



June 16, 2020

Division of Reclamation, Mining & Safety
Attn: Patrick Lennberg
1313 Sherman Street, Room 215
Denver, CO 80203

**RE: Preliminary Adequacy Review Response; Technical Revision(TR02);
Tucson South Pit, Permit No. M-2004-044**

Dear Mr. Lennberg,

Please see the responses below to the preliminary adequacy review for TR-02, Tucson South Pit. The updated exhibits are enclosed with this response.

1. It is not clear whether the acreages quoted on page D-3, 4th paragraph, are mining acres or affected acres, please make the distinction in the text.

-Please see updated Exhibit D. The text was deleted to avoid confusion. The correct mining acreages are reflected in the table on page D-3.

2. In the revised mining plan, page D-3, the acreage for Phase 2 is quoted to be 139.6 acres while the table included on Exhibit C, C-1, states the affected acreage is 139.4 acres. Please clarify difference and revise as needed.

-Please see updated Exhibit D. The text was deleted to avoid confusion. The stated affected acreage in Exhibit C is correct.

3. The Mining Phasing Summary table on page D-3 conflicts with the table provided on Exhibit C-1, please clarify the differences in acreages and revise as needed to be consistent.

-Please see updated Exhibit D. The Mining Phasing Summary table on page D-3 was corrected to be consistent with the table on Exhibit C-1.

4. Please amend Mining Note #2 on Exhibit C-1 to remove the reference of trucking export from South Area.

-Please see updated Exhibit C-1. The note was amended to remove the reference of trucking.



5. Please clarify portions of the table titled Mining Operations Aspects and Disturbance Areas, page D-6, the acreages quoted do not total to the 79.8 acres as shown, Aspect B shows two acreages (8.3 and 15), and what is the relationship between Aspect and disturbed area?

-Please see updated Exhibit D, page D-6. This table was updated to reflect the total acreage for the reclamation calculation. The Aspects column was removed as this was confusing. The two acreages (8.3 and 15) were meant to reflect the acreage of haul roads and miscellaneous areas to be reclaimed. However, these acreages were part of the total acreage to be reclaimed and do not need to be listed separately, so they were removed from this table.

6. Please clarify or revise the statement on page E-2, General Overview of Reclamation Plan, 1st paragraph, "Overburden, and non-marketable materials from the site will be used as backfill" to be consistent with the Mining Plan. In the Mining Plan on page D-3, paragraph 5, states that excess overburden from the site will be conveyed to Platte Valley for reclamation or sold.

-Please see updated Exhibit E, page E-2. This statement was revised to be consistent with Exhibit D, page D-3.

7. The following maps are missing a signature and date, C-1, C-2, C-4, F-1 and F-2 as required by Rule 6.2.1 (2).

-Please see the updated maps with a signature and date.

Should you have additional questions please feel free to contact me at 303-809-7231 or by email at Christine.Felz@lafargeholcim.com. Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Christine Felz".

Christine Felz
Land and Environment Manager

Enclosures:

Exhibit C
Exhibit D
Exhibit E
Exhibit F

TUCSON SOUTH RESOURCE
PRE-MINING AND MINING PLAN MAPS

GRAVEL MINING APPLICANT / OPERATOR:

AGGREGATE INDUSTRIES-WCR, INC.
1687 COLE BLVD, SUITE 300
GOLDEN, COLORADO 80401

SURFACE OWNERS:

AGGREGATE INDUSTRIES-WCR, INC. (TRACTS A, B, D, E, F, H, I, AND M)
1687 COLE BLVD, SUITE 300
GOLDEN, COLORADO 80401

CITY OF AURORA (TRACTS C, G, AND K)
15151 EAST ALAMEDA PARKWAY
SUITE 3600
AURORA, COLORADO 80012

CITY OF THORNTON (TRACT J)
12450 WASHINGTON STREET
THORNTON, COLORADO 80241

ADAMS COUNTY (TRACT L)
ADAMS COUNTY GOVERNMENT CENTER
4430 SOUTH ADAMS COUNTY PARKWAY
BRIGHTON, COLORADO 80601

PLEASE REFER TO SHEETS C-2 AND C-3 FOR ADJACENT PROPERTY OWNERS WITHIN 200' OF PERMIT BOUNDARY. ADJACENT PROPERTY OWNER INFORMATION WAS PROVIDED BY ADAMS COUNTY AND WELD COUNTY RECORDS.

EXISTING VEGETATION:

THE LAND COVER FOR THE PROJECT AREA WAS DETERMINED THROUGH A DESKTOP ANALYSIS OF THE NATIONAL LAND COVER DATABASE (FRY ET AL 2011). THE PROJECT LIES WITHIN COVER CLASSES IDENTIFIED BY THE NLCD AS CULTIVATED CROPLAND, HAY/PASTURE, HERBACEOUS, GRASSLANDS, WOODY AND HERBACEOUS WETLANDS, AND DEVELOPED AND BARREN.

UTILITY INFORMATION:

UTILITY INFORMATION TAKEN FROM THE TUCSON SOUTH ALTAINSPS LAND TITLE SURVEY DATED SEPTEMBER 7, 2018 BY CIVIL ARTS.

WETLAND NOTE:

WETLANDS SHOWN ON PLANS ARE PER INVESTIGATION REPORTS BY TETRA TECH DATED AUGUST 2017.

FLOOD HAZARD INFORMATION:

FLOODPLAIN INFORMATION IS FROM FLOOD INSURANCE RATE MAP, PANEL NO. 08001C0327H & 08001C0326H, DATED MARCH 5, 2007. A PORTION OF THIS LAND LIES WITHIN ZONE AE (SPECIAL FLOOD HAZARD AREAS INUNDED BY THE 1% ANNUAL CHANCE FLOOD) AND REGULATORY FLOODWAY.

MINING AREA ACREAGE TABLE:

AREA/PHASE	TRACT	PERMIT BOUNDARY	AFFECTED AREA		MINED AREA
WEST/ PHASE 1	A	82.6	82.6	88.6	72.0
	B	1.0	1.0		
	C	5.0	5.0		
	K	49.0	0.0		
EAST/ PHASE 2	D	14.4	14.4	139.4	83.8
	E	30.7	30.7		
	F	29.6	29.6		
	G	4.9	4.9		
	H	32.6	32.6		
CONVEYOR	J	3.3	3.3	3.3	0.0
	L	2.9	2.9	2.9	0.0
	TUCSON ST				
TOTALS		283.2	234.2	155.8	

FLOOD HAZARD LEGEND:

EFFECTIVE ZONE AE: AREA OF 1% ANNUAL CHANCE FLOOD WITH BASE FLOOD ELEVATIONS DETERMINED, AS SHOWN ON FEMA FIRM (MARCH 5, 2007)

EFFECTIVE ZONE X: AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD, AS SHOWN ON FEMA FIRM (MARCH 5, 2007)

EFFECTIVE FLOODWAY: THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS ANY ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASES IN FLOOD HEIGHTS, AS SHOWN ON FEMA FIRM (MARCH 5, 2007)

PRE-PROJECT / MINING CONDITIONS: AREA OF 1% ANNUAL CHANCE FLOODPLAIN PER TETRA TECH STUDY (NOV. 2018 OR AS REVISED)

LEGAL DESCRIPTIONS:

TRACT A

THAT PARCEL OF LAND AS DESCRIBED IN A GENERAL WARRANTY DEED RECORDED FEBRUARY 27, 2001 AT RECEPTION NO. C0765905, COUNTY OF ADAMS, STATE OF COLORADO.

EXCEPT PARCEL B AS DESCRIBED IN A GENERAL WARRANTY DEED RECORDED FEBRUARY 27, 2001 AT RECEPTION NO. C0765905, COUNTY OF ADAMS, STATE OF COLORADO.

AND EXCEPT THAT TRACT OF LAND CONVEYED TO CITY OF AURORA AS DESCRIBED IN GENERAL WARRANTY DEED RECORDED DECEMBER 22, 2005, AS RECEPTION NO. 20051222001399920, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT B

A PARCEL OF LAND IN THE SW 1/4 OF SECTION I, TOWNSHIP I SOUTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF ADAMS, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID SECTION 1; THENCE NORTH ALONG THE WEST LINE OF SAID SECTION 1 A DISTANCE OF 1449 FEET; THENCE S84°05'E A DISTANCE OF 1334.7 FEET TO THE TRUE POINT OF BEGINNING; THENCE S89°18'E, 260.7 FEET; THENCE N07°32'E, 171.9 FEET; THENCE N89°18'W, 280.7 FEET; THENCE S07°32'W, 171.6 FEET TO THE POINT OF BEGINNING, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT C

ALL THAT TRACT OF LAND DESCRIBED IN THE SPECIAL WARRANTY DEED RECORDED SEPTEMBER 26, 2016 AT RECEPTION NO. 2016000080681, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT D

THAT PART OF THE NORTH ONE-HALF SOUTHEAST ONE-QUARTER, SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, ADAMS COUNTY, COLORADO DESCRIBED AS:

COMMENCING AT THE NORTHWEST CORNER OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, SAID POINT BEING THE POINT OF BEGINNING; THENCE N. 89°37'18" E. ALONG THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 1050.57 FEET; THENCE S. 00°08'29" E. PARALLEL WITH THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 621.95 FEET TO A LINE THAT IS PARALLEL WITH THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER AND 5 FEET SOUTH OF AN EXISTING HOUSE; THENCE S. 89°37'18" W. ALONG SAID LINE A DISTANCE OF 1050.57 FEET TO THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE N. 00°08'29" W. ALONG THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 621.95 FEET, TO THE POINT OF BEGINNING; EXCEPT THE WEST 40.00 FEET THEREOF, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT E

THAT PART OF THE NORTH ONE-HALF SOUTHEAST ONE QUARTER SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, ADAMS COUNTY, COLORADO, LYING NORTH AND WEST OF THE CENTERLINE OF THE SOUTH PLATTE RIVER, DESCRIBED AS:

COMMENCING AT THE NORTHWEST CORNER OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE SOUTH 00°08'29" EAST ALONG THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 621.95 FEET TO A LINE THAT IS PARALLEL WITH THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER AND 5 FEET SOUTH OF AN EXISTING HOUSE AND THE POINT OF BEGINNING; THENCE NORTH 89°37'18" EAST, PARALLEL WITH THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 1050.57 FEET TO THE NORTHWEST CORNER OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE SOUTH 00°08'29" EAST ALONG THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 1050.57 FEET TO THE POINT OF BEGINNING; EXCEPT THE WEST 40.00 FEET THEREOF, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT F

THAT PART OF THE NORTH ONE-HALF OF THE SOUTHEAST ONE-QUARTER, SECTION 1, TOWNSHIP 1, SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, ADAMS COUNTY, STATE OF COLORADO, LYING NORTH AND WEST OF THE CENTERLINE OF THE SOUTH PLATTE RIVER DESCRIBED AS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, SAID POINT BEING THE POINT OF BEGINNING, THENCE N00°08'29"W, ALONG THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 477.26 FEET; THENCE N89°54'25"E, PARALLEL WITH THE SOUTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 1250.00 FEET; THENCE N00°08'29", PARALLEL WITH THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 169.08 FEET; THENCE N89°54'25"E, PARALLEL WITH THE SOUTH LINE OF SAID

NORTH ONE HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 1324.16 FEET TO THE CENTERLINE OF THE SOUTH PLATTE RIVER; THENCE BY THE FOLLOWING COURSES AND DISTANCES ALONG THE CENTERLINE OF THE SOUTH PLATTE RIVER, S83°55'12"W, 94.57 FEET; S32°39'44"W, 231.53 FEET; S26°54'09"W, 242.48 FEET; S15°48'38"W, 187.17 FEET TO THE SOUTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE S89°54'25"W, ALONG THE SOUTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 2210.47 FEET TO THE POINT OF BEGINNING, EXCEPT THE WEST 40.00 FEET THEREOF, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT G

ALL THAT TRACT OF LAND DESCRIBED IN THE QUIT CLAIM DEED RECORDED MARCH 2, 2017 AT RECEPTION NO. 2017000018970, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT H

THE SW1/4 OF THE SE1/4 OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST, EXCEPT THAT PART AS DESCRIBED IN BOOK 1055 AT PAGE 52, AND IN BOOK 1214 AT PAGE 326 AND EXCEPT THAT PART DESCRIBED IN BOOK 1205 AT PAGE 128, COUNTY OF ADAMS, STATE OF COLORADO

TRACT J

A PORTION OF A PARCEL OWNED BY THE CITY OF THORNTON (PN: 0157101002001) LOCATED IN THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF ADAMS, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: THE WEST 50.00 FEET; THE NORTH 50.00 FEET OF THE WEST 1250.00 FEET; AND THE SOUTH 50.00 FEET OF THE WEST 380.00 FEET.

TRACT K

A PARCEL OF LAND LOCATED IN THE SOUTH HALF OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF ADAMS, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE EAST QUARTER CORNER OF SAID SECTION 1; THENCE SOUTH 89°39'53" WEST 2445.14 FEET ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE NORTH 00°06'03" WEST 827.14 FEET; THENCE 214.58 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 2944.62 FEET AND A LONG CHORD WHICH BEARS NORTH 69°36'00" WEST 214.53 FEET TO A POINT LYING 40.00 FEET EASTERLY FROM THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE NORTH 00°00'03" WEST 32.52 FEET PARALLEL TO THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE 305.94 FEET ALONG THE ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 2914.62 FEET AND A LONG CHORD WHICH BEARS SOUTH 70°16'26" EAST 305.80 FEET, SAID POINT BEING ON THE SOUTHERLY LINE OF THE TUCSON RESOURCES SUBDIVISION AS RECORDED IN THE ADAMS COUNTY RECORDS IN FILE 17 MAP 855; THENCE SOUTH 73°16'48" EAST 2463.67 FEET ALONG THE SOUTHERLY LINE OF SAID TUCSON RESOURCES SUBDIVISION TO THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE SOUTH 00°10'30" EAST 108.13 FEET ALONG THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1 TO THE POINT OF BEGINNING.

TRACT L (TUCSON STREET RIGHT-OF-WAY)

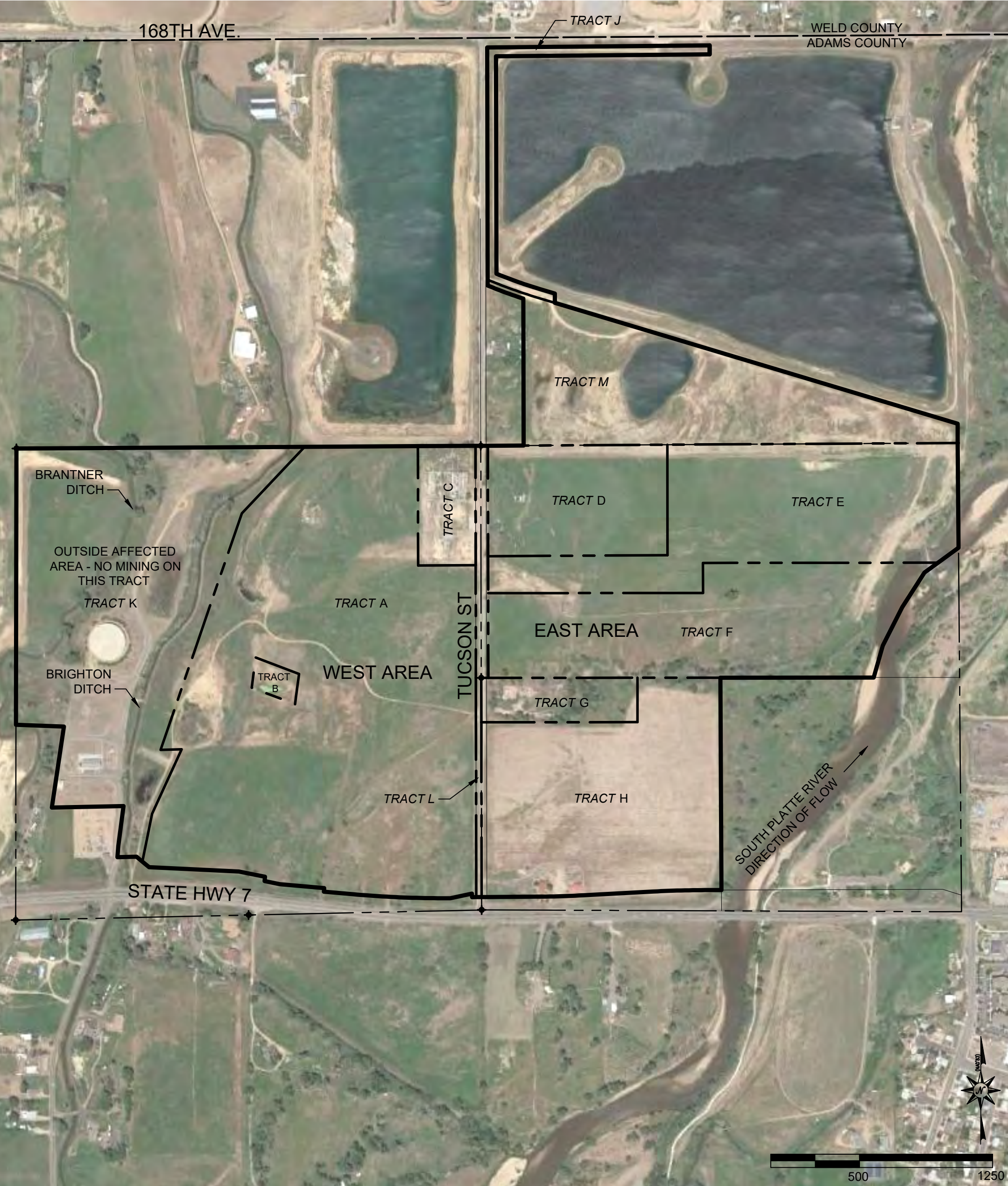
A TRACT OF LAND LOCATED IN THE SOUTH HALF OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF ADAMS, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE CENTER-SOUTH ONE-SIXTEENTH CORNER OF SECTION 1; THENCE ALONG THE NORTH-SOUTH CENTERLINE OF SECTION 1 SOUTH 00°06'29" EAST 1234.13 FEET TO A POINT WHENCE THE SOUTH ONE-QUARTER CORNER OF SECTION 1 BEARS SOUTH 00°06'29" EAST 72.70 FEET; THENCE LEAVING SAID NORTH-SOUTH CENTERLINE SOUTH 89°33'20" WEST 30.00 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF TUCSON STREET; THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE NORTH 00°06'29" WEST 2541.11 FEET TO A POINT ON THE NORTH LINE OF THE SOUTHEAST QUARTER OF SECTION 1; THENCE ALONG SAID NORTH LINE NORTH 89°40'23" EAST 30.00 FEET TO THE CENTER ONE-QUARTER CORNER OF SECTION 1; THENCE ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER OF SECTION 1 NORTH 89°39'20" EAST 40.00 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF TUCSON STREET; THENCE ALONG SAID EASTERLY RIGHT-OF-WAY LINE SOUTH 00°06'29" EAST 1307.12 FEET; THENCE LEAVING SAID EASTERLY RIGHT-OF-WAY LINE SOUTH 89°56'30" WEST 40.00 FEET TO THE CENTER-SOUTH ONE-SIXTEENTH CORNER OF SECTION 1 AND THE POINT OF BEGINNING.

TRACT M

A PARCEL OF LAND LOCATED IN THE SOUTH HALF OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, ADAMS COUNTY, STATE OF COLORADO BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE EAST ONE-QUARTER CORNER OF SECTION 1; THENCE WEST 2445.14 FEET; THENCE NORTH 827.14 FEET; THENCE 214.58 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 2944.62 FEET AND A LONG CHORD WHICH BEARS NORTH 69°36' WEST 214.53 FEET TO A POINT 40 FEET EASTERLY FROM THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE NORTH 32.52 FEET; THENCE 305.94 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 2914.62 FEET AND A LONG CHORD WHICH BEARS SOUTH 70°16' EAST 305.80 FEET; THENCE SOUTH 73°16' EAST 2463.67 FEET; THENCE SOUTH 108.13 FEET TO THE POINT OF BEGINNING.



