

GENERAL NOTES:

- 1. BEARINGS AND COORDINATES ARE RELATIVE TO THE NAD 83 COLORADO STATE PLANES, CENTRAL ZONE, US FOOT (CO83-CF).
2. ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE IN FEET, UNLESS INDICATED OTHERWISE.
3. CALLOUTS, COORDINATES, AND DIMENSIONS ARE POINTED TO OR MEASURED TO EDGE OF PAVEMENT, BACK OF CURB, OR OUTSIDE FACE OF FOUNDATION WALL, UNLESS INDICATED OTHERWISE.
...
23. NO ACTIVITY MAY USE UNSUITABLE MATERIAL (E.G. TRASH, DEBRIS, CAR BODIES, ASPHALT, ETC.). MATERIAL USED FOR CONSTRUCTION OR DISCHARGED MUST BE FREE FROM TOXIC POLLUTANTS IN TOXIC AMOUNTS (SEE SECTION 307 OF THE CLEAN WATER ACT).

- 24. TEMPORARY FILLS MUST BE REMOVED IN THEIR ENTIRETY AND THE AFFECTED AREAS RETURNED TO PRE-CONSTRUCTION ELEVATIONS. ALL TEMPORARILY DISTURBED AREAS SHALL BE RESTORED TO THE PRE-CONSTRUCTION CONDITIONS.
25. FOR ALL YARD PIPING COORDINATION SEE PROCESS DRAWINGS.
26. FOR ALL MECHANICAL COORDINATION SEE MECHANICAL DRAWINGS.
27. FOR ALL ELECTRICAL COORDINATION SEE ELECTRICAL DRAWINGS.
28. FOR ALL STRUCTURAL COORDINATION SEE STRUCTURAL DRAWINGS.
29. DESIGN/BUILDER SHALL SUBMIT A CONCRETE JOINTING PLAN TO THE ENGINEER FOR APPROVAL. MINIMUM JOINTING PATTERN SHOULD BE 10'X10' UNLESS OTHERWISE NOTED.

ABBREVIATIONS:

Table with 2 columns: Abbreviation and Description. Includes symbols like @, Ø, #, %, ASPH, ASTM, ATG, BC, BLDG, BO, BOP, BSC, C&G, CATV, CDOT, CL, CIS, CMP, CNTR, CO, CONC, CONSTR, CWA, DESC, DIA, DIP, DND, DWG, E, EBOX, ECB, EFF, ELEC, EL OR ELEV, EOA, ESMT, ETC, EXIST, EXP, FC, FF, FG, FH, FL, FT, GAL, GM, GS, HDPE, HMA, HP.

ABBREVIATIONS (CONT):

Table with 2 columns: Abbreviation and Description. Includes symbols like ICV, IP, INV, LF, LOC, LP, MAX, MH, MIN, N, N/A, NO, OC, POC, PI, PCC, PP, PRC, PROP, PT, PVM, R, R&R, RW OR ROW, RCP, RS, S, SAN, SCH, SCL, SDWK, SF, SL, SM, SPEC, SSA, STA, STD, STRUC, TBA, TBD, TBR, TBR&R, TBRBO, TBR&RBO, TC, TH, TOW, TP, TPED, TRANSF, TYP, UIP, VTC, W, WM, WMH, WTR, WV, WWF.

CIVIL LEGEND AND SYMBOLOGY. SCREENED OR GRAYSCALE ITEMS REPRESENT EXISTING FEATURES. Includes LINE SYMBOLOGY (R/W, E, SSFM, ST, SS, S, T), SYMBOLS (UTILITIES) (Sanitary Sewer MH, Storm Manhole, Telephone MH, Gas Valve, Gas Meter, Light Pole, Power Pole, GUY, Electric Manhole, Electric Box/Handhole, Electric Pedestal, Electric Transformer, Water MH, Water Meter, Water Valve, Fire Hydrant), SYMBOLS (MISC) (Project Control Point, Bollard, Spot Elevation), and PATTERNS (Undisturbed Earth, Asphalt, Compacted Fill, Concrete, Gravel or Aggregate, Riprap).

ENGINEER'S STATEMENT: THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS.

ENGINEER OF RECORD SIGNATURE: [Signature] DATE: 12/11/2020

OWNER'S/DEVELOPER'S STATEMENT: I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATION.

OWNER SIGNATURE: [Signature] DATE: 12-14-20

Table with 5 columns: no., date, by, ckd, description. Row 0: 10/2/20, MJL, NT, ISSUED FOR PERMIT REVIEW. Row 1: 11/13/20, MJL, NT, ISSUED FOR EL PASO COUNTY PERMIT REVIEW. Row 2: 12/11/20, MJL, NT, REISSUED FOR EL PASO COUNTY PERMIT REVIEW.

Table with 5 columns: no., date, by, ckd, description. Rows 3-19: Various entries with descriptions like ROCK SOCK, SANITARY, SCHEDULE, SEDIMENT CONTROL LOG, etc.

BURNS MEDONNELL logo and address: 9785 Maroon Cir., Suite 400, Centennial, CO 80112, 303-721-9292.

Table with 2 columns: date, detailed, designed, checked. Row 1: DECEMBER 2020, M. LIESENDAHL, M. LIESENDAHL, N. TESSITORE.



CHEROKEE METROPOLITAN DISTRICT TDS REDUCTION FACILITY CIVIL NOTES, ABBREVIATIONS, & LEGEND

Table with 2 columns: project, contract, drawing, sheet. Row 1: 119461, contract, drawing C001 - 2, sheet 1 of sheets.



RECORD DRAWING NOTES:

- DESIGN/BUILDER SHALL MAINTAIN UPDATED RECORD DRAWINGS AT ALL TIMES THROUGH THE DURATION OF THE PROJECT. CONSTRUCTION RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER.
- DURING CONSTRUCTION OF THE PROJECT, DESIGN/BUILDER SHALL BE RESPONSIBLE FOR KEEPING TRACK OF ANY ENGINEER-APPROVED FIELD CONSTRUCTION REVISIONS TO THE DESIGN DEPICTED ON APPROVED CONSTRUCTION DRAWINGS. THESE REVISIONS SHALL BE USED TO PREPARE RECORD DRAWINGS OF COMPLETED CONSTRUCTION.
- ALL VARIATIONS IN PROJECT CONDITIONS, LOCATIONS, AND CONFIGURATIONS, AND ANY OTHER CHANGES OR DEVIATIONS FROM THE INFORMATION PRESENTED ON THE ORIGINAL, APPROVED CONSTRUCTION DRAWINGS SHALL BE NOTED. THIS INCLUDES BURIED OR CONCEALED CONSTRUCTION AND UTILITY FEATURES THAT WERE REVEALED DURING CONSTRUCTION.
- THE ENGINEER SHALL REVIEW COMPLETENESS, ACCURACY, AND FORMAT OF SUBMITTED RECORD DRAWINGS. IF THE RECORD DRAWINGS ARE CONSIDERED UNACCEPTABLE, THEY SHALL BE RETURNED TO THE DESIGN/BUILDER FOR CORRECTION AND RESUBMISSION.
- DESIGN/BUILDER SHALL PROVIDE THE FOLLOWING SURVEY SERVICES AND SUPPLY TO THE ENGINEER.
 - BEFORE UTILITY EXCAVATION, DESIGN/BUILDER SHALL LOCATE EXISTING UTILITIES UNDER AND ADJACENT TO PROPOSED IMPROVEMENTS.
 - FOR INSTALLATION OF ALL NEW UTILITIES, SURVEY SHOTS SHALL BE TAKEN AT ALL:
 - BUILDING CONNECTIONS
 - HORIZONTAL CHANGES: BENDS, TEES, WYES, ETC.
 - LARGE VERTICAL DEPTH CHANGES
 - CONNECTIONS AT EXISTING UTILITIES
 - STRUCTURES: VALVES CLEANOUTS, MANHOLES ETC.
 - GRAVITY PIPE INVERTS AT PIPE ENDS AND STRUCTURES
 - PRESSURE PIPE INVERTS EVERY 50'
 - TOP OF ELECTRICAL AND COMMUNICATIONS DUCTS AND CONDUITS EVERY 50'.
 - FOR ALL EXISTING UTILITIES EXCAVATED, SURVEY SHOTS SHALL BE TAKEN AT ALL:
 - TOP OF UNDERGROUND UTILITIES, INCLUDING UTILITY DIAMETER/ SIZE / DEPTH
 - BUILDING CONNECTIONS
 - HORIZONTAL CHANGES: BENDS, TEES, WYES, ETC.
 - LARGE VERTICAL DEPTH CHANGES
 - CONNECTIONS TO EXISTING UTILITIES
 - STRUCTURES: VALVES CLEANOUTS, MANHOLES, ETC.
 - GRAVITY PIPE INVERTS AT PIPE BENDS AND STRUCTURES
 - PRESSURE PIPE INVERTS EVERY 50'
 - TOP OF ELECTRICAL AND COMMUNICATIONS DUCTS AND CONDUITS EVERY 50'.

