

Dan Woolery,
President, Division 3

James Rickert,
Vice President, Division 5

Ronnean Lund,
Director, Division 1

Audie Butcher,
Director, Division 2

Steve McCarley,
Director, Division 4

Justin Dahl,
General Manager

BOARD MEETING

Agenda

February 16, 2024, 9:00 a.m.

1887 Howard Street, Anderson (Council Chambers)

1. Call To Order

2. Flag Salute

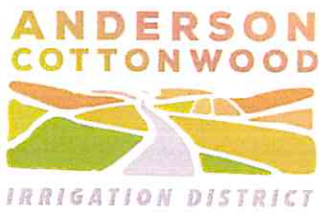
3. Public Participation

Time set aside for members of the public that wish to address the Board regarding operations of the District within the jurisdiction of the Board. Individuals are requested to limit comments to a maximum of three minutes.

4. Business Items

- a. Discuss & Approve Innovative Controls SCADA Quote for District Facilities
- b. Discuss & Approve Clear Channel Chemical Quote for the Treatment of the Main Canal
- c. Discuss & Select a Shady Lane Bid from Contractors/Appoint SHN Engineering (Steve Nelson) to be Project Manager

9. Adjourn



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General Manager

Date: 02/16/2024 Agenda Item No. 4a

Agenda Title: Discuss & Approve Innovative Controls SCADA Quote for District Facilities

Discussion: Board and staff should discuss the two different quotes that Innovative Controls submitted.

Fiscal Impact: Quote 1: \$54,610 - \$62,700/ Quote 2: \$90,033

Recommendation: Staff recommends going with quote one, as this will fit the District needs, and will allow the District to divert water more efficiently. Also, both quotes exceed budget and needs Board approval.

Attachments: See the two attachments for 4a



Lic. 965664

Date: 2/12/24

Attn: Ben Dunkin

Project: SCADA Communications

Description

Current SCADA communications are unreliable. ICSCADA is recommending implementation of a Hybrid Communication System (HCS) utilizing the existing 900Mhz frequency and introduce cellular gateways as backhauls.

Static IPs come at a higher cost; this is one caveat of using cellular gateways. ICSCADA provides over 20 cellular Static IP's for over 13 irrigation districts spread over California and has been doing so for over 8 years now.

North Repeater, Boat Ramp, Locust and Crowley will each need a cellular gateway. From there ICSCADA will analyze each remote station; i.e., Radial Gate, Smith Road, etc.... back to its corresponding repeater by way of RSSI (Received Signal Strength Indicator) if a value of $\leq (-85\text{db})$ or lower, the RSSI is within spec the remote station will not require a cellular modem, this is best case. If $\text{RSSI} > (-85\text{db})$ a cellular gateway will be installed, this is worst case.

Cost by site is difficult to accurately isolate. In order to keep the quote short and to the point I've added in a majority of the parts needed and labors, in other words I cannot provide a cost per site instead is a best cost – worst cost scenario.

Costs

Description	Qty
Cellular Radio	1
High Gain Antenna	1
Power Supply	1
Breakers	3
Comm Cables	2

Description
Labor/Install
Analyze Comm Paths
Acquire Cellular Service
Radio Program
HMI Programming
PLC Programming

Total Cost: \$54,610.00 - \$62,700.00

Annual Cost (First Year included):

Annual Cost: \$2,400 - \$4,200 (Best - Worst)

Cellular Gateway Sites

Best Case

1. North Repeater
2. Boat Ramp
3. Locust
4. Crowley

Worst Case (Added On)

1. Smith Road
2. North Bank
3. Radial Gate

Clarifications

1. Tax and shipping not included in quote
2. Quote Expires 3/12/24
3. Assumes all PLCs are in working condition



Lic. 965664

Date: 2/9/24

Attn: Ben Dunkin

Project: SCADA Communications

Description

Current SCADA communications are not reliable and causing interference for another Irrigation District. ICSCADA is recommending moving the current SCADA frequency from 900Mhz Unlicensed to 400Mhz Licensed.

Benefits to moving over to 400Mhz:

1. 400Mhz frequency will loss less power compared to 900Mhz frequency in non-line of site applications, making it a prime frequency for this terrain. When power is lost over RF (Radio Frequency) your signal weakens eventually losing the data.
2. FCC will guarantee that no one else can use the frequency purchased within a given radius eliminating possible interferences from RF.

Caveats of moving over to 400Mhz:

1. It carries less data then 900Mhz, data will be slower but more consistent.
2. It requires a License that will need to be purchased every 10 years.
3. Most RF hardware will need to be changed to handle a different frequency.