MINING NOTES:

- REFER TO EXHIBITS C-2 AND C-3 FOR ADJACENT PROPERTY OWNERS, SOURCE OF SURVEY/TOPOGRAPHY, AND BENCHMARK INFORMATION.
- AN ENGINEERING STABILITY ANALYSIS FOR SLIDING FAILURE HAS BEEN PERFORMED. MINING OCCURRING WITHIN 200' OF A MAN-MADE STRUCTURE NOT OWNED BY THE APPLICANT/OPERATOR HAS ADEQUATE SETBACK FOR SLIDING FAILURE. THE LIMIT OF MINING EXCAVATION PER THE GEOTECHNICAL SLOPE STABILITY ANALYSIS IS SHOWN ON EXHIBITS C-4 AND C-5.
- FOR THE WEST AND EAST CELLS, THE OPERATOR WILL USE DRY MINING TECHNIQUES AND EXCAVATE MATERIAL BY BACKHOE, BULLDOZERS, AND SIMILAR EQUIPMENT. THE MINING FOR THESE PHASES WILL INVOLVE INSTALLATION OF A SLURRY WALL, DE-WATERING ACTIVE MINING AREAS, AND PUMPING WATER FROM DE-WATERED AREAS IN ACCORDANCE WITH THE DISCHARGE PERMIT.
- TOPSOIL AND OVERBURDEN STOCKPILES SHALL BE TEMPORARILY STORED IN THE AREAS SHOWN. THE STOCKPILES IN THE FLOODPLAIN SHALL BE ALIGNED PARALLEL TO THE FLOOD-FLOW DIRECTION OF THE S. PLATTE RIVER, HAVE A MAXIMUM HEIGHT OF 30', A MAXIMUM LENGTH OF 300', MAXIMUM 3H:1V SLOPES, AND A MINIMUM OF 100' BETWEEN STOCKPILES.
- OVERBURDEN AND TOPSOIL STOCKPILES ABOVE EXISTING GRADE, THAT ARE EXPECTED TO BE PRESENT FOR OVER 1 YEAR, WILL BE SEEDED WITH A TEMPORARY SEED MIX AS WEATHER PERMITS.
- OVERBURDEN AND TOPSOIL STOCKPILES MAY BE STORED IN THE BOTTOM OF THE MINING CELLS IN EAST AND WEST MINING AREAS AS LONG AS THE TOP OF THE STOCKPILE IS BELOW THE PRE-MINING SURFACE ELEVATION.
- STOCKPILED TOPSOIL WILL BE SEGREGATED FROM OTHER SPOIL.
- THE OPERATION WILL INVOLVE CONCURRENT MINING AND RECLAMATION WITH FINAL SLOPES BEING 3H:1V, AND PLACEMENT OF 6" TO 12" OF TOPSOIL ON ALL RECONSTRUCTED AREAS ABOVE THE PROPOSED HIGH WATER LEVEL OF THE FUTURE RESERVOIR, AND OTHER DISTURBED AREAS AS NECESSARY.
- TETRA TECH INC. IS NOT RESPONSIBLE FOR SAFETY, IN, ON, OR ABOUT THE PROJECT SITE, NOR FOR

- COMPLIANCE BY THE APPROPRIATE PARTY OF ANY REGULATIONS THERETO.
- A MINIMUM OF TEN (10) FEET OF CLEARANCE FROM ANY EXISTING POWERLINE OR FUTURE POWERLINE SHALL BE MAINTAINED AT ALL TIMES AS OUTLINED BY STATE STATUTES.
 - UTILITIES SHOWN ON THIS PLAN WERE FIELD LOCATED AT THE TIME OF PLAN PREPARATION. FOR SAFETY, THE OPERATOR SHOULD LOCATE UTILITIES PRIOR TO SLURRY WALL CONSTRUCTION, OR MINING ACTIVITY.
 - SLURRY WALL SHOWN HEREIN IS GENERAL LOCATION ONLY. THE PORTION OF THE SLURRY WALL IN THE TUCSON STREET ROW WILL BE CONSTRUCTED UPON APPROVAL OF ADAMS COUNTY.
 - PRIOR TO DISTURBANCE OF ANY WATERS OF THE U.S., AGGREGATE INDUSTRIES-WCR, INC. WILL GET APPROPRIATE APPROVALS FROM THE U.S. ARMY CORPS OF ENGINEERS.
 - NO IRRIGATION DITCHES WILL BE DISTURBED. LATERALS THAT SERVE THE PROPERTY WILL BE REMOVED.
 - WETLANDS BUFFER SHALL NOT BE DISTURBED UNTIL USACE AUTHORIZATION IS OBTAINED.
 - THE MAXIMUM SLOPE ON EASTERN AND SOUTHERN HIGHWALL EXCAVATIONS THAT ARE 400 FEET OR LESS FROM THE SOUTH PLATTE RIVER SHALL NOT EXCEED 3H:1V BETWEEN APRIL 1 AND SEPTEMBER 30.
 - THE MINING LIMITS SHOWN HEREIN ASSUME A 3H:1V (EAST AND WEST AREAS) AS DESCRIBED IN THE SLOPE STABILITY AND SETBACK UPDATES MEMO (TETRA TECH, JULY 8, 2019). DEVIATIONS FROM THE ASSUMPTIONS MADE IN THE MEMO MAY IMPACT THE ALLOWABLE GEOTECHNICAL SETBACK. THIS MEMO DOES NOT DOCUMENT SETBACKS THAT ARE BASED ON MUTUAL AGREEMENT'S OR ADAMS COUNTY REGULATIONS.

SHEET INDEX:

- C-1 EXHIBIT C COVER SHEET & MINING NOTES
- C-2 EXHIBIT C PER-MINING PLAN MAP WEST AREAS
- C-3 EXHIBIT C PRE-MINING PLAN MAP EAST AREA
- C-4 EXHIBIT C WEST AREA MINING PLAN
- C-5 EXHIBIT C EAST AREA MINING PLAN
- C-6 EXHIBIT C MINING DETAILS

CERTIFICATION:

THIS MAP WAS ORIGINALLY PREPARED & CERTIFIED BY TETRATECH, 3/15/2019, PROJECT NUMBER 200-23514-18004. MODIFIED BY MARK SPANIEL WITH LAFARGEHOLCIM.

Mine Planner II - Mark Spaniel 6-10-2020



www.tetratech.com
1900 S. Sunset St., Ste. 1-E
Denver, CO 80202
Phone: (303) 772-6262

BY	TH	TH	TH	MES			
MARK	DATE	DESCRIPTION	1	2	3	4	
1	7/8/19	FIRST ADEQUACY REVIEW RESPONSE					
2	9/16/19	SECOND ADEQUACY REVIEW RESPONSE					
3	11/6/19	THIRD ADEQUACY REVIEW RESPONSE					
4	4/30/20	REMOVE SOUTH MINING AREA					

AGGREGATE INDUSTRIES - WCR, INC.

TUCSON SOUTH
RESOURCE

EXHIBIT C

COVER SHEET & MINING NOTES

Project No.: 200-23514-18004

Designed By: JAB

Drawn By: JJA

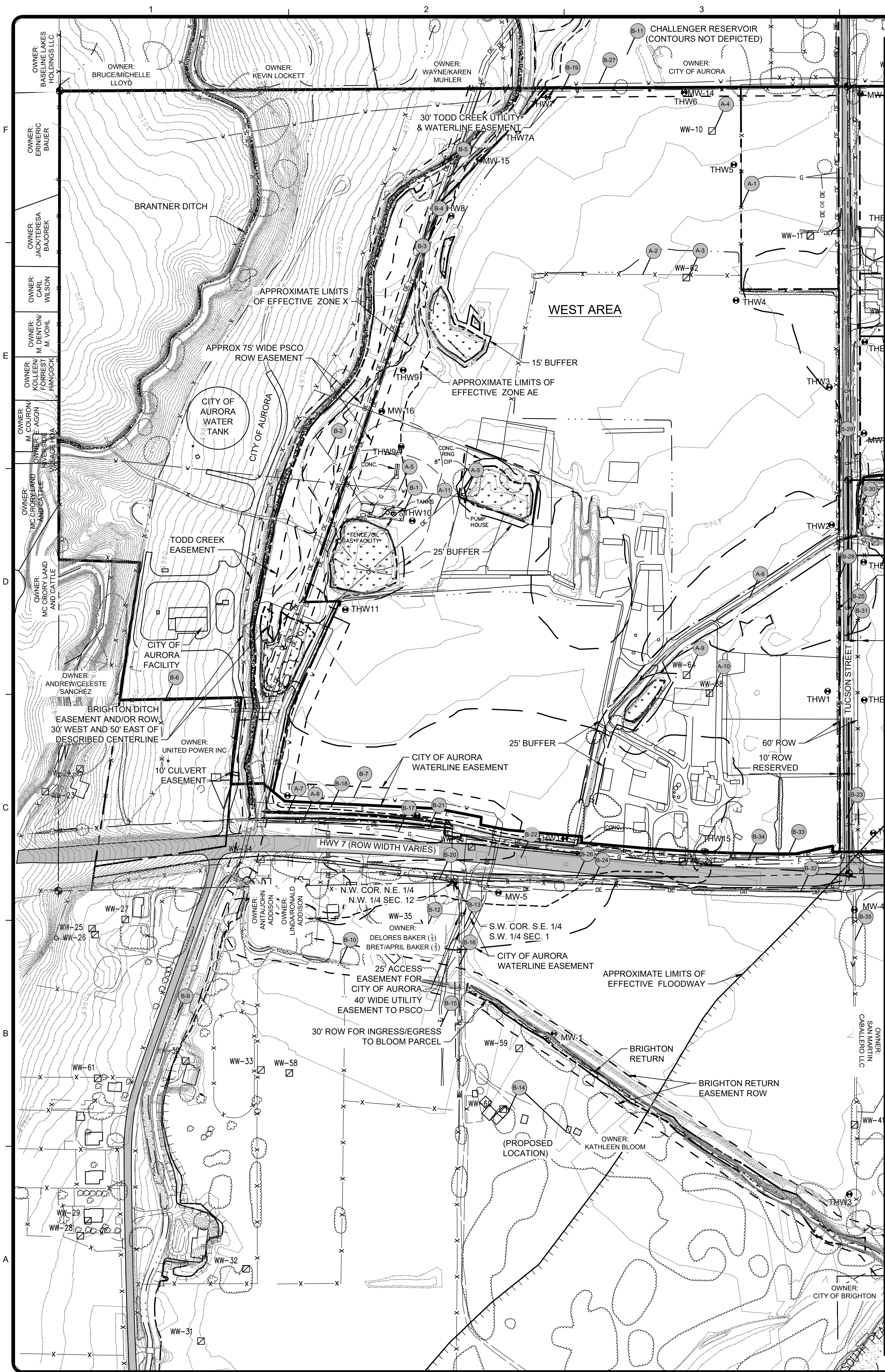
Checked By: JAB

C-1

EXHIBIT

Bar Measures 1 inch

Copyright: Tetra Tech



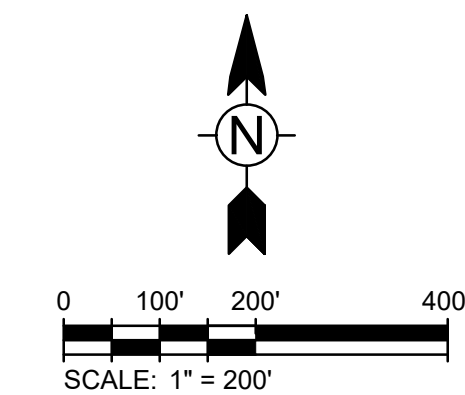
LEGEND:

- MINE PERMIT BOUNDARY
- TRACT BOUNDARY
- EASEMENT
- EFFECTIVE FLOODWAY
- EFFECTIVE ZONE AE
- EFFECTIVE ZONE X
- PRE-PROJECT MINING CONDITIONS 100-YR FLOODPLAIN
- EXISTING WETLAND BOUNDARY
- EXISTING WETLAND BUFFER
- EXISTING EDGE OF WATER
- EXISTING 2' CONTOURS
- EXISTING FENCE
- EXISTING EDGE OF ROAD
- EXISTING ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING TELEPHONE LINE
- EXISTING ASPHALT ROAD
- EXISTING SOUTH PLATTE RIVER
- UDFCD STABILIZATION
- EXISTING WETLANDS
- MONITORING WELL LOCATION WITH WELL ID #
- WATER WELL LOCATION WITH WELL ID #
- EXISTING TREES
- UTILITY POLE
- SECTION CORNER MONUMENT

STRUCTURE LIST

STRUCTURES TO BE REMOVED				RECOMMENDED OFFSET PER STABILITY ANALYSIS (FT)	STRUCTURE AGREEMENT OR UDFCD OFFSET (FT)	ACTUAL OFFSET FROM MINING EXCAVATION LIMITS (FT)
STRUCTURE ID	STRUCTURE DESCRIPTION	OWNER	ADDRESS			
A-1	FENCE	CITY OF AURORA	15151 EAST ALAMEDA PARKWAY, SUITE 3000, AURORA, COLORADO, 80012	-	-	-
A-2	FENCES LOCATED ON PROPERTY	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-3	WW-42	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-4	WW-10	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-5	PUMP HOUSE, WELL & WATERLINE	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-6	IRRIGATION DITCH	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-7	IRRIGATION LATERALS	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-8	IRRIGATION LATERALS	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-9	WW-44	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-10	WW-38	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-11	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC.	PO BOX 925, BRIGHTON, CO, 80602	-	-	-
STRUCTURES TO BE PROTECTED						
STRUCTURE ID	STRUCTURE DESCRIPTION	OWNER	ADDRESS			
B-1	CEILING AND GAS FACILITY, WELL, APPURTENANCES, AND FENCE	GREAT WESTERN OPERATING COMPANY, LLC		56	-	56
B-2	GAS LINE	GREAT WESTERN OPERATING COMPANY, LLC		56	-	56
B-3	OVERHEAD ELECTRIC WITH POWER POLES	PUBLIC SERVICE CO. OF COLO.	1880 LARIMER ST, DENVER, COLORADO, 80202	45	-	75 MINIMUM
B-4	OVERHEAD ELECTRIC WITH POWER POLES	PUBLIC SERVICE CO. OF COLO.	1880 LARIMER ST, DENVER, COLORADO, 80202	45	-	75 MINIMUM
B-5	OVERHEAD ELECTRIC WITH POWER POLES	PUBLIC SERVICE CO. OF COLO.	1880 LARIMER ST, DENVER, COLORADO, 80202	45	-	75 MINIMUM
B-6	ELECTRICAL SUBSTATION	UNITED POWER INC.	PO BOX 925, BRIGHTON, CO, 80602	45	-	281
B-7	WATERLINE	CITY OF AURORA	15151 EAST ALAMEDA PARKWAY, SUITE 3000, AURORA, COLORADO, 80012	72 MIN (N OF HWY 7) 20 MIN (S OF HWY 7)	60	80 MIN (N OF HWY 7) 75 MIN (S OF HWY 7)
B-8	INTENTIONALLY NOT USED	BRIGHTON DITCH COMPANY	3286 WELD COUNTY ROAD 23, FT LUTHER, CO 80621	35	-	90 MINIMUM
B-9	BRIGHTON DITCH	BRIGHTON DITCH COMPANY	3286 WELD COUNTY ROAD 23, FT LUTHER, CO 80621	77	-	77
B-10	BRIGHTON DITCH RETURN FLOW	CITY OF AURORA	15151 EAST ALAMEDA PARKWAY, SUITE 3000, AURORA, COLORADO, 80012	45	-	185
B-11	CHALLENGER RESERVOIR	DELORES BAKER, APRIL AND BRET BAKER	12429 E 160TH AVE, DENVER, CO	20	-	215
B-12	PRIVATE RESIDENCE	KATHLEEN BLOOM, DELORES, APRIL & BRET BAKER	BLOOM 12500 E 160TH AVE, BRIGHTON, COLORADO, 80602	20	-	100
B-13	SHARED ACCESS	CITY OF AURORA	15151 EAST ALAMEDA PARKWAY, SUITE 3000, AURORA, COLORADO, 80012	77	-	335
B-14	PRIVATE RESIDENCE AND OUT BUILDINGS	KATHLEEN BLOOM	12500 E 160TH AVE, BRIGHTON, COLORADO, 80602	20	-	95
B-15	TELEPHONE LINE	CENTURY LINK	PO BOX 2560, OMAHA, NE 68103	35	-	66 SOUTH
B-16	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC INC	PO BOX 925, BRIGHTON, CO, 80602	106	-	112
B-17	GAS LINE	XCEL	414 NICOLLET MALL, MINNEAPOLIS, MN 55401	35 (BOTH SIDES)	-	60 EAST
B-18	UNDERGROUND ELECTRIC	UNITED POWER INC INC	PO BOX 925, BRIGHTON, CO, 80602	45	20	65
B-19	WATERLINE	TODD CREEK FARMS METROPOLITAN DIST. NO. 1	7500 EAST 152ND AVE, BRIGHTON, COLORADO, 80401	45	20	65
B-20	FENCE	COLORADO DEPARTMENT OF TRANSPORTATION	2828 W. HOWARD PLACE, DENVER, CO 80204	106	-	175
B-21	FENCE	COLORADO DEPARTMENT OF TRANSPORTATION	2828 W. HOWARD PLACE, DENVER, CO 80204	106	-	175
B-22	CO STATE HIGHWAY 7	XCEL	414 NICOLLET MALL, MINNEAPOLIS, MN 55401	35 (BOTH SIDES)	-	60 EAST
B-23	GAS LINE	CENTURY LINK	PO BOX 2560, OMAHA, NE 68103	35	-	66 SOUTH
B-24	TELEPHONE LINE	ADAMS COUNTY	4430 S. ADAMS COUNTY PARKWAY, BRIGHTON, COLORADO, 80601	35 (BOTH SIDES)	-	65
B-25	GAS LINE	XCEL	414 NICOLLET MALL, MINNEAPOLIS, MN 55401	35 (BOTH SIDES)	-	60 EAST
B-26	WATERLINE	TODD CREEK FARMS METROPOLITAN DIST. NO. 1	7500 EAST 152ND AVE, BRIGHTON, COLORADO, 80401	45	20	65
B-27	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC.	PO BOX 925, BRIGHTON, CO, 80602	35	-	111 WEST
B-28	FENCE	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	35	-	35 EAST
B-29	FENCE	CITY OF AURORA	15151 EAST ALAMEDA PARKWAY, SUITE 3000, AURORA, COLORADO, 80012	65	-	115
B-30	TELEPHONE LINE	CENTURY LINK	PO BOX 2560, OMAHA, NE 68103	35	-	66 SOUTH
B-31	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC	PO BOX 925, BRIGHTON, CO, 80602	35	-	65
B-32	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC	PO BOX 925, BRIGHTON, CO, 80602	35	-	65
B-33	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC	PO BOX 925, BRIGHTON, CO, 80602	35	-	108
B-34	UNDERGROUND ELECTRIC	UNITED POWER INC	PO BOX 925, BRIGHTON, CO, 80602	106	-	120
B-35	FENCE	ISAN MARTIN CABALLERO, LLC	13110 E 160TH AVE, BRIGHTON, CO 80601	-	-	-

* Offset is selected from nearest feature analyzed in the stability analysis
** Actual offset distance is measured from the feature to the nearest mining excavation limit



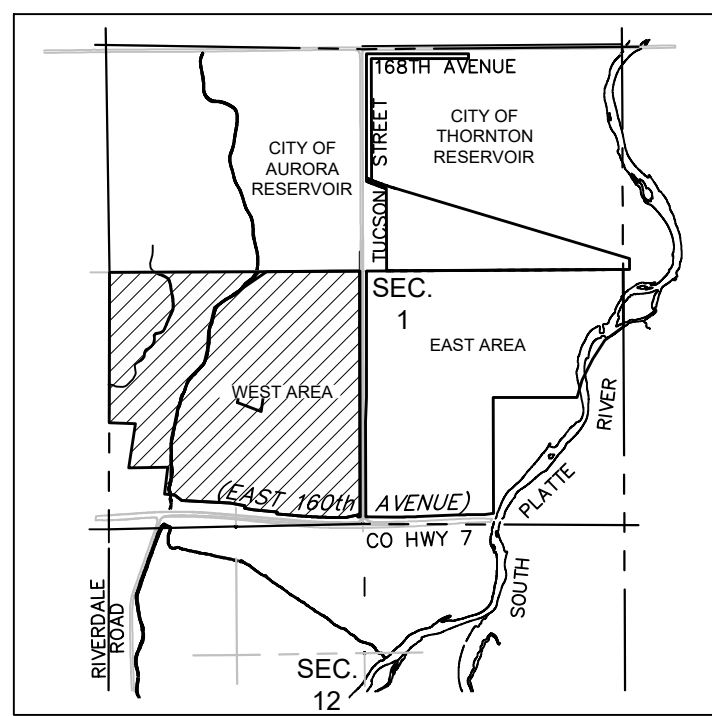
CERTIFICATION:

THIS MAP WAS ORIGINALLY PREPARED & CERTIFIED BY TETRATECH, 3/15/2019, PROJECT NUMBER 200-23514-18004. MODIFIED BY MARK SPANIEL WITH LAFARGEHOLCIM.

Mine Planner II - Mark Spaniel 6-10-2020

Mark Spaniel

KEY MAP
NOT TO SCALE



SURVEY/TOPOGRAPHIC INFORMATION:

BASEMAP INFORMATION AND TOPOGRAPHY: (3/26/2003) CARRERA MAPPING, INC., 4743 SOUTH CATHAY COURT AURORA, COLORADO, 80015 PHONE: (303) 693-5999

SURVEY INFORMATION: CIVIL ARTS 1500 KANSAS AVE, STE. 2-E LONGMONT, CO 80501

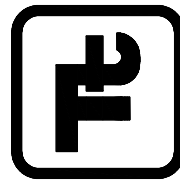
BOUNDARY INFORMATION AND EXISTING UTILITIES: CIVIL ARTS 1500 KANSAS AVE, STE. 2-E LONGMONT, CO 80501 (SEE LEGAL DESCRIPTIONS)

FEATURES OUTSIDE PROPERTY BOUNDARY WERE PROVIDED BY: AERIAL PHOTO AND USGS MAP

WELL INFORMATION:

☐ WW-# LOCATIONS ARE APPROXIMATE, BASED ON SEO DATABASE AND DOOR TO DOOR SURVEY, AND COULD BE ABANDONED OR DESTROYED. INFORMATION IS FROM TETRA TECH WELL INVENTORY REPORT DATED MARCH 13, 2004.