EXISTING CONDITIONS NOTES:

- DESIGN/BUILDER SHALL RETAIN A LICENSED SURVEYOR TO SURVEY PROJECT IMPROVEMENTS. IF BENCHMARKS SHOWN ARE IN AREAS THAT REQUIRE DEMOLITION, OTHER BENCHMARKS SHALL BE ESTABLISHED BEFORE DEMOLITION AND CONSTRUCTION WORK BEGINS. DESIGN/BUILDER SHALL SUPPLY CERTIFIED, CONTROL POINT DATA TO ENGINEER AND OWNER AFTER COMPLETION OF CONSTRUCTION.
- THE DESIGN/BUILDER SHALL FIELD-CHECK ALL EXISTING CONDITIONS AND BE THOROUGHLY FAMILIAR WITH THE SITE BEFORE ANY WORK COMMENCES. ANY DISCREPANCIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER BEFORE ANY FURTHER WORK COMMENCES.
- IT SHALL BE THE DESIGN/BUILDER'S RESPONSIBILITY TO FIELD-VERIFY EXISTING STRUCTURES, UTILITIES, AND SURVEY INFORMATION, AND TO TAKE NECESSARY PRECAUTIONS DURING DEMOLITION AND CONSTRUCTION, DESIGN/BUILDER SHALL VERIFY EXISTENCE AND MARK LOCATIONS OF ALL UTILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK. DESIGN/BUILDER SHALL CONTACT THE ENGINEER AND ALL ASSOCIATED UTILITY COMPANIES AND AGENCIES TO IDENTIFY THE LOCATION OF UTILITIES. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING CONSTRUCTION.
- PRIOR TO CONSTRUCTION, THE DESIGN/BUILDER SHALL NOTIFY THE ENGINEER OF OPERATIONAL PLANS. IN THE EVENT AN UNEXPECTED UTILITY OR STRUCTURE INTERFERENCE OR CONFLICT IS ENCOUNTERED DURING CONSTRUCTION. THE DESIGN/BUILDER SHALL IMMEDIATELY NOTIFY THE ENGINEER. ANY UTILITY SERVICE OR STRUCTURES DISTURBED BY THE DESIGN/BUILDER'S OPERATIONS SHALL BE RESTORED IMMEDIATELY AT THE DESIGN/BUILDER'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE DESIGN/BUILDER IS RESPONSIBLE FOR PROTECTING ITEMS NOT TO BE DAMAGED DURING DEMOLITION AND CONSTRUCTION. THE DESIGN/BUILDER SHALL REPAIR OR REPLACE DAMAGED OR DISTURBED ITEMS TO THE SATISFACTION OF THE OWNER.

DEMOLITION NOTES:

- ALL DEMOLITION, WASTE, DEBRIS, AND UNSATISFACTORY MATERIALS SHALL BE DISPOSED OF OFFSITE.
- DESIGN/BUILDER SHALL COORDINATE LIMITS OF SAWCUT AND PAVEMENT REMOVAL WITH PROPOSED PAVEMENT LAYOUT.
- PAVEMENT DESIGNATED FOR SAWCUT SHALL BE SAWCUT FULL DEPTH.
- EXISTING PAVEMENT EDGES SHALL BE SAWCUT IN LOCATIONS SHOWN TO PROVIDE CLEAN EDGE FOR CONSTRUCTION OF PROPOSED PAVEMENT.
- PAVEMENT REMOVAL LIMITS SHALL BE TO THE NEAREST EXISTING PAVEMENT JOINT TO THE GREATEST EXTENT POSSIBLE TO PREVENT PARTIAL PANEL REMOVAL. PAVEMENT REMOVAL SHALL INCLUDE REMOVAL OF PAVEMENT AND ANY SUBBCASE MATERIAL PRESENT.
- ANY DAMAGE TO PAVEMENT AREAS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- DESIGN/BUILDER SHALL CONFIRM DEMOLITION LIMITS WITH PROPOSED CONSTRUCTION LIMITS. ADDITIONAL DEMOLITION MAY BE REQUIRED AND SHALL BE COORDINATED WITH THE ENGINEER TO ENSURE UNINTERRUPTED SERVICE OR ACCESS TO THE FACILITY.
- UNLESS NOTED OTHERWISE, ALL EXISTING FACILITIES ARE TO REMAIN UNDISTURBED AND USED IN PLACE. THE DESIGN/BUILDER SHALL PROVIDE PROTECTIVE MEASURES NECESSARY TO PREVENT DAMAGE. THE DESIGN/BUILDER SHALL REPAIR AND/OR REPLACE, AT DESIGN/BUILDER'S EXPENSE, ALL EXISTING FACILITIES DAMAGED DURING CONSTRUCTION ACTIVITIES. EXISTING FACILITIES NOTED FOR REMOVAL SHALL BE REMOVED AND DISPOSED OF AT THE DESIGN/BUILDER'S EXPENSE. ALL EXCESS MATERIAL RESULTING FROM EARTHWORK OPERATIONS SHALL BE REMOVED AND DISPOSED OF BY THE DESIGN/BUILDER, OR PLACED IN OWNER-APPROVED AREAS ONSITE.

UTILITY DEMOLITION NOTES:

- DESIGN/BUILDER SHALL COORDINATE WITH THE OWNER PRIOR TO REMOVAL OF EXISTING UTILITIES IN SERVICE. RELOCATED UTILITIES SHALL BE CONSTRUCTED BEFORE REMOVAL OF EXISTING UTILITIES TO ENSURE UNINTERRUPTED SERVICE TO THE FACILITIES SERVED BY THE UTILITY. ALL RELOCATIONS SHALL BE COORDINATED WITH THE OWNER.
- UTILITY CAPPING METHODS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC PIPE MATERIAL IN SERVICE. ALL CAPPING SHALL BE INSPECTED AND APPROVED BY THE ENGINEER.
- IN AREAS OF UTILITY REMOVAL OF ABANDONED LINES, THE PORTION OF EXISTING ABANDONED LINES TO REMAIN SHALL BE CAPPED OR PLUGGED AT REMOVAL OF INTERFACE.

