



Technical Memorandum

DATE: October 22, 2020

PROJECT: 10-1-074

TO: Mr. Jason Smith, Teichert Aggregates (JSmith@teichert.com)

FROM: Till Angermann, Principal Hydrogeologist
Mohamed Nasser, Project Engineer

SUBJECT: ALTERNATE ROUTING OF MOORE CANAL SOUTH OF MINING PIT
SHIFLER PROPERTY, WOODLAND, YOLO COUNTY

Luhdorff & Scalmanini Consulting Engineers (LSCE) previously evaluated potential effects of planned future mining and reclamation activities at Teichert's Shifler property on groundwater levels and flow (LSCE 2016, 2019, 2020). The evaluations assumed that the portion of Moore Canal which presently traverses the Shifler property would be mined out, while the canal would be routed along the northern perimeter of the proposed mining pit.

A proposed project alternative routes Moore Canal along the southern perimeter of the proposed pit (Exhibit A). This alternative canal configuration does not affect any of the conclusions set forth in the previous reports.

References

- Luhdorff and Scalmanini Consulting Engineers. 2016. Groundwater conditions in the vicinity of planned wet pit mining operations, Shifler property. Report. February 8, 2016. LSCE file 10-1-074.
- Luhdorff and Scalmanini Consulting Engineers. 2019. Groundwater conditions in the vicinity of planned wet pit mining operations, Shifler property, Woodland. Technical Memorandum. December 9, 2019. LSCE file 10-1-074.
- Luhdorff and Scalmanini Consulting Engineers. 2020. Supplemental Analysis of Groundwater Conditions, Planned Mining and Reclamation Activities, Shifler Property, Woodland, Yolo County. Technical Memorandum. February 5, 2020. LSCE file 10-1-074.

Exhibit

Exhibit A Alternate Shifler Mining and Reclamation Plan –South Route Moore Canal

OFF-CHANNEL MINING PLAN - SOUTH CANAL ALTERNATIVE
FOR
SHIFLER PROPERTY

YOLO COUNTY, CALIFORNIA
OCTOBER 2020

GENERAL NOTES:

- ALL WORK SHALL CONFORM TO THE YOLO COUNTY OFF-CHANNEL MINING ORDINANCE (ORD. #1190), THE PROJECT SPECIFIC CONDITIONS OF APPROVAL, THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP), THE SURFACE MINING AND RECLAMATION ACT (SMARA), OSHA, MSHA, AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
- EXISTING TOPOGRAPHY BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES; VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING MINING.
- ANY WORK THAT NEEDS TO BE PERFORMED WITHIN PG&E'S OR ANY OTHER UTILITY COMPANY'S EASEMENT WILL REQUIRE A CONSENT AGREEMENT FROM THE APPROPRIATE UTILITY COMPANY. USE CAUTION WHEN OPERATING ANY VEHICLES OR EQUIPMENT NEAR OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES. COMPLY WITH ALL CONDITIONS LISTED IN THE CONSENT AGREEMENT.
- THE DEPTH OF MINING AND THE LIMIT-OF-MINING LINES ARE ONLY APPROXIMATE, AND ARE SUBJECT TO CHANGE BASED ON THE AMOUNT AND QUALITY OF MATERIAL UNCOVERED, AND THE ABILITY OF THE PRODUCER TO MEET THE RECLAMATION REQUIREMENTS. THE FORESEEABLE ESTIMATE OF VARIATION IS +/- 10' IN MINING DEPTH; AND +/- 20% OF AREA FOR EACH TYPE OF RECLAMATION.
- HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BY LUHDORFF & SCALMANNI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
- MAXIMUM INCLINATION OF MINING SLOPES ABOVE THE SUMMER LOW GROUNDWATER LEVEL TO BE 3/4:1 (H:V).
- PROVIDE PROTECTION TO WET PIT AREAS FROM STORMWATER AND/OR AGRICULTURAL RUNOFF THROUGH THE PLACEMENT OF BERMS AND/OR SWALES. (THIS NOTE MAY NOT APPLY OR BE REQUIRED IF EXISTING TOPOGRAPHY PREVENTS SURFACE RUNOFF FROM ENTERING ANY OF THE MINING EXCAVATIONS THAT EXPOSE GROUNDWATER.)
- IF HUMAN SKELETAL REMAINS ARE ENCOUNTERED DURING EXCAVATION, ALL WORK WITHIN SEVENTY-FIVE (75) FEET SHALL IMMEDIATELY STOP, AND THE COUNTY CORONER SHALL BE NOTIFIED WITHIN TWENTY-FOUR (24) HOURS. IF ANY CULTURAL RESOURCES, SUCH AS CHIPPED OR GROUND STONE, HISTORIC DEBRIS, BUILDING FOUNDATIONS, OR PALEONTOLOGICAL MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEN ALL WORK WITHIN SEVENTY-FIVE (75) FEET SHALL IMMEDIATELY STOP AND THE DIRECTOR SHALL BE NOTIFIED AT ONCE. ANY CULTURAL RESOURCES FOUND ON THE SITE SHALL BE RECORDED BY A QUALIFIED ARCHAEOLOGIST AND THE INFORMATION SHALL BE SUBMITTED TO THE COUNTY.
- DURING OPERATIONS, THE SITE SHALL BE KEPT FREE OF DEBRIS AND MAINTAINED IN A NEAT AND ORDERLY MANNER SO AS NOT TO CREATE ANY HAZARDOUS OR UNSIGHTLY CONDITIONS. OVERBURDEN SHALL BE STOCKPILED AND STUMPS, BRUSH, OR OTHER DEBRIS RESULTING FROM EXCAVATION AND/OR PROCESSING SHALL BE PROPERLY DISPOSED.
- UNNECESSARY PERSONNEL SHALL BE EXCLUDED FROM OFF-CHANNEL EXCAVATIONS. OPEN PITS SHALL BE FENCED WITH A FOUR STRAND BARBED WIRE FENCE OR THE EQUIVALENT, PRIOR TO THE COMMENCEMENT OF EXCAVATION. FENCING MAY ENCLOSE THE PROPERTY OF WHICH THE MINING SITE IS A PART, THE MINING SITE, OR BOTH. IN ADDITION, SIGNS SHALL BE INSTALLED AT THE PROJECT SITE BOUNDARIES AND ACCESS ROAD, INDICATING THAT THE EXCAVATION AREA IS A DANGER ZONE.

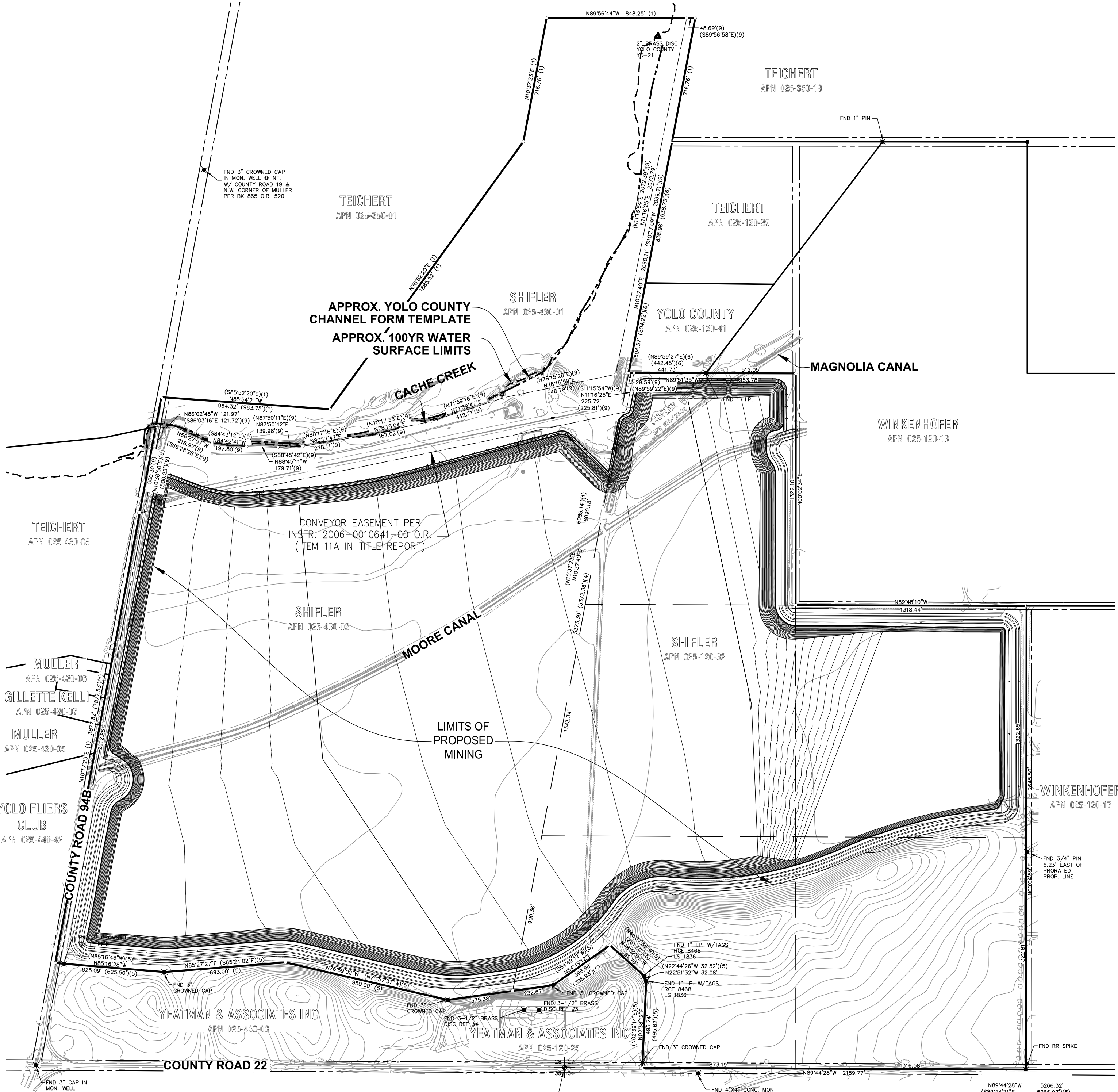
ABBREVIATIONS:

AC	ACRES	IRR	IRRIGATION
AG	AGRICULTURAL	MSHA	MINE SAFETY AND HEALTH ADMINISTRATION
AGG	AGGREGATE	MW	MONITOR WELL
AMSL	ABOVE MEAN SEA LEVEL	N	NORTH
APN	ASSESSOR'S PARCEL NUMBER	N.I.C.	NOT IN CONTRACT
AVG	AVERAGE	OG	ORIGINAL GROUND ELEVATION
CFR	CODE OF FEDERAL REGULATIONS	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CL	CENTER LINE	PL	PROPERTY LINE
CY	CUBIC YARDS	R	RADIUS
E	EAST	R/W	RIGHT-OF-WAY
ELEV	ELEVATION	RECL.	RECLAMATION
FG	FINISH GRADE	S	SLOPE
FL	FLOW LINE	S&G	SAND AND GRAVEL
FT	FEET	TYP	TYPICAL
GB	GRADE BREAK	V	VERTICAL
GW	GROUND WATER	W	WEST
H	HORIZONTAL	YR	YEAR

LEGEND:

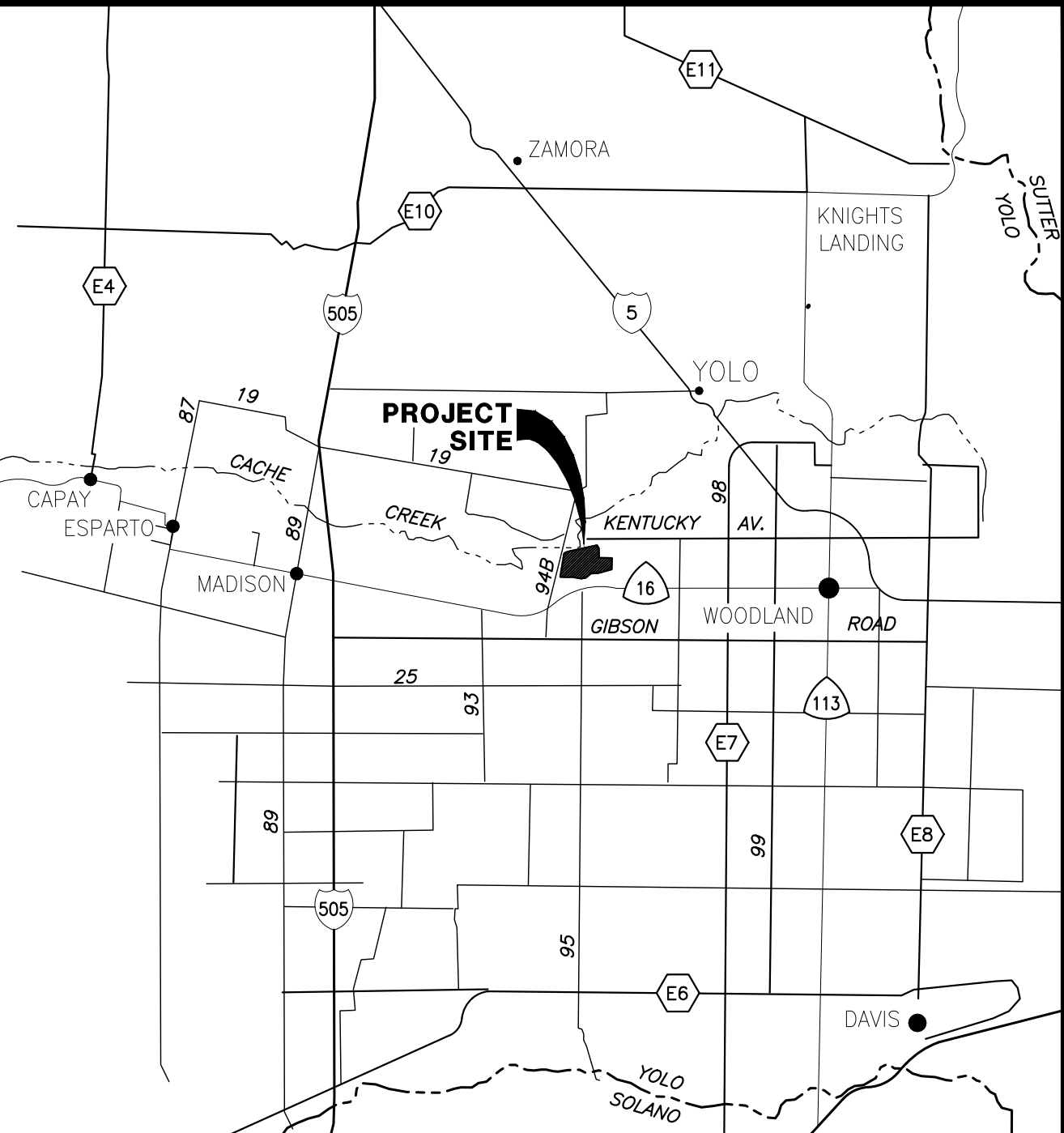
FOUND MONUMENTS AS SHOWN		EXISTING ELEV.	
POWER POLE		PROPOSED ELEV.	
EXISTING EDGE OF ROAD		HORIZONTAL TO VERTICAL SLOPE	
WATER		WATER SURFACE	
EXISTING GROUND CONTOUR		PROPERTY BOUNDARY	
PROPOSED CONTOUR		RIGHT-OF-WAY	
CROSS SECTION NUMBER AND SHEET LOCATION		EASEMENT	
		FENCE	
APPROXIMATE YOLO COUNTY TEST 3 LINE			
APPROXIMATE 100YR WATER SURFACE LIMITS			