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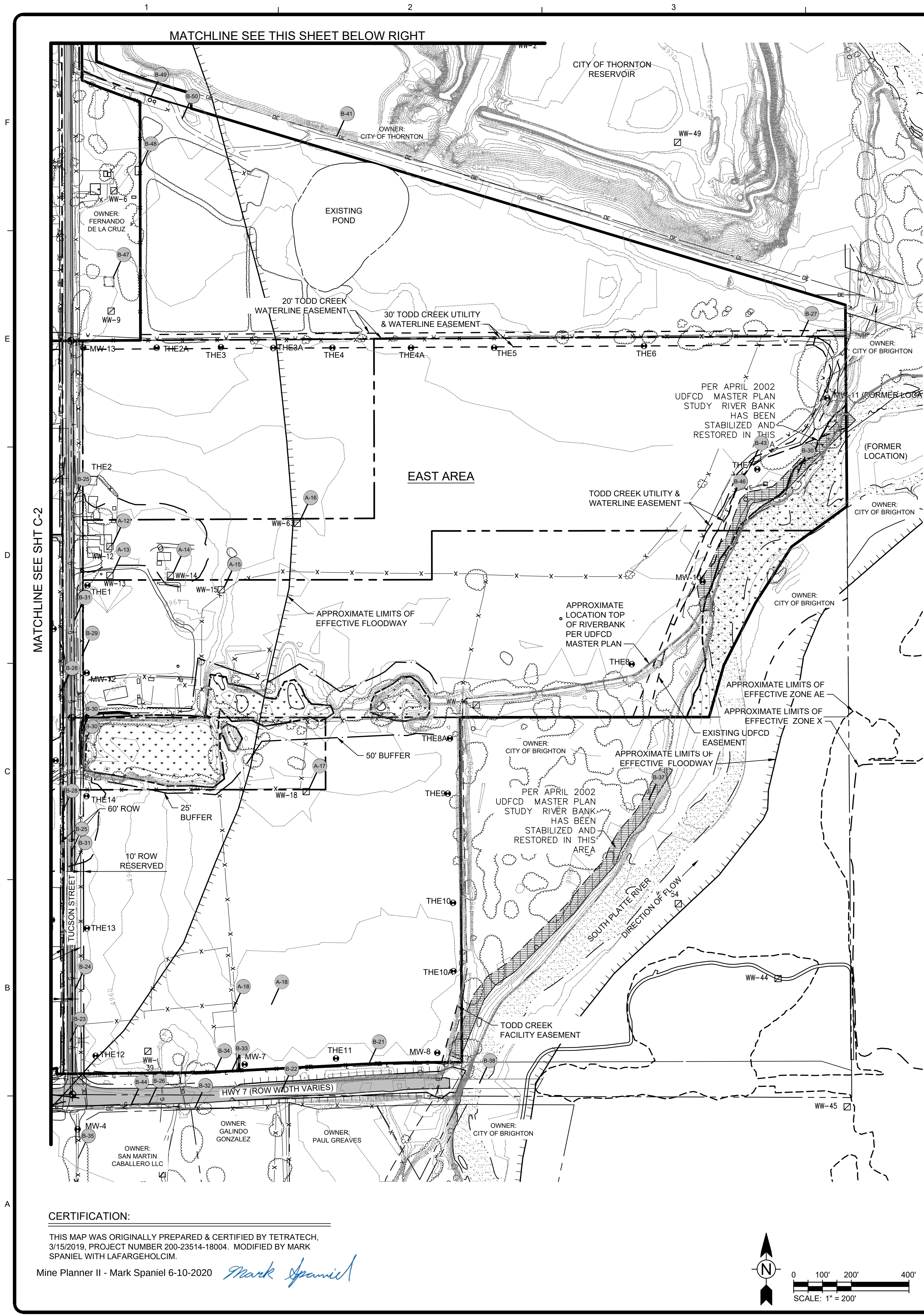
MARK	DATE	DESCRIPTION	BY
1	7/8/19	FIRST ADEQUACY REVIEW RESPONSE	TH
2	9/6/19	SECOND ADEQUACY REVIEW RESPONSE	TH
3	11/8/19	THIRD ADEQUACY REVIEW RESPONSE	TH
4	5/11/20	REMOVE SOUTH AREA FROM MINING LIMIT	MES

AGGREGATE INDUSTRIES - WCR, INC.
TUCSON SOUTH RESOURCE
EXHIBIT C
PRE-MINING PLAN MAP
WEST AREA

Project No.: 200-23514-18004
Designed By:
Drawn By:
Checked By:

C-2
EXHIBIT

Bar Measures 1 inch



LEGEND:

---	MINE PERMIT BOUNDARY		EXISTING ASPHALT ROAD
---	TRACT BOUNDARY		EXISTING SOUTH PLATTE RIVER
---	EASEMENT		UDFCD STABILIZATION
---	EFFECTIVE FLOODWAY		EXISTING WETLANDS
---	EFFECTIVE ZONE AE		MONITORING WELL LOCATION WITH WELL ID #
---	EFFECTIVE ZONE X		WATER WELL LOCATION WITH WELL ID #
---	PRE-PROJECT/MINING CONDITIONS 100-YR FLOODPLAIN		EXISTING TREES
---	EXISTING WETLAND BOUNDARY		UTILITY POLE
---	EXISTING WETLAND BUFFER		SECTION CORNER MONUMENT
---	EXISTING EDGE OF WATER		
---	EXISTING 2' CONTOURS		
---	EXISTING FENCE		
---	EXISTING EDGE OF ROAD		
---	EXISTING ELECTRIC LINE		
---	EXISTING OVERHEAD ELECTRIC LINE		
---	EXISTING GAS LINE		
---	EXISTING WATER LINE		
---	EXISTING TELEPHONE LINE		

SURVEY/TOPOGRAPHIC INFORMATION:

BASEMAP INFORMATION AND TOPOGRAPHY: (3/26/2002) CARRERA MAPPING, INC., 4743 SOUTH CATHAY COURT AURORA, COLORADO, 80015 PHONE: (303) 693-5999

SURVEY INFORMATION: CIVIL ARTS 1500 KANSAS AVE, STE. 2-E LONGMONT, CO 80501

BOUNDARY INFORMATION AND EXISTING UTILITIES: CIVIL ARTS 1500 KANSAS AVE, STE. 2-E LONGMONT, CO 80501 (SEE LEGAL DESCRIPTIONS)

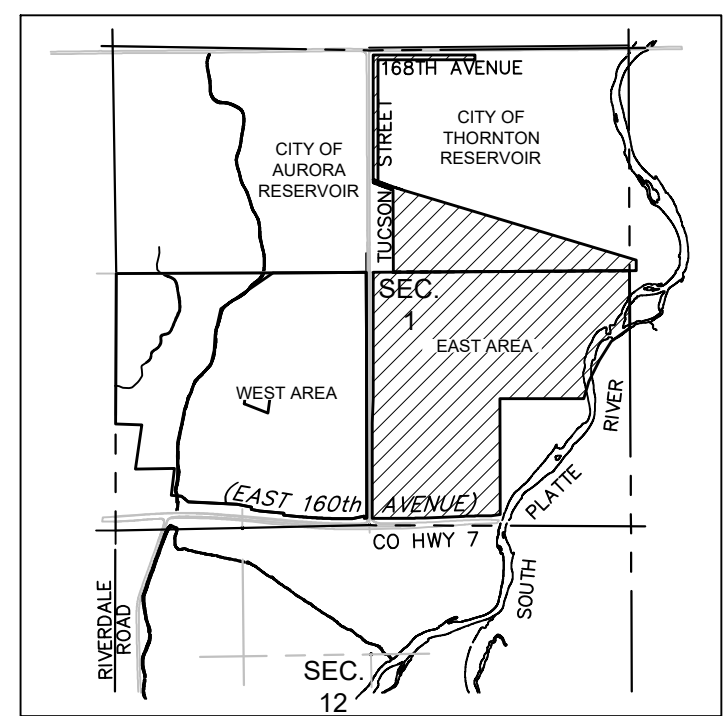
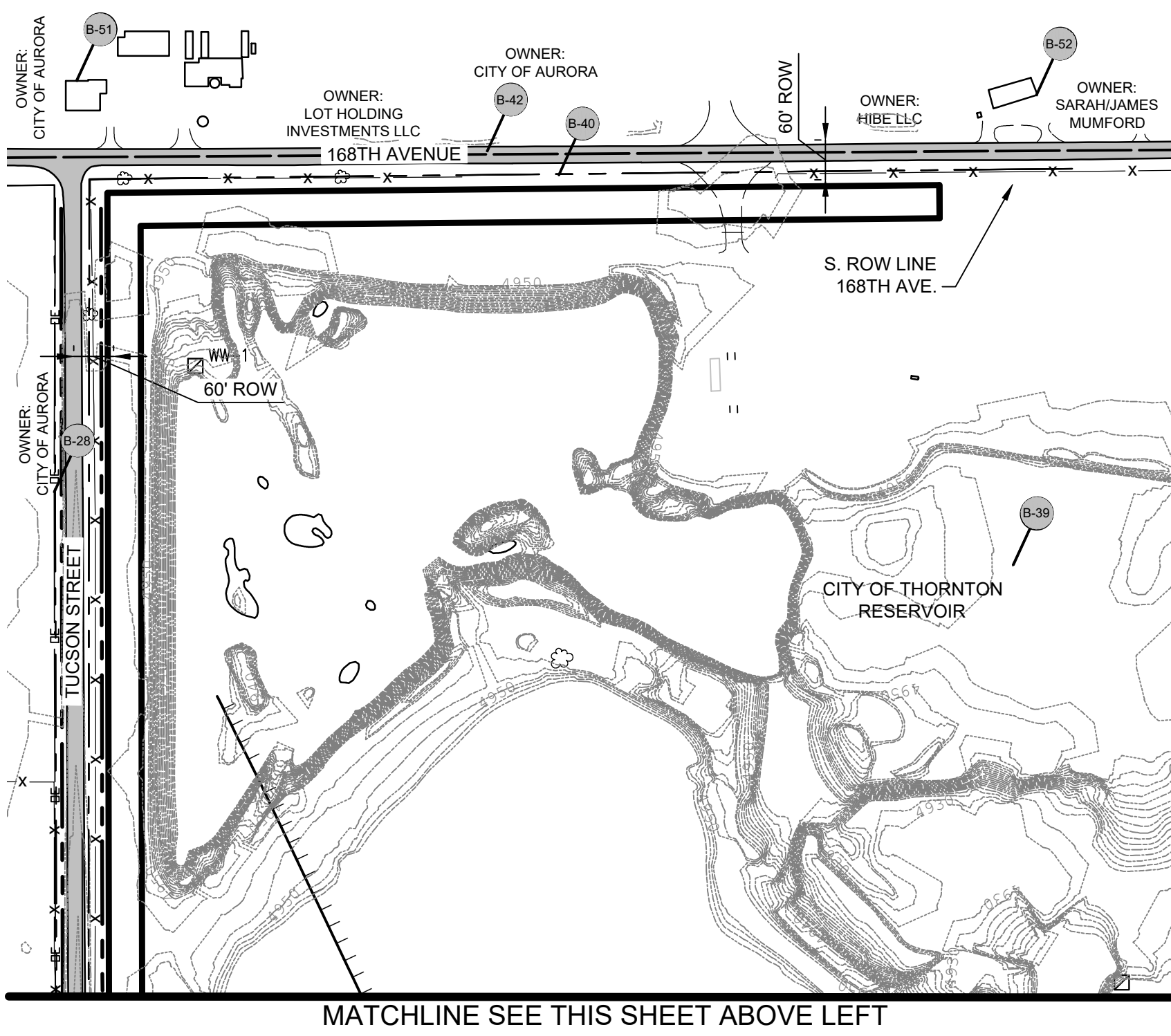
FEATURES OUTSIDE PROPERTY BOUNDARY WERE PROVIDED BY: AERIAL PHOTO AND USGS MAP

WELL INFORMATION:

WW-# LOCATIONS ARE APPROXIMATE, BASED ON SEO DATABASE AND DOOR TO DOOR SURVEY, AND COULD BE ABANDONED OR DESTROYED. INFORMATION IS FROM TETRA TECH WELL INVENTORY REPORT DATED MARCH 13, 2004.

STRUCTURES TO BE REMOVED				RECOMMENDED OFFSET PER STABILITY ANALYSIS (FT)*	STRUCTURE AGREEMENT OR UDFCD OFFSET (FT)	ACTUAL OFFSET FROM MINING EXCAVATION LIMITS (FT)**
STRUCTURE ID	STRUCTURE DESCRIPTION	OWNER	ADDRESS			
A-12	WW-12	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-13	WW-13	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-14	WW-14	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-15	WW-15	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-16	WW-63	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-17	WW-18	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
A-18	PRIVATE RESIDENCE	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	-
STRUCTURES TO BE PROTECTED				RECOMMENDED OFFSET PER STABILITY ANALYSIS (FT)*	STRUCTURE AGREEMENT OR UDFCD OFFSET (FT)	ACTUAL OFFSET FROM MINING EXCAVATION LIMITS (FT)**
STRUCTURE ID	STRUCTURE DESCRIPTION	OWNER	ADDRESS			
B-21	FENCE	COLORADO DEPARTMENT OF TRANSPORTATION	2829 W. HOWARD PLACE, DENVER, CO, 80204	35	-	55
B-22	CO STATE HIGHWAY 7	COLORADO DEPARTMENT OF TRANSPORTATION	2829 W. HOWARD PLACE, DENVER, CO, 80204	35	-	133
B-23	GAS LINE	XCEL	414 NICOLLET MALL, MINNEAPOLIS, MN, 55401	35	-	104
B-24	TELEPHONE LINE	CENTURY LINK	PO BOX 2560, OMAHA, NE, 68103	35	-	81
B-25	TUCSON STREET	ADAMS COUNTY	4430 S. ADAMS COUNTY PARKWAY, BRIGHTON, COLORADO, 80601	35	-	84
B-26	GAS LINE	XCEL	414 NICOLLET MALL, MINNEAPOLIS, MN, 55401	35	-	158
B-27	WATERLINE	TODD CREEK FARMS METROPOLITAN DIST. NO. 1	7550 EAST 152ND AVE, BRIGHTON, COLORADO, 80401	35	20	200
B-28	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC	PO BOX 929, BRIGHTON, CO, 80602	35	-	126
B-29	FENCE	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	35	-	56
B-30	FENCE	CITY OF AURORA	15151 EAST ALAMEDA PARKWAY, SUITE 3600, AURORA, COLORADO, 80012	35	-	57
B-31	TELEPHONE LINE	CENTURY LINK	PO BOX 2560, OMAHA, NE, 68103	35	-	81
B-32	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC	PO BOX 929, BRIGHTON, CO, 80602	35	-	176
B-33	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC	PO BOX 929, BRIGHTON, CO, 80602	35	-	51
B-34	UNDERGROUND ELECTRIC	UNITED POWER INC	PO BOX 929, BRIGHTON, CO, 80602	35	-	58
B-35	FENCE	SAN MARTIN CABALLERO, LLC	13110 E 160TH AVE, BRIGHTON, CO, 80601	-	-	-
B-36	RIVERBANK STABILIZATION	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT	2480 W. 26TH AVE, SUITE 156B, DENVER, COLORADO, 80211	44	200	200 MINIMUM
B-37	RIVERBANK STABILIZATION	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT	2480 W. 26TH AVE, SUITE 156B, DENVER, COLORADO, 80211	44	200	200 MINIMUM
B-38	HIGHWAY 7 BRIDGE	COLORADO DEPARTMENT OF TRANSPORTATION	2829 W. HOWARD PLACE, DENVER, CO, 80204	-	200	338
B-39	THORNTON RESERVOIR	CITY OF THORNTON	9500 CMC DR, THORNTON CO 80229-4326	-	-	335
B-40	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC	PO BOX 929, BRIGHTON, CO, 80602	-	-	2335
B-41	OVERHEAD ELECTRIC WITH POWER POLES	UNITED POWER INC	PO BOX 929, BRIGHTON, CO, 80602	-	-	776
B-42	168TH STREET	ADAMS COUNTY	4430 S. ADAMS COUNTY PARKWAY, BRIGHTON, COLORADO, 80601	-	-	2350
B-43	WATERLINE, WELL, PUMP HOUSE & APPURTENANCES	TODD CREEK FARMS METROPOLITAN DIST. NO. 1	7550 EAST 152ND AVE, BRIGHTON, COLORADO, 80401	-	20	143
B-44	GUARDRAIL	COLORADO DEPARTMENT OF TRANSPORTATION	2829 W. HOWARD PLACE, DENVER, CO, 80204	35	-	162
B-45	INTENTIONALLY NOT USED			-	-	-
B-46	UNDERGROUND ELECTRIC	TODD CREEK FARMS METROPOLITAN DIST. NO. 1	7550 EAST 152ND AVE, BRIGHTON, COLORADO, 80401	-	20	173
B-47	PRIVATE RESIDENCE AND OUT BUILDINGS	FERNANDO DE LA CRUZ	16400 TUCSON STREET, BRIGHTON, CO, 80601	-	-	292
B-48	PRIVATE RESIDENCE AND OUT BUILDINGS	FERNANDO ARMANDO DE LA CRUZ BRECEDA	16400 TUCSON STREET, BRIGHTON, CO, 80601	-	-	675
B-49	OIL AND GAS FACILITY	GREAT WESTERN OPERATING COMPANY, LLC		-	-	916
B-50	ACCESS ROAD	AGGREGATE INDUSTRIES WCR, INC.	1687 COLE BLVD, SUITE 300, GOLDEN, COLORADO, 80401	-	-	839
B-51	PRIVATE RESIDENCE AND OUT BUILDINGS	CHRISTOFER MUEHLER	11585 COUNTY ROAD 2, BRIGHTON, CO, 80603	-	-	2405
B-52	PRIVATE RESIDENCE AND OUT BUILDINGS	JAMES AND SARAH MUMFORD	11835 COUNTY ROAD 2, BRIGHTON, CO, 80603	-	-	2415

* Offset is selected from nearest feature analyzed in the stability analysis
** Actual offset distance is measured from the feature to the mining excavation limit shown on sheet.



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MARK	DATE	DESCRIPTION	BY
1	7/9/19	FIRST ADEQUACY REVIEW RESPONSE	TH
2	9/16/19	SECOND ADEQUACY REVIEW RESPONSE	TH
3	11/8/19	THIRD ADEQUACY REVIEW RESPONSE	TH
4	5/11/20	REMOVE SOUTH AREA FROM MINING LIMIT	MES

AGGREGATE INDUSTRIES - WCR, INC.

TUCSON SOUTH RESOURCE

EXHIBIT C

PRE-MINING PLAN MAP

EAST AREA

Project No.: 200-23514-18004

Designed By:

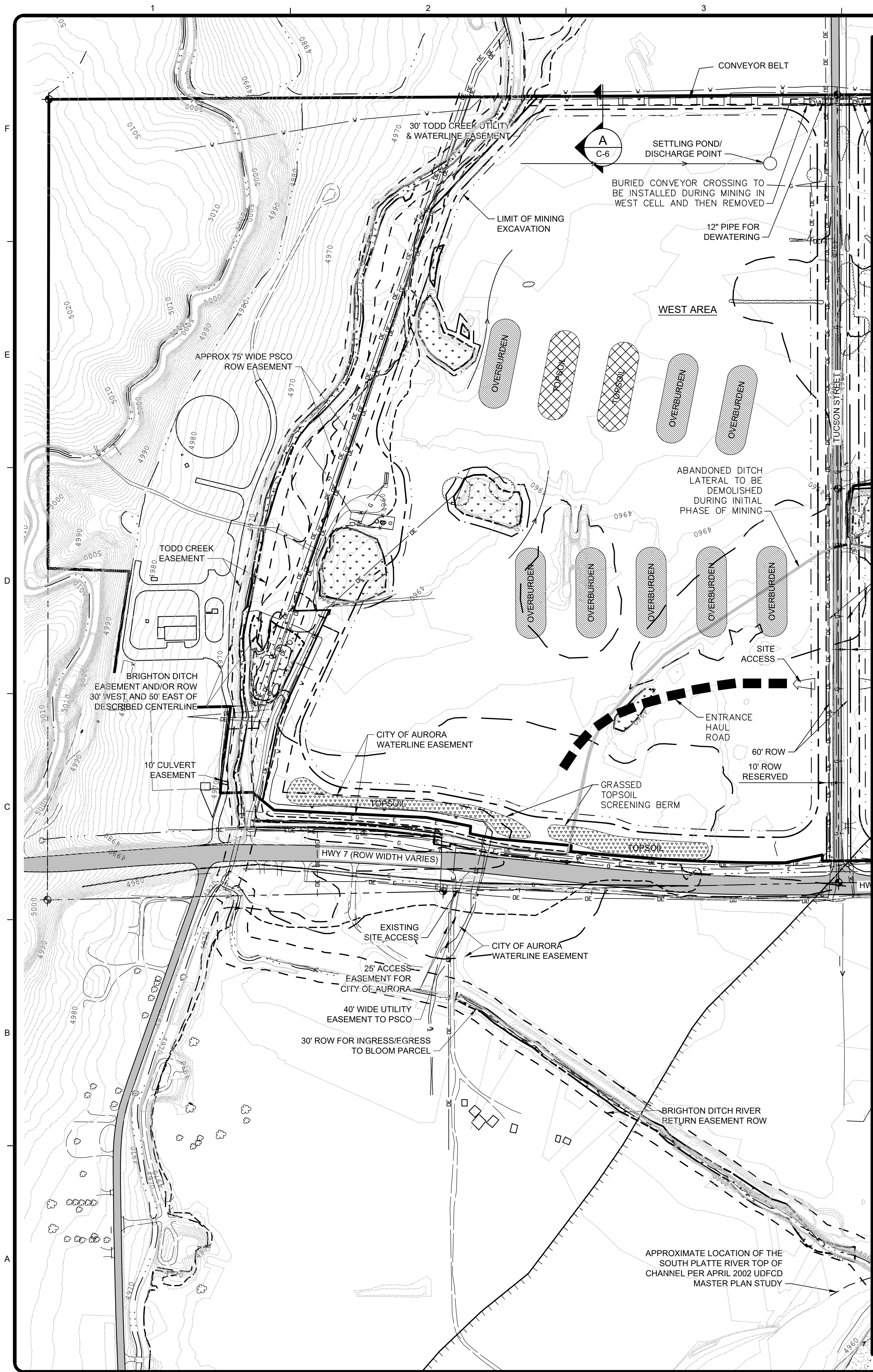
Drawn By:

Checked By:

C-3

EXHIBIT

Bar Measures 1 inch



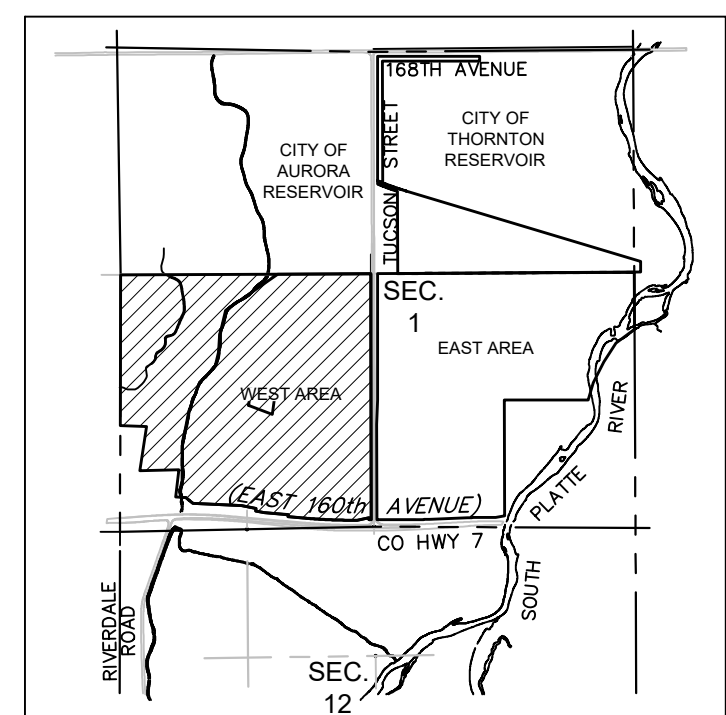
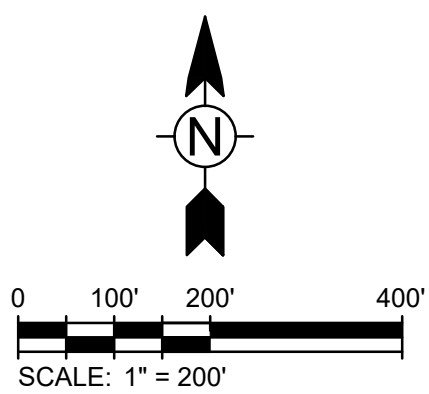
CERTIFICATION:

THIS MAP WAS ORIGINALLY PREPARED & CERTIFIED BY TETRA TECH, 3/15/2019, PROJECT NUMBER 200-23514-18004. MODIFIED BY MARK SPANIEL WITH LAFARGEHOLCIM.