UTILITY NOTES:

- ALL PIPE SIZES ARE IN INCHES UNLESS INDICATED OTHERWISE.
- DESIGN/BUILDER IS RESPONSIBLE FOR COORDINATING ALL BUILDING CONNECTIONS WITH THE BUILDING SUBCONTRACTOR AND THE INFORMATION PROVIDED ON MECHANICAL AND ELECTRICAL DRAWINGS.
- DESIGN/BUILDER SHALL COORDINATE ALL REQUIRED UTILITY SHUTDOWNS FOR UTILITY CONNECTIONS WITH THE OWNER.
- SEE DETAIL 1 ON DRAWING C504 FOR TYPICAL PIPE TRENCH DETAIL.
- ALL UNDERGROUND UTILITIES ARE SUBJECT TO ACCEPTANCE TESTING AND INSPECTION METHODS DETAILED IN THE SPECIFICATIONS, WHICH MAY INCLUDE VIDEO CAMERA INSPECTION.
- ANY CHANGES TO PROPOSED UTILITY DESIGN SHALL BE APPROVED BY THE ENGINEER.
- THRUST BLOCKS OR JOINT RESTRAINTS ARE REQUIRED AT ALL TEES, BENDS, OR ELBOWS OF PRESSURIZED PIPING IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, AND MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL 3 ON DRAWING C504 FOR TYPICAL THRUST BLOCK DETAIL.
- ALL UTILITY STRUCTURES ARE TO BE H-20 RATED UNLESS INDICATED OTHERWISE.
- IF A MANHOLE IS LOCATED IN PAVEMENT AREAS, RIM ELEVATIONS SHALL BE FLUSH WITH FINAL GRADE. IF A MANHOLE IS LOCATED OUTSIDE OF PAVEMENT AREAS, RIM ELEVATION SHALL BE 6.00" MINIMUM ABOVE ADJACENT FINISH GRADE.
- COVERS AND CASTINGS OF MANHOLES AND STRUCTURES SHALL BE STAMPED PER THE APPROPRIATE UTILITY TYPE OR PER THE LOCAL STANDARDS, AND SHALL BE STAMPED PER THE ORIGIN OF MANUFACTURE.
- IT SHALL BE THE RESPONSIBILITY OF THE DESIGN/BUILDER TO COORDINATE ALL NECESSARY UTILITY RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANY.
- ALL MANHOLES, VALVE BOXES, METERS AND OTHER AT GRADE UTILITY APPURTENANCES WITHIN THE CONSTRUCTION LIMITS SHALL BE ADJUSTED TO FINISHED GRADE. THE DESIGN/BUILDER WILL BE RESPONSIBLE FOR THE NECESSARY ADJUSTMENTS/RELOCATIONS OF WATER LINES; FIRE HYDRANTS; VALVE BOXES; METERS; WATER, STORM, AND SANITARY MANHOLES, AND OTHER APPURTENANCES AS SHOWN IN THE DRAWINGS. THE DESIGN/BUILDER SHALL COORDINATE SCHEDULING OF ALL UTILITY ADJUSTMENTS/RELOCATIONS WHETHER PERFORMED BY THE SUBCONTRACTOR OR THE UTILITY COMPANY.

GRADING NOTES:

- PROPOSED ELEVATIONS INDICATED ARE FOR TOP OF FINAL GRADE, PAVEMENT, OR STRUCTURE UNLESS INDICATED OTHERWISE.
- ELEVATION DENOTED AS "MATCH" ARE INTENDED TO MEET EXISTING GRADE ELEVATION. DESIGN/BUILDER SHALL VERIFY ELEVATIONS AT TIE-INS AND MATCH POINTS PRIOR TO BEGINNING CONSTRUCTION.
- EXTERIOR FINISH GRADES AT BUILDING ENTRANCES AND DOORWAY THRESHOLDS SHALL BE MAXIMUM 0.25 INCHES BELOW BUILDING FINISH FLOOR IF A VERTICAL THERESHOLD IS PROVIDED, AND SHALL BE MAXIMUM 0.5 INCHES BELOW BUILDING FINISH FLOOR IS A BEVELED THRESHOLD IS PROVIDED, UNLESS INDICATED OTHERWISE.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. ANY DRAINAGE FEATURE OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER SUBJECT TO THE APPROVAL OF THE ENGINEER UNLESS INDICATED OTHERWISE.
- SURFACES AROUND THE FACILITY SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND PAVEMENTS.
- THE DESIGN/BUILDER SHALL REMOVE STANDING WATER FROM THE PROJECT WORK LIMITS AS NECESSARY TO PROTECT SUBGRADE, SUBBASE, AND/OR BASE COURSE OF NEW PAVEMENT, SURROUNDING PAVEMENT-TO-REMAIN, OR OTHER COMPLETED WORKS.
- SEE EROSION CONTROL DRAWINGS FOR RECOMMENDED BEST PRACTICES FOR SEDIMENT AND EROSION CONTROL.
- TOP ELEVATIONS OF ALL UTILITY STRUCTURES TO REMAIN SHALL BE ADJUSTED ACCORDINGLY TO FINISH GRADE ELEVATION.
- ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE NOT DESIGNATED TO RECEIVE SURFACING SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE SPECIFICATIONS.

EROSION AND SEDIMENT CONTROL NOTES:

- CONSTRUCTION ACTIVITY POLLUTION PREVENTION IS REQUIRED FOR THIS PROJECT. PREVENTION OF POLLUTION RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE ACCOMPLISHED BY CONTROLLING SOIL EROSION, WATERWAY SEDIMENTATION, AND AIRBORNE DUST GENERATION. DESIGN/BUILDER SHALL ENSURE THAT NO SEDIMENT RESULTING FROM CONSTRUCTION ACTIVITIES INFRINGES ONTO ADJACENT PROPERTIES. DESIGN/BUILDER SHALL COORDINATE EROSION AND SEDIMENT CONTROL WITH OTHER CONSTRUCTION ENTITIES PERFORMING WORK ON ADJACENT PROPERTIES.
- SOIL EROSION AND SEDIMENT CONTROLS ARE MEASURES USED TO REDUCE THE AMOUNT OF SOIL PARTICLES THAT ARE CARRIED OFF AN AREA AND DEPOSITED INTO A DRAINAGE COLLECTION SYSTEM OR INTO A BODY OF WATER. THE DESIGN/BUILDER SHALL BE RESPONSIBLE FOR ENSURING THAT EROSION AND SEDIMENTATION ARE CONTROLLED TO THE EXTENT PRACTICABLE. ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES. PRIOR TO INITIATING CONSTRUCTION IN ALL AREA, ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE. UPON PROJECT COMPLETION ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.
- TEMPORARY EROSION CONTROL SHALL BE THE DESIGN/BUILDER'S RESPONSIBILITY, WHO SHALL UTILIZE APPROPRIATE BEST MANAGEMENT PRACTICES (BMPs). THOSE BMPs SHALL CONSIST OF SILT FENCE, SEDIMENT CONTROL LOGS, OR OTHER MEANS TO CONTROL EROSION AS NEEDED. THE DESIGN/BUILDER SHALL PROVIDE AND FOLLOW THE EROSION AND SEDIMENT CONTROL PLANS AS NEEDED.
- DESIGN/BUILDER SHALL PLACE PERIMETER BMPs AS SHOWN PRIOR TO BEGINNING WORK. THE DEVICES SHALL BE PLACED DOWN-SLOPE OF DISTURBED AREAS WHERE SHEET EROSION WOULD OCCUR. PERIMETER BMPs SHALL BE CLEANED AND REPAIRED WHEN SEDIMENT BUILDUP REACHES ONE-THIRD OF PERIMETER BMP HEIGHT. AFTER SIGNIFICANT RUNOFF EVENTS, THE DESIGN/BUILDER SHALL INSEPECT ALL EROSION CONTROL MEASURES FOR SILT BUILD-UP THAT INTERFERES WITH THE PERFORMANCE OF THE EROSION CONTROL MEASURE AND REPAIR OR REPLACE THOSE MEASURES, AS NECESSARY.