The same radio architecture will be used, since we are using a more robust frequency there should be no need for a radio comms path study, helping reduce the overall cost of the new radio install.

Existing coax cable (Heliac) will be reused, a Reflected Power test will be implemented to verify the integrity of the Heliac cable. New Type N connectors at each end of the Heliac along with a new Polyphaser and Jumper will be installed.

It's recommended that a 20'x 2" pole be mounted back up on the office antenna mast, ICSCADA will aid in installing. ACID will purchase the pole and hardware for mounting. ACID will be required to rent a boom lift taller than any antenna mast ACID owns (probably 80'-100') and must have a second boom lift taller than the wood pole at the office for aiding in installing the 20'x2" pole for the Master Antenna.

Costs

Master Site (Office)

Description	Qty
Xetawave Radio	1
Jumper	1
Connectors	2
Polyphaser	1
Omni Antenna	1
Comm Cables	1
Power Supply	1
Panel Mounting Supplies	1
1/2" Heliac	300

Parts	\$5,940.00
Labor	\$4,485.00
Total	\$10,425.00

Description
Install
Radio Program
HMI Programming

Repeater Sites

Description	Qty
Dual Xetawave Radio	1
Jumper	2
Connectors	4
Polyphaser	1
YagiAntenna	1
Omni Atenaa	1
Comm Cables	1
Power Supply	1
Panel Mounting Supplies	1

Parts	\$6,144.00
Labor	\$2,760.00
Total	\$8,904.00

Description
Install
Radio Program
HMI Programming
PLC Programming

Remote Stations

Description	Qty
Xetawave Radio	1
Jumper	1
Connectors	2
Polyphaser	1
Yagi Antenna	1
Comm Cables	1
Power Supply	1
Panel Mounting Supplies	1

Description
Install
Radio Program
HMI Programming
PLC Programming

Parts	\$3,084.00
Labor	\$2,415.00
Total	\$5,499.00

Total Cost

1 x Master Site	\$10,425.00
4 x Repeaters	\$35,616.00
8 x Remote Stations	\$43,992.00
TOTAL Cost	\$90,033.00

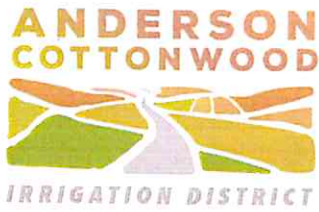
Not included in Cost:

10-year 400Mhz license is not part of the quote

- \$1,895.00
- Will need to be purchased prior to radio install

Clarifications

1. Tax and shipping not included in quote
2. Quote good for 30 days from above date
3. Assumes all Heliac is still useable and working
4. Parts will be billed for upon receipt



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Justin Dahl
General Manager

Date: 02/16/2024 **Agenda Item No.** 4b

Agenda Title: Discuss & Approve Clear Channel Chemical Quote for the Treatment of the Main Canal

Discussion: Board and staff should discuss the quote from Clear Channel and how this will affect the main canal during irrigation season.

Fiscal Impact: \$42,089.39

Recommendation: Staff recommends treating the main canal twice this year for aquatic weeds. This quote exceeds the current budget and staff recommends the Board approve the new amount.

Attachments: See attachment 4b

Local Contact: ClearChannelVM
 21413 Kirkwood Manor Drive
 Redding, CA 96002
 Dave Blodget 661-599-3231
 dave.blodget@clearchannelvm.com



ClearChannelVM
 Clear Channel Vegetation Management

ClearChannelVM Quote

Customer Name	Anderson Cottonwood Irrigation District	Expires	Terms	Sales Tax
		2/29/24	Net 30	7.75%

Ship To:	
Address	2810 Silver Street
City	Anderson
State	CA
Zip	96007
Phone	530-365-7329
Contact Person	B. Duncan, S. Passmore

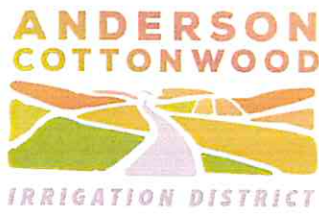
Bill To:	
Address	2810 Silver Street
City	Anderson
State	CA
Zip	96007
Phone	530-365-7329
Contact Person	B. Duncan, S. Passmore