EXHIBIT A



KEY MAP

1" = 400'



VICINITY MAP

NOT TO SCALE

SHEET INDEX:

- M-01 TITLE SHEET
- M-02 SITE PLAN
- M-03 CROSS SECTION A-A
- M-04 CROSS SECTION B-B
- M-05 CROSS SECTION C-C
- M-06 CROSS SECTION D-D
- M-07 CROSS SECTION E-E
- M-08 CROSS SECTION F-F
- M-09 CROSS SECTION G-G

BENCHMARK:

EXISTING TOPOGRAPHY BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES. AERIAL TARGETS SURVEYED BY LAUGENOUR AND MEIKLE, WOODLAND. HORIZONTAL DATUM: CA NAD83 ZONE 2 VERTICAL DATUM: NAVD 88

ASSESSORS PARCEL NO:

025-120-32
025-120-33
025-430-02
025-430-01

PROPERTY OWNER:

SHIFLER LJ FAMILY TRUST INC.
35030 COUNTY ROAD 20
WOODLAND, CA 95851

APPLICANT:

TEICHERT AGGREGATES
P.O. BOX 15002
SACRAMENTO, CA 95851
(916) 484-3319

CIVIL ENGINEER:

CUNNINGHAM ENGINEERING
2940 SPAFFORD STREET, SUITE 200
DAVIS, CALIFORNIA 95618
(530) 758-2026

DRAWING STATUS:

- PLAN REVIEW SET -
- NOT FOR CONSTRUCTION
- PERMIT SET

DESIGNED BY	NC/KM	NO.	DATE	REVISIONS	BY	APPD.
DRAWN BY	KM					
CHECKED BY	SG					
SCALE						
AS SHOWN						



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SHIFLER MINING PLAN - SOUTH
CANAL ALTERNATIVE
TITLE SHEET

YOLO COUNTY

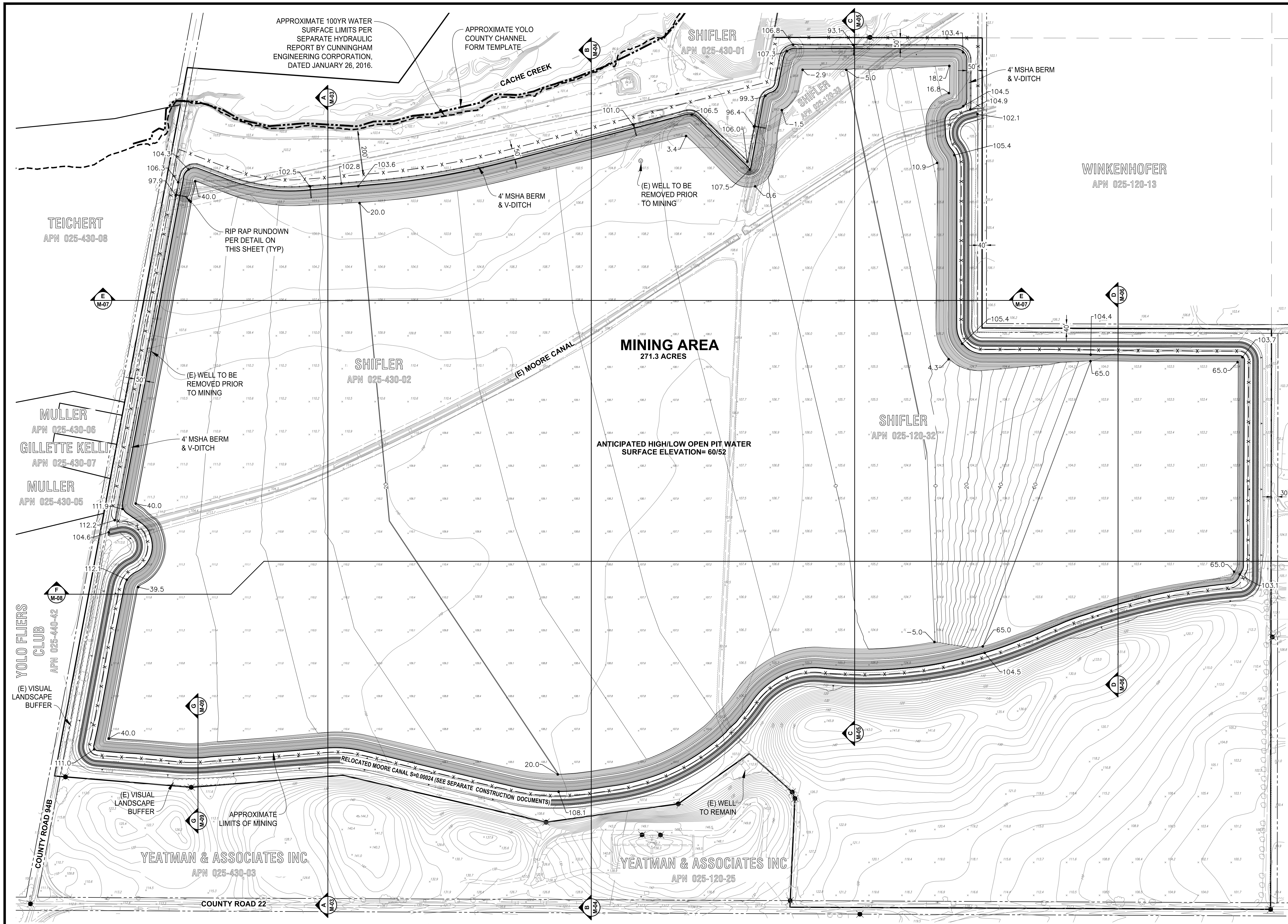
CALIFORNIA

SHEET

M-01
OF
9

DATE: 10/16/20

JOB NO: 1129.20



- NOTES:**
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 - BERMS OR V-DITCHES (NOT SHOWN) TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
 - BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.
 - PROPOSED CONTOURS SHOWN AT 5' INTERVAL.
 - WELLS TO BE ABANDONED SHALL BE ABANDONED PER YOLO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH STANDARDS.
 - TOPSOIL AND OVERBURDEN STOCKPILES SHALL BE SLOPED AND VEGETATED PER SECTION 10-4.433 OF THE MINING ORDINANCE.

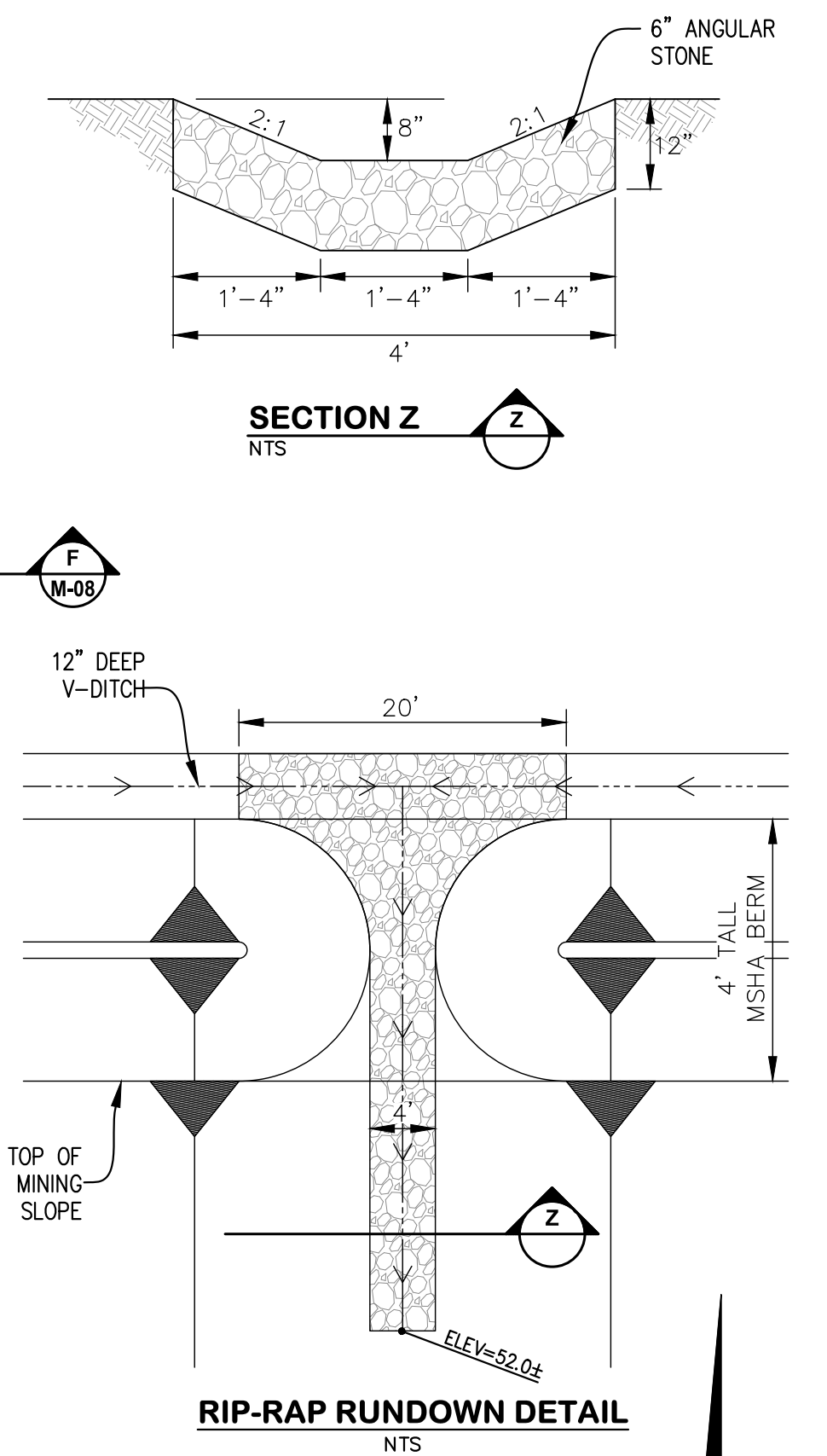
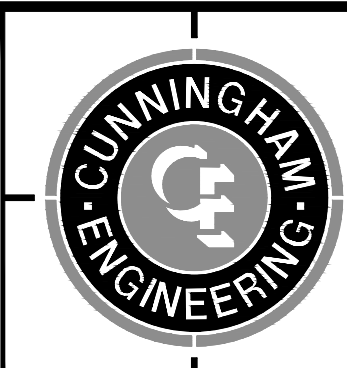
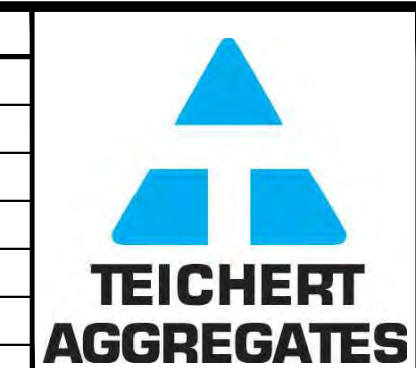


EXHIBIT A

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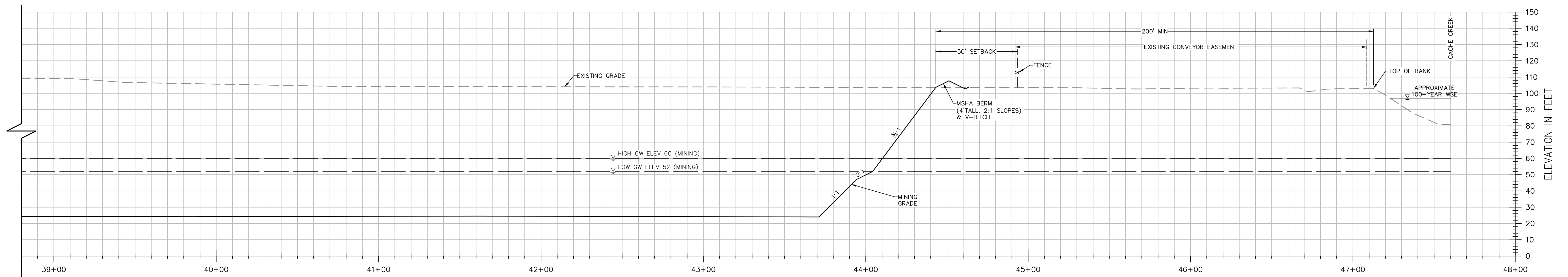
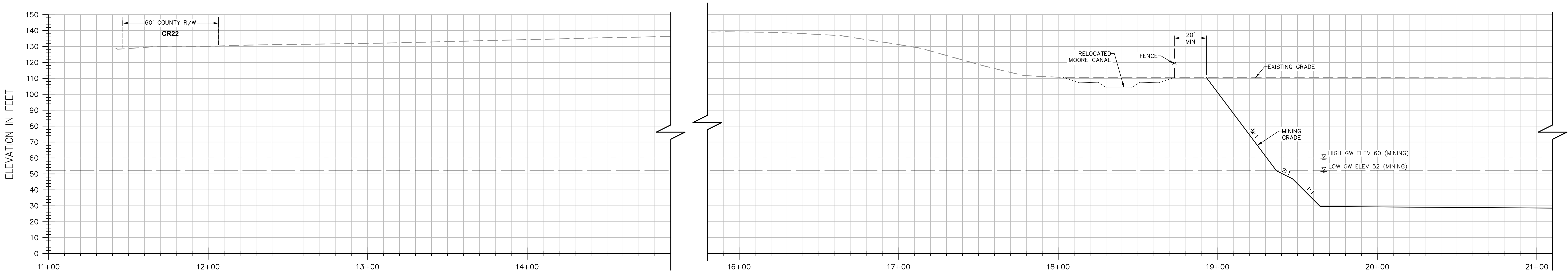
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**SHIFLER MINING PLAN - SOUTH
CANAL ALTERNATIVE
SITE PLAN**

YOLO COUNTY

CALIFORNIA

SHEET	M-02
OF	9
DATE:	09/18/20
JOB NO:	1129.20



SECTION A-A

H: 1"=30'
V: 1"=30'

NOTES:

- ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
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- BOTTOM MINING ELEVATIONS ARE $\pm 10'$ DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.