no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW



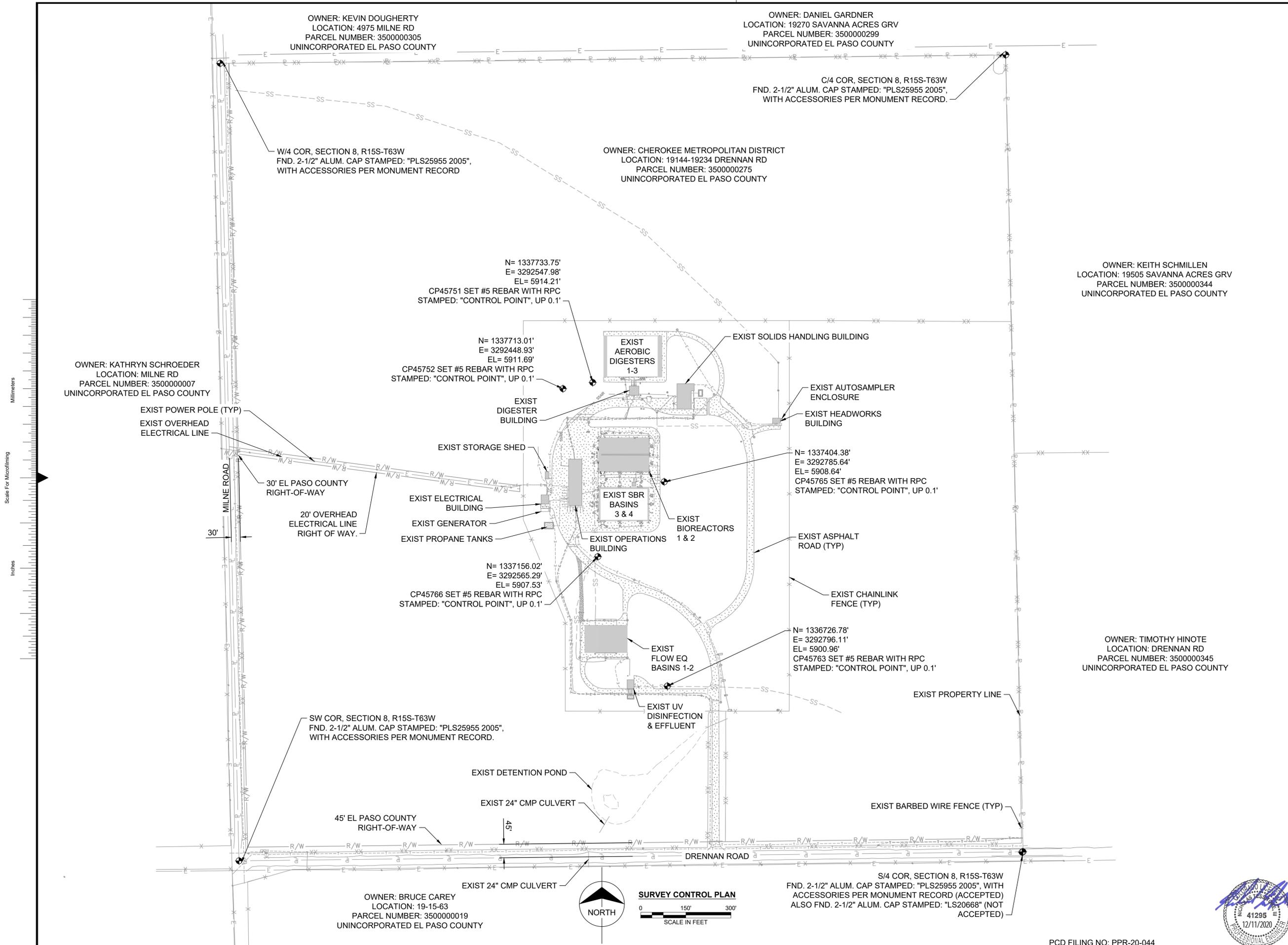
date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE



**CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
CIVIL CONSTRUCTION NOTES**

project 119461	contract
drawing 41295 12/11/2020	rev. 2
sheet 2	of sheets
file 119461_C002.DWG	





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0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
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Scale For Microfilming
Millimeters
Inches

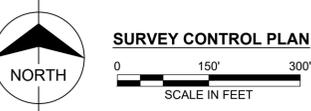
BURNS & MCDONNELL
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
SURVEY CONTROL PLAN

project	119461	contract	
drawing	CS101	rev.	2
sheet	3	of	3
file	119461_CS101.DWG		



PCD FILING NO: PPR-20-044

OWNER: KEVIN DOUGHERTY
 LOCATION: 4975 MILNE RD
 PARCEL NUMBER: 3500000305
 UNINCORPORATED EL PASO COUNTY

OWNER: DANIEL GARDNER
 LOCATION: 19270 SAVANNA ACRES GRV
 PARCEL NUMBER: 3500000299
 UNINCORPORATED EL PASO COUNTY

OWNER: KEITH SCHMILLEN
 LOCATION: 19505 SAVANNA ACRES GRV
 PARCEL NUMBER: 3500000344
 UNINCORPORATED EL PASO COUNTY

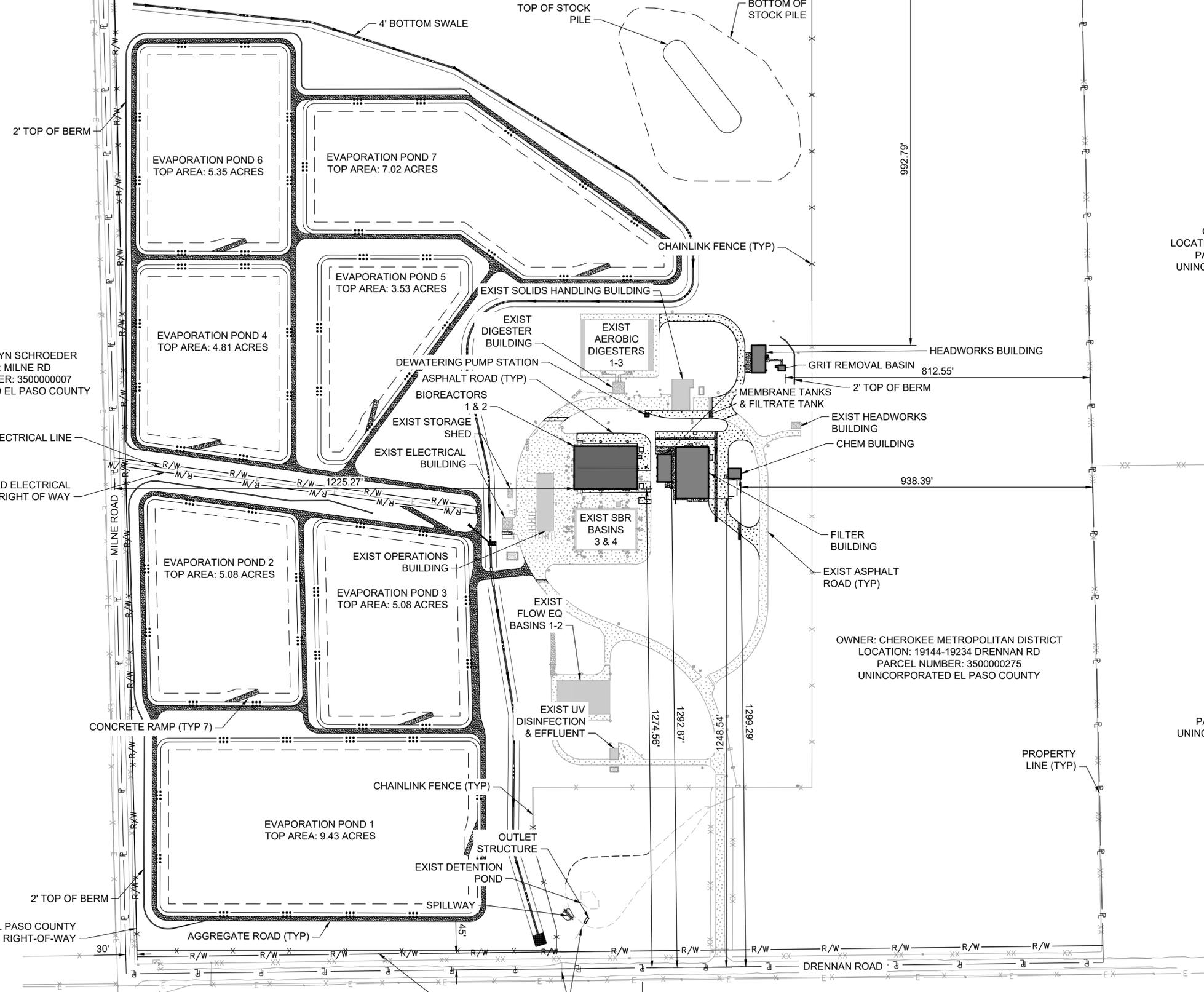
OWNER: KATHRYN SCHROEDER
 LOCATION: MILNE RD
 PARCEL NUMBER: 3500000007
 UNINCORPORATED EL PASO COUNTY