Product	Pack Size	Qty	Price	Total
Credit 41 Extra (glyphosate)	2.5 gal	60	\$ 19.15	\$ 1,149.00
Credit 5.4 Extra (glyphosate)	2.5 gal	60	\$ 25.00	\$ 1,500.00
Triclopyr 3 SL	2.5 gal	10	\$ 58.63	\$ 586.30
Triclopyr 4 EC	2.5 gal	20	\$ 58.32	\$ 1,166.40
MAGNACIDE H	370 lb	740	\$ 15.75	\$ 11,655.00
MAGNACIDE H Freight (round trip)		740	\$ 0.60	\$ 444.00
				\$ -
Cascade	250 gal	250	\$ 86.35	\$ 21,587.50
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -

Remarks: 2 Empty MAGNACIDE H cylinders will be picked up upon delivery of new full cylinders

Customer Ref
 Number:

Sub Total	\$ 38,088.20
Freight	\$265.00
CA Mill Tax	818.76
sales tax	2917.43
Total	\$ 42,089.39



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Steve McCarley,
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Justin Dahl
General Manager

Date: ___02/16/2024___ Agenda Item No. 4c

Agenda Title: Discuss & Select a Shady Lane Bid from Contractors/Assign SHN Engineering (Steve Nelson) to be Project Manager

Discussion: Board and staff should discuss the bids from the contractors and select one to complete the project. The Board and staff should also discuss appointing SHN Engineering (Steve Nelson) to be the project manager.

Fiscal Impact: Bids from contractor/SHN Project Manager

Recommendation: Staff recommends selecting one of the bids submitted to complete the Shady Lane project, along with appointing Steve Nelson as project manager.

Attachments:
See attachment- Shady Lane project
Bids will be made available at the meeting

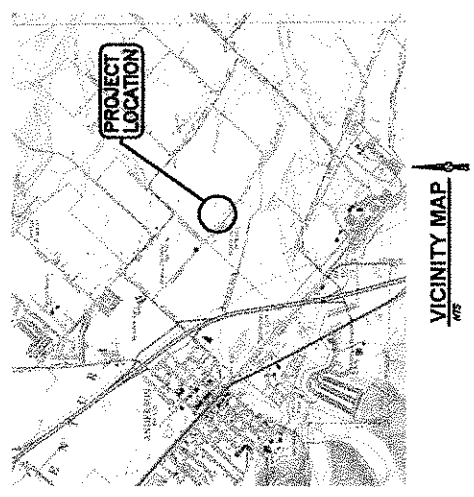
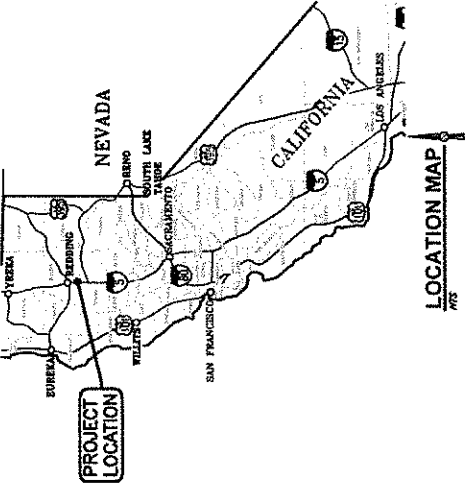
ANDERSON COTTONWOOD IRRIGATION DISTRICT

SHADY LANE
SHADY LANE, ANDERSON, CALIFORNIA

PREPARED BY:



FEBRUARY 2024



INDEX OF SHEETS

SEQ SHEET	TITLE
1	G1.0 COVER
2	G2.0 GENERAL NOTES
3	G1.0 OVERALL PLAN
4	G1.1 PLAN AND PROFILE STA 0+00 TO 2+00
5	G1.2 PLAN AND PROFILE STA 2+00 TO 4+75
6	G1.3 PLAN AND PROFILE STA 4+75 TO 8+20
7	G1.4 PLAN AND PROFILE STA 8+20 TO 8+50
8	G1.5 PLAN AND PROFILE STA 8+50 TO 10+00
9	G2.0 DETAILS
10	G2.1 DETAILS
11	G2.2 DETAILS
12	E3.0 EROSION CONTROL PLAN AND NOTES
13	E3.1 EROSION CONTROL DETAILS



GENERAL PROJECT SPECIFICATION:

- 1. UNDESIRABLE MATERIALS, INCLUDING BUT NOT LIMITED TO: ...
2. UNDESIRABLE MATERIALS, INCLUDING BUT NOT LIMITED TO: ...
3. UNDESIRABLE MATERIALS, INCLUDING BUT NOT LIMITED TO: ...

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UNDESIRABLE MATERIALS, INCLUDING BUT NOT LIMITED TO: ...