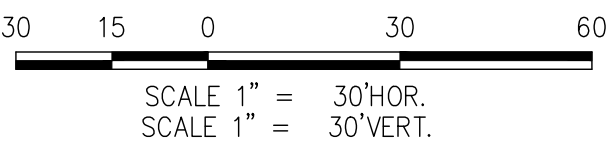


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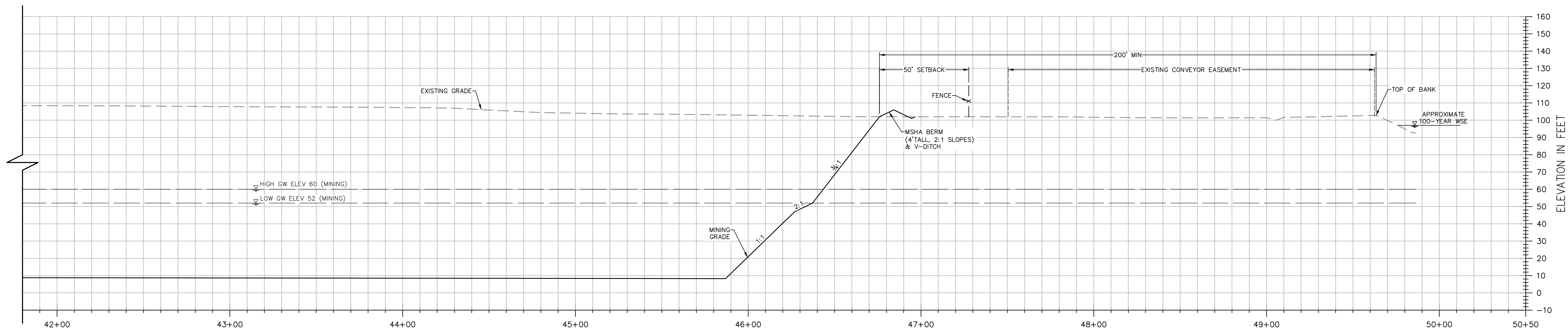
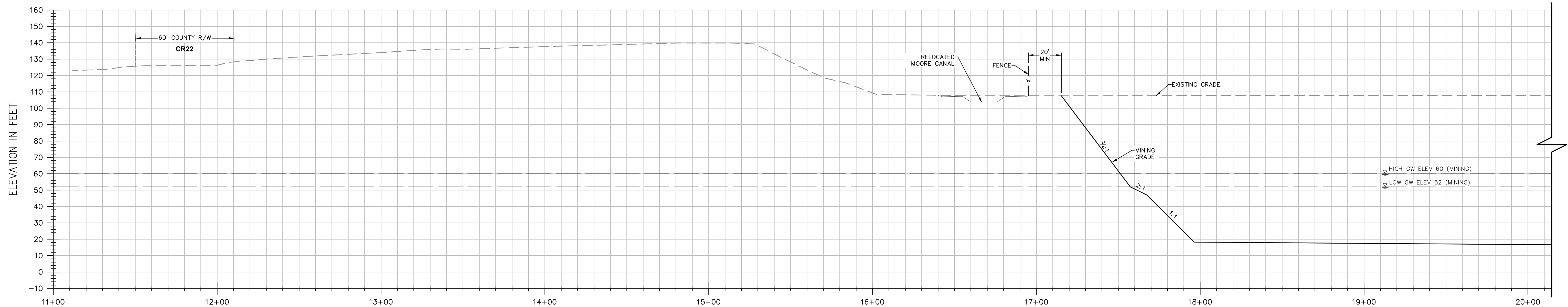
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SHIFLER MINING PLAN - SOUTH
CANAL ALTERNATIVE
CROSS SECTION A-A

YOLO COUNTY

CALIFORNIA

SHEET M-03 OF 9
DATE: <u>10/16/20</u>
JOB NO: 1129.20



SECTION B-B

H: 1"=30'
V: 1"=30'

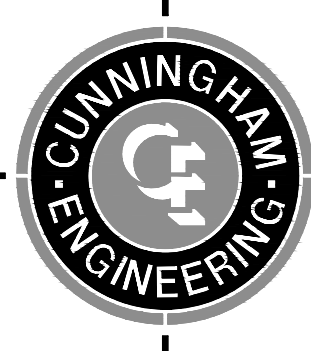
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30 15 0 30 60
SCALE 1" = 30'HOR.
SCALE 1" = 30'VERT.

EXHIBIT A

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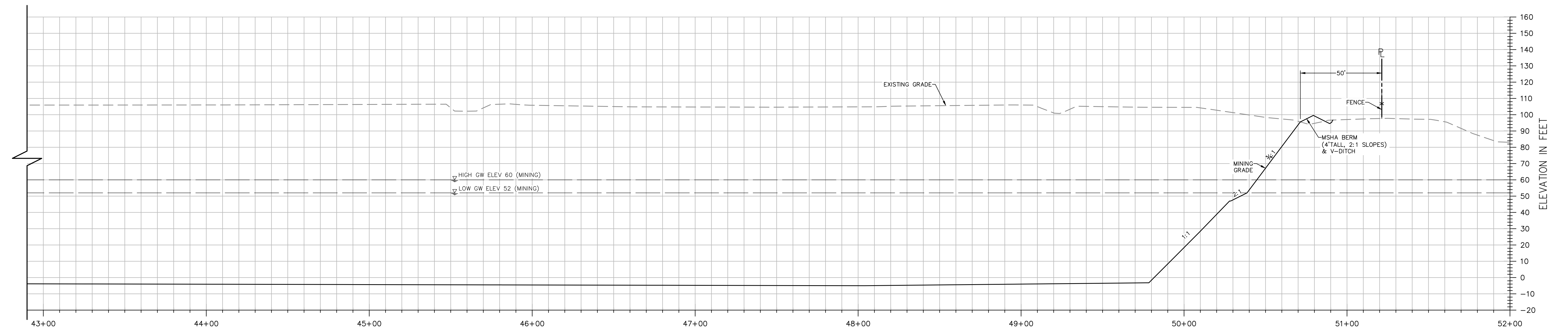
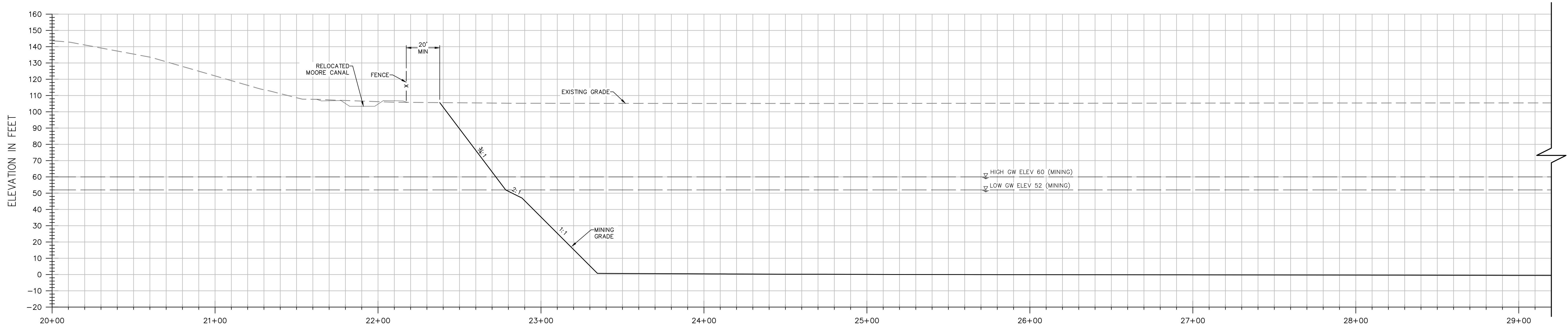
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SHIFLER MINING PLAN - SOUTH CANAL ALTERNATIVE CROSS SECTION B-B

YOLO COUNTY

CALIFORNIA

SHEET
M-04
OF
9
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SECTION C-C

H: 1"=30'
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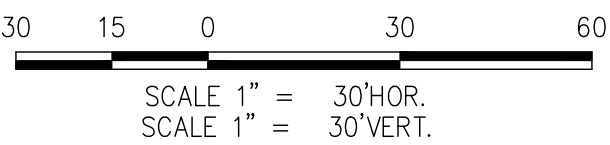
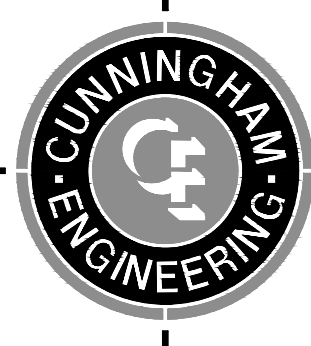


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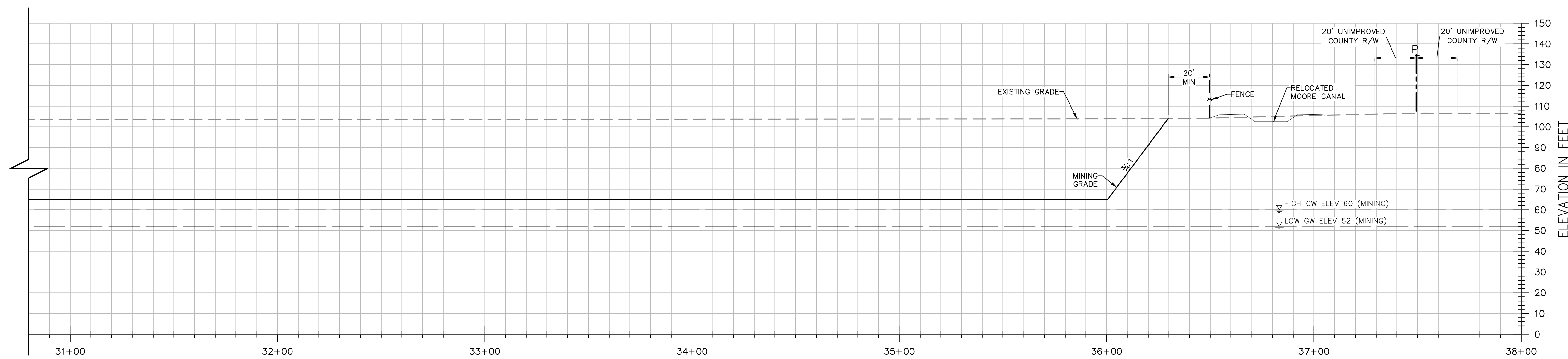
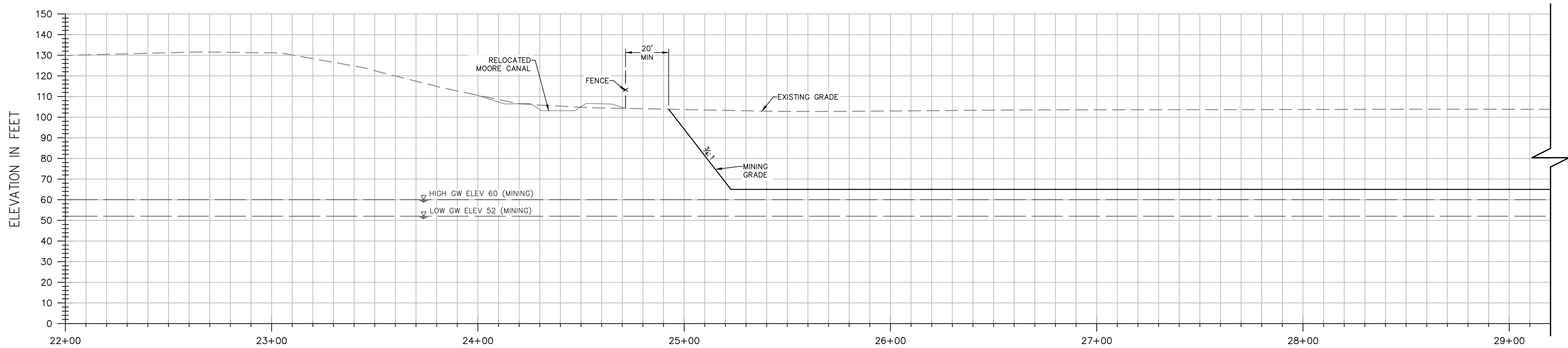
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SHIFLER MINING PLAN - SOUTH
CANAL ALTERNATIVE
CROSS SECTION C-C