Mine Planner II - Mark Spaniel 6-10-2020 *Mark Spaniel*

- LEGEND:
- MINE PERMIT BOUNDARY
 - TRACT BOUNDARY
 - EASEMENT
 - EFFECTIVE FLOODWAY
 - EFFECTIVE ZONE AE
 - EFFECTIVE ZONE X
 - PRE-PROJECT/MINING CONDITIONS 100-YR FLOODPLAIN
 - EXISTING WETLAND BOUNDARY
 - EXISTING WETLAND BUFFER
 - EXISTING EDGE OF WATER
 - EXISTING 2' CONTOURS
 - EXISTING FENCE
 - EXISTING EDGE OF ROAD
 - EXISTING ELECTRIC LINE
 - EXISTING OVERHEAD ELECTRIC LINE
 - EXISTING GAS LINE
 - EXISTING WATER LINE
 - EXISTING TELEPHONE LINE
 - PROPOSED SLURRY WALL
 - LIMIT OF MINING EXCAVATION PER SLOPE STABILITY ANALYSIS
 - SURFACE DEWATERING TRENCH
 - 12" PIPE FOR DEWATERING
 - ON SITE HAUL ROAD
 - ON SITE CONVEYOR
 - PROPOSED ACCESS
 - OVERBURDEN STOCKPILE
 - TOPSOIL STOCKPILE
 - TOPSOIL SCREENING BERM W/ GRASS COVER
 - SETTLING POND/DISCHARGE POINT
 - EXISTING ASPHALT ROAD
 - EXISTING SOUTH PLATTE RIVER
 - UDFCD STABILIZATION
 - EXISTING WETLANDS

NOTE:
1. CONCEPTUAL UNDERDRAIN AND DETAILS ARE PRESENTED IN EXHIBIT G.



AGGREGATE INDUSTRIES - WCR, INC.

TUCSON SOUTH RESOURCE

EXHIBIT C

WEST AREA

MINING PLAN

Project No.: 200-23514-18004

Designed By:

Drawn By:

Checked By:

C-4

EXHIBIT

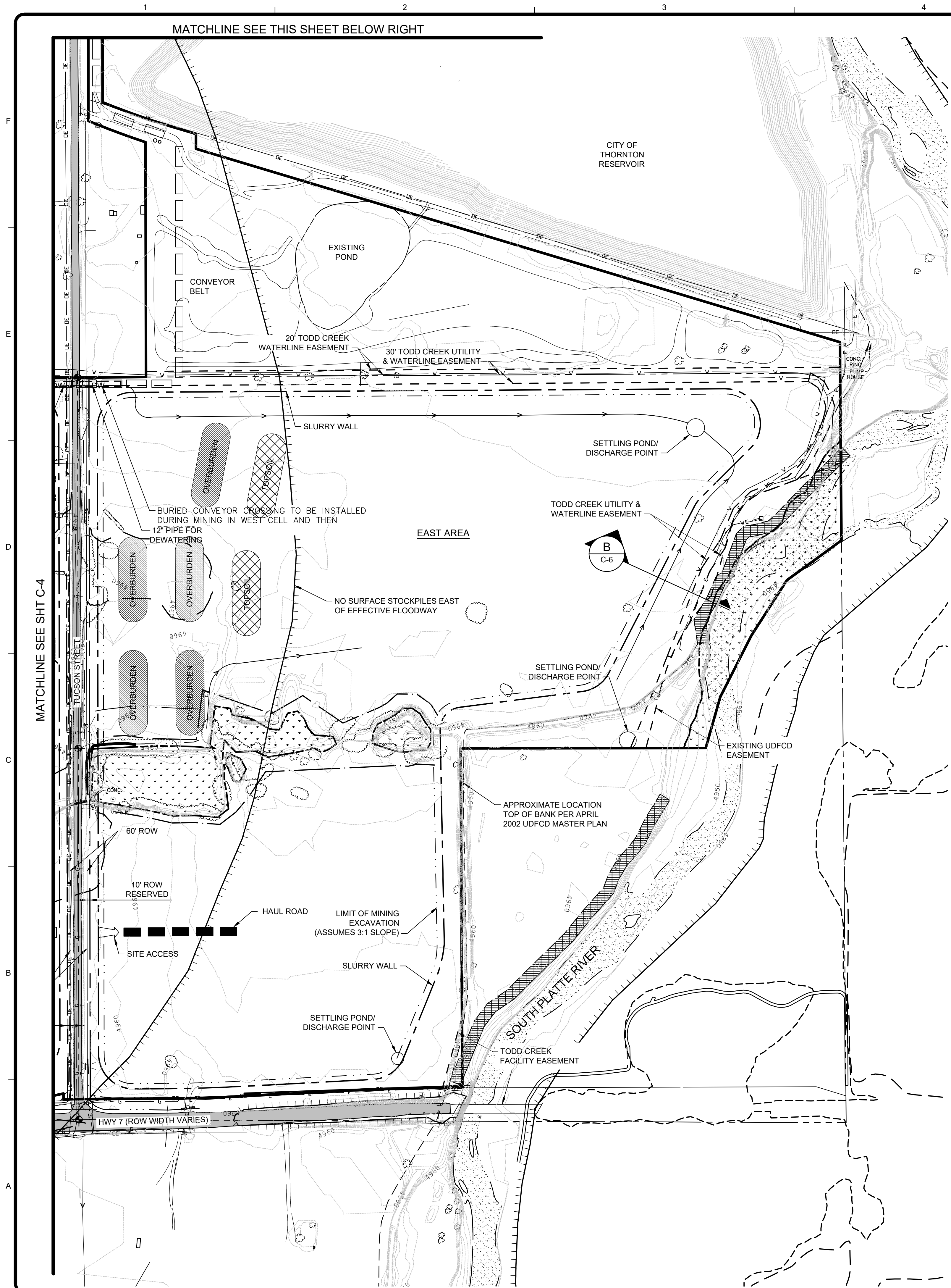
MARK	DATE	DESCRIPTION	BY
1	7/8/19	FIRST ADEQUACY REVIEW RESPONSE	TH
2	9/16/19	SECOND ADEQUACY REVIEW RESPONSE	TH
3	11/8/19	THIRD ADEQUACY REVIEW RESPONSE	TH
4	5/1/20	REMOVE SOUTH AREA FROM MINING PLAN	MES

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Bar Measures 1 inch



CERTIFICATION:

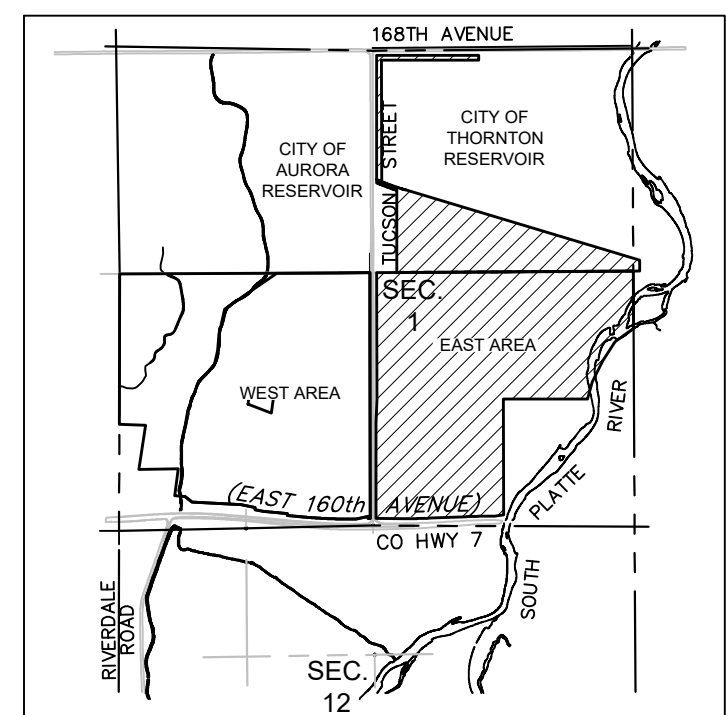
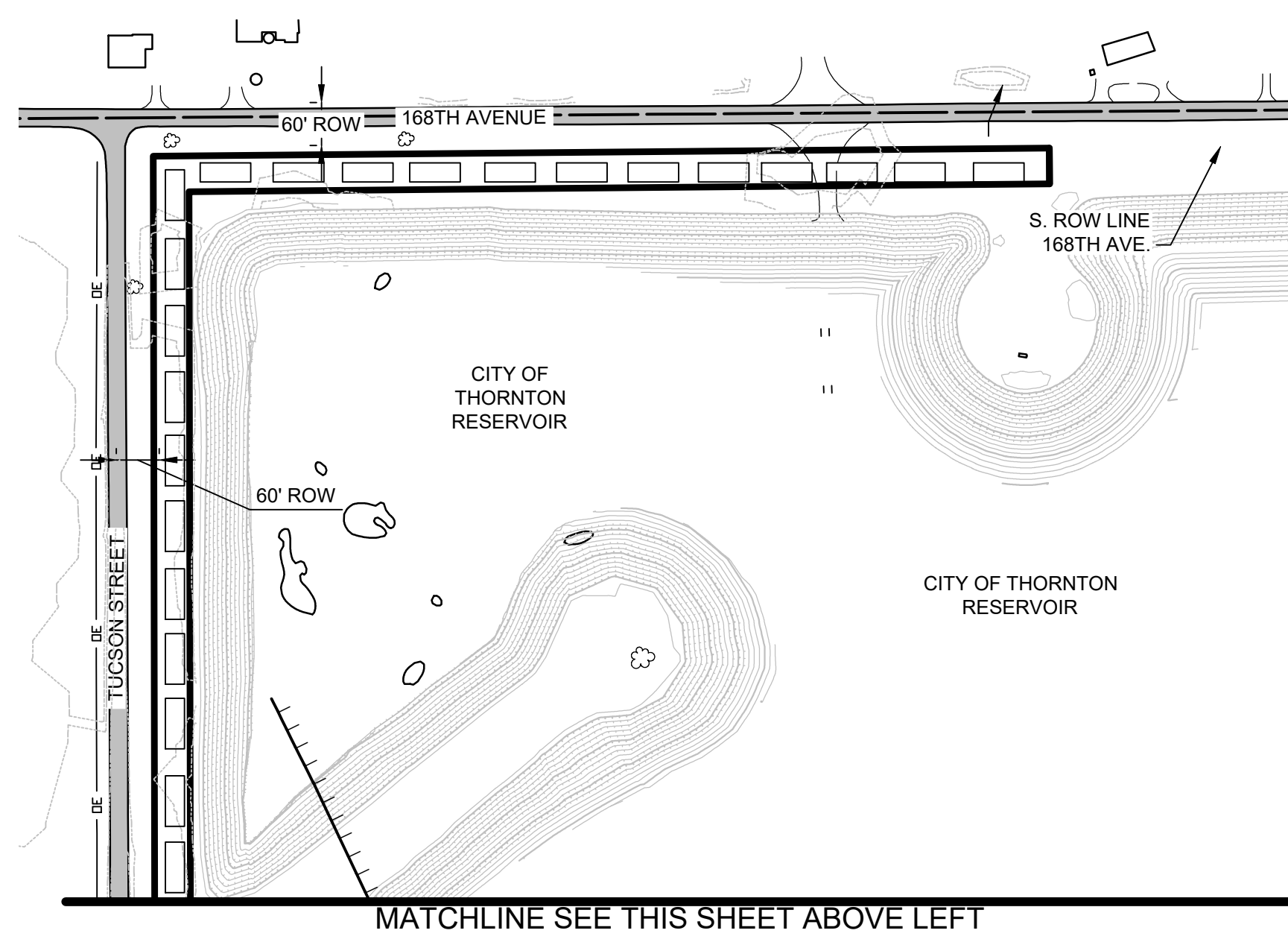
THIS MAP WAS ORIGINALLY PREPARED & CERTIFIED BY TETRATECH, 3/15/2019, PROJECT NUMBER 200-23514-18004. MODIFIED BY MARK SPANIEL WITH LAFARGEHOLCIM.

Mine Planner II - Mark Spaniel 6-10-2020 *Mark Spaniel*

- LEGEND:**
- MINE PERMIT BOUNDARY
 - TRACT BOUNDARY
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 - EFFECTIVE ZONE AE
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 - SURFACE DEWATERING TRENCH
 - 12" PIPE FOR DEWATERING
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 - EXISTING SOUTH PLATTE RIVER
 - UDFCD STABILIZATION
 - EXISTING WETLANDS

NOTE:

1. CONCEPTUAL UNDERDRAIN AND DETAILS ARE PRESENTED IN EXHIBIT G.



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MARK	DATE	DESCRIPTION	BY
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4	5/1/20	REMOVE SOUTH AREA FROM MINING PLAN	MES

AGGREGATE INDUSTRIES - WCR, INC.

TUCSON SOUTH RESOURCE

EXHIBIT C

EAST AREA

MINING PLAN

Project No.: 200-23514-18004

Designed By:

Drawn By:

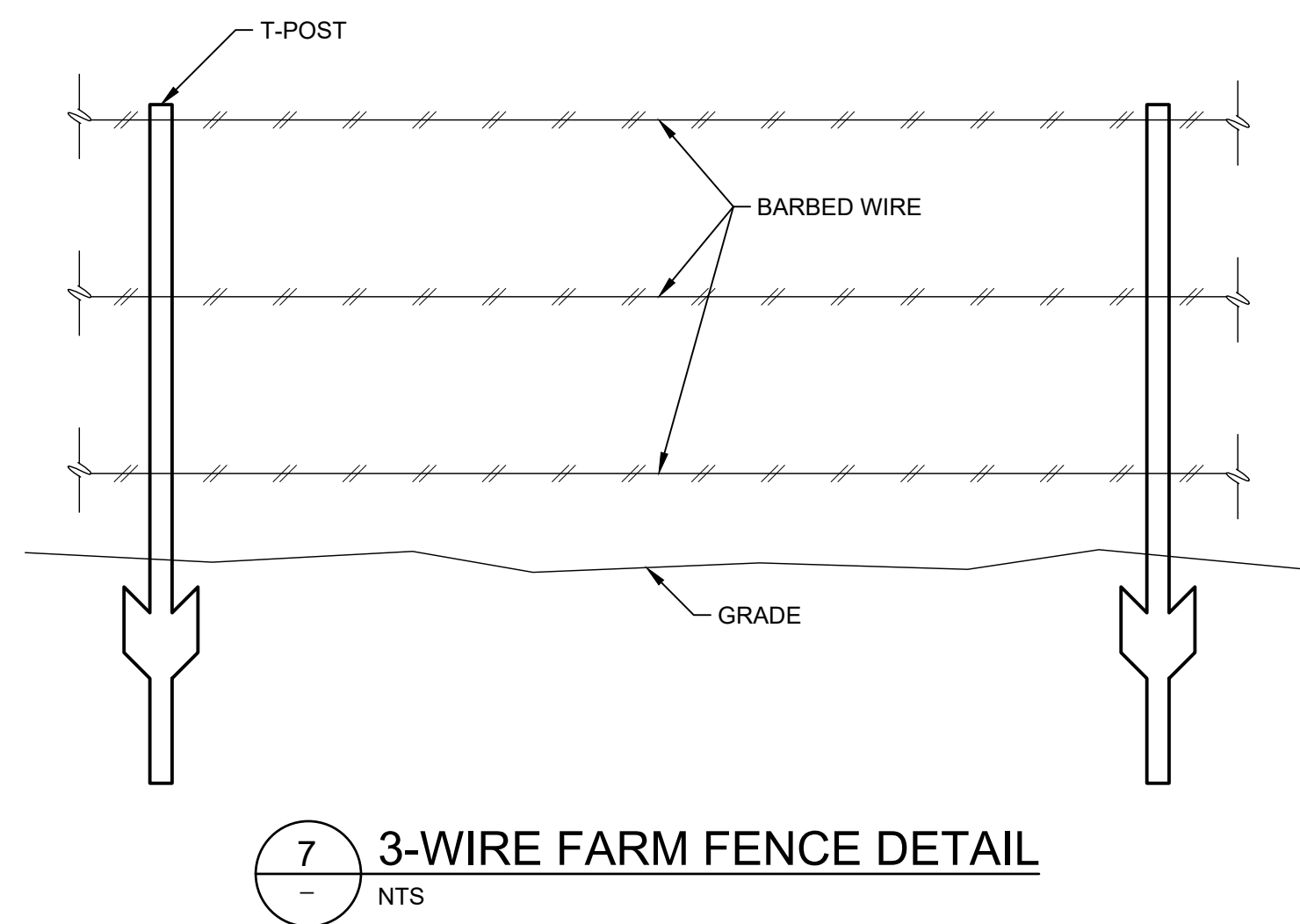
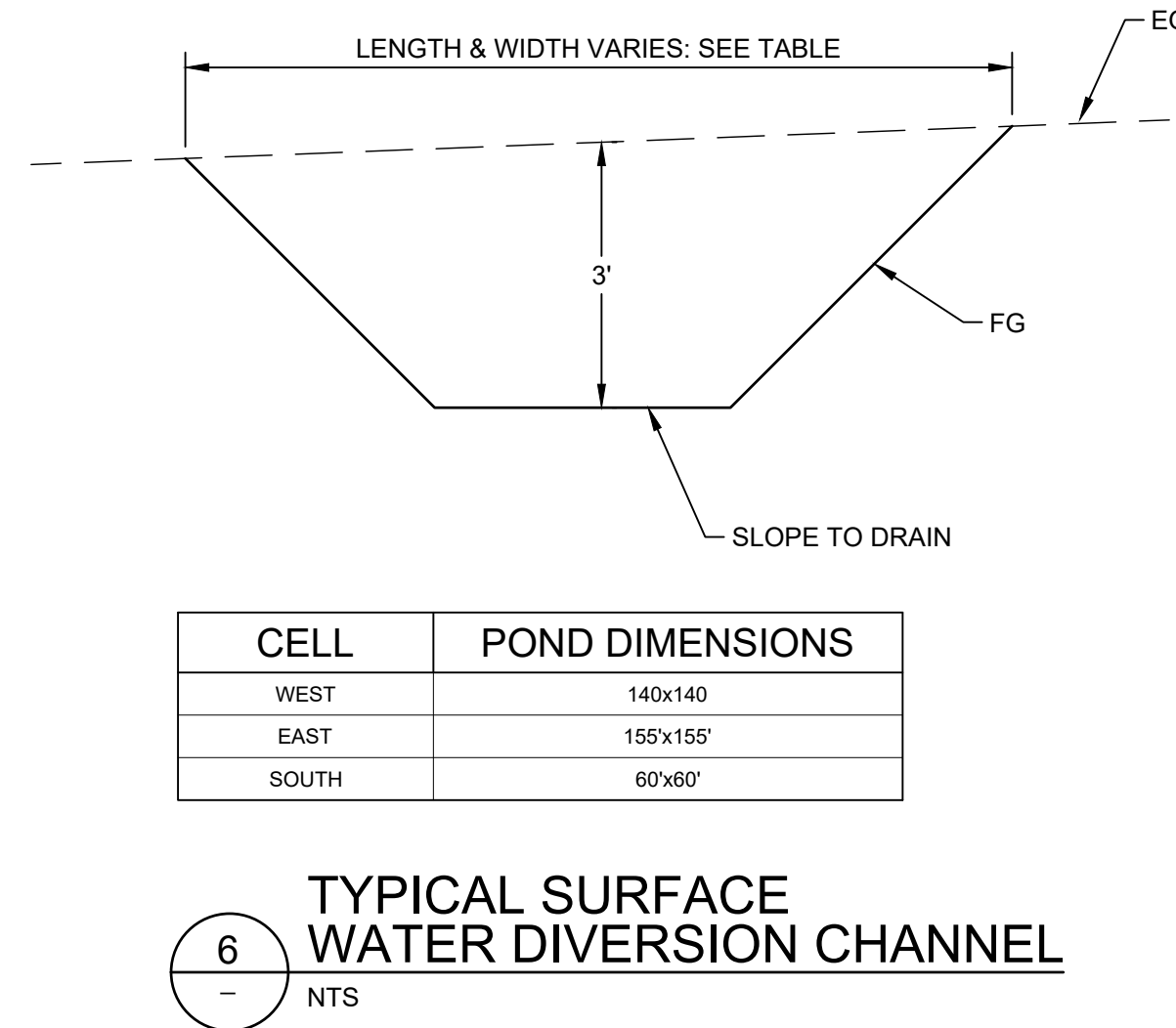
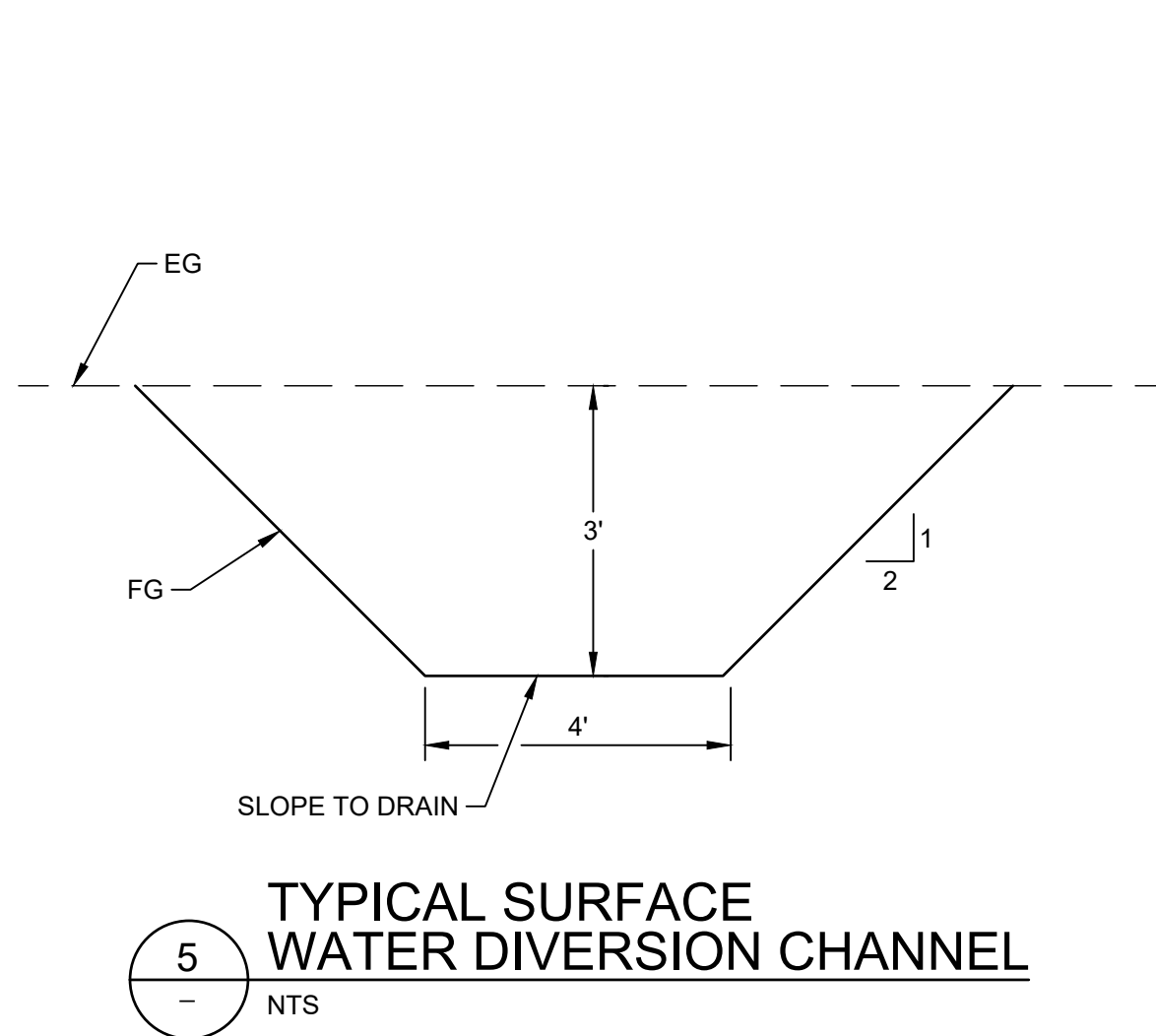
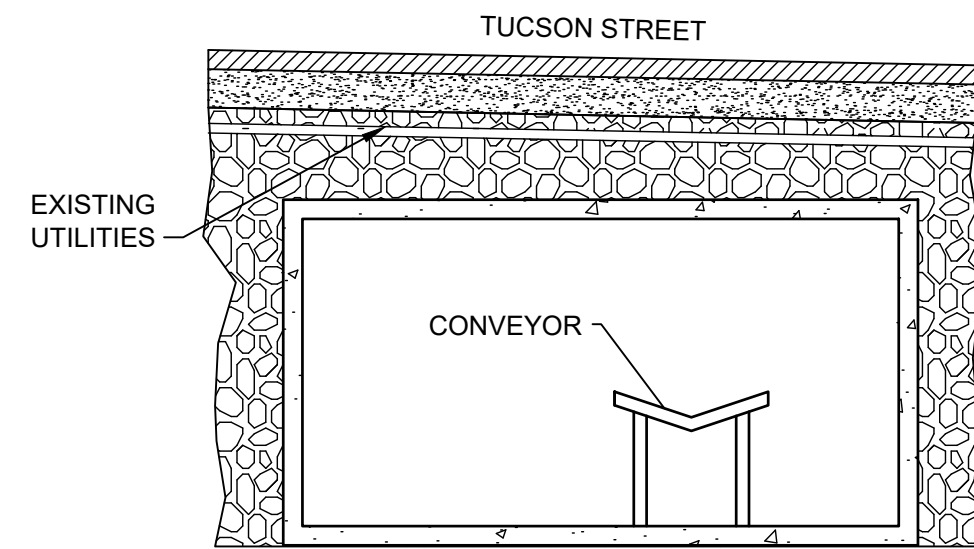
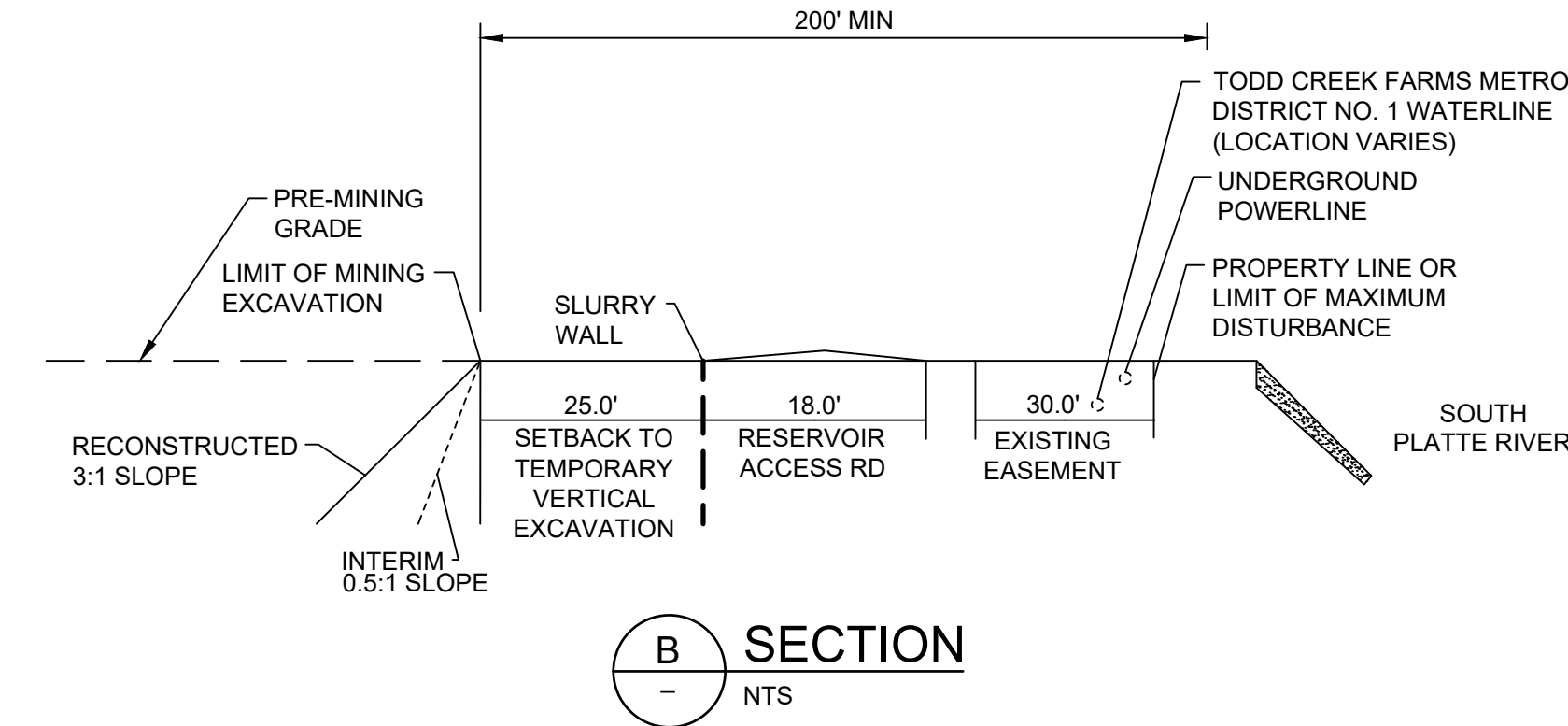
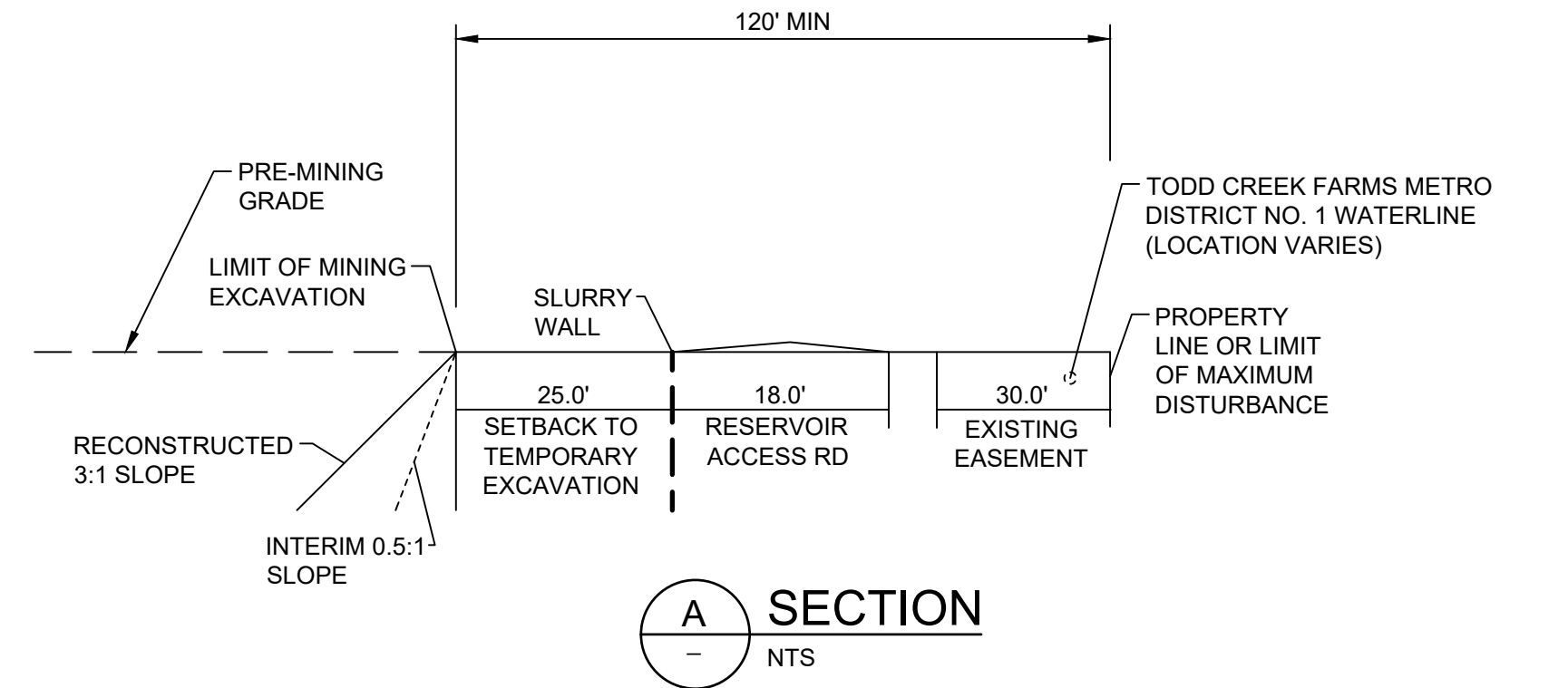
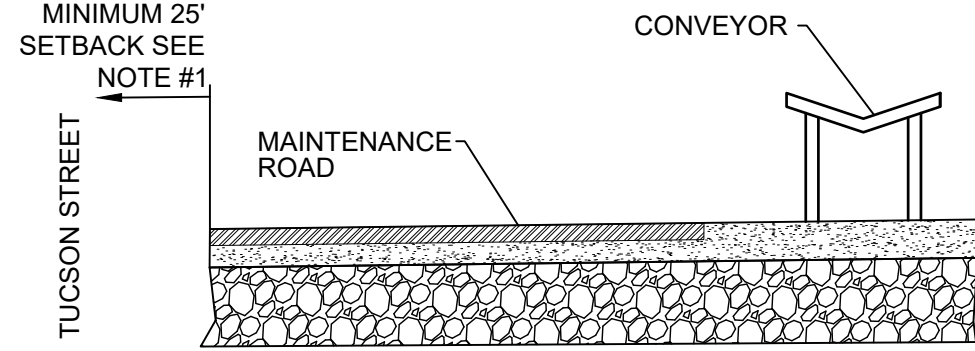
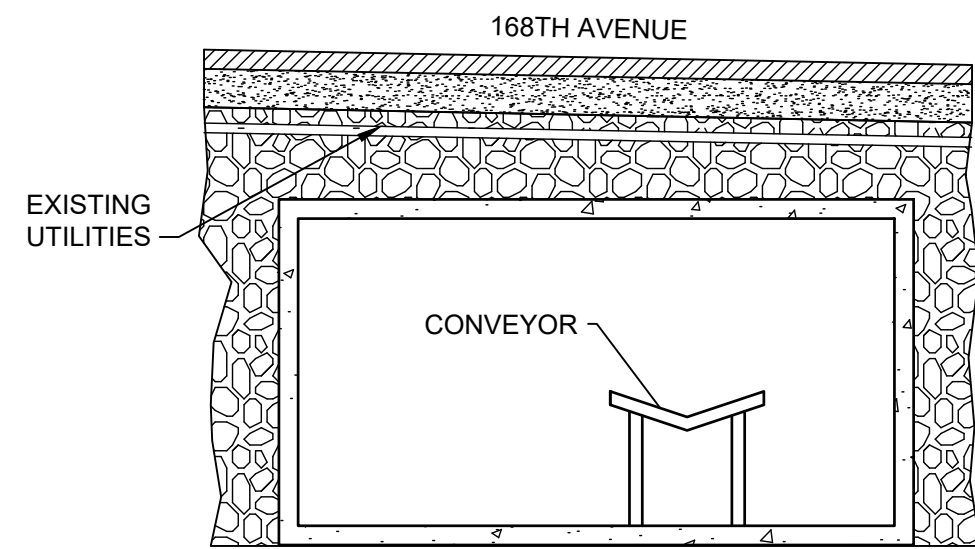
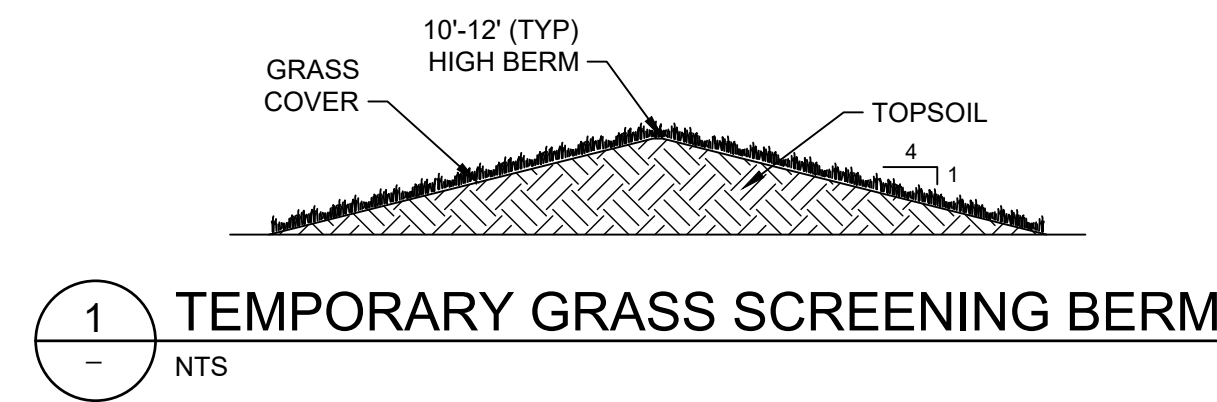
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EXHIBIT

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7/1/2019 9:36:08 AM - C:\PROJECTS\DENVER\235141\33-23514-17005\CAD\SHEETFILES\DRMS\5 EXHIBIT C EAST AREA (PHASE 3) MINING PLAN.DWG - ANDRYAUSKAS, JEREMY



CERTIFICATION:

THIS MAP WAS PREPARED BY TETRA TECH IN COOPERATION WITH AGGREGATE INDUSTRIES-WCR, INC. AGGREGATE INDUSTRIES-WCR, INC. WILL KEEP THE DIVISION OF RECLAMATION, MINING, AND SAFETY INFORMED OF ANY CHANGES TO THE MINING OR RECLAMATION PLANS THROUGH ANNUAL REPORTS AND FILE TECHNICAL REVISIONS OR AMENDMENT APPLICATIONS AS NECESSARY THROUGHOUT THE LIFE OF THE MINE.

THOMAS HESEMANN 3/15/2019
DATE

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AGGREGATE INDUSTRIES - WCR, INC.
TUCSON SOUTH
RESOURCE
EXHIBIT C
MINING PLAN DETAILS

Project No.: 200-23514-18004
Designed By: JAB
Drawn By: JJA
Checked By: JAB

C-6
EXHIBIT

Copyright: Tetra Tech
Bar Measures 1 inch

EXHIBIT D
MINING PLAN
Revised 6/8/2020

EXHIBIT D

Mining Plan

The proposed amended Mined Land Reclamation Board (MLRB) Tucson South Resource permit area is approximately 1.5 miles south of the Aggregate Industries Wattenberg Lakes Mine (M-2004-051), which supplies aggregate construction materials to much of southern Weld and western Adams counties. The amended Tucson South Resource Permit Boundary contains substantiated aggregate resources to continue the supply in this region of Colorado. Supplementing resources at the Wattenberg operation, new supplies from the amended Tucson South Resource will continue to provide construction materials to meet the Front Range Colorado demand.

Introduction and Overview

The amended Tucson South Resource permit area is currently owned by Aggregate Industries-WCR Inc. and the City of Aurora and consists of dryland agriculture, a small, partially reclaimed gravel resource and a former greenhouse growing operation and water utility infrastructure including an above ground tank and auxiliary building. The property is located both north and south of Colorado Highway 7, bisected by Tucson Street.

Mining of the Tucson South Resource is proposed to happen in two phases. The West Area (Phase 1) is located north of Colorado Highway 7 and west of Tucson Street, and the East Area (Phase 2) is located north of Colorado Highway 7 and east of Tucson Street.

In general, drainage on the site flows toward the South Platte River to the north and east of the property. The drainage pattern in the West Area either flows to local low spots on the property, is conveyed off-site to the north, or is conveyed via an irrigation return ditch to the East Area. The East cell generally drains north and east to the river via overland flow or through existing channels and ditches left by historic disturbance.

With this project the Permit Boundary and the Affected Lands are different areas, as explained below.

Permit Boundary Area

The proposed Permit Boundary contains the following areas as shown on Exhibit C-1 and Exhibit F-1:

- Tracts of land owned by Aggregate Industries-WCR, Inc. referred to on our mapping as Tracts A, B, D, E, F, H, and M.
- Tracts of land owned by the City of Aurora referred to on our mapping as Tracts C, G and K.
- Tucson Street right-of-way referred to on our maps as Tract L.
- Land owned by the City of Thornton referred to on our maps as Tract J. The applicant is working with the landowner to obtain a right-of-way easement for a conveyor on this tract.

Affected Land

The Affected Land includes all Tracts described in the Permit Boundary except Tract K, which is owned by the City of Aurora. This area is located west of and including the Brighton Ditch and will not be disturbed by the mining activities and reclamation operations. Therefore, it was excluded from the Affected Land. Aggregate had previously planned to mine a Phase 3 South Cell. This area has been removed from the permit boundary.

Existing Land Uses

The proposed Tucson South Resource mine currently consists of dryland agriculture, one house and a former greenhouse growing operation. The former greenhouse growing operation is currently being demolished by the City of Aurora in preparation of mining. Aggregate Industries is currently renting the existing house and they have given the renters notice to vacate the property by March 31, 2019. The Todd Creek water well and associated United Power overhead electric line on the west side of the West area will also be removed. Aggregate Industries purchased the Todd Creek water well parcel and entered into an agreement to relocate the well to an area adjacent to the river. The relocated well is shown on Exhibit C-3. The applicant has contacted United Power regarding removal of the existing electric service and will forward the documentation regarding removal of the service line upon receipt. There is one rural residential property located adjacent to property on Tucson Street, several rural residential properties south of Tract H and Highway 7 and east of Tract I, and there is a developing residential subdivision located west of Tract K. The South Platte River corridor receives recreational use and the City of Brighton operates a parks and wildlife recreational area north of Highway 7 and east of Tract H along the west side of the South Platte River.

Improvements owned by the applicant or property owners that are located within the Permit Boundary Area such as un-improved roads, fences, alluvial water wells and associated pumps, houses and outbuildings, irrigation ditches and laterals, may be removed or relocated during mining and reclamation. There are two established oil and gas wells and associated facilities located on the property. The operator of the well has notified Aggregate Industries that the wells will be capped and abandoned in 2019. No mining will take place within 75' of the existing oil and gas wells until the wells are plugged and abandoned per Colorado Oil and Gas Conservation Commission standards. Structures, easements, or rights-of-ways not owned by the applicant or property owner will not be disturbed without prior permission (see Exhibit C Pre-Mining Maps). None of the easements, rights-of-ways, or associated structures are expected to be negatively affected by mining or reclamation operations.

Nature of Deposit to be Mined

Test borings indicate a layer of topsoil and overburden ranging from 1 to 11 feet in depth with a typical overburden depth of 5 feet. The typical depth of topsoil to be removed is 6". In the western part of the site, the topsoil has been tilled until recently and likely contains a significant amount of organics. The overburden is underlain by an aggregate layer with a thickness ranging from 0 to 46 feet with a typical thickness of 25 feet. In some parts of the sites, the aggregate layer contains a 2- to 9-foot thick mud lens. The total depth to bedrock from the surface grade ranges from 5 feet in the west to approximately 50 feet in an apparent paleochannel in the eastern part of the site. The typical depth to bedrock is approximately 27 feet over most of the mine area. The aggregate layer overlies sedimentary bedrock of the Denver Basin.

A complete soils report is attached in Exhibit I herein for reference.