GENERAL NOTES
1. ALL CHASSIS STATIONS SHALL BE LOCATED WITHIN THE DESIGNATED AREA...
2. ALL CHASSIS STATIONS SHALL BE LOCATED WITHIN THE DESIGNATED AREA...
3. ALL CHASSIS STATIONS SHALL BE LOCATED WITHIN THE DESIGNATED AREA...

GENERAL NOTES
4. LEVELING, GRADING, AND GRUBBING
CONTRACTOR SHALL VERIFY AND IMPLEMENT THE DESIGN CONTROL PLAN AS SHOWN ON THE DESIGN DRAWINGS...

GENERAL NOTES
5. CROSSING CONTROL BARRIERS
CONTRACTOR SHALL VERIFY AND IMPLEMENT THE DESIGN CONTROL PLAN AS SHOWN ON THE DESIGN DRAWINGS...

GENERAL NOTES
6. CONSTRUCTION OF CONCRETE STRUCTURES
CONCRETE SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND SHALL BE CURED PROPERLY...

GENERAL NOTES
7. CONSTRUCTION OF METAL STRUCTURES
METAL STRUCTURES SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE SPECIFICATIONS...

GENERAL NOTES
8. CONSTRUCTION OF STEEL STRUCTURES
STEEL STRUCTURES SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE SPECIFICATIONS...

GENERAL NOTES
9. CONSTRUCTION OF MASONRY STRUCTURES
MASONRY STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS...

GENERAL NOTES
10. CONSTRUCTION OF OTHER STRUCTURES
OTHER STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS...

GENERAL NOTES
11. GENERAL NOTES
CONTRACTOR SHALL VERIFY AND IMPLEMENT THE DESIGN CONTROL PLAN AS SHOWN ON THE DESIGN DRAWINGS...