YOLO COUNTY

CALIFORNIA

SHEET M-05 OF 9
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SECTION D-D

H: 1"=30'
V: 1"=30'

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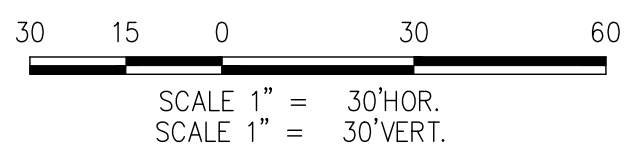
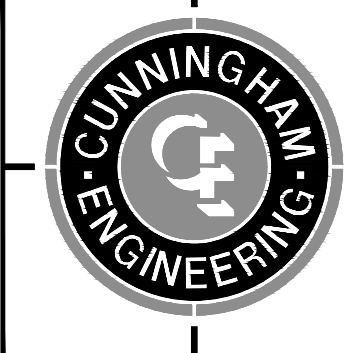


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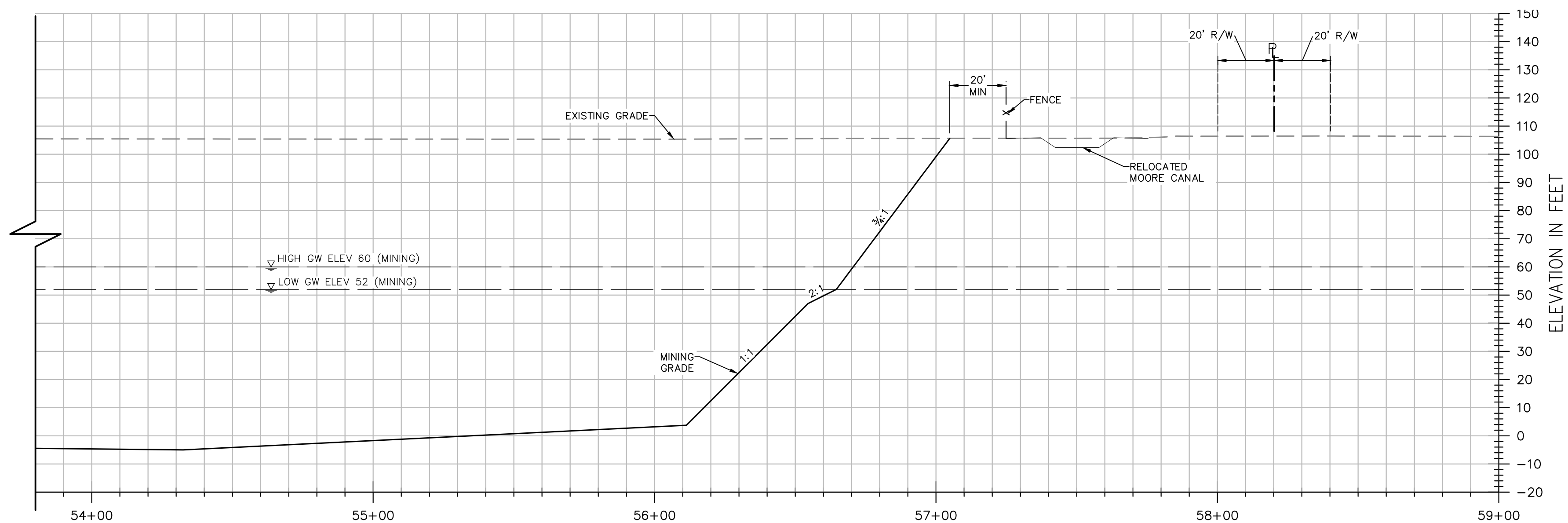
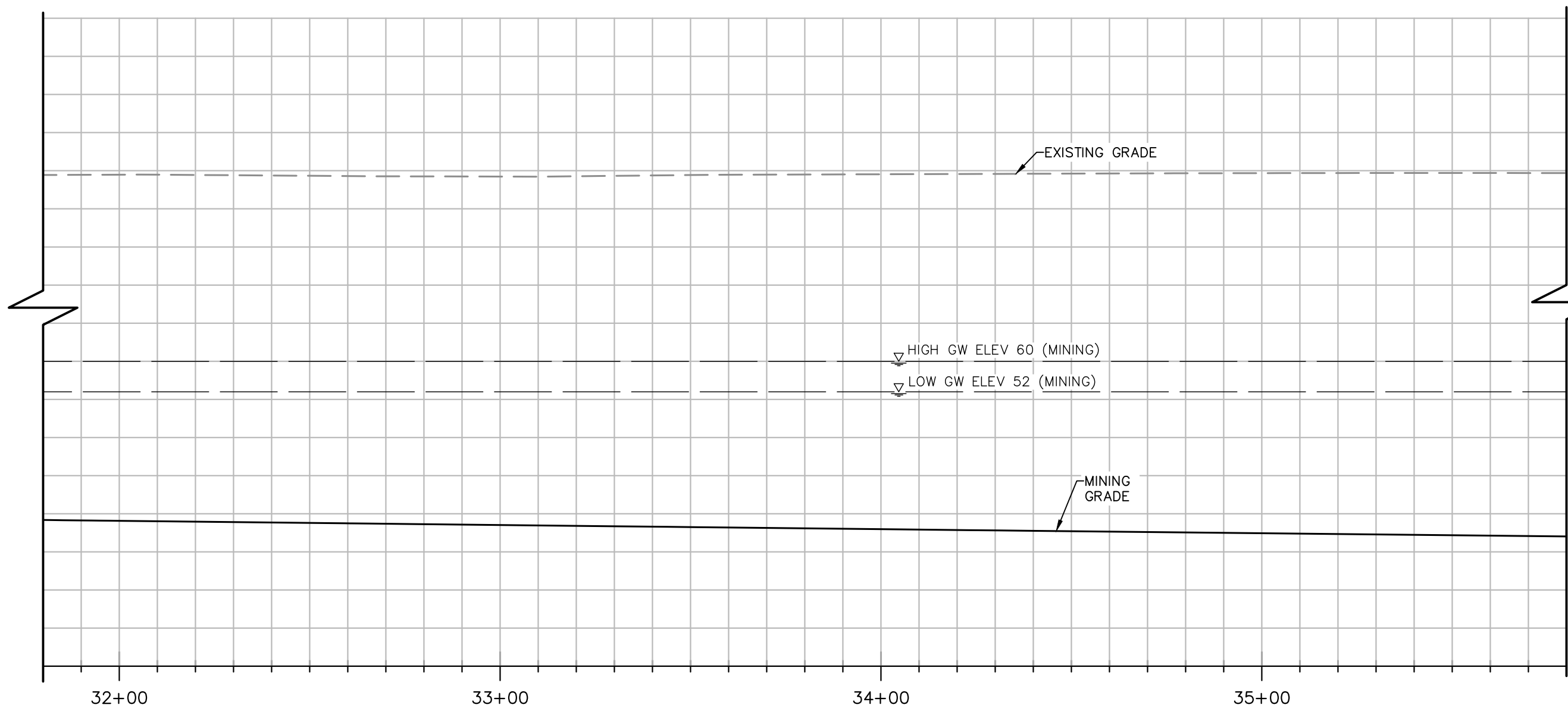
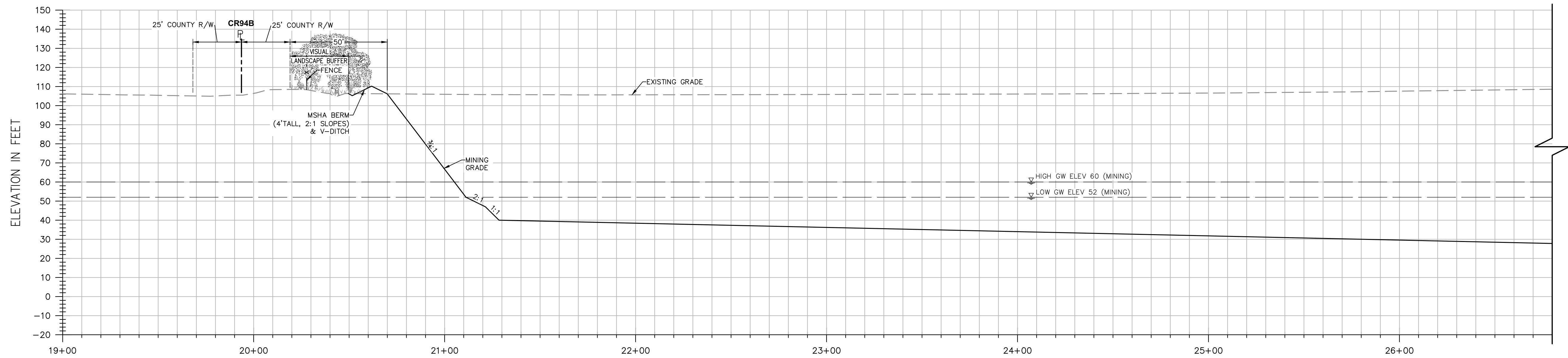
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**SHIFLER MINING PLAN - SOUTH
CANAL ALTERNATIVE
CROSS SECTION D-D**

YOLO COUNTY

CALIFORNIA

SHEET M-06 OF 9
DATE: <u>10/16/20</u>
JOB NO: 1129.20



SECTION E-E

H: 1"=30'
V: 1"=30'

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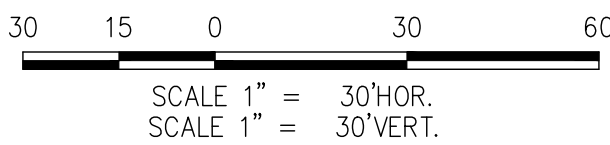
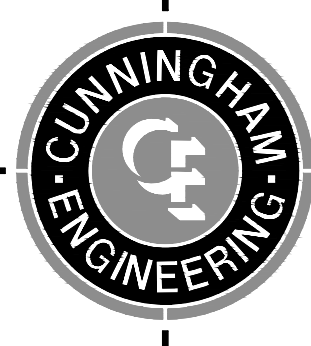


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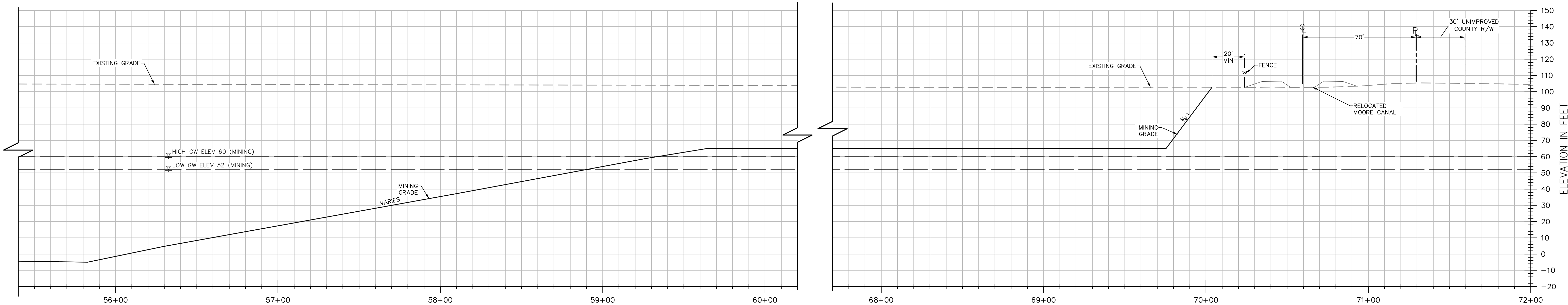
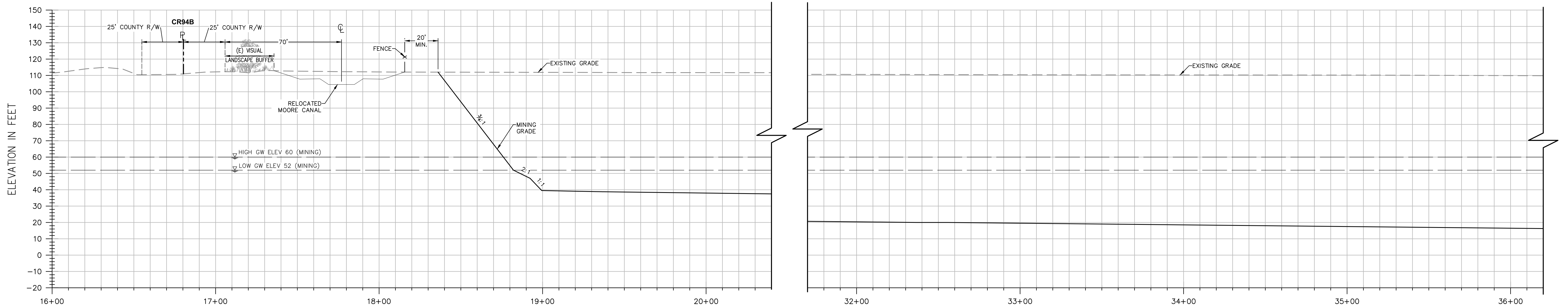
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SHIFLER MINING PLAN - SOUTH
CANAL ALTERNATIVE
CROSS SECTION E-E

YOLO COUNTY

CALIFORNIA

SHEET M-07 OF 9
DATE: <u>10/16/20</u>
JOB NO: 1129.20



SECTION F-F

H: 1"=30'
V: 1"=30'

NOTES:

- ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
- HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
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- BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.

