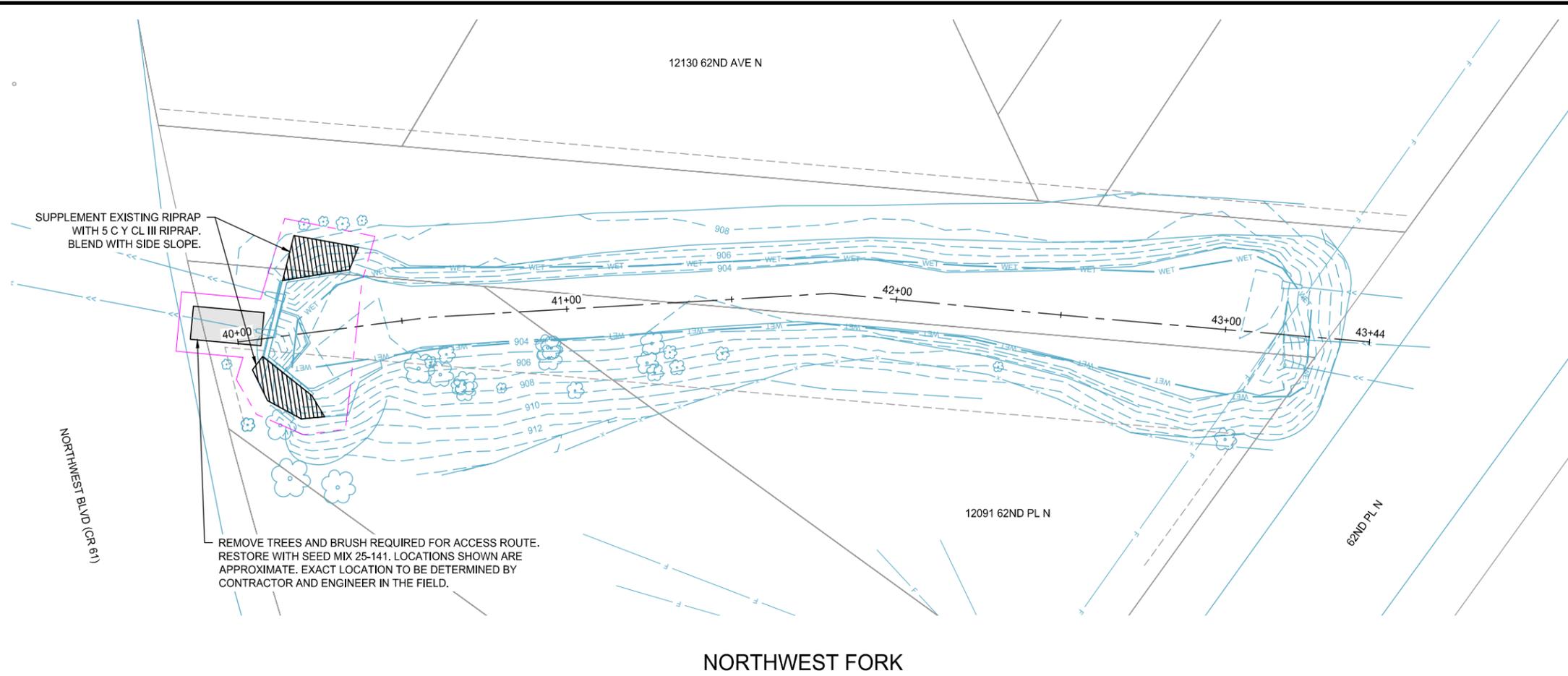
BASS LAKE ESTATES 2ND ADDITION
STREAM RESTORATION PROJECT
CITY OF PLYMOUTH, MN

CLIENT PROJECT NO. WR 22-0001

WSB PROJECT NO. 018715-000

SHEET 11 OF 13

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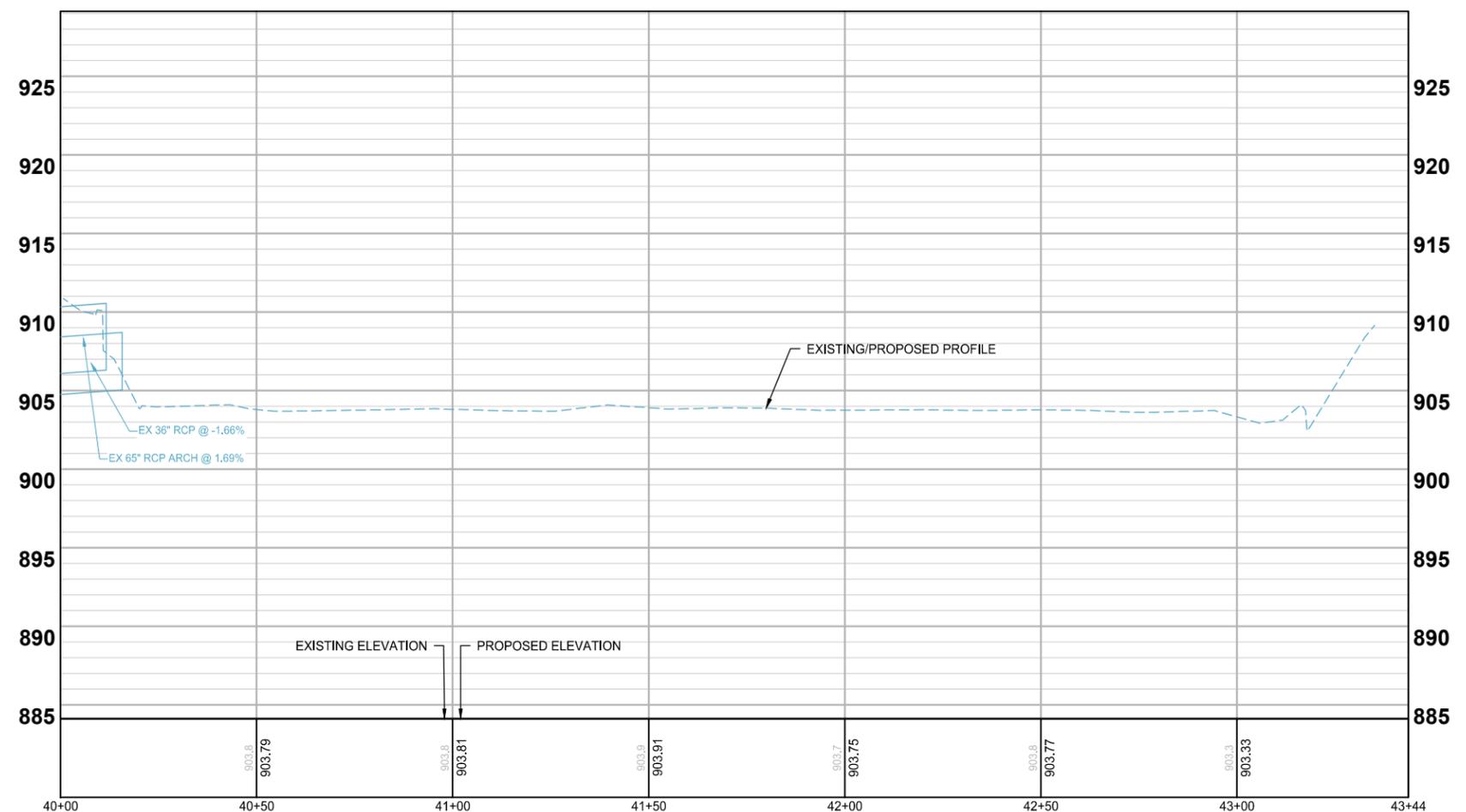