OWNER: CHEROKEE METROPOLITAN DISTRICT
 LOCATION: 19144-19234 DRENNAN RD
 PARCEL NUMBER: 3500000275
 UNINCORPORATED EL PASO COUNTY

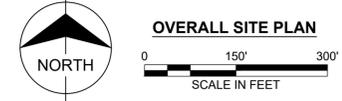
OWNER: TIMOTHY HINOTE
 LOCATION: DRENNAN RD
 PARCEL NUMBER: 3500000345
 UNINCORPORATED EL PASO COUNTY

OWNER: BRUCE CAREY
 LOCATION: 19-15-63
 PARCEL NUMBER: 3500000019
 UNINCORPORATED EL PASO COUNTY

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Scale For Microfilming
 Millimeters
 Inches



BURNS & MCDONNELL
 9785 Maroon Cir., Suite 400
 Centennial, CO 80112
 303-721-9292

date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE

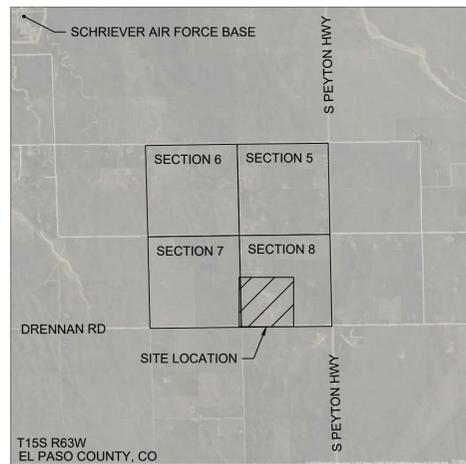
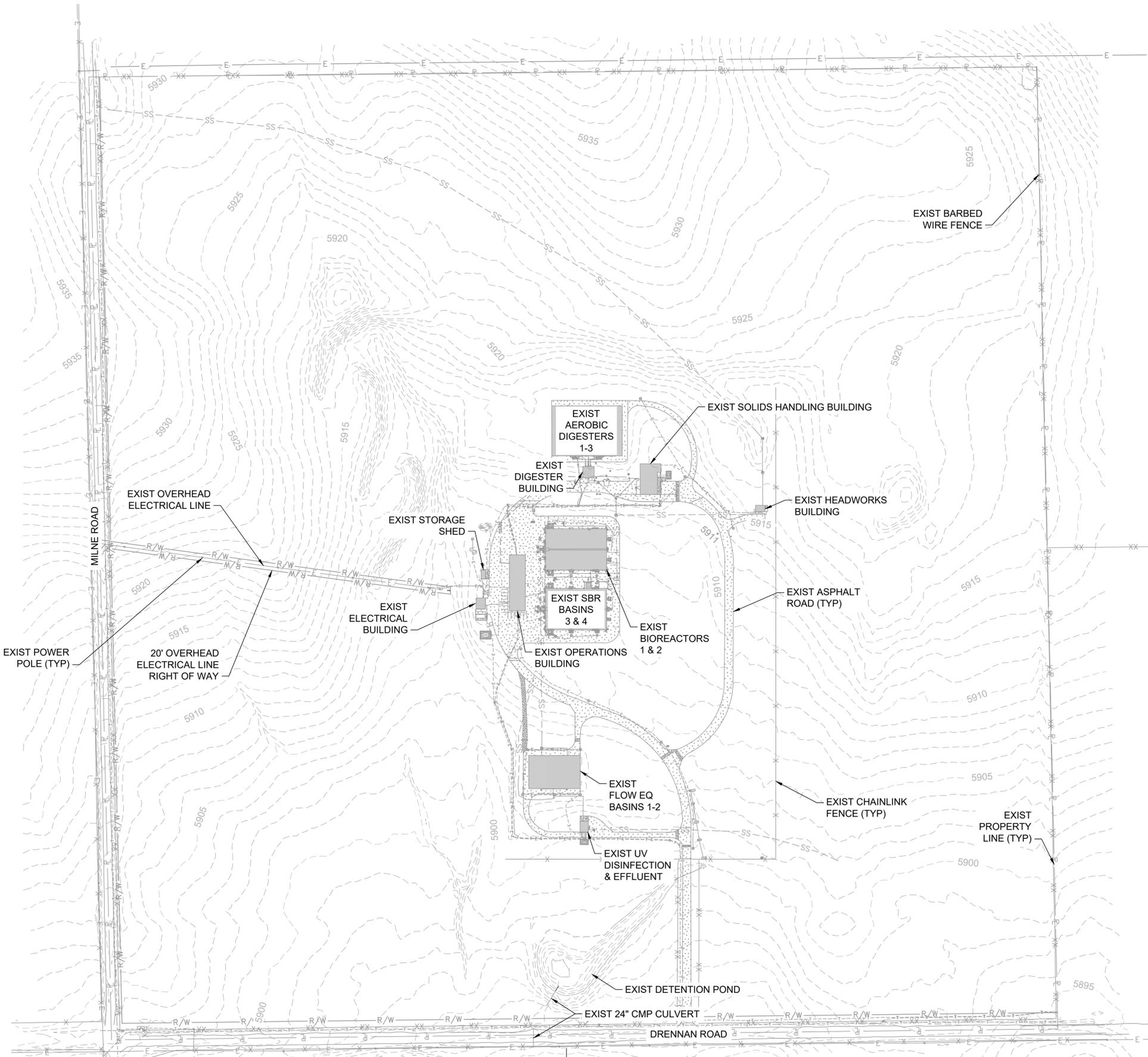


CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
 OVERALL SITE PLAN

project	119461	contract	
drawing	CS102	rev.	2
sheet	6	of	6
file	119461_CS102.DWG		



PCD FILING NO: PPR-20-044



no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW

Scale For Microfilming
Inches
Millimeters

**BURNS
MEDONNELL**
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE

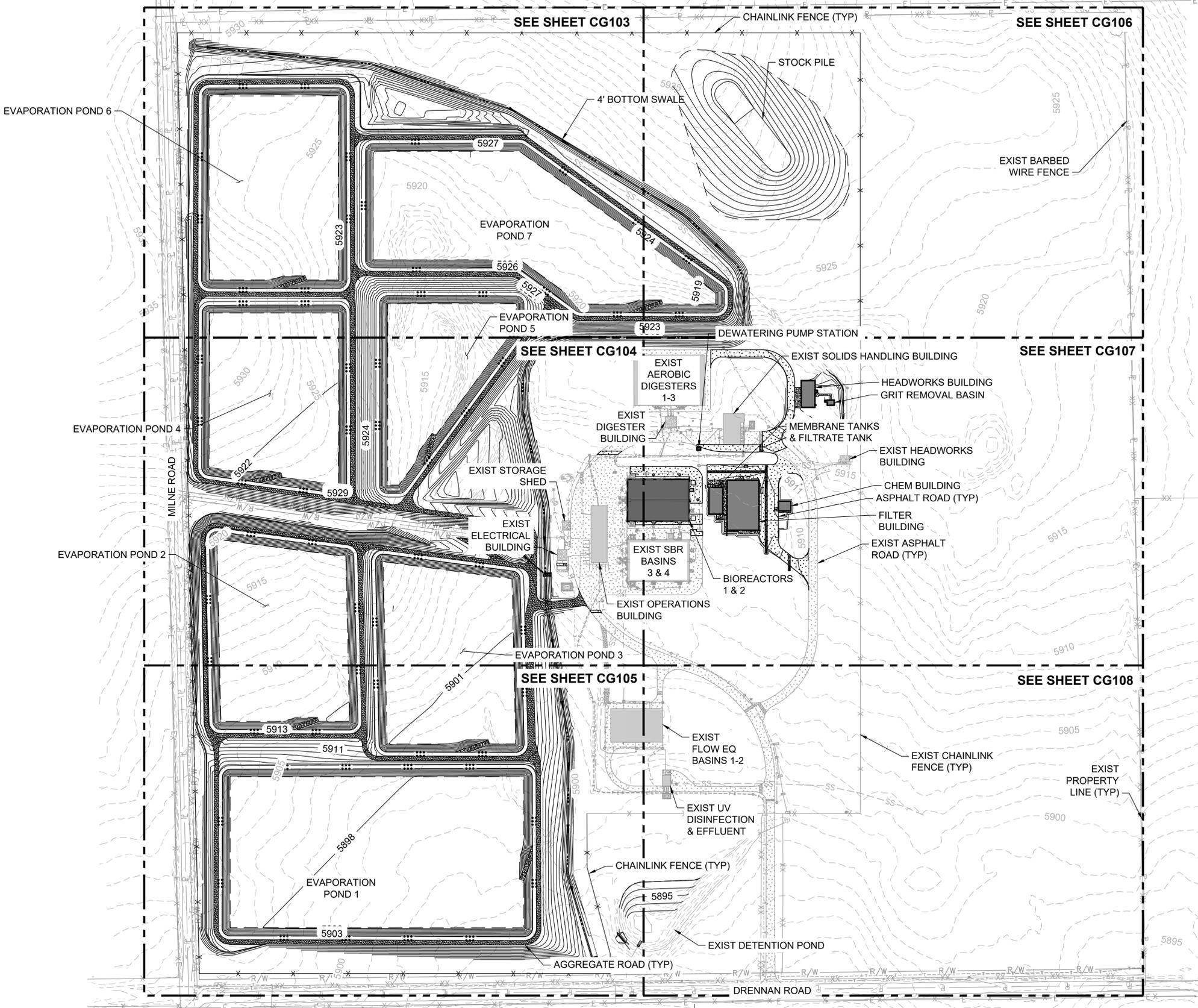


CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
OVERALL EXISTING GRADING PLAN

project 119461	contract
drawing 41295 12/11/2020	rev. 2
sheet 17	of sheets
file 119461_CG101.DWG	

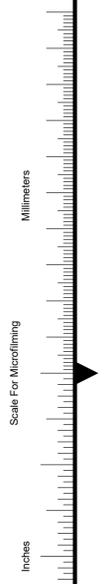


PCD FILING NO: PPR-20-044



NOTES:
 1. THIS PACKAGE WAS PREPARED UTILIZING THE GEOTECHNICAL RECOMMENDATIONS OUTLINED IN "GEOTECHNICAL ENGINEERING STUDY" FOR PROJECT NO. 20-2-126, PREPARED BY KUMAR & ASSOCIATES, INC. (REVISED 05/27/20). SEE DOCUMENT FOR ADDITIONAL INFORMATION.

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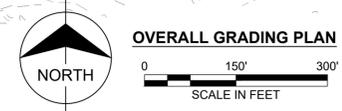
BURNS MEDONNELL
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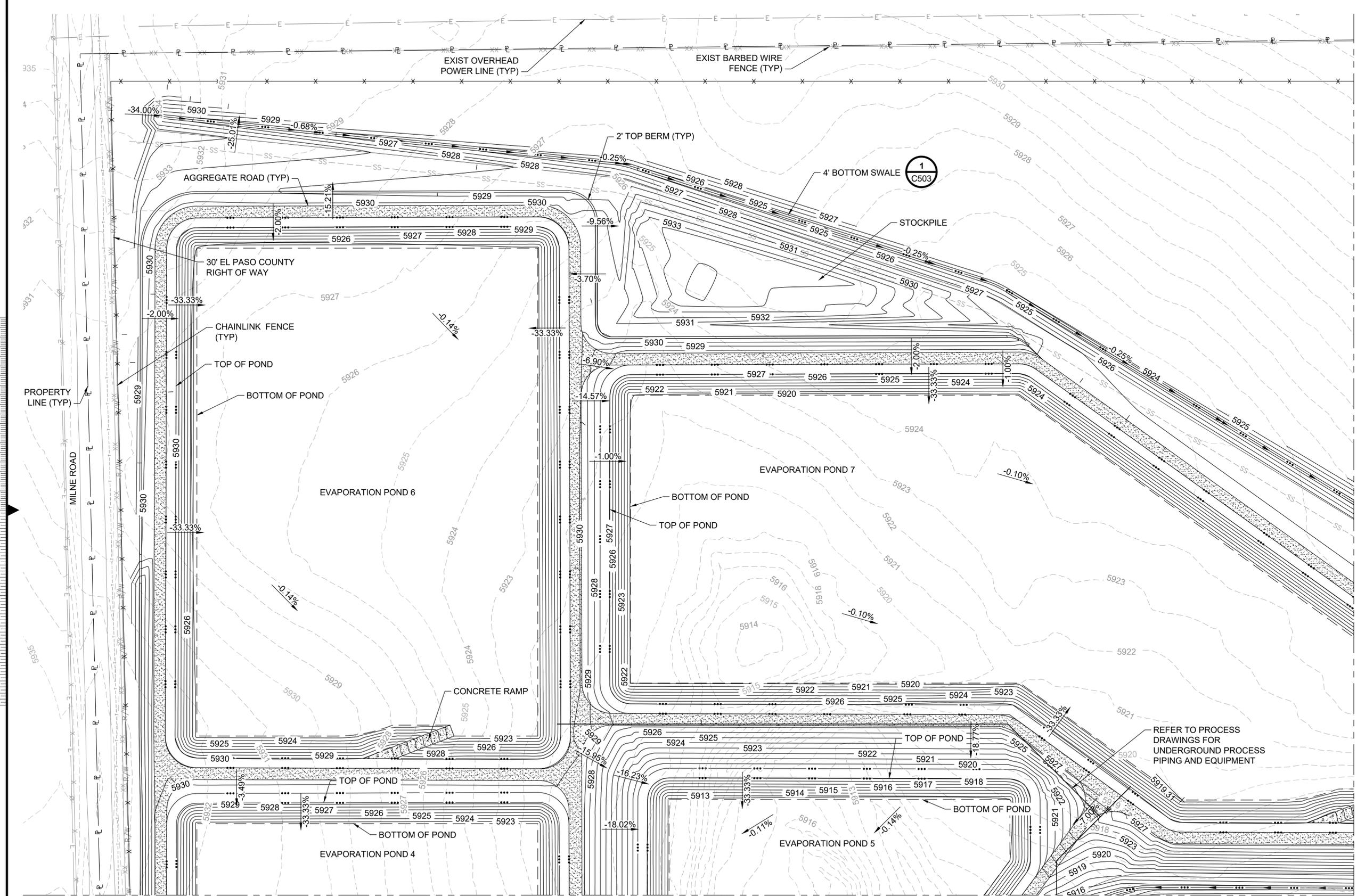
date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
 OVERALL GRADING PLAN