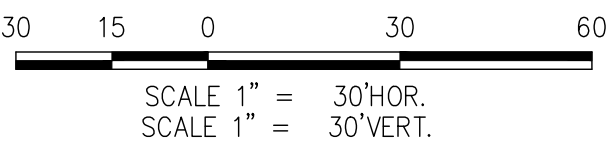


EXHIBIT A

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DRAWN BY <u>KM</u>					
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AS SHOWN					



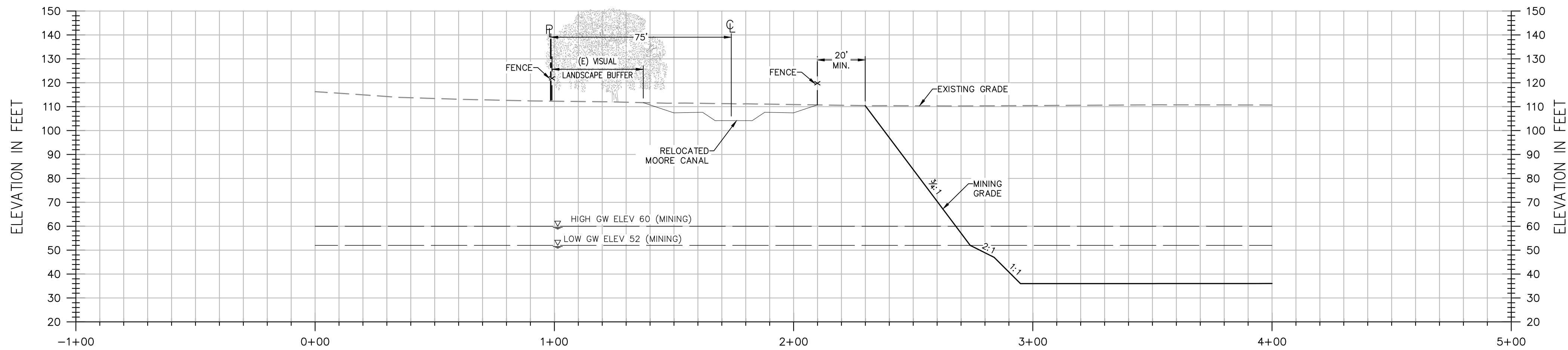
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SHIFLER MINING PLAN - SOUTH
CANAL ALTERNATIVE
CROSS SECTION F-F

YOLO COUNTY

CALIFORNIA

SHEET
M-08
OF
9
DATE: <u>10/16/20</u>
JOB NO: 1129.20



SECTION G-G

H: 1"=30'
V: 1"=30'

NOTES:

- ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
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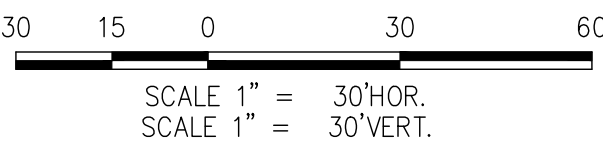
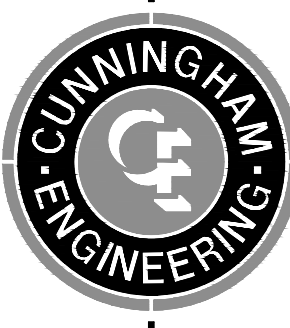


EXHIBIT A

DESIGNED BY <u>NC/KM</u>	NO.	DATE	REVISIONS	BY	APPD.	 	CECWEST.COM Project Planning ■ Civil Engineering ■ Landscape Architecture ■ Sacramento Office 2020 20th Street, Suite Three Sacramento, CA 95818 (916) 455-2028 ■ Davis Office 2540 Spafford Street, Suite 200 Davis, CA 95618 (530) 756-2028	SHIFLER MINING PLAN - SOUTH CANAL ALTERNATIVE CROSS SECTION G-G	YOLO COUNTY CALIFORNIA	SHEET M-09 OF 9
DRAWN BY <u>KM</u>										DATE: <u>10/16/20</u>
CHECKED BY <u>SG</u>										JOB NO: 1129.20
SCALE										
AS SHOWN										

CONCEPTUAL OFF-CHANNEL RECLAMATION PLAN - SOUTH CANAL ALTERNATIVE
FOR
SHIFLER PROPERTY

GENERAL NOTES:

- ALL WORK SHALL CONFORM TO THE YOLO COUNTY SURFACE MINING RECLAMATION ORDINANCE (ORD. #1191), THE PROJECT SPECIFIC CONDITIONS OF APPROVAL, THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP), THE SURFACE MINING AND RECLAMATION ACT (SMARA), OSHA, MSHA, AND OTHER APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
- EXISTING TOPOGRAPHY BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES; VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING MINING.
- ANY WORK THAT NEEDS TO BE PERFORMED WITHIN PG&E'S OR ANY OTHER UTILITY COMPANY'S EASEMENT WILL REQUIRE A CONSENT AGREEMENT FROM THE APPROPRIATE UTILITY COMPANY. USE CAUTION WHEN OPERATING ANY VEHICLES OR EQUIPMENT NEAR OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES. COMPLY WITH ALL CONDITIONS LISTED IN THE CONSENT AGREEMENT.
- THE DEPTH OF MINING AND THE LIMIT-OF-MINING LINES ARE ONLY APPROXIMATE, AND ARE SUBJECT TO CHANGE BASED ON THE AMOUNT AND QUALITY OF MATERIAL UNCOVERED, AND THE ABILITY OF THE PRODUCER TO MEET THE RECLAMATION REQUIREMENTS. THE FORESEEABLE ESTIMATE OF VARIATION IS +/- 10' IN MINING DEPTH; AND +/- 20% OF AREA FOR EACH TYPE OF RECLAMATION.
- HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BY LUHDORFF & SCALAMANNI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
- IF HUMAN SKELETAL REMAINS ARE ENCOUNTERED DURING EXCAVATION, ALL WORK WITHIN SEVENTY-FIVE (75) FEET SHALL IMMEDIATELY STOP, AND THE COUNTY CORONER SHALL BE NOTIFIED WITHIN TWENTY-FOUR (24) HOURS. IF ANY CULTURAL RESOURCES, SUCH AS CHIPPED OR GROUND STONE, HISTORIC DEBRIS, BUILDING FOUNDATIONS, OR PALEONTOLOGICAL MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEN ALL WORK WITHIN SEVENTY-FIVE (75) FEET SHALL IMMEDIATELY STOP AND THE DIRECTOR SHALL BE NOTIFIED AT ONCE. ANY CULTURAL RESOURCES FOUND ON THE SITE SHALL BE RECORDED BY A QUALIFIED ARCHAEOLOGIST AND THE INFORMATION SHALL BE SUBMITTED TO THE COUNTY.
- DURING OPERATIONS, THE SITE SHALL BE KEPT FREE OF DEBRIS AND MAINTAINED IN A NEAT AND ORDERLY MANNER SO AS NOT TO CREATE ANY HAZARDOUS OR UNSIGHTLY CONDITIONS. OVERBURDEN SHALL BE STOCKPILED AND STUMPS, BRUSH, OR OTHER DEBRIS RESULTING FROM EXCAVATION AND/OR PROCESSING SHALL BE PROPERLY DISPOSED.
- UNNECESSARY PERSONNEL SHALL BE EXCLUDED FROM OFF-CHANNEL EXCAVATIONS. OPEN PITS SHALL BE FENCED WITH A FOUR STRAND BARBED WIRE FENCE OR THE EQUIVALENT, PRIOR TO THE COMMENCEMENT OF EXCAVATION. FENCING MAY ENCLOSE THE PROPERTY OF WHICH THE MINING SITE IS A PART, THE MINING SITE, OR BOTH. IN ADDITION, SIGNS SHALL BE INSTALLED AT THE PROJECT SITE BOUNDARIES AND ACCESS ROAD, INDICATING THAT THE EXCAVATION AREA IS A DANGER ZONE.

ABBREVIATIONS:

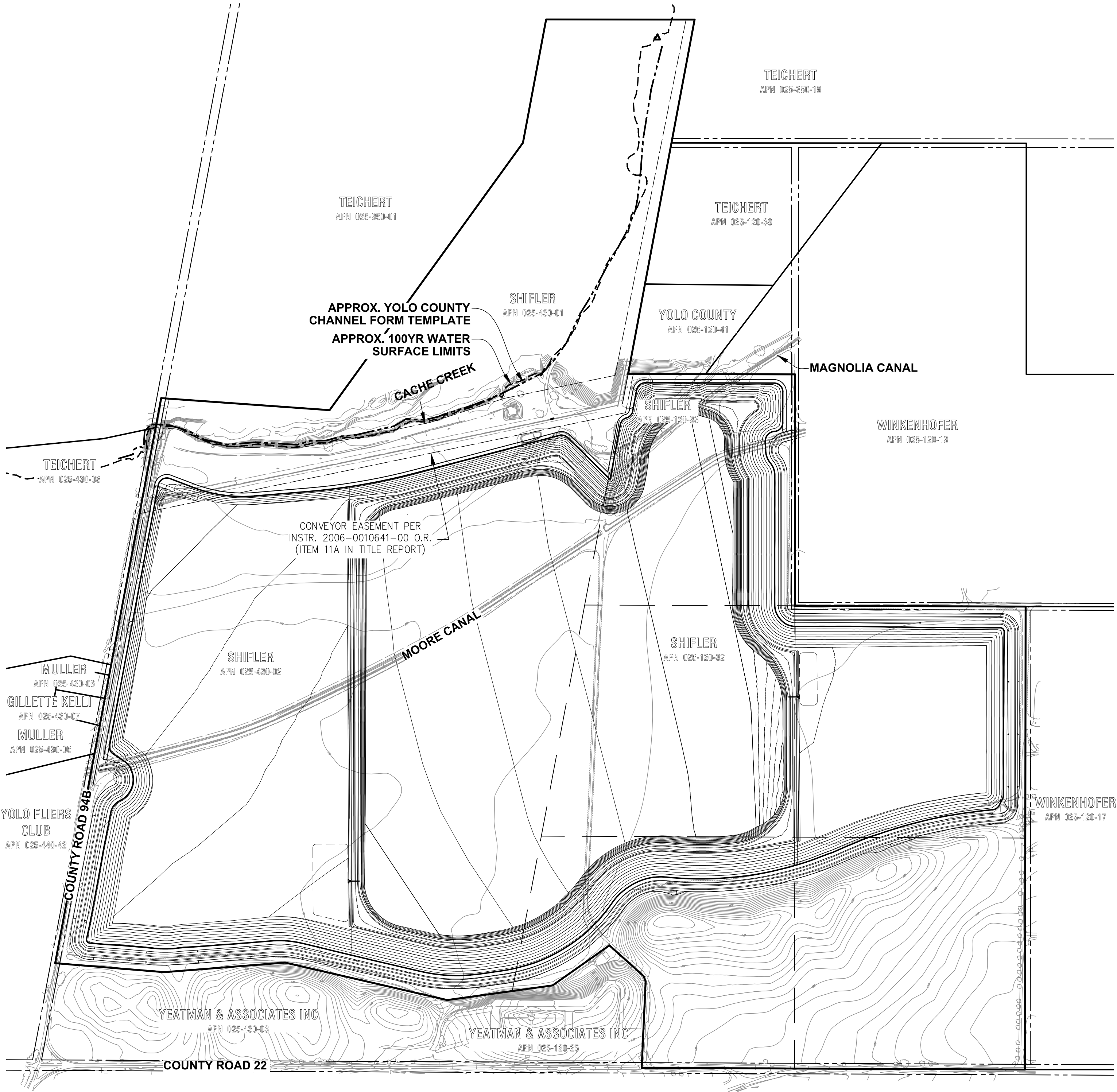
AC	ACRES	IRR	IRRIGATION
AG	AGRICULTURAL	MSHA	MINE SAFETY AND HEALTH ADMINISTRATION
AGG	AGGREGATE	MW	MONITOR WELL
AMSL	ABOVE MEAN SEA LEVEL	N	NORTH
APN	ASSESSOR'S PARCEL NUMBER	N.I.C.	NOT IN CONTRACT
AVG	AVERAGE	OG	ORIGINAL GROUND ELEVATION
CFR	CODE OF FEDERAL REGULATIONS	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CL	CENTER LINE	PL	PROPERTY LINE
CY	CUBIC YARDS	R	RADIUS
E	EAST	R/W	RIGHT-OF-WAY
ELEV	ELEVATION	RECL.	RECLAMATION
FG	FINISH GRADE	S	SLOPE
FL	FLOW LINE	S&G	SAND AND GRAVEL
FT	FEET	TYP	TYPICAL
GB	GRADE BREAK	V	VERTICAL
GW	GROUND WATER	W	WEST
H	HORIZONTAL	YR	YEAR

LEGEND:

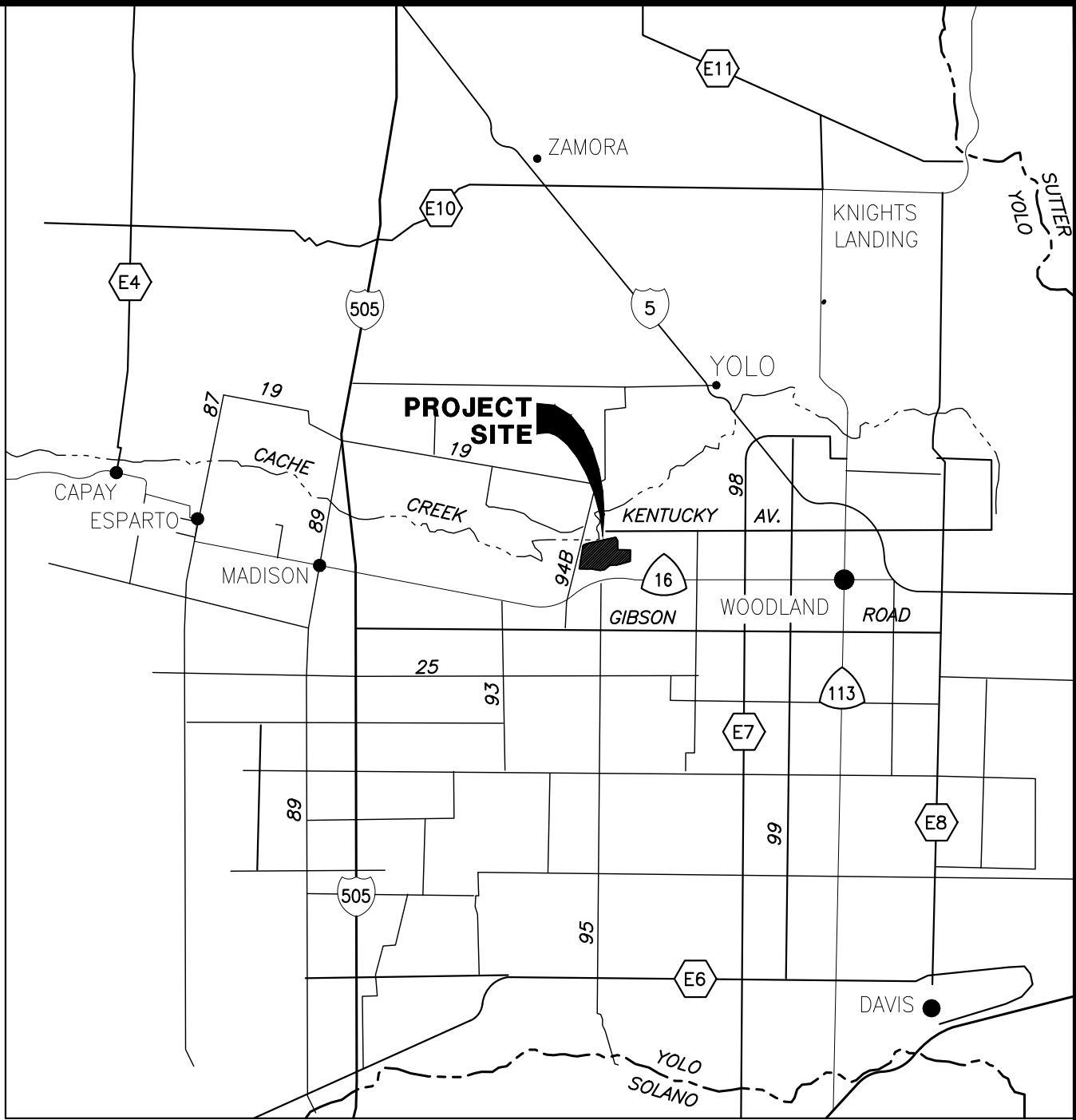
FOUND MONUMENTS AS SHOWN	✕	EXISTING ELEV.	195.0
POWER POLE	⊖	PROPOSED ELEV.	30.0
EXISTING EDGE OF ROAD	---	HORIZONTAL TO VERTICAL SLOPE	2:1
WATER	~~~~~	WATER SURFACE	▽
EXISTING GROUND CONTOUR	100	PROPERTY BOUNDARY	---
PROPOSED CONTOUR	90	RIGHT-OF-WAY	---
CROSS SECTION NUMBER AND SHEET LOCATION	A C-03	EASEMENT	---
APPROXIMATE YOLO COUNTY TEST 3 LINE	---	RECLAMATION HABITAT BOUNDARY	---
APPROXIMATE 100YR WATER SURFACE LIMITS	---	FENCE	x-x-x-x-x-x
TOP OF SLOPE	▽		
BOTTOM OF SLOPE	▽		

EXHIBIT A

YOLO COUNTY, CALIFORNIA
OCTOBER 2020



KEY MAP
1" = 400'



VICINITY MAP
NOT TO SCALE

SHEET INDEX:

- R-01 TITLE SHEET
- R-02 SITE PLAN
- R-03 CROSS SECTION A-A
- R-04 CROSS SECTION B-B
- R-05 CROSS SECTION C-C
- R-06 CROSS SECTION D-D
- R-07 CROSS SECTION E-E
- R-08 CROSS SECTION F-F
- R-09 CROSS SECTION G-G

BENCHMARK:

EXISTING TOPOGRAPHY BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES. AERIAL TARGETS SURVEYED BY LAUGENOUR AND MEIKLE, WOODLAND, HORIZONTAL DATUM: CA NAD83 ZONE 2 VERTICAL DATUM: NAVD 88

ASSESSORS PARCEL NO:

025-120-32
025-120-33
025-430-02
025-430-01

PROPERTY OWNER:

SHIFLER LJ FAMILY TRUST INC.
35030 COUNTY ROAD 20
WOODLAND, CA 95851

APPLICANT:

TEICHERT AGGREGATES
P.O. BOX 15002
SACRAMENTO, CA 95851
(916) 484-3319

CIVIL ENGINEER:

CUNNINGHAM ENGINEERING
2940 SPAFFORD STREET, SUITE 200
DAVIS, CALIFORNIA 95618
(530) 758-2026

DRAWING STATUS:

- PLAN REVIEW SET - NOT FOR CONSTRUCTION
- PERMIT SET

DESIGNED BY	NO.	DATE	REVISIONS	BY	APPD.
KM/NC					
DRAWN BY					
KM					
CHECKED BY					
SG					
SCALE					
AS SHOWN					



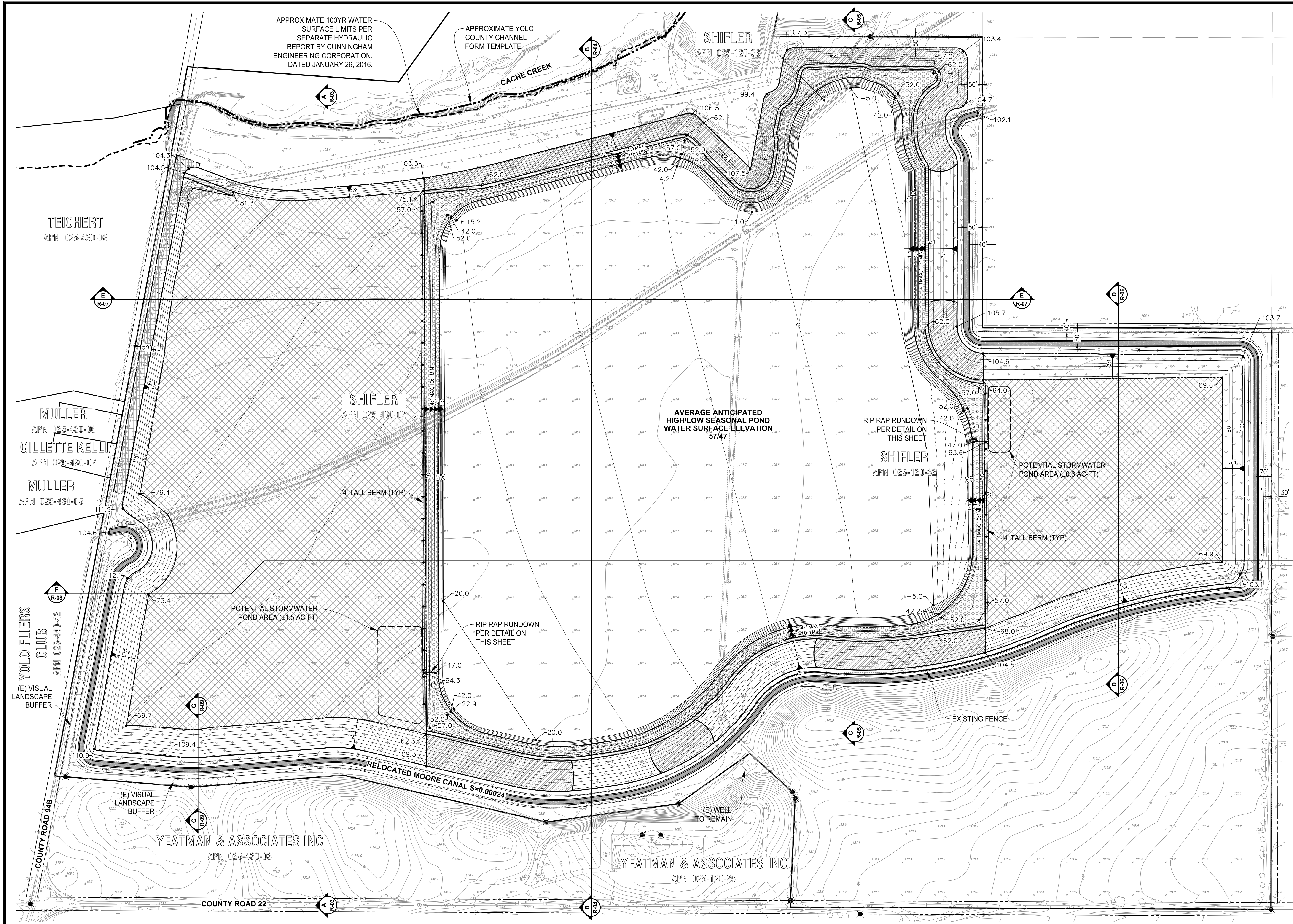
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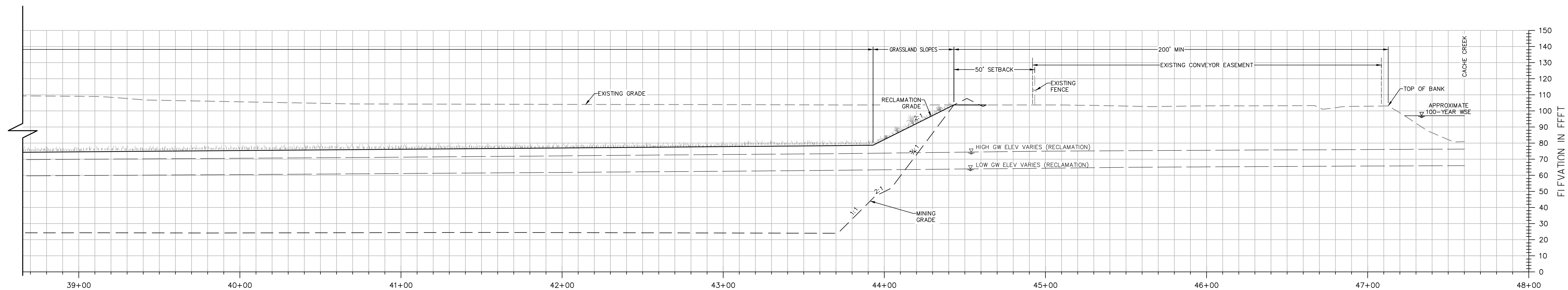
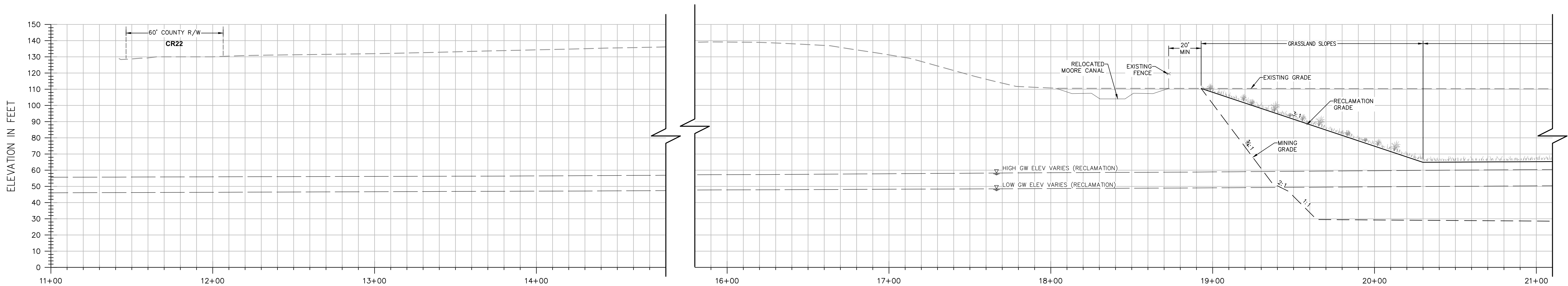
SHIFLER RECLAMATION PLAN - SOUTH
CANAL ALTERNATIVE
TITLE SHEET

YOLO COUNTY

CALIFORNIA

SHEET	R-01
OF	9
DATE:	10/16/20
JOB NO:	1129.20





SECTION A-A

H: 1"=30'
V: 1"=30'

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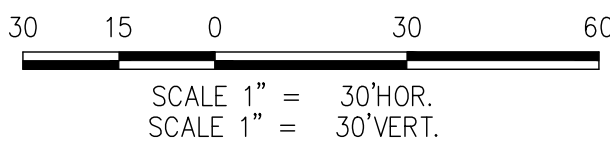
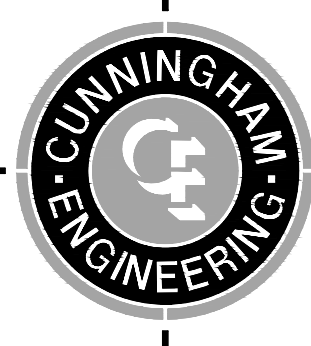


EXHIBIT A

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CHECKED BY <u>SG</u>					
SCALE					
AS SHOWN					