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wsb City of Plymouth City of Maple Grove
 SCALE: AS SHOWN PLAN BY: BPM DESIGN BY: KJF CHECK BY: JHN

REVISIONS	
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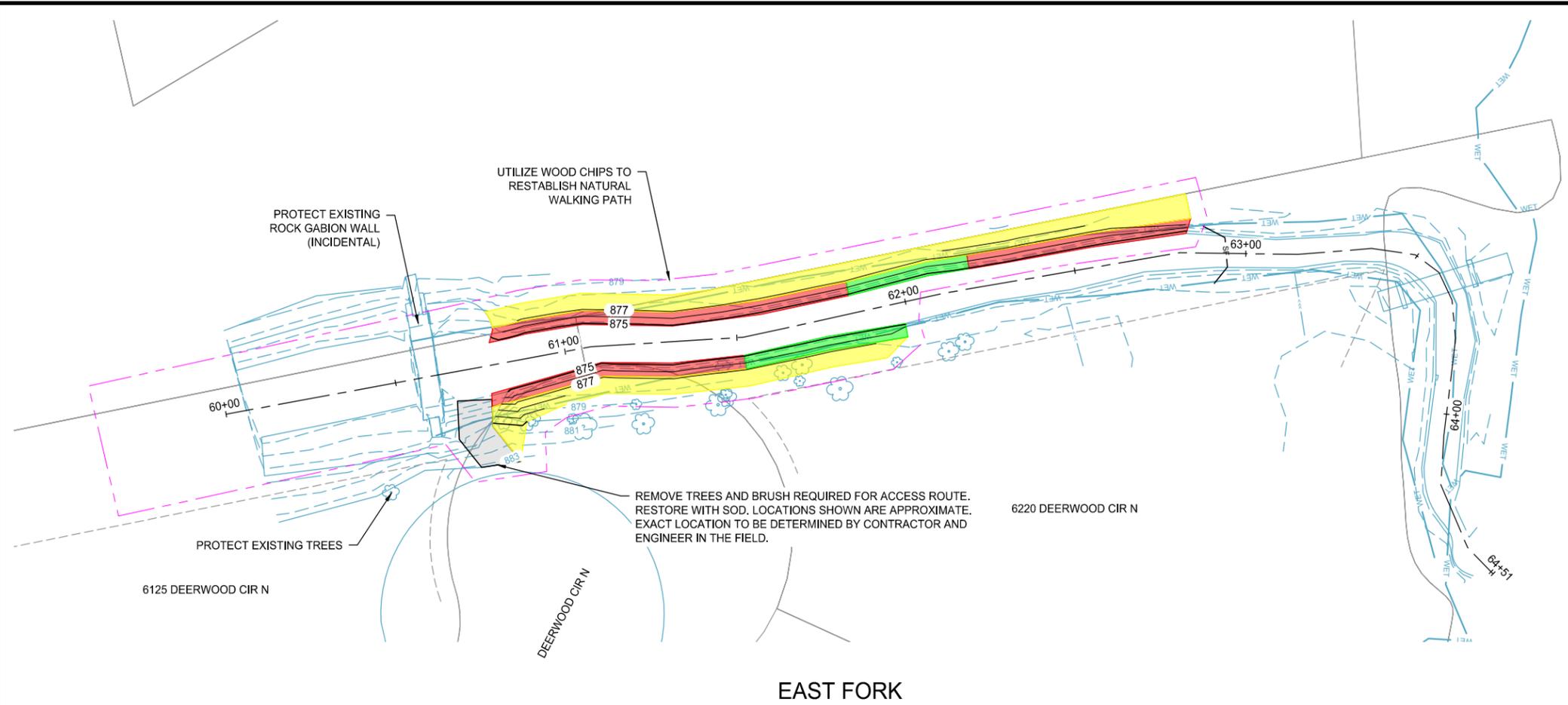
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SITE & GRADING PLANS