project	119461	contract	
drawing	CG102	rev.	2
sheet	18	of	sheets
file	119461_CG102.DWG		





no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

Scale For Microfining
Millimeters
Inches

SEE SHEET CG106

SEE SHEET CG104

REFER TO PROCESS DRAWINGS FOR UNDERGROUND PROCESS PIPING AND EQUIPMENT

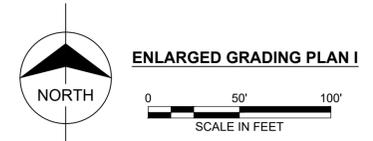
BURNS MEDONNELL
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE

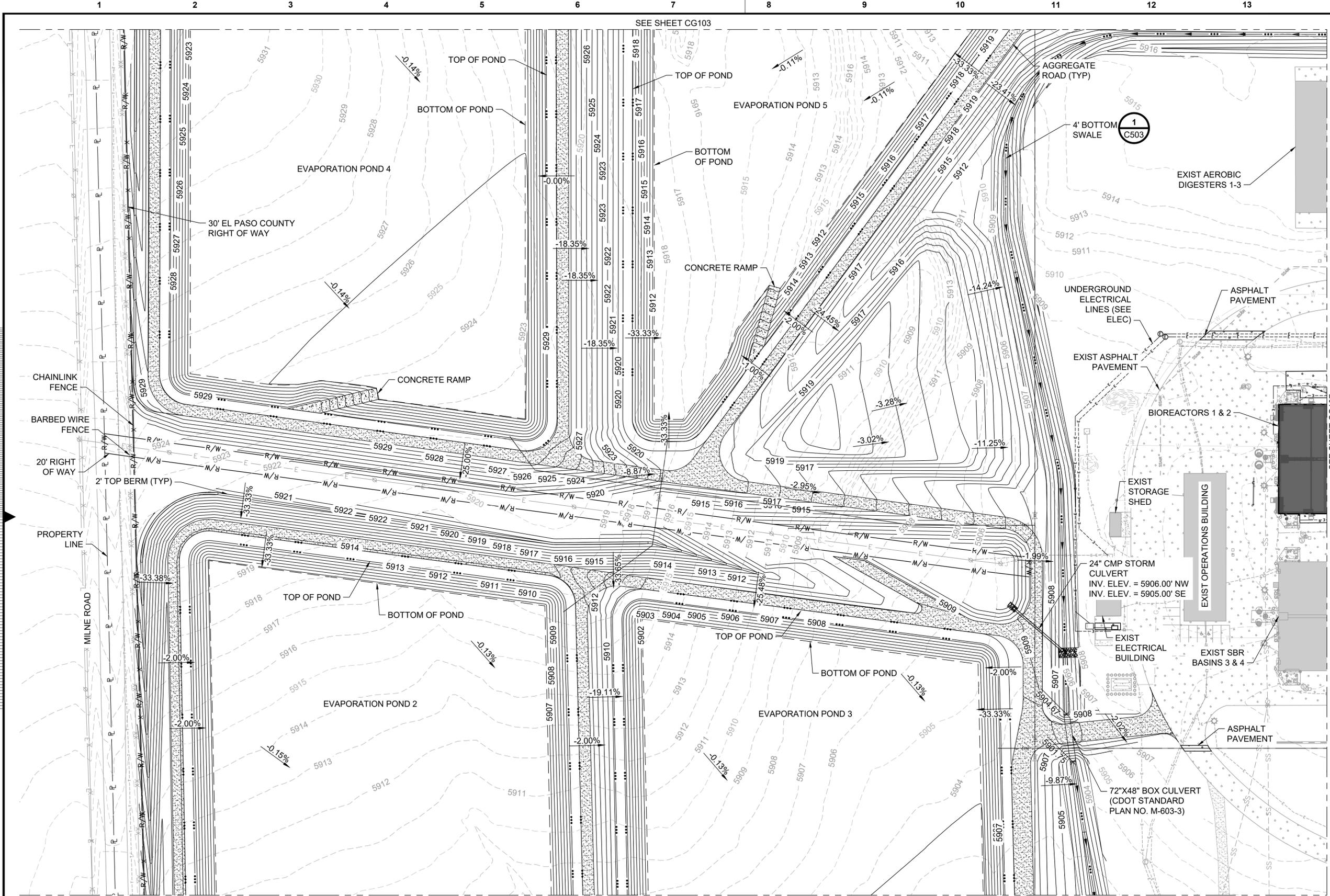


CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
ENLARGED GRADING PLAN I

project 119461	contract
drawing CG103	rev. 2
sheet 19 of sheets	
file 119461_CG103.DWG	