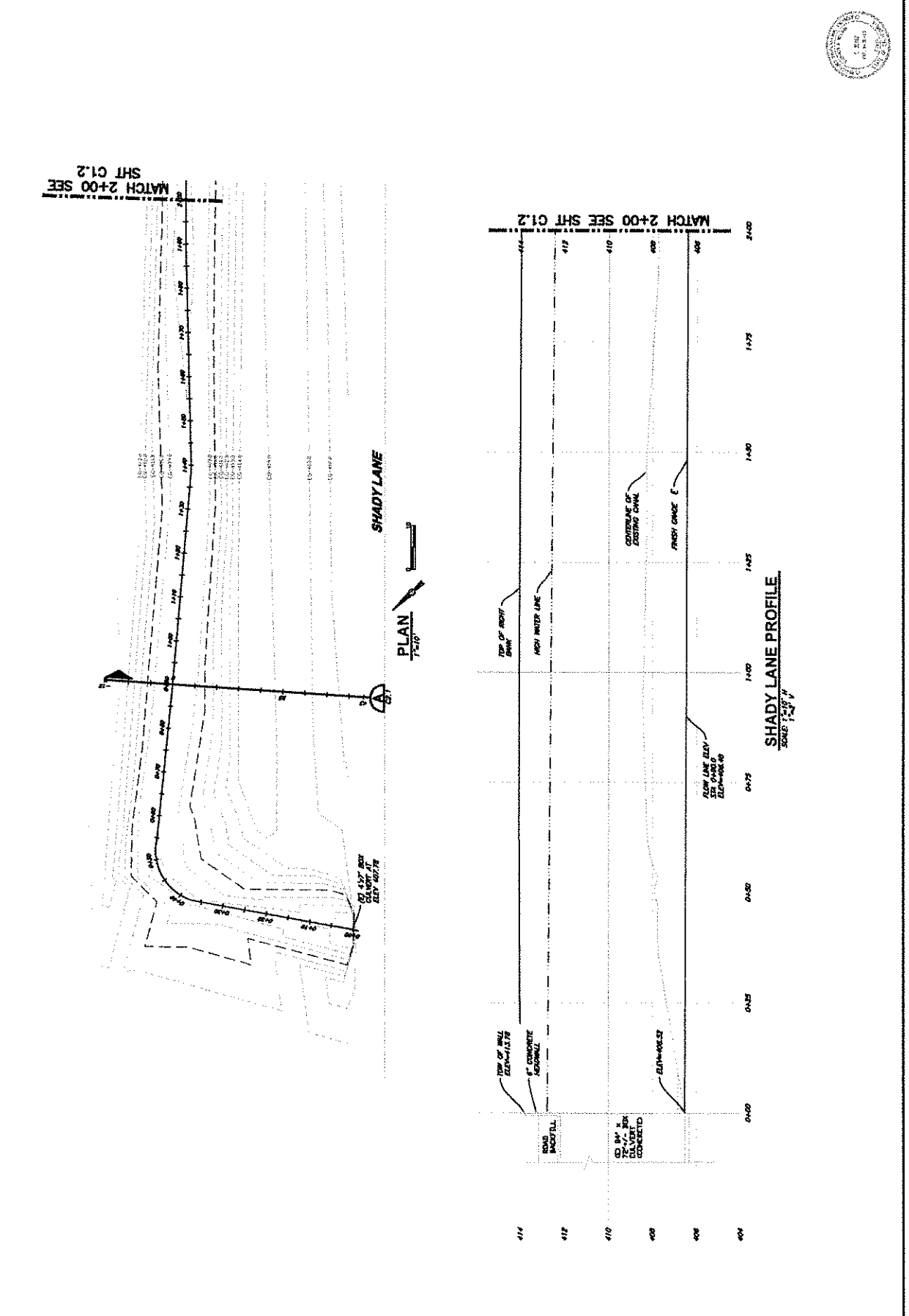


PROJECT: C1.1
 SHEET: 500
 DATE: 02/20/24
 PROJECT NO: 242007

ACID IRRIGATION DISTRICT
 SHADY LANE
 SHADY LANE, ANDERSON, CALIFORNIA
 PLAN AND PROFILE STA 0+00 TO 2+00

NO.	DATE	REVISION

350 MARSHALL AVE. STE. B
 REDWOOD, CA 96002
 (916) 221-5424
 WWW.HSN-ENGINEERING.COM
 HSN ENGINEERING



DATE: 2/6/2024 8:18 AM DWG: SHADY LANE - PLAN AND PROFILE STA 0+00 TO 2+00
 DRAWN BY: J. B. BROWN
 CHECKED BY: J. B. BROWN
 PROJECT NO: 242007

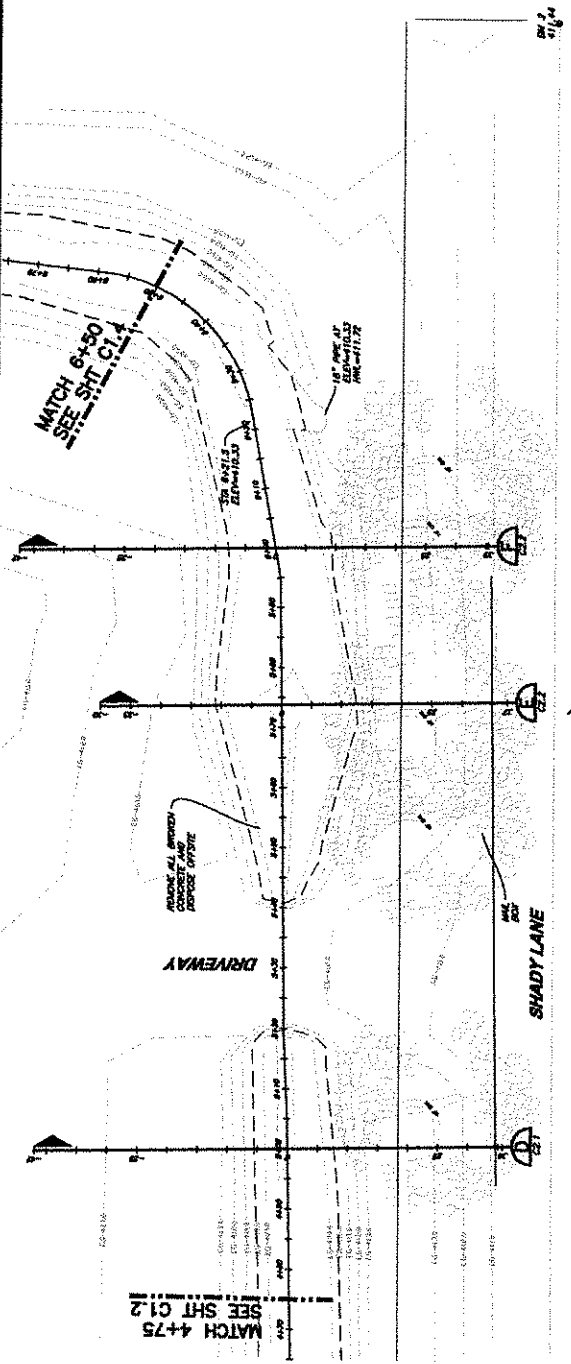
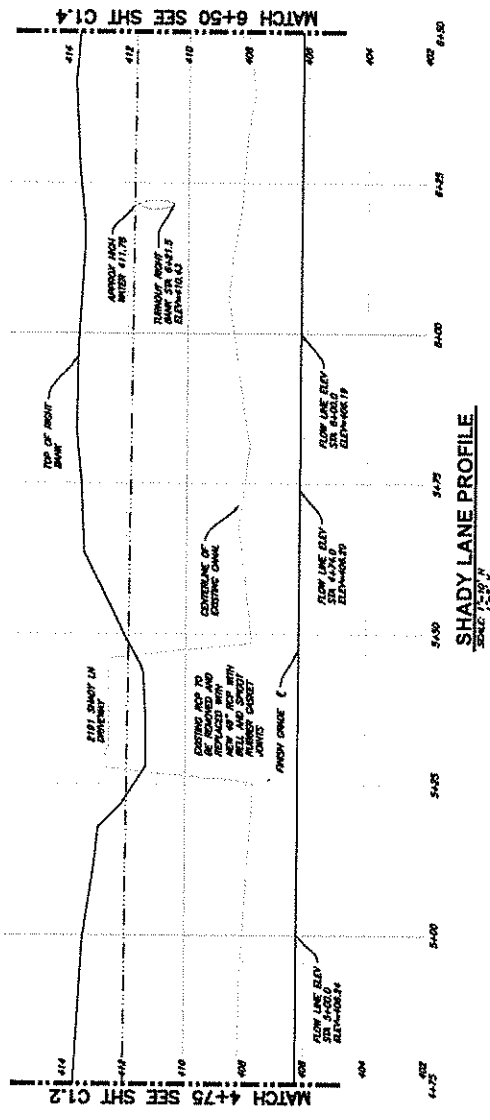