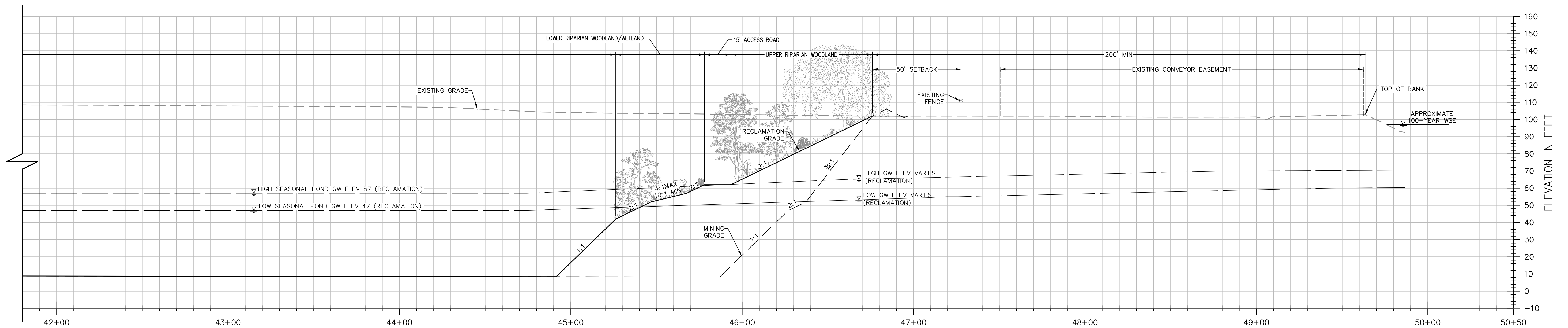
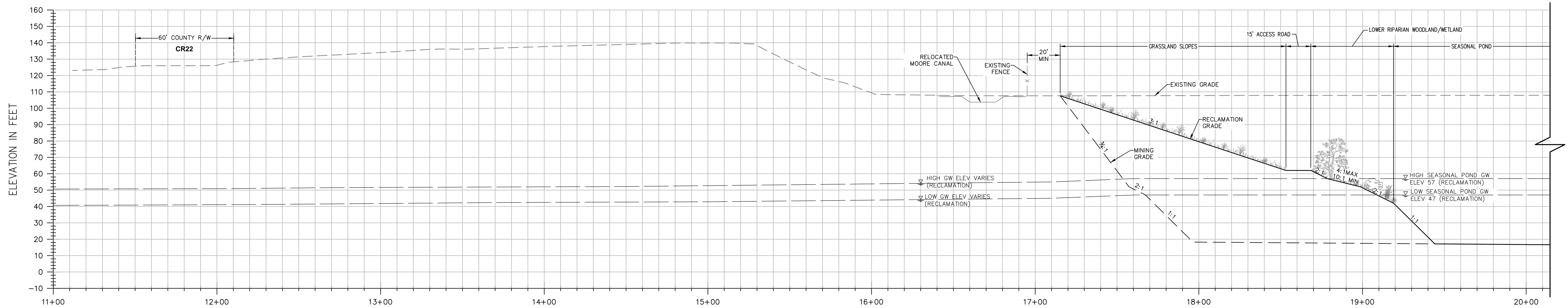
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**SHIFLER RECLAMATION PLAN - SOUTH
CANAL ALTERNATIVE
CROSS SECTION A-A**

YOLO COUNTY

CALIFORNIA

SHEET R-03 OF 9
DATE: <u>10/16/20</u>
JOB NO: 1129.20



SECTION B-B

H: 1"=30'
V: 1"=30'

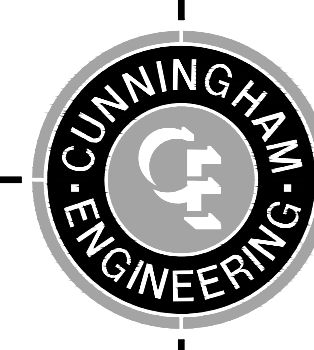
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30 15 0 30 60
SCALE 1" = 30'HOR.
SCALE 1" = 30'VERT.

EXHIBIT A

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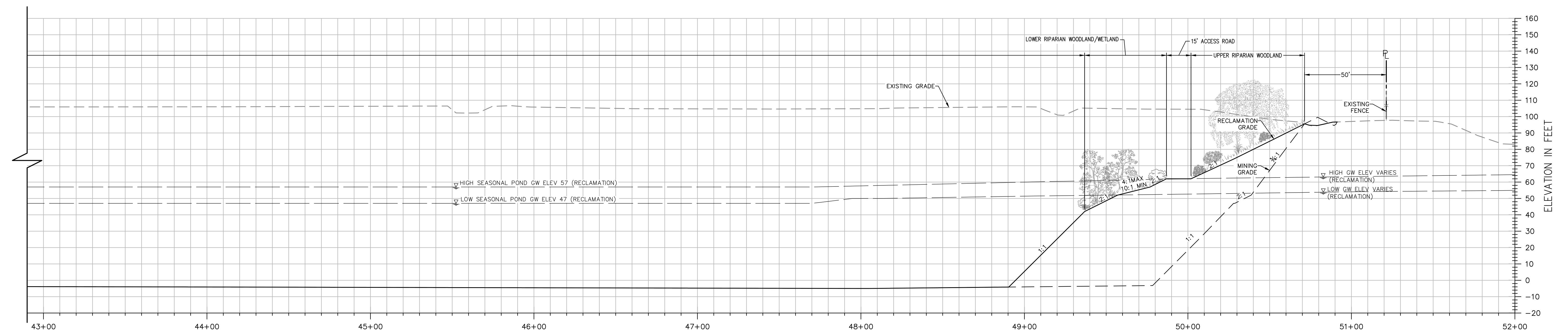
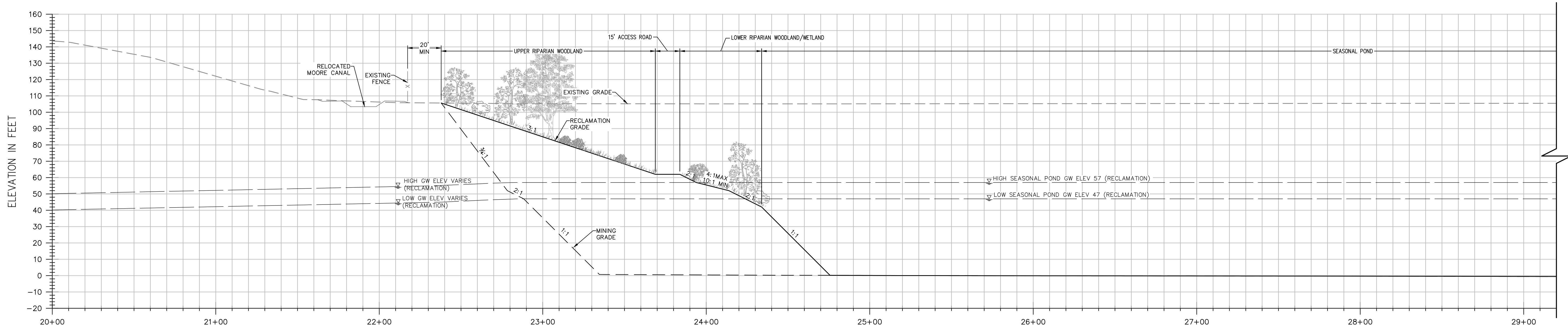
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SHIFLER RECLAMATION PLAN - SOUTH CANAL ALTERNATIVE CROSS SECTION B-B

YOLO COUNTY

CALIFORNIA

SHEET
R-04
OF
9
DATE: 10/16/20
JOB NO: 1129.20



SECTION C-C

H: 1"=30'
V: 1"=30'

NOTES:

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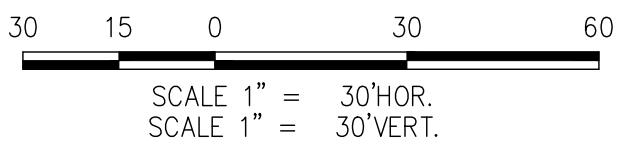
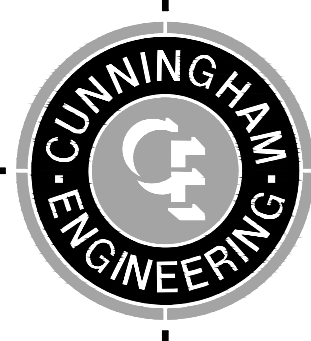


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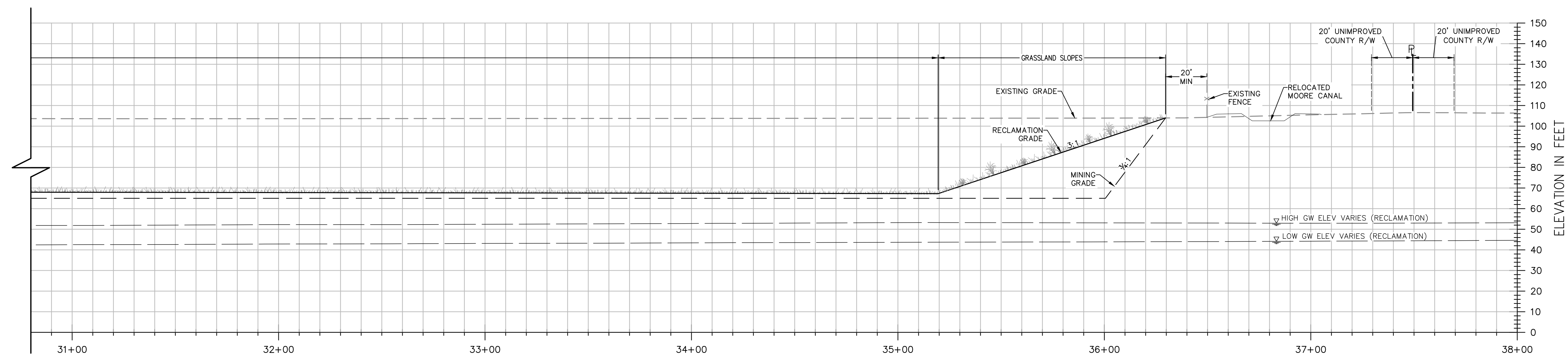
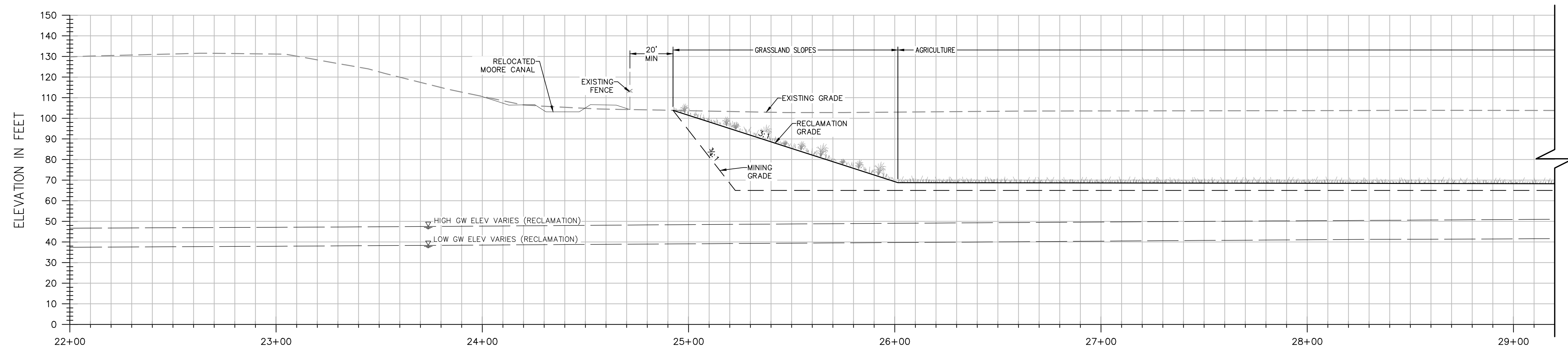
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**SHIFLER RECLAMATION PLAN - SOUTH
CANAL ALTERNATIVE
CROSS SECTION C-C**