Mine Phasing

Aggregate Industries anticipates mining and reclaiming the proposed Tucson South Resource site in approximately 5 to 8 years. The rate of mining and overall life of the mine is dependent on several factors including product demand and operational needs. Test pits have verified that commercial deposits of sand and gravel exist up to 50 feet below the surface of the ground. In addition to the commercial sand and gravel materials, clay, silt, and other non-marketable materials excavated from the proposed permit area will be used on-site for reclamation.

The mining plan currently includes mining in two phases. Mining may occur simultaneously in more than one phase. The actual sequence may change depending on market conditions, operational needs, or site conditions:

- West Area (Phase 1), is located north of Highway 7 and west of Tucson Street and included Tracts A, B and C
- East Area (Phase 2) is north of Highway 7 and east of Tucson Street and includes Tracts D, E, F, G and H

Tract J will contain the conveyor to carry product off-site to the processing facility at the Wattenberg Lakes Site and will be used during all mining phases.

Mining will begin in the West Area (Phase 1). Once mining is complete in the West Area, mining will commence in the East Area (Phase 2). All necessary permits will be obtained, and any required special construction techniques will be used prior to disturbance in any jurisdictional Waters of the U.S. A summary of mining phases is presented in the table below.

Processing and sale of the material will occur on the Platte Valley site (M-1989-120). Overburden from the West and East Areas will be used to reclaim the cells. If there is excess overburden material, the material will be conveyed to the Platte Valley site and Wattenberg Lakes site for reclamation.

A slurry wall will be constructed around the East and West Areas prior to exposure of the water table. The final design of the slurry wall is pending and will be provided to the DRMS prior to exposing the water table.

Mine Phasing Summary

Mine Phase	Total Acreage To be mined (acres)	Duration (years)
West	72.0	4
East	83.8	4
Total	155.8	8

Mining Methods

There may be two methods of mining used within the permit boundary:

- The slurry wall liner for the West and East Areas will likely be installed prior to exposure of ground water in the site. Once the slurry wall is installed the West and East Areas will be dewatered. The deposit will be dry mined using dewatering trenches and pumps within the slurry lined area. Prior to excavation of each mining phase, trenches will be cut along the perimeter of the excavation to begin dewatering the sand and gravel material. The trenches will extend through the overburden and alluvium to bedrock. Pumps will be used to remove the groundwater that drains from the deposit within the lined excavation. If necessary, water from the trenches will be circulated through a settling pond prior to being discharged to adjacent drainage ditches and/or the South Platte River (see Exhibit C Mining Maps). As excavation begins, the mining cell and dewatering trenches on the floor will continue to collect any water entering the lined Areas, keeping the deposit material relatively dry. The collected water will be directed to settling ponds within the Areas or near the final discharge point to South Platte River. It is anticipated that dewatering will be completed within the slurry wall lined mining area within 12 months and dewatering throughout the life of the mine will be limited to precipitation, stormwater runoff that drains into the mining area, and minor amounts of groundwater.
- If the slurry wall liners cannot be installed prior to mining in the West and East Areas, the cells will be mined using dewatering trenches as described above. However, in this scenario, dewatering will continue until the slurry wall liners can be installed.

Earth Moving

Setbacks from the top of slope of each area to the proposed permit boundary or man-made structures not owned by the applicant or by agreement with the structure owner will generally be 30 feet or greater. Specific setbacks from Highway 7 and Tucson Street also account for future expansion of the roadways. The perimeter setbacks from the structures are shown on Exhibit C - Mining Maps.

These setbacks were determined in combination with Adams County regulations and the Slope Stability Analysis prepared by Tetra Tech provided herein in the Geotechnical Stability Exhibit. The setbacks reflect the Factors of Safety in the Proposed Slope Stability/Geotechnical Analysis Policy in the DRMS memorandum dated May 16, 2018.

Areas to be mined will be prepared by removal of topsoil and overburden. Each preparation area may be as much as 100 feet wide along the anticipated mining face. Usually, only enough area is stripped and prepared to provide the estimated needs for the next 10 to 14 months of mining. Surface topsoil material will be stripped separate from the underlying, deeper subsoil or overburden material. This topsoil layer contains most of the soils organic matter and will be stockpiled separately for use in reclamation. Once the topsoil has been removed, the rest of the overburden will be stripped and stockpiled separate from the topsoil.

When the alluvial material is exposed and sufficiently dewatered, the aggregate material will be recovered using equipment typical for sand and gravel mining operations. In the West and East Areas, the aggregates will be mined using conventional dry mining methods. Earth moving equipment may include, but is not limited to, dozers, loaders, scrapers, and excavators as mining progresses to a depth of 20 to 50 feet below the surface. The alluvial material is an unconsolidated deposit and, therefore, no blasting is required. The aggregate material from the Areas will be temporarily stockpiled within the various Areas, conveyed to the staging area, or immediately transported off-site for processing. During mining and reclamation activities, watering trucks for dust control will be used as needed.

The active mining face will extend no more than 1,500 feet in length. During mining and prior to reclamation in the West and

East Areas, the mine walls will be a nearly vertical to ½H:1V slope (see Exhibit C, Mining Maps). Mining will progress down to the depth of quality aggregate material. Backfilling and/or grading of side slopes may follow behind the mining activities before mining in the Area is complete. Concurrent reclamation will be practiced when the highwall reaches the mine limit. During the flood season April 1 through September 30 and when the highwall is within 400 feet or less of the river the highwall will be no steeper than 3H:1V.

As mining progresses, topsoil, overburden, and non-marketable materials will be removed and stockpiled for use in reclamation activities. Overburden from the West Area and East Areas will be used in reclamation. Should there be excess overburden on these cells, the material will be conveyed to the Platte Valley site for reclamation or to be sold. During mining in the West and East Areas, topsoil will be segregated and stockpiled in the locations shown on Exhibit C Mining Maps, i.e. outside of the Floodway. As mining progresses, overburden will be taken directly to mined out slopes for use in reclamation. Topsoil and overburden stockpiles will be configured to have side-slopes no steeper than 3H:1V. If the stockpiles are inactive for more than one growing season, such as the stockpiles used for screening, they will be seeded with the fast-growing grass seed mixture below.

Stockpile Grass Seed Mixture

Grass Species	Rate (#PLS/acre)
Luna Pubescent Wheatgrass	15.0
Amur Intermediate Wheatgrass	15.0
Rates are for broadcast seeding.	

Other than those used for screening, long-term stockpiles are not anticipated. Temporary stockpile materials will continually be used for reclamation and the stockpiles will likely be disturbed on a frequent basis and seeding the stockpiles may not be practical during the operation. If stockpile seeding is not used, surface roughening will be maintained to limit wind and water erosion.

Most of the proposed Tucson South Resource Permit Boundary Area is within the regulatory floodplain of South Platte River. Because of floodplain regulatory restrictions, stockpiling will occur within a mining Area whenever possible with the top of stockpile elevation lower than the pre-project grade. Stockpiles within the modeled floodplain above the existing ground surface will generally be created parallel to potential South Platte River flood flows. The stockpiles will be no longer than 300 feet, with minimum spacing of 100 feet between stockpiles for flood flows to pass (see Exhibit C, Mining Maps). The screening stockpiles along Highway 7 as indicated by modeling, are located in areas where placement is not expected to impact floodplain water surface elevations. Consequently, there is no restriction on length or orientation. The impacts of stockpiles on floodplain water surface elevations is presented in the *Floodplain Use Permit* application submitted to Adams County in support of the County Special Use Permit application.

Additional mining and reclamation procedures will be used within the regulatory floodplain to mitigate impacts from potential flood flows. Flood season is considered to be April 1 through September 30. The southern and eastern slopes of each area will either be maintained at 3H:1V during the flood season during mining or concurrently reclaimed at 3H:1V with reclamation backfill. This restriction only applies for areas within 400 feet of the South Platte River in accordance with DRMS policy. If flood waters reach the mining Areas prior to complete reclamation, the

3H:1V slopes will allow controlled flow into the Areas while reducing the potential for head cutting and capture of the South Platte River.

A Floodplain Use Application is being prepared and will be submitted to Adams County for this project. Adams County is the regulating authority on the flood permit; however, Adams County may request review and comment from Urban Drainage and Flood Control District (UD&FCD). Comments and revisions from the County or the UDFCD will be incorporated into the final Floodplain Use Permit.

The table below illustrates a point in time when the mining disturbance could be at its maximum. At the proposed Tucson South Resource site, it is assumed that the mining disturbance will be at its greatest when the East Area mining is nearly complete. That will be a time when the slurry wall is installed and, topsoil replacement and initial seeding will be completed for the West Area.

Reclamation Activities

	Mining Operation	Disturbed Area (acres)
	<i>Active Mining Area:</i> 1. Backfill remaining East Cell mining face and side slopes (2,300 feet in length averaging 27 feet deep requiring backfill and rough grading to 3H:1V slopes.) 2. Rough Grade remaining disturbed areas of the east cell 3. Replace topsoil on backfilled area of East cell above the HWL of the reservoir (61.5 acres) 4. Final Grade East Cell	
	<i>Miscellaneous Disturbed Areas (Stockpiles, Haul Roads, Conveyor route)</i> 1. Replace topsoil on internal haul roads and main site entrance (3 acres x 0.5') 2. Replace topsoil on conveyor route (3.3 acres X.5') 3. Replace topsoil on stockpile area (5 acres x 0.5') 4. Scarify internal haul roads and conveyor route areas 5. Final grade all miscellaneous areas (8.3 acres x 0.5') 6. Reseed 20% of all areas in the area of disturbance above the HWL of the reservoirs.	
	<i>Final Reclamation:</i> 1. Seeding – entire East Area above the highwater line of the reservoir plus internal haul route and the conveyor route. 2. Weed management and re-seeding (20% of the Affected Lands located above the highwater line of the reservoirs)	
Total Disturbed Area		83.8

Diversions and Impoundments

Roads and irrigation ditches will effectively minimize stormwater surface run-on to the mining site, so run-on diversion structures are not anticipated. During the initial mining activities, stockpiling of topsoil and overburden on the surface is anticipated. Diversionary channels, as shown on Exhibit C, will be used divert surface runoff from leaving each of the Areas or entering the wetlands areas. Surface diversion channels will convey runoff to settling ponds, prior to discharging to the South Platte River. As mining progresses and the excavation increases in size, diversionary channels will convey less runoff because more runoff will enter the mine excavations. Runoff that collects in the excavations will be conveyed by the dewatering trenches to a common point, where it will be pumped to the river after sediment settling has occurred, if necessary.

Material Processing and Associated Facilities

Pit run material will be hauled or conveyed off-site to the Wattenberg Lakes site (M-2004-051) to be conveyed for processing at the Platte Valley site (M-1989-120).

Commodities to be Mined and Intended Use

Sand and gravel for use as construction materials will be the primary products produced from the proposed Tucson South Resource. Test pits have verified that commercial deposits of sand and gravel exist up to 50 feet below the surface of the ground. In addition to the commercial sand and gravel materials, topsoil and overburden materials will be used on-site for reclamation.

Use of Explosives

The material is unconsolidated deposits, no explosives or blasting are required.

Wetlands

Tetra Tech also prepared the *Tucson South Sand and Gravel Mine Project—Adams County, Colorado Wetland Delineation Report dated February 2019*. A copy of the report is included in Exhibit J.

A buffer zone has been added to the Exhibit C maps around all the delineated features within the mining excavation limits. The buffer width is proportional to the planned depth of mining surrounding the delineated features. Note 16 has been added to Exhibit C-1 to state that wetlands buffer shall not be disturbed until USACE authorization has been obtained

EXHIBIT E

RECLAMATION PLAN

Revised 6/8/2020

EXHIBIT E

Reclamation Plan

This plan for the proposed Tucson South Resource site includes the two different mining areas (West and East). Reclamation activities have been coordinated with the property owners and are intended to meet the proposed final land use.

Aggregate Industries (AI) has set forth measures that will be taken to meet performance standards for the following requirements:

- (1) Grading shall be completed to create a final topography appropriate to the final land use selected in the Reclamation Plan.
- (2) Overburden and waste materials will be placed in the mined area and to ensure adequate compaction for stability and to prevent leaching of toxic or acid-forming materials.
- (3) All grading will be done in a manner to control erosion and siltation of the affected lands, to protect areas outside the affected land from slides and other damage.
- (4) All backfilling and grading will be completed as soon as feasible after the mining process. AI has established reasonable timetables consistent with good mining and reclamation procedures.
- (5) There is no anticipated refuse, acid-forming or toxic producing materials associated with this site.
- (6) Any drill or auger holes that are part of the mining operation will be plugged with non-combustible material, which shall prevent harmful or polluting drainage. There are no adits or shafts associated with this site.
- (7) Maximum slopes and slope combinations will be compatible with the configuration of surrounding conditions and selected land use. In all cases where a lake or pond is produced as a portion of the Reclamation Plan, all slopes, shall be no steeper than a ratio of 3:1 (horizontal to vertical ratio). There is no swimming associated with the end use of this property.
- (8) Future agricultural use is not anticipated on this site. However, the upland meadow in the East cells will be graded to allow for access to maintain the area.
- (9) AI may backfill material generated within the MLRB permitted area into an excavated pit within the permit area. AI may import inert structural fill material onto the site for backfill. Prior to import of inert structural fill generated outside of the approved permit area, AI will provide DRMS with notice of any proposed backfill activity not identified in the approved Reclamation Plan. AI will maintain a Financial Warranty at all times, adequate to cover the cost to stabilize and cover any exposed backfilled material. The Notice to DRMS shall include, but is not limited to:
 - (a) a narrative that describes the approximate location of the proposed activity;
 - (b) the approximate volume of inert material to be backfilled;
 - (c) a signed affidavit certifying that the material is clean and inert, as defined in Rule 1.1(20);
 - (d) the approximate dates the proposed activity will commence and end, however, such dates shall not be an enforceable condition;
 - (e) an explanation of how the backfilled site will result in a post-mining configuration that is compatible with the approved post-mining land use; and
 - (f) a general engineering plan stating how the material will be placed and stabilized in a manner to avoid unacceptable settling and voids.

(10) All mined material to be disposed of within the affected area will be handled in such a manner to prevent any unauthorized release of pollutants to the surface drainage system.

(11) No unauthorized release of pollutants to groundwater shall occur from any materials mined, handled or disposed of within the permit area.

More specific information regarding how AI will comply with the performance standards is outlined below.

Final Proposed Land Use

The current land use for the Tucson South Resource property is a combination of partially reclaimed mining area, dryland agriculture, upland meadow and a City of Aurora water facility. The City of Aurora water facility (located outside the Affected Lands, west of the Brighton Ditch) will be removed from the Permit Boundary at a future date and continue to operate. The proposed final land use for the remainder of the property is lined municipal water storage for the West cell and the majority of the East cell, upland meadow on the northern portion of the East cell. Surrounding land uses include: Water storage to the north, rural residential and agriculture to the south, Town of Brighton wildlife conservation area and the South Platte River to the east and water storage and suburban residential to the west. The lined storage and upland meadow are compatible with existing and future adjacent land uses. This property lies within the City of Brighton Urban Growth area and is designated as natural resource conservation and flood plain on the 2016 Future Land Use Map.

General Overview of the Reclamation Plan

Types of Reclamation acres

Reclamation of the proposed permit area will contain two land forms; uplands and lined, open water reservoirs. Cottonwoods and shrubs will be planted along the South Platte River on the eastern side of the east cell. Timing and installation of the plantings will be coordinated with the Urban Drainage and Flood Control District. It is anticipated that these plantings will be installed prior to mining in the East cell and will be established as part of the concurrent reclamation of the site. The primary reclamation process will be backfilling the slopes of the mined-out areas to be reclaimed as reservoirs and backfill of the partially reclaimed area on the northern end of the East cell to create an upland meadow. Overburden, and non-marketable materials from the site will be used as backfill. If excess overburden and non-marketable materials exists, the material will be conveyed to Wattenberg Lakes site (M2004-051) for reclamation. As mined out cells are backfilled, rough grading will establish the slopes and elevations necessary to facilitate the appropriate land form for that specific area of the site. In upland areas backfill materials will be placed to an elevation near or below the pre-mining surface elevation. For areas where reservoirs are to be located, backfill will be used to create pond side slopes. Pond depth may extend all the way to bedrock and side slopes will be 3H:1V or flatter.

Except for pond slopes below normal average highwater surface elevation, all areas disturbed by mining activities will be prepared with topsoil to a minimum of 6 to 12 inches and revegetated during reclamation. Revegetation will generate a blend of upland grass species. Given suitable precipitation, seeding should produce good vegetation cover over much of the reclaimed site. Roads not necessary for future access and other disturbed areas will be reclaimed with topsoil and overburden replacement and vegetative cover to stabilize the areas and minimize erosion.

Reclamation Measures/Materials Handling

All available topsoil and overburden material will be used for backfilling and reclamation. Earth moving equipment may include, but is not limited to dozers, loaders, scrapers, and excavators. Additional farm equipment for grading and seeding may be used for revegetation activities.

Materials Handling – Backfilling

The site will be concurrently reclaimed to create the water storage reservoirs. Compaction for the reservoir side slopes at this site will be 95 percent (or better) standard proctor. When an area is completely mined out from grade to bedrock, each section approximately 800-foot-wide (or approximately 30 acres), will begin side slope construction while the next contiguous area or consecutive phase is beginning mining. Due to the floodway, there is limited space for stockpile placement at this site; by concurrently reclaiming, as an area is being prepared for mining, the overburden and topsoil can be stripped and immediately placed, or stockpiled in the previously mined area, limiting the material handling. It is estimated that within 6 months of an area being completely mined, it will be reclaimed.

Backfilling of mining cells and other reclamation activities will be concurrent with mining. Topsoil, overburden, and non-marketable material excavated during mining will be used almost immediately. Small temporary stockpiles may be created within or along the edge of the mining cells. When enough material is available in the stockpile, the material will be graded into the previously mined areas. Locations of topsoil and overburden stockpiles are shown on Exhibit C Mining Maps.

Material may be imported for reclamation if on-site material is insufficient to create the reclaimed pond slopes. Prior to receiving any backfill material from outside the proposed permit area, the operator will provide notice with information that includes the backfill location and volume of off-site material to be used, an affidavit certifying that the material is clean and inert, an approximate time frame for backfilling with off-site material, and an update regarding material placement procedures and the final reclamation configuration. The on-site or off-site backfill material used will not contain known toxic or hazardous materials.

All backfilling and grading will be done to stabilize the material and control erosion. Final grading and seeding will be done as soon as possible after backfilling, grading, and topsoiling have been completed. The reclamation will not leave high walls on the property. In addition, there will be no auger holes, excavations, or shafts left on the property.

Materials Handling - Grading

Once backfill is placed to the approximate final grade for upland meadow or pond side slope creation, the area will be rough graded to establish final elevations, slopes, and transitions. Final grading will include addition of topsoil and surface preparation for revegetation. Special attention shall be given to transitions from reclaimed areas to undisturbed land. The final topography will not create new surface drainage directed onto adjacent properties.

Reservoir side slopes will include the steepest reclaimed grades on the site, potentially as steep as 3H:1V. The side slopes will be graded smooth to accommodate future maintenance of the lined reservoirs. The reclamation will not leave high walls on the property.

Materials Handling – Slurry Wall

The proposed slurry wall will provide a vertical low permeable cutoff between alluvial groundwater outside of mining cells and water stored below-grade inside of mining cells. Slurry walls (also known as slurry cutoff walls or slurry trenches) are non-structural liners constructed to provide a primary low permeability liner and isolate a mining cell from the existing alluvial aquifer. Soil-bentonite slurry walls are a very common type of liner constructed in Colorado. Construction of a soil-bentonite slurry wall liner is planned at the Tucson South Resource. Once the liners are

constructed and meet an SEO required 90-day minimum leak test, lined water storage reservoirs located north of State Highway 7 will be available for use. Draft Technical Specifications dated July 2004 for the construction of soil-bentonite slurry wall liners at Tucson South in Adams County Colorado were prepared by Tetra Tech RMC and submitted to the Division for review. These specifications are a "placeholder" and are on record with the Division as part of the existing permit for this property. Aggregate Industries has contracted with Deere and Ault Consultants, Inc. to provide a final design of a soil-bentonite slurry wall liner for Tucson South.

The slurry wall will be constructed with a long reach excavator, clamshell, or other suitable trenching equipment. A trench approximately 3 to 5 feet wide and 100 to 150 feet in length will be excavated through the existing alluvium and several feet into the underlying shale bedrock. The total slurry wall depth varies from top to bottom based on the existing geology but will average 30 feet deep for this project. The trench will be flooded with fresh bentonite slurry to stabilize the excavation during construction of the slurry wall. A mixture of alluvium excavated from the trench, dry bentonite, and clayey supplemental fines will be mixed at the surface and placed into the trench in a semi-fluid state typically with a bulldozer and/or second excavator. The slurry in the trench is displaced by the soil-bentonite backfill as the excavation of the trench is advanced. Once the excavation of the trench followed by the backfill operation is complete, the soil-bentonite backfill consolidates and behaves as a soft clayey soil. The top of the slurry wall is typically capped with a few feet of clayey soils to speed up the primary consolidation, identify the approximate location of the slurry wall, and provide clayey soils to fill depressions due to the consolidation of the slurry wall.

Other considerations required for successful construction of a soil-bentonite slurry wall include a stable, relatively flat gently sloping (i.e. less than 2 percent parallel to the wall) construction platform along the proposed slurry wall alignment. Construction of the construction platform along the slurry wall alignment is primarily on stable, native soils found at the site and should not present a challenge for construction equipment. There are narrow areas proposed for the construction platform at this site. However, the narrow areas are relatively short and soil-bentonite slurry wall construction activities should not be greatly affected by these sections. Once soil-bentonite slurry wall construction is complete, the construction platform will be final graded for stability and an operations and maintenance access route will be left in place. The route will be reclaimed and stabilized as a low traffic dirt road.