SHEET NO. 523071
 DATE: 02/20/24
 C1.3
 SHADY LANE IRRIGATION DISTRICT

PLAN AND PROFILE STA 4+75 TO 6+50
 SHADY LANE, ANDERSON, CALIFORNIA
 8+50

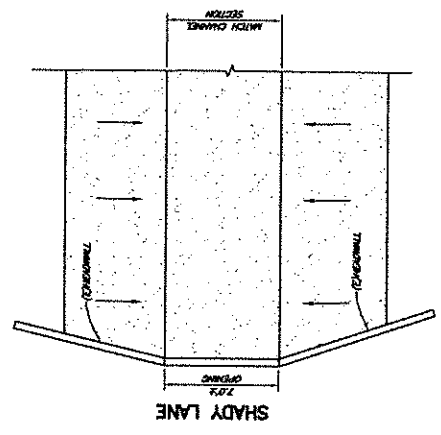
NO.	DATE	REVISION

300 HAYWARD AVE., STE. B
 ANDERSON, CA 95002
 209-221-9474
 S&B ENGINEERING
 1" = 40' HORIZ.
 1" = 4' VERT.
 VERIFY SCALES
 CHECKS ACCORDING TO



SHEET 2/7/2024 8:59 AM ORNELL PLOTTER 2/7/2024 8:19 AM ORNELL DWG
 I:\working\2023\23001-ADD-CANAL---SHADY-LANE\Draw\23001-SHADY-LANE-CRCH-CHANNEL.DWG

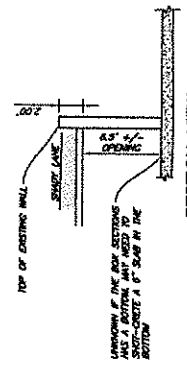
VERIFY SCALES
 300 HATHORN AVE. STE. B
 RENO, CA 95022
 916-796-3300
 330-321-5424
 1" = 4' FOR PLAN
 1" = 8' FOR SECTION
 CHECKS ACCORDING TO



PLAN

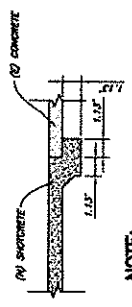
NOTE:
 SHOWSLAB (E) CONCRETE AT RE-IN APPLY BONDING AGENT TO (E) CONCRETE PRIOR TO SHOOTCRETE.