YOLO COUNTY

CALIFORNIA

SHEET
R-05
OF
9
DATE: 10/16/20
JOB NO: 1129.20

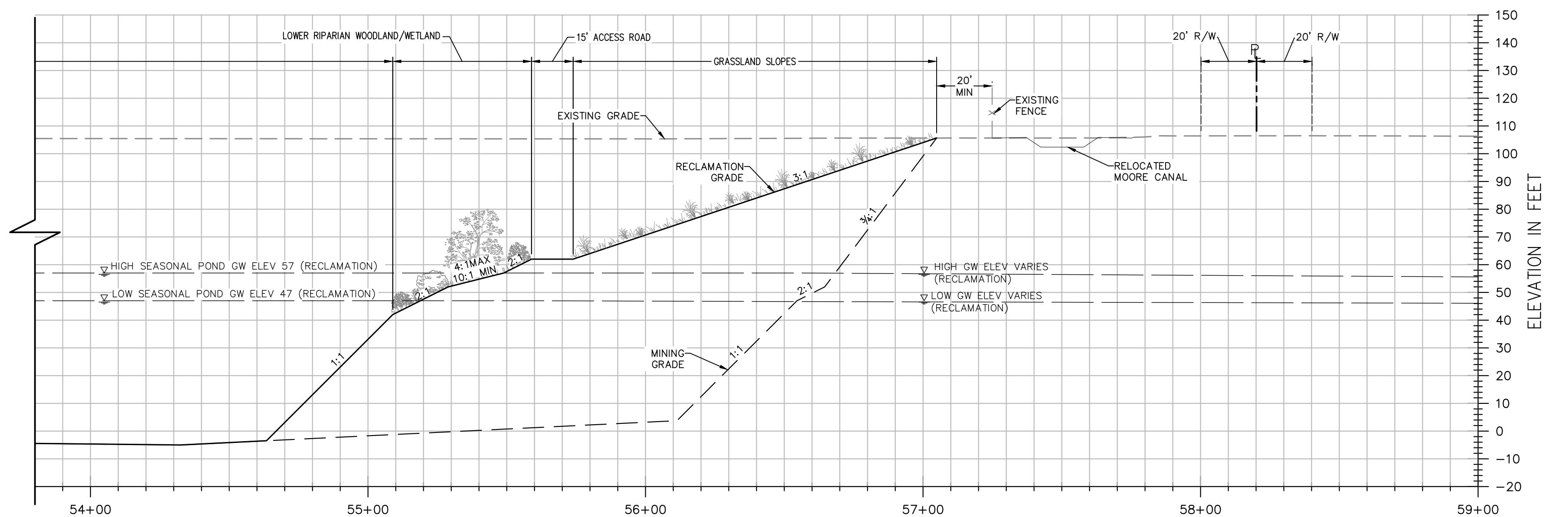
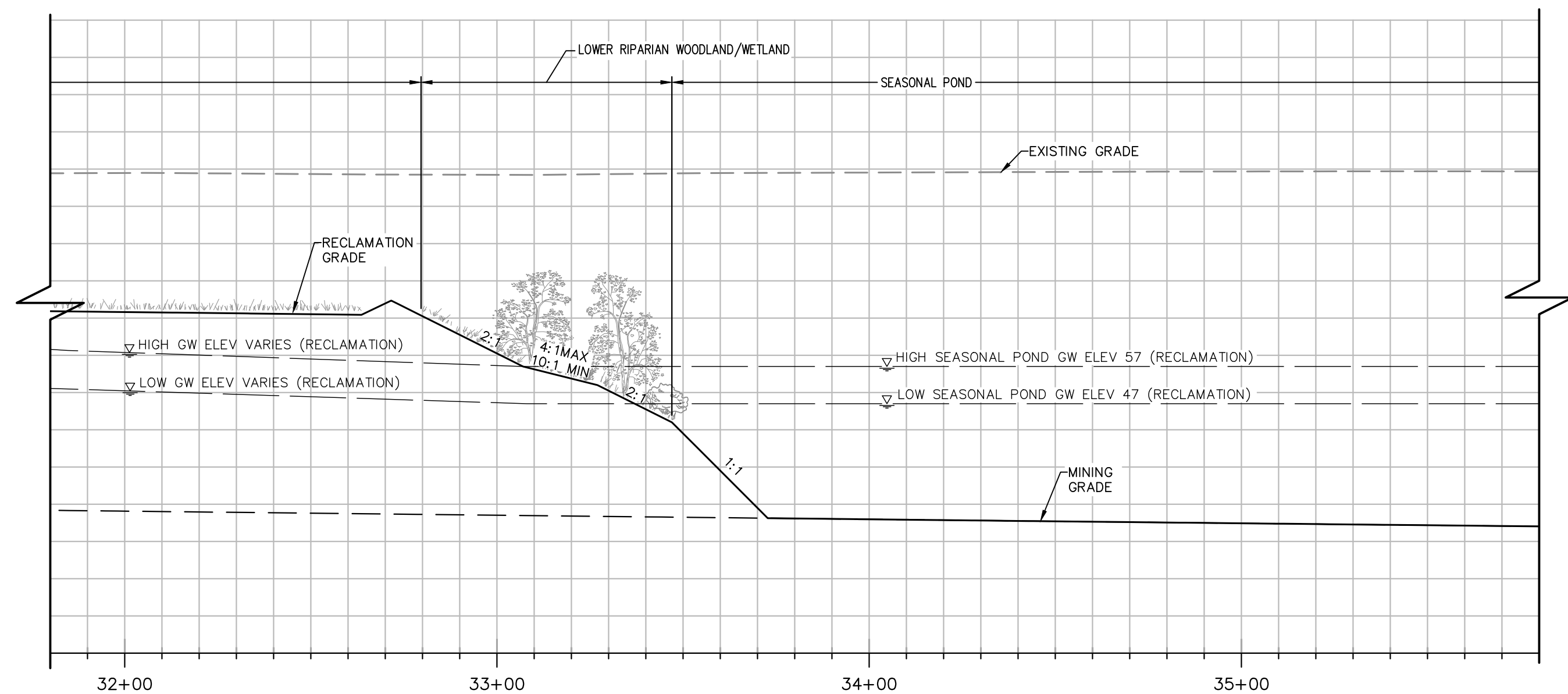
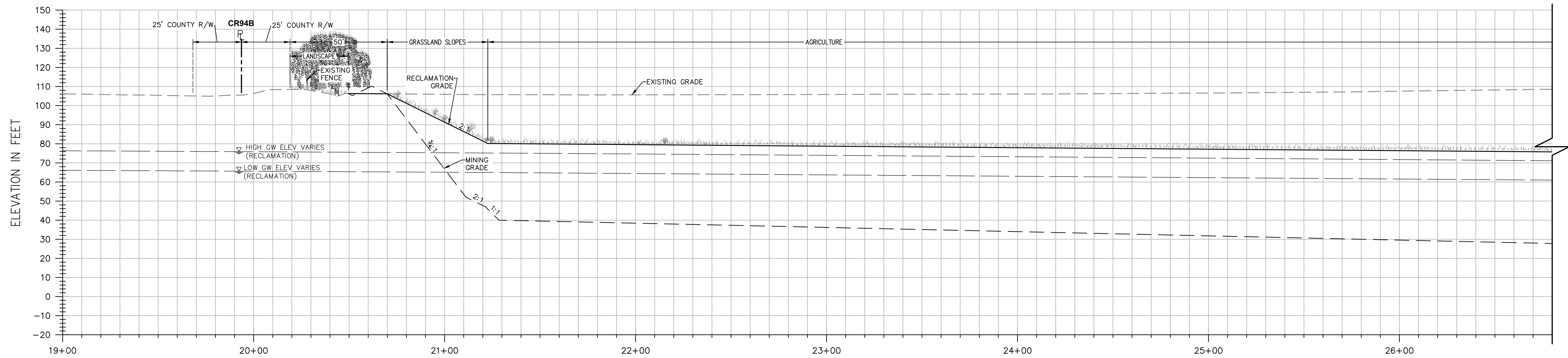


SECTION D-D

H: $1'' = 30'$
V: $1'' = 30'$

NOTES:

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SECTION E-E

H: 1"=30'
V: 1"=30'

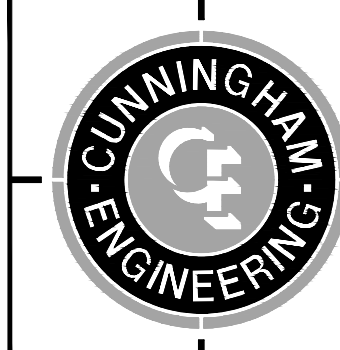
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30 15 0 30 60
SCALE 1" = 30'HOR.
SCALE 1" = 30'VERT.

EXHIBIT A

DESIGNED BY <u>KM/NC</u>	NO.	DATE	REVISIONS	BY	APPD.
DRAWN BY <u>KM</u>					
CHECKED BY <u>SG</u>					
SCALE					
AS SHOWN					



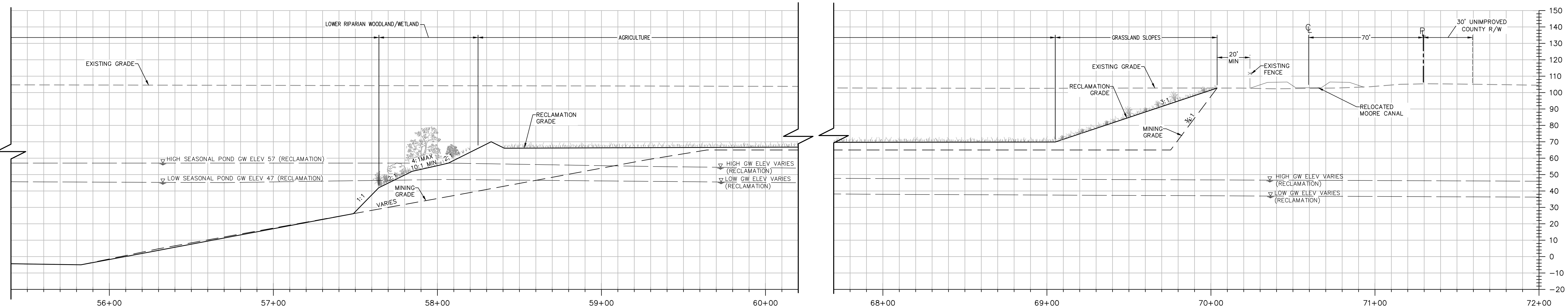
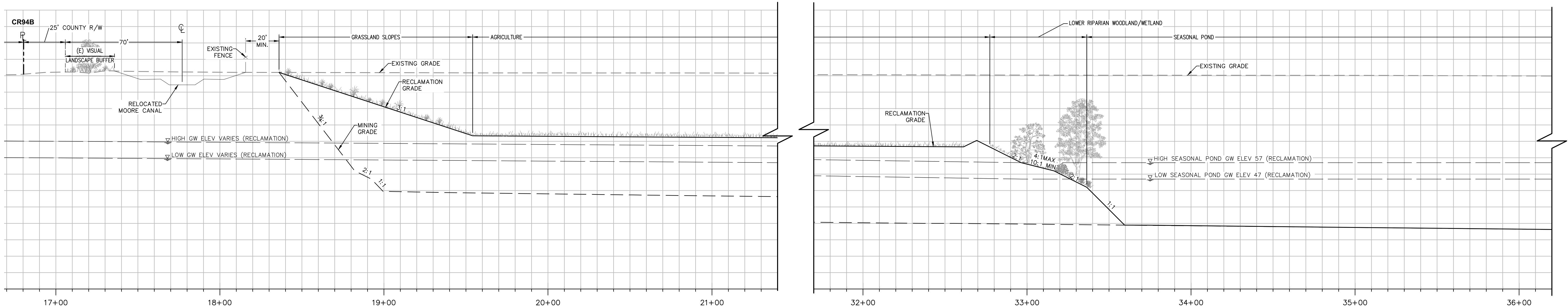
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SHIFLER RECLAMATION PLAN - SOUTH CANAL ALTERNATIVE CROSS SECTION E-E

YOLO COUNTY

CALIFORNIA

SHEET R-07 OF 9
DATE: <u>10/16/20</u>
JOB NO: 1129.20



SECTION F-F

H: 1"=30'
V: 1"=30'

NOTES:

- 1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
- 2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
- 3. BERMS OR V-DITCHES TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
- 4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.
- 5. AGRICULTURE ZONES TO HAVE MINIMUM OF 5' OF TOPSOIL AND SHALL BE A MINIMUM OF 5' ABOVE THE AVERAGE HIGH GROUNDWATER LEVEL.

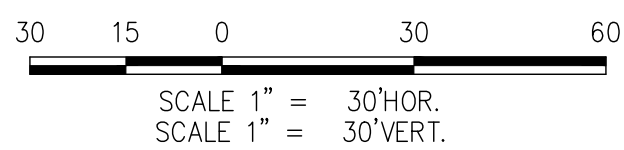
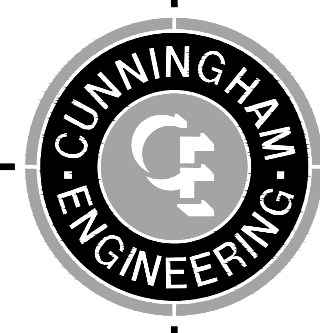


EXHIBIT A

DESIGNED BY <u>KM/NC</u>	NO.	DATE	REVISIONS	BY	APPD.
DRAWN BY <u>KM</u>					
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SCALE					
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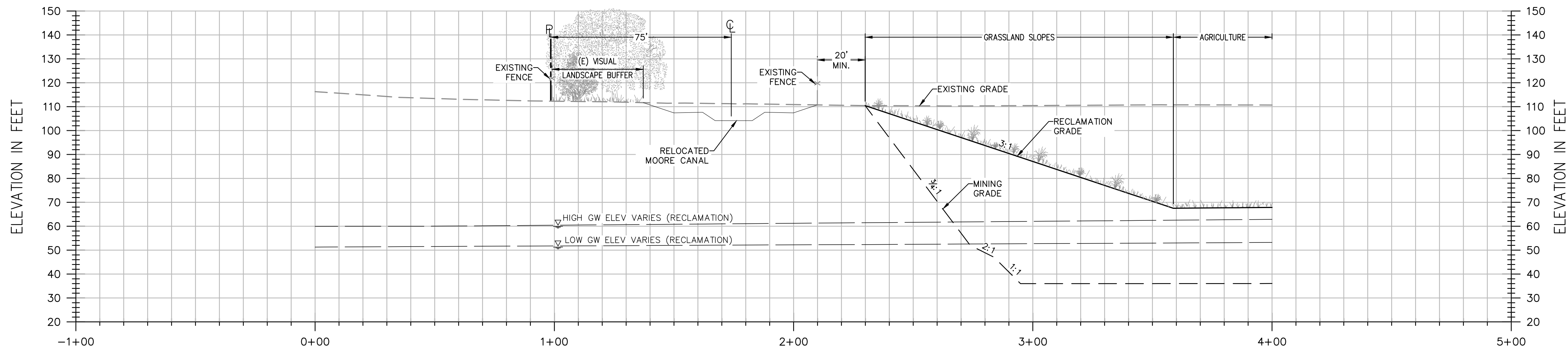
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SHIFLER RECLAMATION PLAN - SOUTH
CANAL ALTERNATIVE
CROSS SECTION F-F

YOLO COUNTY

CALIFORNIA

SHEET R-08 OF 9
DATE: <u>10/16/20</u>
JOB NO: 1129.20



SECTION G-G

H: 1"=30'
V: 1"=30'

NOTES:

- ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
- HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
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- AGRICULTURE ZONES TO HAVE MINIMUM OF 5' OF TOPSOIL AND SHALL BE A MINIMUM OF 5' ABOVE THE AVERAGE HIGH GROUNDWATER LEVEL.

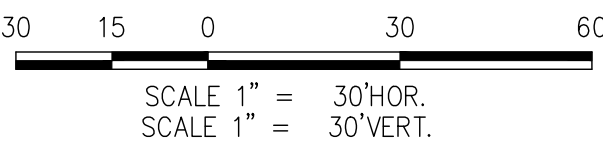
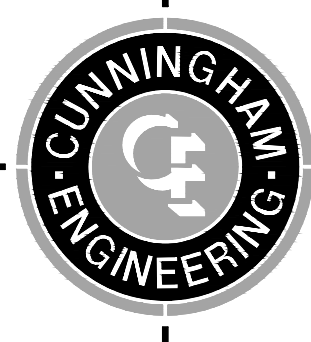


EXHIBIT A

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SHIFLER RECLAMATION PLAN - SOUTH
CANAL ALTERNATIVE
CROSS SECTION G-G & H-H

YOLO COUNTY CALIFORNIA

SHEET R-09 OF 9
DATE: <u>10/16/20</u>
JOB NO: 1129.20