Gravel Pit Lining Criteria

Gravel pit liners are designed with the goal of meeting the leakage requirements outlined in the State of Colorado's document entitled "*State Engineer Guidelines for Lining Criteria of Gravel Pits*," August 1999. As described in the guidelines, the intent of the soil-bentonite slurry wall design is to reduce the groundwater inflow (leakage rate) into the lined below-grade mining cell to at or below the Design Standard. The Design Standard is defined in the guidelines as the leakage rate that is not greater than 0.03 ft/day (1×10^{-5} cm/sec) multiplied by the curtain area of the soil-bentonite slurry wall (i.e. the length of the perimeter wall in feet multiplied by the average vertical depth of the wall as measured from the ground surface to the mine cell floor along the toe of the cell side slope), plus 0.0015 ft/day (5×10^{-7} cm/sec) multiplied by the area of the floor encompassed by the soil-bentonite liner. The guidelines allow for a liner to meet a performance standard which is three times the Design Standard and operate as a lined water storage cell. Monitoring and release requirements are increased from monthly reporting to weekly reporting for liners that meet the Performance Standard. At the completion of construction, the liner is subjected to a minimum 90-day leak test as described in the guidelines.

Topsoil and Revegetation

Revegetation will only include grass seeding of disturbed areas. No tree or shrub planting is planned around the perimeter of the reservoirs. Where required, topsoil will be replaced to a depth of 6 to 12 inches. Topsoil will be placed after backfilling and rough grading is completed. As an area is reclaimed, runoff or excess water from adjacent areas will not be allowed to flow over slopes being graded and seeded. If needed, berms or channels will be constructed to divert excess water and dispose of it in a safe and non-erosive manner.

Seeding of disturbed areas will be done as areas are finished with preparation including grading and topsoil spreading. Seeding will be most successful if done between mid-November and the end of April. Seeding can be performed in May if necessary, but after May it is not advisable to plant. Seeding before November is not advised as the potential for a warm growth environment and early germination would likely result in a major failure of the revegetation and require reseeding.

Fertilizer may be applied to re-soiled areas in a manner that will encourage emergence and survival of the grasses without encouraging competition from weeds. Starter fertilizer can be applied before, or at the time of, seeding. If necessary, full fertilization will be applied after emergence. Fertilizer mixtures will be based upon soil tests made on samples taken from re-soiled areas prior to seeding.

If a significant invasion of noxious weeds occurs after seeding, the weeds will be mowed before they can go to seed. The areas will be mowed periodically for additional control as needed. Mechanical control will be used as a first priority. Chemical methods will only be used if no other alternative produces acceptable results.

Periodic inspection for noxious weeds, at least once a year early in the season, will be done. The weed inspection will search for not only the expected species but also any new List A or List B species introductions. It is likely that non-noxious and List C species will also be found. Non-noxious weeds, which are often native invaders, do not need to be controlled, but if the population of a List C species is controllable then it will be included in the control program. List C noxious species are problematic but are usually not as serious as List B species.

Specific information regarding weeds is included in the Biological Resource Inventory included with Exhibit H. Aggregate Industries utilizes an integrated weed management protocol to manage weeds on their active mining sites this protocol includes:

1. Management Objective

Manage noxious weeds and plant pests within the permit area.

2. Weed Species to be Controlled

Aggregate Industries - WCR, Inc. (AI) will control those plant species identified by current State statute or regulation as noxious. Plant pests are defined as those biological species that significantly predate the desirable vegetation of the project site.

3. Weed Management Actions

- *Monitoring*

The presence of noxious weeds and plant pests will be monitored annually, at which time weed control efforts will be reviewed and specific management measures adjusted as necessary. Management measures will be undertaken where a single or combination of noxious weed species or plant pests comprises or shows a deleterious effect to the live vegetation cover in the mitigation area as determined by observations of a revegetation or weed control specialist.

- *Control Measures*

AI will contract with a licensed herbicide applicator/weed management specialist to implement the weed management plan. Noxious weeds or plant pests may be controlled by any combination of cultural, mechanical, biological, or chemical measures. Weed control measures will be developed specifically for the noxious weed species encountered and in consultation with Adams County, local weed control district and/or the Colorado State Department of Agriculture as necessary. Topsoil slated for removal from the site will be treated with a long-term residual pre-emergent or post-emergent herbicide to reduce noxious weeds prior to removal. AI will conduct an aggressive mowing program the first year following revegetation, withholding herbicide use until the following year to avoid

damaging new seedlings. Herbicides will be applied by a licensed commercial applicator. Stockpiles that remain undisturbed for more than one season will be seeded with a temporary cover crop. Where noxious weed control measures cause disturbance to the remaining vegetation, seeding or planting of desirable replacement vegetation will occur during the first normal planting or seeding season after weed control measures have been implemented and deemed successful.

- *Contact Person(s)*

During mining, the Operations Manager at the site will be the contact person for weed control. When mining is completed, the weed control contact person will be Aggregate Industries' operations staff at the corporate office in Golden, Colorado. Aggregate Industries will be responsible for weed control until the site is released by DRMS. At that time, responsibility for weed control will transfer to the land owner.

The grass seed mix, composed of a long lasting and regenerating native upland seed mixture, will be used in upland areas where no future irrigated agriculture or other development is anticipated. The native open space seed mix recommendation is presented below.

Upland Meadow Grass Seed	Scientific Name	Variety	% of Mix	Application Rate* (#PLS/acre)
Big Bluestem	<i>Andropogon gerardii</i>	Kaw	15%	1.7
Blue Grama	<i>Bouteloua gracilis</i>	Hachita, Lovington	10%	0.3
Green Needlegrass	<i>Nassella viridula</i>	Lodom	15%	1.5
Sideoats Grama	<i>Bouteloua curtipendula</i>	Vaughn, Butte	10%	1.0
Switchgrass	<i>Panicum virgatum</i>	Blackwell	20%	2.0
Western Wheatgrass	<i>Pascopyrum smithii</i>	Arriba, Barton	30%	4.8
Total				11.3
*Application rate is for drill seeding. If seed is to be broadcast, the application rate will be doubled.				
Temporary Stockpile Vegetation: Luna Pubescent Wheatgrass – 15 lb./ac Amur Intermediate Wheatgrass – 15 lb./ac				

Upland grass seed will be planted with a drill equipped with depth bands and press wheels. The seeded area will then be covered with certified weed-less straw mulch at a rate of 2,000 pounds per acre. The straw will be crimped into the soil to control erosion until the grass becomes established. Drill seeding is the preferred method for revegetation. If broadcast seeding is necessary on moist soils, steep slopes, or in excessively rocky areas, success can be encouraged by broadcasting onto growth medium that is very loose. If the seed is broadcast in those circumstances, then the seeded area will be dragged to help bury the seed.

Wildlife

Current wildlife conditions and potential impacts are described in Exhibit H, Wildlife Information.

Water – General Requirement

To minimize the effect on the prevailing hydrologic balance, the operator shall:

- Comply with all applicable Colorado water laws.
- Comply with all applicable Federal and State water quality laws and regulations.
- Comply with all Federal and State requirements for dredge and fill.
- Perform all work to minimize erosion and sediment transport.

Current water resource conditions and potential surface water and groundwater impacts are described in Exhibit G, Water Information.

Groundwater – Specific Requirements

Current water use on the proposed Tucson South Resource site consists of a permitted well field along the eastern portion of the site, adjacent to the South Platte River (owned and operated by the Todd Creek Metropolitan District) and limited depletions from existing wetlands on the site. The well permit for the gravel mining operation is also in place. Copies of the well permit and well completion report are included in Exhibit G, Water Information.

This site is included in Aggregate Industries Substitute Water Supply Plan (SWSP) for the South Platte River. Specific information regarding water resources is included in Exhibit G. This plan will cover water removed from the site with the material during mining. Once the site is reclaimed there will be no ongoing depletions associated with the property. The West and East cells will be reclaimed to lined water storage reservoirs.

Tucson South Resource Groundwater Modeling Study on the hydrogeologic effects of Mining, prepared by Tetra Tech RMC dated August 2004 is attached herein for reference. A groundwater monitoring and mitigation plan was submitted to the Division as part of an adequacy response to Mr. Larry Oehler dated November 22, 2004 (pages 17-19). The plan was reviewed and approved by the Division as part of the original permit for the site. A copy of the approved plan is attached herein for reference in Exhibit G. Aggregate Industries obtained a well permit for the site in 2017 and filed the well completion report with the Colorado Division of Water Resources in 2018. A copy of the well permit and well completion report are also included in Exhibit G.

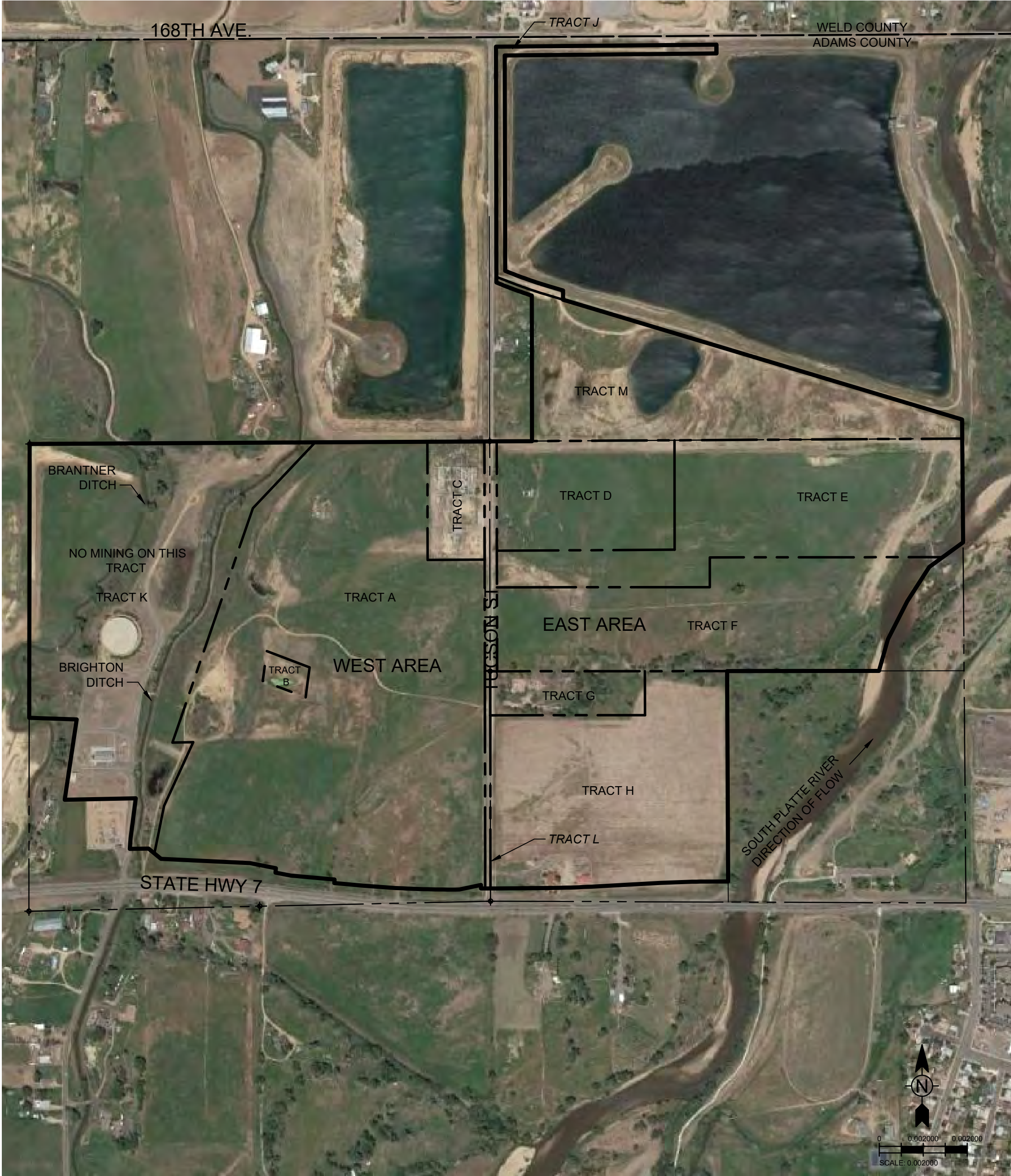
The mining and reclamation operation will not affect groundwater quality on or off the site. The operation will comply with State groundwater quality standards. Due to the absence of significant sources of potential pollutants, groundwater quality monitoring is not required in this operation.

Buildings and Structures

No buildings or structures associated with mining activities will be left in the proposed permit area following reclamation.

Signs and Markers

Permit notification signs will be placed and maintained at the entrance to the operation. The permit boundary will be identified where it is not already identified by fences or suitable markers. All signs and markers will be removed upon permit release.



RECLAMATION NOTES:

1. ALL FINAL RECLAIMED RESERVOIR SIDE SLOPES SHALL BE NO STEEPER THAN 3H:1V. 6" - 12" OF TOPSOIL WILL BE PLACED ON ALL SLOPES ABOVE THE ASSUMED HIGH-WATER LINE. RE-VEGETATION SHALL USE SEED MIXES LISTED IN TABLE BELOW, OR SIMILAR ALTERNATE MIX BASED ON COMMERCIAL AVAILABILITY AT THE TIME OF RECLAMATION. ALL SUBSTITUTIONS WILL DETERMINED IN CONSULTATION WITH QUALIFIED EXPERTS, AND APPROPRIATE TO THE REGION AND SOIL REGIME.

2. HIGH WATER LINE IS APPROXIMATE BASED ON AN ASSUMED 1' FREEBOARD.

3. AREAS TO BE RECLAIMED AS UPLAND WILL RECEIVE A MINIMUM OF 6" - 12" TOPSOIL TO BETTER ESTABLISH GRASSES AND PLANTINGS.

4. PLANTINGS WILL BE INSTALLED WHEN MINING COMMENCES IN THE EAST CELL (PHASE 2). PLANTINGS WILL BE INSTALLED BY A RECLAMATION CONTRACTOR IN SEPTEMBER AND HAND WATERED UNTIL THE GROUND FREEZES. PLANTINGS WILL BE MONITORED IN THE SPRING TO MAKE SURE THEY ARE LEAFING OUT, REPLACED AS NECESSARY TO PROVIDE THE QUANTITIES AS ORIGINALLY INSTALLED AND WATERED AS NECESSARY THROUGH THE FIRST THREE GROWING SEASONS TO ESTABLISH.

5. AT RECLAMATION, AGGREGATE INDUSTRIES-WCR, INC. WILL ATTAIN UDB&FCD APPROVAL OF PLANTING LOCATIONS WITHIN THE UDB&FCD EASEMENT ALONG THE SOUTH PLATTE RIVER PRIOR TO INSTALLATION.
6. SEEDING WILL BE DONE DURING THE FIRST FAVORABLE SEEDING SEASON FOLLOWING TOPSOIL PLACEMENT. BASED ON RECOMMENDATION OF THE NRCS, IT IS ANTICIPATED THAT SEEDING WILL BE DONE BETWEEN OCT 15 AND MAY 1, UNLESS WEATHER CONDITIONS REQUIRE SEEDING OUTSIDE THESE MONTHS.

7. CERTIFIED WEED-FREE STRAW CRIMPED INTO TOPSOIL WILL BE USED WHERE GRASSES ARE TO BE ESTABLISHED ABOVE THE HIGH-WATER LINE ON RESERVOIR SIDESLOPES, OR NEW SEEDS PLANTED INTO A COVER CROP.

CERTIFICATION:

THIS MAP WAS ORIGINALLY PREPARED & CERTIFIED BY TETRATECH, 3/15/2019, PROJECT NUMBER 200-23514-18004. MODIFIED BY MARK SPANIEL WITH LAFARGEHOLCIM.

SHEET INDEX:

- F-1

COVER SHEET & RECLAMATION NOTES
- F-2

RECLAMATION PLAN MAP - WEST AREA
- F-3

RECLAMATION PLAN MAP - EAST AREA

GRAVEL MINING APPLICANT / OPERATOR:

AGGREGATE INDUSTRIES-WCR, INC.
1687 COLE BLVD, SUITE 300
GOLDEN, COLORADO 80401

SURFACE OWNERS:

AGGREGATE INDUSTRIES-WCR, INC. (TRACTS A, B, D, E, F, H, I, AND M)
1687 COLE BLVD, SUITE 300
GOLDEN, COLORADO 80401

CITY OF AURORA (TRACTS C, G, AND K)
15151 EAST ALAMEDA PARKWAY
SUITE 3800
AURORA, COLORADO 80012

CITY OF THORNTON (TRACT J)
12450 WASHINGTON STREET
THORNTON, COLORADO 80241

ADAMS COUNTY (TRACT L)
ADAMS COUNTY GOVERNMENT CENTER
4430 SOUTH ADAMS COUNTY PARKWAY
BRIGHTON, COLORADO 80601

RECLAMATION AREA ACREAGE TABLE:

RECLAMATION PLAN AREAS	ACREAGES
MINING AREAS RECLAIMED TO WATER STORAGE	155.8
DISTURBED, BUT NOT MINED LAND RECLAIMED TO UPLAND MEADOW	85.1
UNDISTURBED AREAS OUTSIDE AFFECTED AREA	49.0
TUCSON STREET ROW	2.9
TOTAL	292.8

SEED MIX AND SEED MIX NOTES:

UPLAND MEADOW GRASS SEED	SCIENTIFIC NAME	VARIETY	% OF MIX	APPLICATION RATE* (#PLS/ACRE)
BIG BLUESTEM	ANDROPOGON GERARDII	KAW	15%	1.7
BLUE GRAMA	BOUTELOUA GRACILIS	HACHITA, LOVINGTON	10%	0.3
GREEN NEEDLAGRASS	NASSELLA VIRIDULA	LODOM	15%	1.5
SIDE OATS GRAMA	BOUTELOUA CURTIPENDULA	VAUGHN, BUTTE	10%	1
SWITCHGRASS	PANICUM VIRGATUM	BLACKWELL	20%	2
WESTERN WHEAT GRASS	PASCOPIRYUM SMITHII	ARRIBA, BARTON	30%	4.8
TOTAL				11.3
*APPLICATION RATE IS FOR DRILL SEEDING. IF SEED IS TO BE BROADCAST, THE APPLICATION RATE WILL BE DOUBLED.				
TEMPORARY STOCKPILE VEGETATION:				
LUNA PUBESCENT WHEAT GRASS - 15 LB/AC				
AMUR INTERMEDIATE WHEAT GRASS - 15 LB/AC				

TUCSON SOUTH RESOURCE
RECLAMATION PLAN MAPS

LEGAL DESCRIPTIONS:

TRACT A

THAT PARCEL OF LAND AS DESCRIBED IN A GENERAL WARRANTY DEED RECORDED FEBRUARY 27, 2001 AT RECEPTION NO. C0765905, COUNTY OF ADAMS, STATE OF COLORADO.

EXCEPT PARCEL B AS DESCRIBED IN A GENERAL WARRANTY DEED RECORDED FEBRUARY 27, 2001 AT RECEPTION NO. C0765905, COUNTY OF ADAMS, STATE OF COLORADO.

AND EXCEPT THAT TRACT OF LAND CONVEYED TO CITY OF AURORA AS DESCRIBED IN GENERAL WARRANTY DEED RECORDED DECEMBER 22, 2005, AS RECEPTION NO. 20051222001399920, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT B

A PARCEL OF LAND IN THE SW 1/4 OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF ADAMS, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID SECTION 1: THENCE NORTH ALONG THE WEST LINE OF SAID SECTION 1 A DISTANCE OF 1449 FEET; THENCE S84°05'E A DISTANCE OF 1334.7 FEET TO THE TRUE POINT OF BEGINNING;
THENCE S89°18'E, 260.7 FEET;
THENCE N07°32'E, 171.6 FEET;
THENCE N69°18'W, 260.7 FEET;
THENCE S07°32'W, 171.6 FEET TO THE POINT OF BEGINNING, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT C

ALL THAT TRACT OF LAND DESCRIBED IN THE SPECIAL WARRANTY DEED RECORDED SEPTEMBER 26, 2016 AT RECEPTION NO. 2016000080681, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT D

THAT PART OF THE NORTH ONE-HALF SOUTHEAST ONE-QUARTER, SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, ADAMS COUNTY, COLORADO DESCRIBED AS:

COMMENCING AT THE NORTHWEST CORNER OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, SAID POINT BEING THE POINT OF BEGINNING; THENCE N. 89°37'18" E. ALONG THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 1050.57 FEET; THENCE S. 00°08'29" E. PARALLEL WITH THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 621.95 FEET TO A LINE THAT IS PARALLEL WITH THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER AND 5 FEET SOUTH OF AN EXISTING HOUSE; THENCE S. 89°37'18" W. ALONG SAID LINE A DISTANCE OF 1050.57 FEET TO THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE N. 00°08'29" W. ALONG THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 621.95 FEET, TO THE POINT OF BEGINNING, EXCEPT THE WEST 40.00 FEET THEREOF, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT E

THAT PART OF THE NORTH ONE-HALF SOUTHEAST ONE-QUARTER, SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, ADAMS COUNTY, COLORADO, LYING NORTH AND WEST OF THE CENTERLINE OF THE SOUTH PLATTE RIVER, DESCRIBED AS:

COMMENCING AT THE NORTHWEST CORNER OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE SOUTH 00°08'29" EAST ALONG THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 621.95 FEET TO A LINE THAT IS PARALLEL WITH THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER AND 5 FEET SOUTH OF AN EXISTING HOUSE AND THE POINT OF BEGINNING; THENCE NORTH 89°37'18" EAST, PARALLEL WITH THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 1050.57 FEET; THENCE NORTH 00°08'29" WEST, PARALLEL WITH THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 621.95 FEET TO THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE NORTH 89°37'18" EAST ALONG THE NORTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 1635.47 FEET TO THE NORTHEAST CORNER OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE SOUTH 00°31'01" EAST ALONG THE EAST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 590.02 FEET TO THE CENTERLINE OF THE SOUTH PLATTE RIVER; THENCE SOUTHERLY ALONG THE CENTERLINE OF THE SOUTH PLATTE RIVER SOUTH 53°55'12" WEST, A DISTANCE OF 142.93 FEET TO A LINE THAT IS 646.34 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE SOUTH 89°54'25" WEST ALONG SAID LINE, A DISTANCE OF 1324.16 FEET TO A LINE THAT IS 1250.00 FEET EAST OF AND PARALLEL WITH THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE SOUTH 00°08'29" EAST, PARALLEL WITH THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 169.08 FEET TO A LINE THAT IS 477.26 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE SOUTH 89°54'25" WEST ALONG SAID LINE, A DISTANCE OF 1250.00 FEET TO THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE NORTH 00°08'29" WEST ALONG THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 207.94 FEET TO THE POINT OF BEGINNING, EXCEPT THE WEST 40.00 FEET THEREOF, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT F

THAT PART OF THE NORTH ONE-HALF OF THE SOUTHEAST ONE-QUARTER, SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, ADAMS COUNTY, STATE OF COLORADO, LYING NORTH AND WEST OF THE CENTERLINE OF THE SOUTH PLATTE RIVER DESCRIBED AS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, SAID POINT BEING THE POINT OF BEGINNING; THENCE N00°08'29'W, ALONG THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 477.26 FEET; THENCE N89°54'25"E, PARALLEL WITH THE SOUTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 1250.00 FEET; THENCE N00°08'29", PARALLEL WITH THE WEST LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 169.08 FEET; THENCE N89°54'25"E, PARALLEL WITH THE SOUTH LINE OF SAID

NORTH ONE HALF SOUTHEAST ONE-QUARTER A DISTANCE OF 1324.16 FEET TO THE CENTERLINE OF THE SOUTH PLATTE RIVER; THENCE BY THE FOLLOWING COURSES AND DISTANCES ALONG THE CENTERLINE OF THE SOUTH PLATTE RIVER; S83°55'12"W, 94.57 FEET; S32°39'44"W, 231.53 FEET, S26°54'09"W, 242.48 FEET; S15°48'38"W, 187.17 FEET TO THE SOUTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER; THENCE S89°54'25"W, ALONG THE SOUTH LINE OF SAID NORTH ONE-HALF SOUTHEAST ONE-QUARTER, A DISTANCE OF 2210.47 FEET TO THE POINT OF BEGINNING, EXCEPT THE WEST 40.00 FEET THEREOF, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT G

ALL THAT TRACT OF LAND DESCRIBED IN THE QUIT CLAIM DEED RECORDED MARCH 2, 2017 AT RECEPTION NO. 2017000018970, COUNTY OF ADAMS, STATE OF COLORADO.