DETAIL 3
 (INTAKE STRUCTURE STA 0+00)



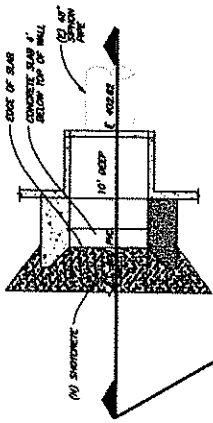
SECTION VIEW

DETAIL 5
 (STRUCTURE STA 0+00)



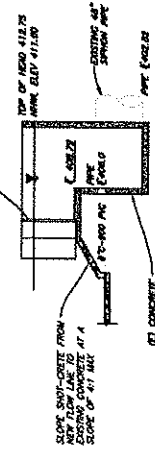
NOTE:
 SHOWSLAB (E) CONCRETE AT RE-IN APPLY BONDING AGENT TO (E) CONCRETE PRIOR TO SHOOTCRETE.

DETAIL 2
 ((N) LINER TO (E) CONCRETE)



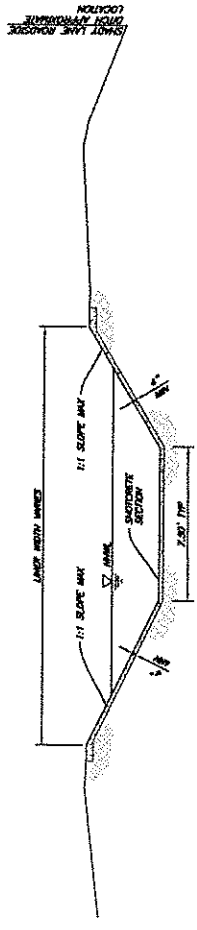
PLAN

NOTE:
 SHOWSLAB (E) CONCRETE AT RE-IN APPLY BONDING AGENT TO (E) CONCRETE PRIOR TO SHOOTCRETE.



SECTION

DETAIL 1
 (OUTLET STRUCTURE STA 9+36)



NOTES:
 1. EXISTING CHANNEL SURROUND SHALL BE SMOOTH DRY AND UNIMPDED PRIOR TO SHOOTCRETE.
 2. AT LOCATIONS OF CHANNEL SIDE SLOPES THAT REQUIRE FULL CONTINUITY TO EXISTING CHANNEL, THE SLOPE OF EXISTING CHANNEL SHALL BE 1 FOOT MORE AWAY FROM THE CHANNEL THAN THE SLOPE OF THE SHOOTCRETE.

DETAIL 4
 (LINER SECTION)



10/23/24
 DATE 07/2024
 SHEET C2.1

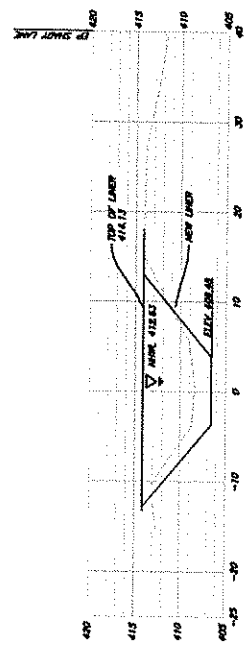
ACID REGRADE DISTRICT
 SHADY LANE
 SHADY LANE, ANDERSON, CALIFORNIA

DETAILS

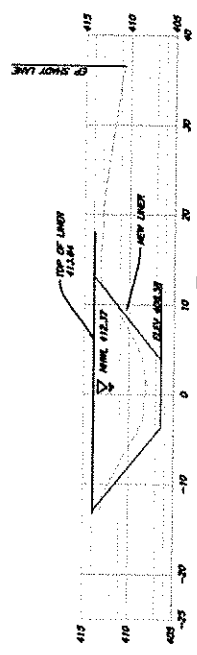
NO.	DATE

PERSON	

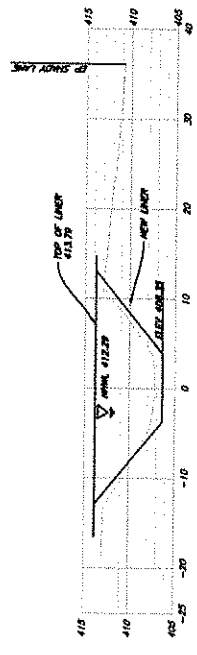
300 HARBOR AVE. STE. B
 REDWOOD, CA 96002
 530-231-5424
 WWW.SMS-ENGINEERING.COM
 1 - 0
 4' PER 1" MAX. ON
 1/4" = 1' MIN. ON
 ALL DIMENSIONS
 UNLESS OTHERWISE
 SPECIFIED