**BASS LAKE ESTATES 2ND ADDITION
 STREAM RESTORATION PROJECT**
 CITY OF PLYMOUTH, MN

CLIENT PROJECT NO. WR 22-0001
 WSB PROJECT NO. 018715-000
 SHEET 12 OF 13

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LOCATION

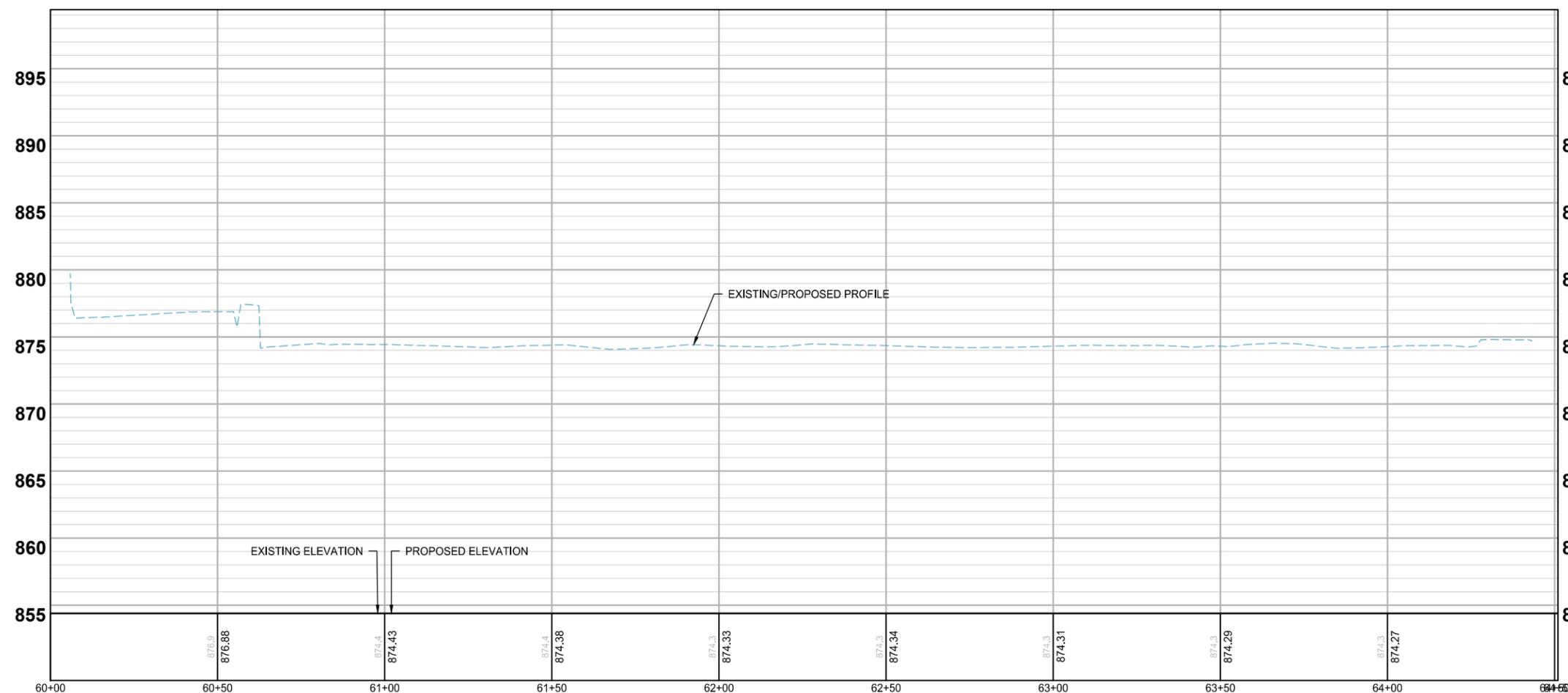


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