TRACT H

THE SW1/4 OF THE SE1/4 OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST, EXCEPT THAT PART AS DESCRIBED IN BOOK 1055 AT PAGE 52, AND IN BOOK 1214 AT PAGE 326 AND EXCEPT THAT PART DESCRIBED IN BOOK 1205 AT PAGE 128, COUNTY OF ADAMS, STATE OF COLORADO

TRACT J

A PORTION OF A PARCEL OWNED BY THE CITY OF THORNTON (PN: 0157101002001) LOCATED IN THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF ADAMS, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
THE WEST 50.00 FEET; THE NORTH 50.00 FEET OF THE WEST 1250.00 FEET; AND THE SOUTH 50.00 FEET OF THE WEST 380.00 FEET.

TRACT K

A PARCEL OF LAND LOCATED IN THE SOUTH HALF OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF ADAMS, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE EAST QUARTER CORNER OF SAID SECTION 1: THENCE SOUTH 89°39'53" WEST 2445.14 FEET ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE NORTH 00°06'03" WEST 827.14 FEET; THENCE 214.58 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 2944.62 FEET AND A LONG CHORD WHICH BEARS NORTH 69°36'00" WEST 214.53 FEET TO A POINT LYING 40.00 FEET EASTERLY FROM THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE NORTH 00°06'03" WEST 32.52 FEET PARALLEL TO THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE 305.94 FEET ALONG THE ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 2914.62 FEET AND A LONG CHORD WHICH BEARS SOUTH 70°16'26" EAST 305.80 FEET, SAID POINT BEING ON THE SOUTHERLY LINE OF THE TUCSON RESOURCES SUBDIVISION AS RECORDED IN THE ADAMS COUNTY RECORDS IN FILE 17 MAP 865; THENCE SOUTH 73°04'48" EAST 2463.67 FEET ALONG THE SOUTHERLY LINE OF SAID TUCSON RESOURCES SUBDIVISION TO THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE SOUTH 00°10'30" EAST 108.13 FEET ALONG THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1 TO THE POINT OF BEGINNING.

TRACT L (TUCSON STREET RIGHT-OF-WAY)

A TRACT OF LAND LOCATED IN THE SOUTH HALF OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF ADAMS, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

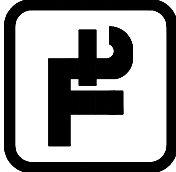
BEGINNING AT THE CENTER-SOUTH ONE-SIXTEENTH CORNER OF SECTION 1: THENCE ALONG THE NORTH-SOUTH CENTERLINE OF SECTION 1 SOUTH 00°06'29" EAST 1234.13 FEET TO A POINT WHENCE THE SOUTH ONE-QUARTER CORNER OF SECTION 1 BEARS SOUTH 00°06'29" EAST 72.70 FEET; THENCE LEAVING SAID NORTH-SOUTH CENTERLINE SOUTH 89°33'20" WEST 30.00 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF TUCSON STREET; THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE NORTH 00°08'29" WEST 2541.11 FEET TO A POINT ON THE NORTH LINE OF THE SOUTHWEST QUARTER OF SECTION 1; THENCE ALONG SAID NORTH LINE NORTH 89°40'23" EAST 30.00 FEET TO THE CENTER ONE-QUARTER CORNER OF SECTION 1; THENCE ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER OF SECTION 1 NORTH 89°39'20" EAST 40.00 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF TUCSON STREET; THENCE ALONG SAID EASTERLY RIGHT-OF-WAY LINE SOUTH 00°08'29" EAST 1307.12 FEET; THENCE LEAVING SAID EASTERLY RIGHT-OF-WAY LINE SOUTH 89°56'30" WEST 40.00 FEET TO THE CENTER-SOUTH ONE-SIXTEENTH CORNER OF SECTION 1 AND THE POINT OF BEGINNING.

TRACT M

A PARCEL OF LAND LOCATED IN THE SOUTH HALF OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF ADAMS, STATE OF COLORADO BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE EAST ONE-QUARTER CORNER OF SECTION 1: THENCE WEST 2445.14 FEET; THENCE NORTH 827.14 FEET; THENCE 214.58 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 2944.62 FEET AND A LONG CHORD WHICH BEARS NORTH 69°36' WEST 214.53 FEET TO A POINT 40 FEET EASTERLY FROM THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE NORTH 32.52 FEET; THENCE 305.94 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 2914.62 FEET AND A LONG CHORD WHICH BEARS SOUTH 70°16' EAST 305.80 FEET; THENCE SOUTH 73°01' EAST 2463.67 FEET; THENCE SOUTH 108.13 FEET TO THE POINT OF BEGINNING.

TETRA TECH



www.tetratech.com
1900 S. Sunset St., Ste. 1-E
Longmont, CO 80501
Phone: (303) 772-5282

MARK	DATE	DESCRIPTION	BY
1	7/8/19	FIRST ADEQUACY REVIEW RESPONSE	TH
2	9/16/19	SECOND ADEQUACY REVIEW RESPONSE	TH
3	11/8/19	THIRD ADEQUACY REVIEW RESPONSE	TH
4	5/1/20	REMOVE SOUTH AREA FROM REC PLAN	MES
AGGREGATE INDUSTRIES - WCR, INC.			
TUCSON SOUTH RESOURCE			
EXHIBIT F			
COVER SHEET & RECLAMATION NOTES			

Project No.: 200-23514-18004
Designed By: JAB
Drawn By: JAB
Checked By: JAB

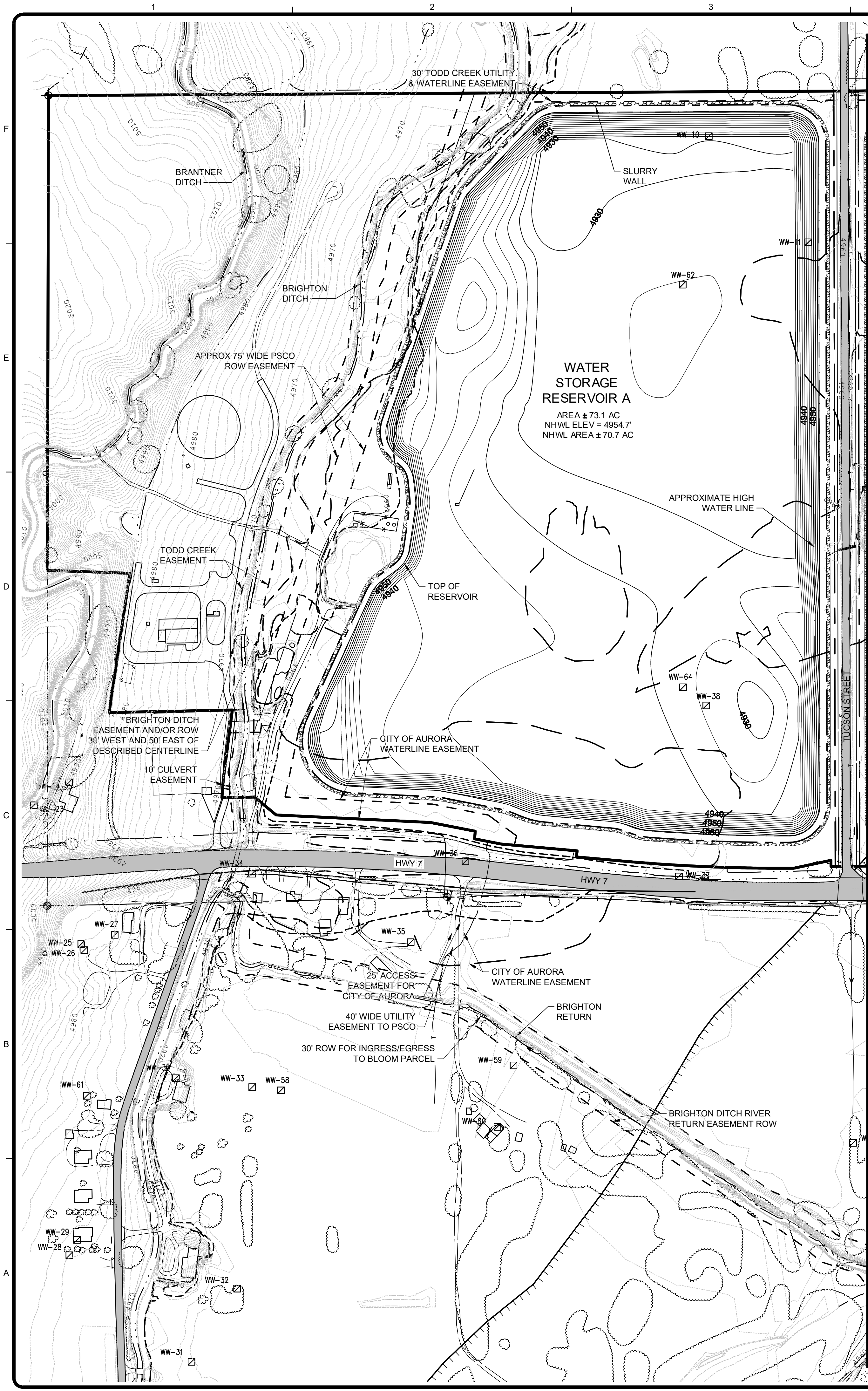
F-1

EXHIBIT

Bar Measures 1 inch

Copyright: Tetra Tech

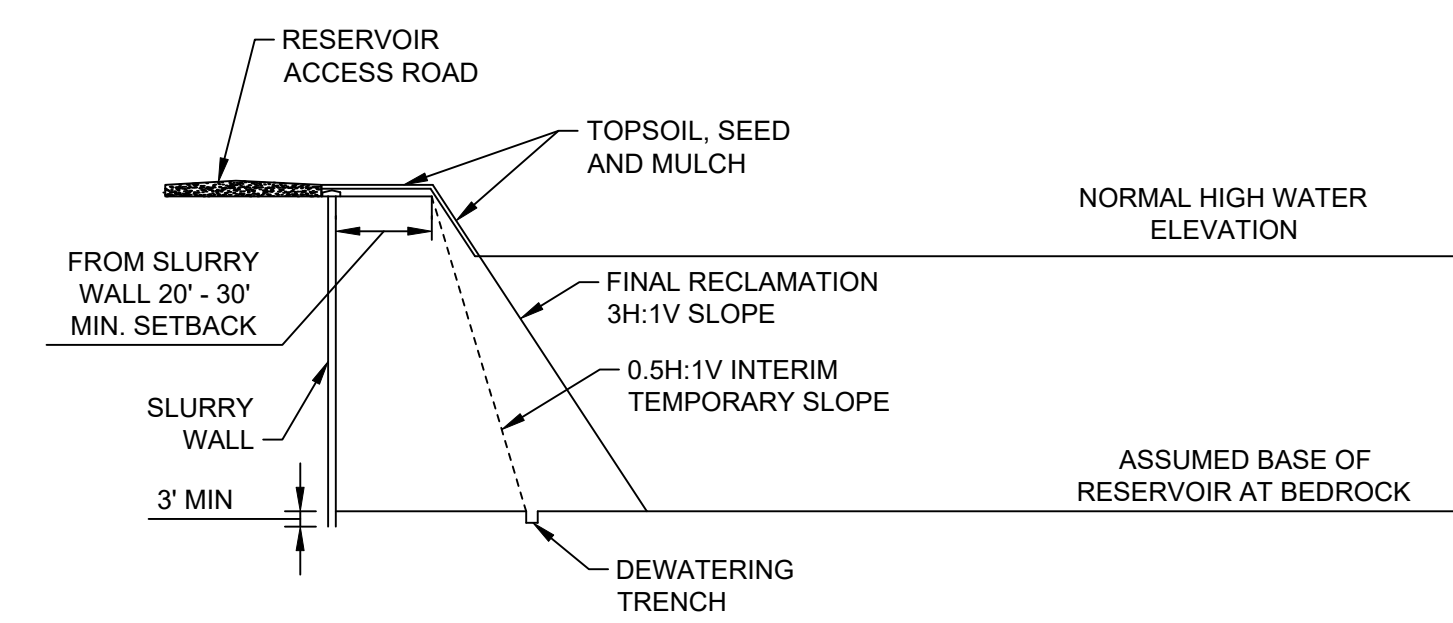
Mark Spaniel



CERTIFICATION:

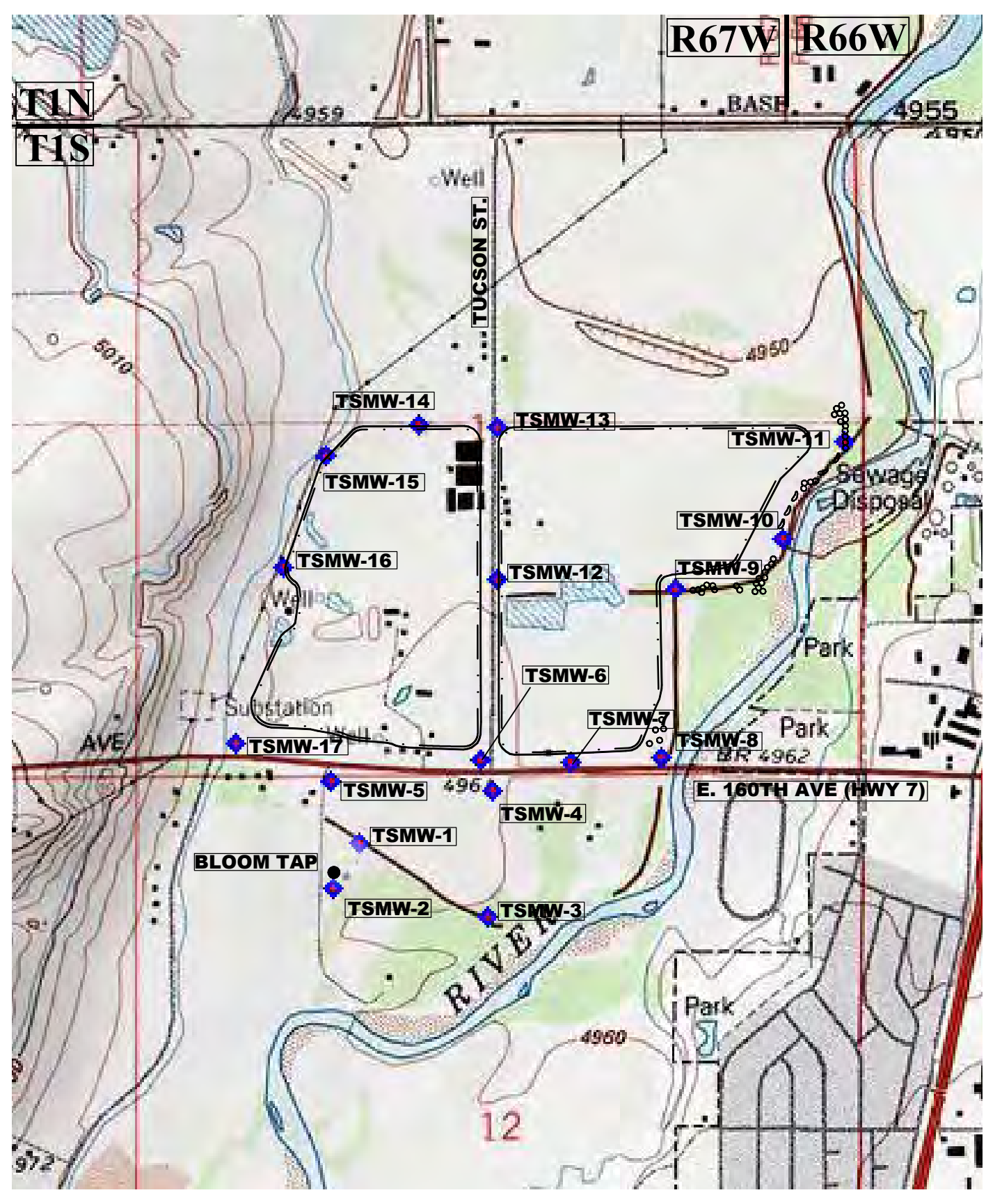
THIS MAP WAS ORIGINALLY PREPARED & CERTIFIED BY TETRATECH, 3/15/2019, PROJECT NUMBER 200-23514-18004. MODIFIED BY MARK SPANIEL WITH LAFARGEHOLCIM.

Mine Planner II - Mark Spaniel 6-10-2020 *Mark Spaniel*

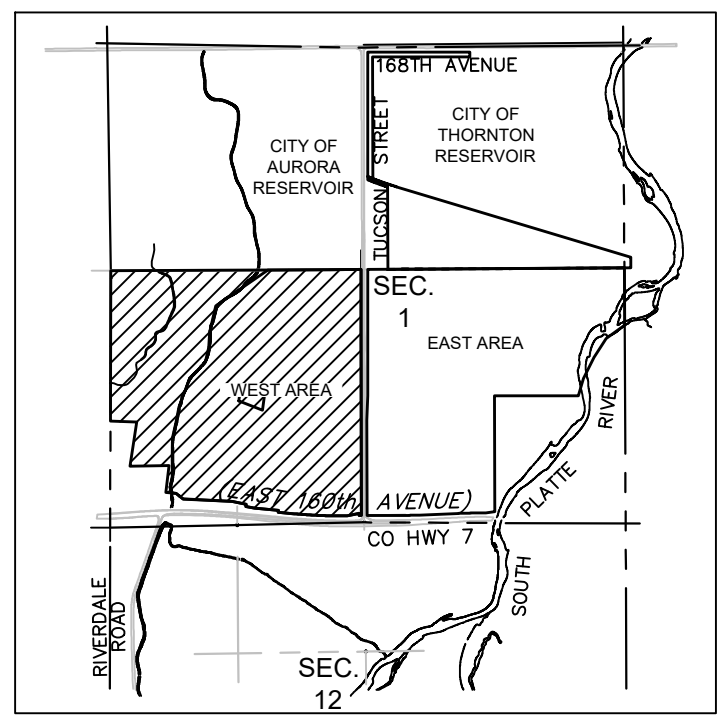
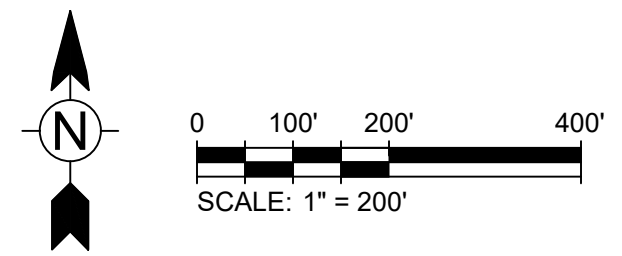


1 TYPICAL RESERVOIR CROSS-SECTION
NTS
NOTE: UNDERGROUND UTILITIES NOT SHOWN.

- LEGEND:**
- MINE PERMIT BOUNDARY
 - TRACT BOUNDARY
 - EASEMENT
 - EFFECTIVE FLOODWAY
 - EFFECTIVE ZONE AE
 - EFFECTIVE ZONE X
 - PRE-PROJECT/MINING CONDITIONS 100-YR FLOODPLAIN
 - EXISTING WETLAND BOUNDARY
 - EXISTING EDGE OF WATER
 - EXISTING 2' CONTOURS
 - EXISTING FENCE
 - EXISTING EDGE OF ROAD
 - EXISTING ELECTRIC LINE
 - EXISTING OVERHEAD ELECTRIC LINE
 - EXISTING GAS LINE
 - EXISTING WATER LINE
 - EXISTING TELEPHONE LINE
 - PROPOSED SLURRY WALL
 - PROPOSED 2' CONTOURS
 - RESERVOIR ACCESS ROAD
 - EXISTING ASPHALT ROAD
 - EXISTING SOUTH PLATTE RIVER
 - UDFCD STABILIZATION
 - NHWL
 - NORMAL HIGH WATER LINE



MONITORING WELL LOCATION MAP
NTS



KEY MAP
NOT TO SCALE

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MARK	DATE	DESCRIPTION	BY	TH
1	7/8/19	FIRST ADEQUACY REVIEW RESPONSE	TH	
2	9/16/19	SECOND ADEQUACY REVIEW RESPONSE	TH	
3	11/8/19	THIRD ADEQUACY REVIEW RESPONSE	TH	
4	5/1/20	REMOVE SOUTH AREA FROM REC PLAN	MES	

AGGREGATE INDUSTRIES - WCR, INC.

TUCSON SOUTH RESOURCE

EXHIBIT F

WEST AREA RECLAMATION PLAN

Project No.: 200-23514-18004

Designed By:

Drawn By:

Checked By:

F-2

EXHIBIT

Copyright: Tetra Tech

Bar Measures 1 inch