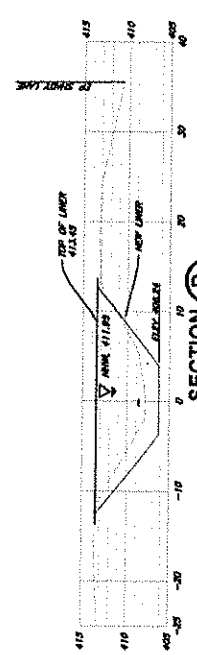
SECTION A
 (STA 0+80)



SECTION B
 (STA 2+50)



SECTION C
 (STA 3+00)



SECTION D
 (STA 5+00)

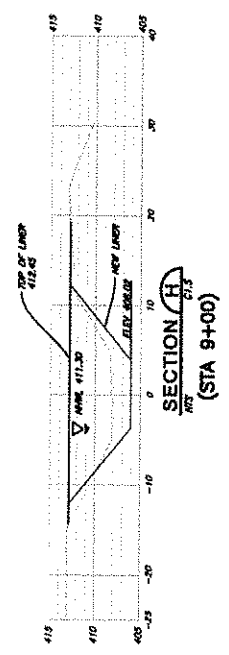
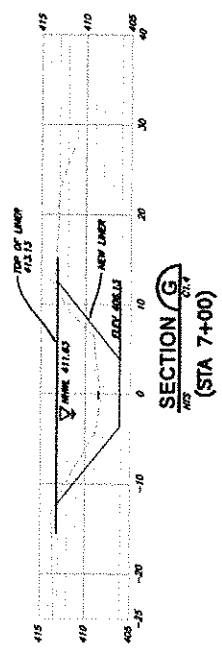
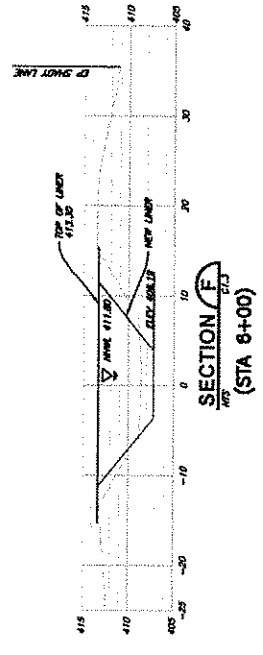
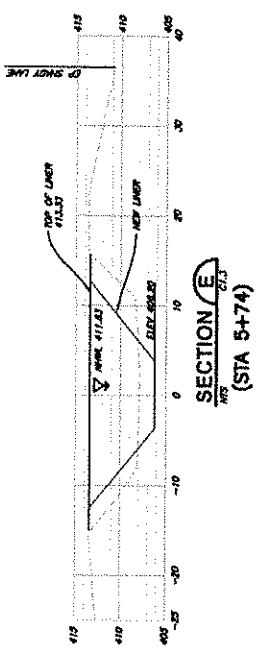
1/13/25
 DATE: 02/20/24
 SHEET NO. 02.2
 PROJECT NO. 250

ACID BRONATION DISTRICT
 SHAYT LAKE, ANDERSON, CALIFORNIA
 SHAYT LAKE
 DETAILS

NO.	DATE

BY	PERSON

350 HANFORD AVE., STE. B
 REDWOOD, CA 96002
 916-221-4455
 WWW.NSI-CORP.COM
 NSI IS ONE NOW ON
 ORIGINAL DRAWING
 O
 THIS SHEET SHALL
 BE USED FOR THE PROJECT
 UNLESS OTHERWISE
 SPECIFIED
 VERIFY SCALES



Reference: 523031
(523000.023)

Addendum No. 2 To Agreement
Dated November 14, 2023
Proposal to Provide Civil and Design
Engineering Services
(Project Name Shady Lane Canal)

Additional Scope of Work

SHN proposes to furnish engineering oversight and inspection service for the construction of the shotcrete liner as shown on design drawings by SHN dated 02/2024.

Field construction staking can be provided on a Time and materials basis if the district requests this service.

All exclusions will remain the same as in the original Service Agreement as referenced.

Related Costs

SHN agrees to provide services covered by this Addendum on a time and expenses basis. Fees are estimated as follows:

Senior engineer	\$	\$195/hr
Junior engineer	\$	\$140/hr
Survey equipment and supplies	\$	\$400/day

SHN Consulting Engineers & Geologists, Inc.

Address: 812 W. Wabash Ave.
Eureka, CA 95501-2138

By: Bruce Grove

Title: Regional Principal

Signature: _____

Date: _____

Client: ACID Irrigation District

Address: 2810 Howard St
Anderson, CA 96007

By: Justin Dahl

Title: General Manager

Signature: _____

Date: _____