PCD FILING NO: PPR-20-044



SEE SHEET CG105

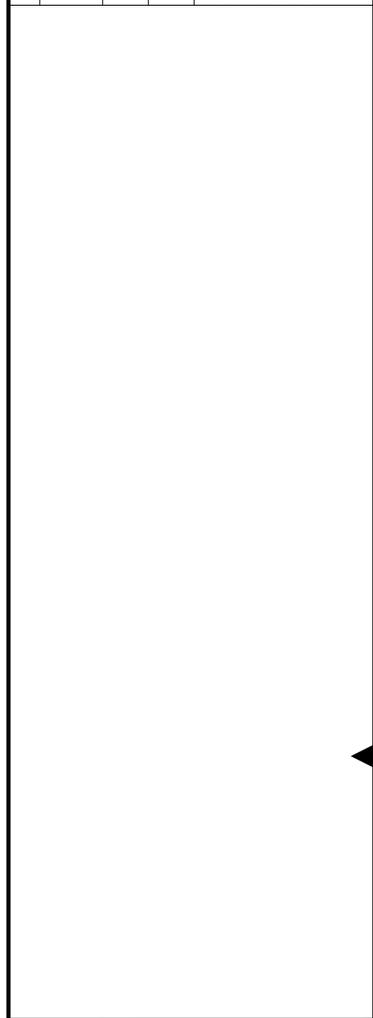
NORTH

ENLARGED GRADING PLAN II

SCALE IN FEET

SEE SHEET CG104

no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW



**BURNS
MEDONNELL**

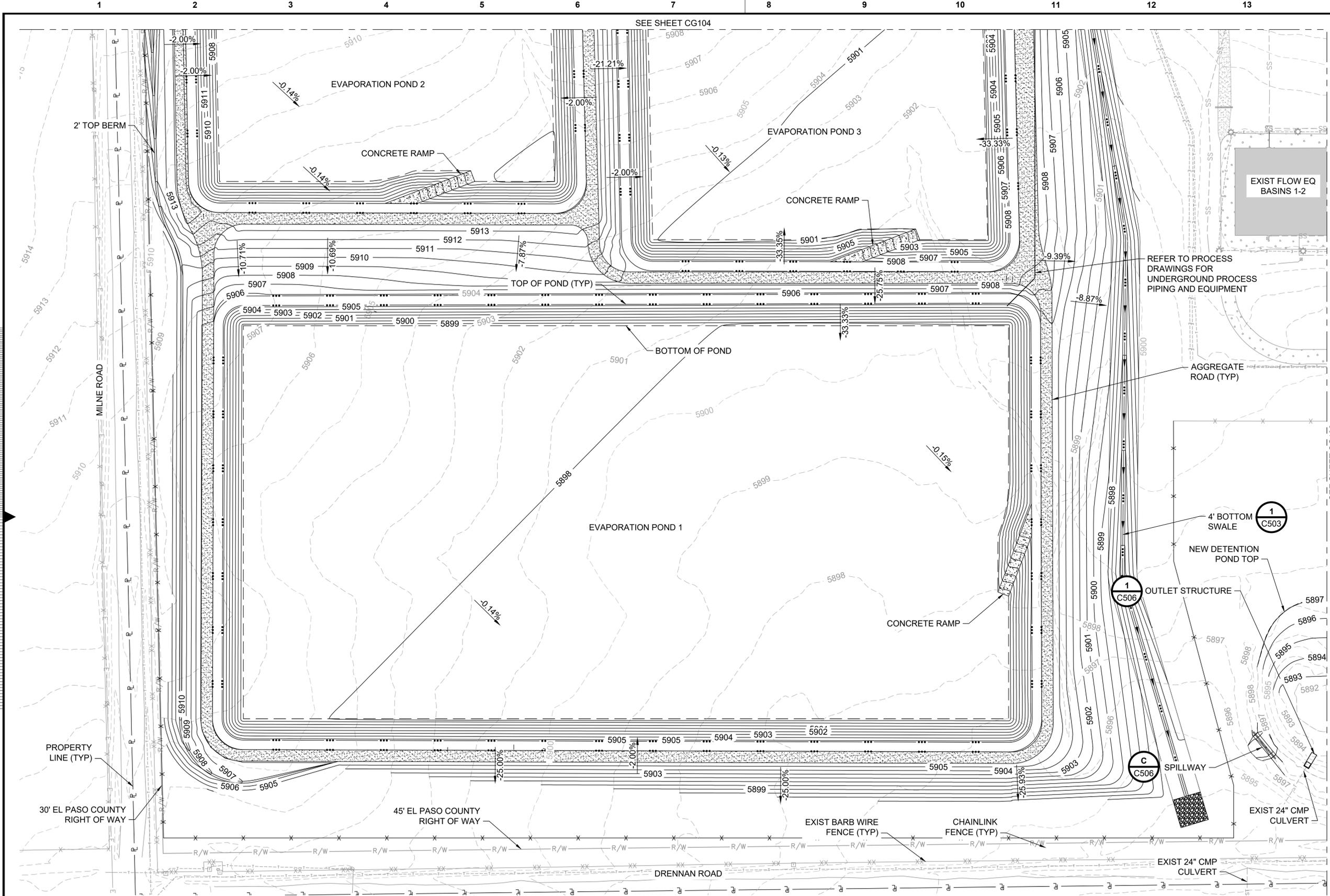
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
ENLARGED GRADING PLAN II

project	119461	contract	
drawing	CG104	rev.	2
sheet	20	of	sheets
file	119461_CG104.DWG		



no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

SEE SHEET CG108

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 303-721-9292

date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
 ENLARGED GRADING PLAN III

project	119461	contract	
drawing	CG105	rev.	2
sheet	21	of	sheets
file	119461_CG105.DWG		

ENLARGED GRADING PLAN III

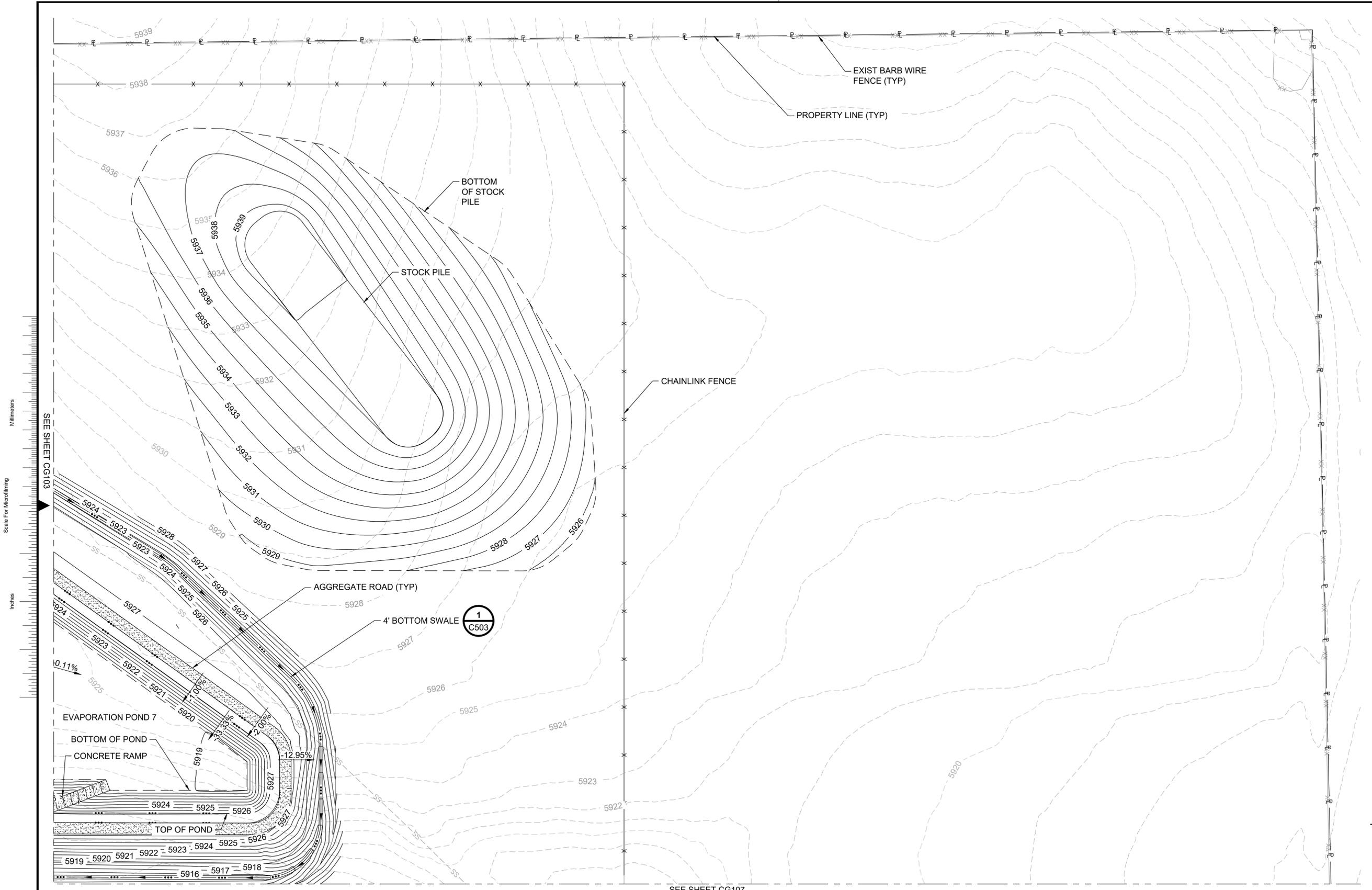
NORTH

0 50' 100'

SCALE IN FEET



PCD FILING NO: PPR-20-044



Scale For Microfilming
Millimeters
Inches

SEE SHEET CG103

SEE SHEET CG107

no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

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 303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
 ENLARGED GRADING PLAN IV

project 119461	contract
drawing CG106	rev. 2
sheet 22	of sheets
file 119461_CG106.DWG	

ENLARGED GRADING PLAN IV

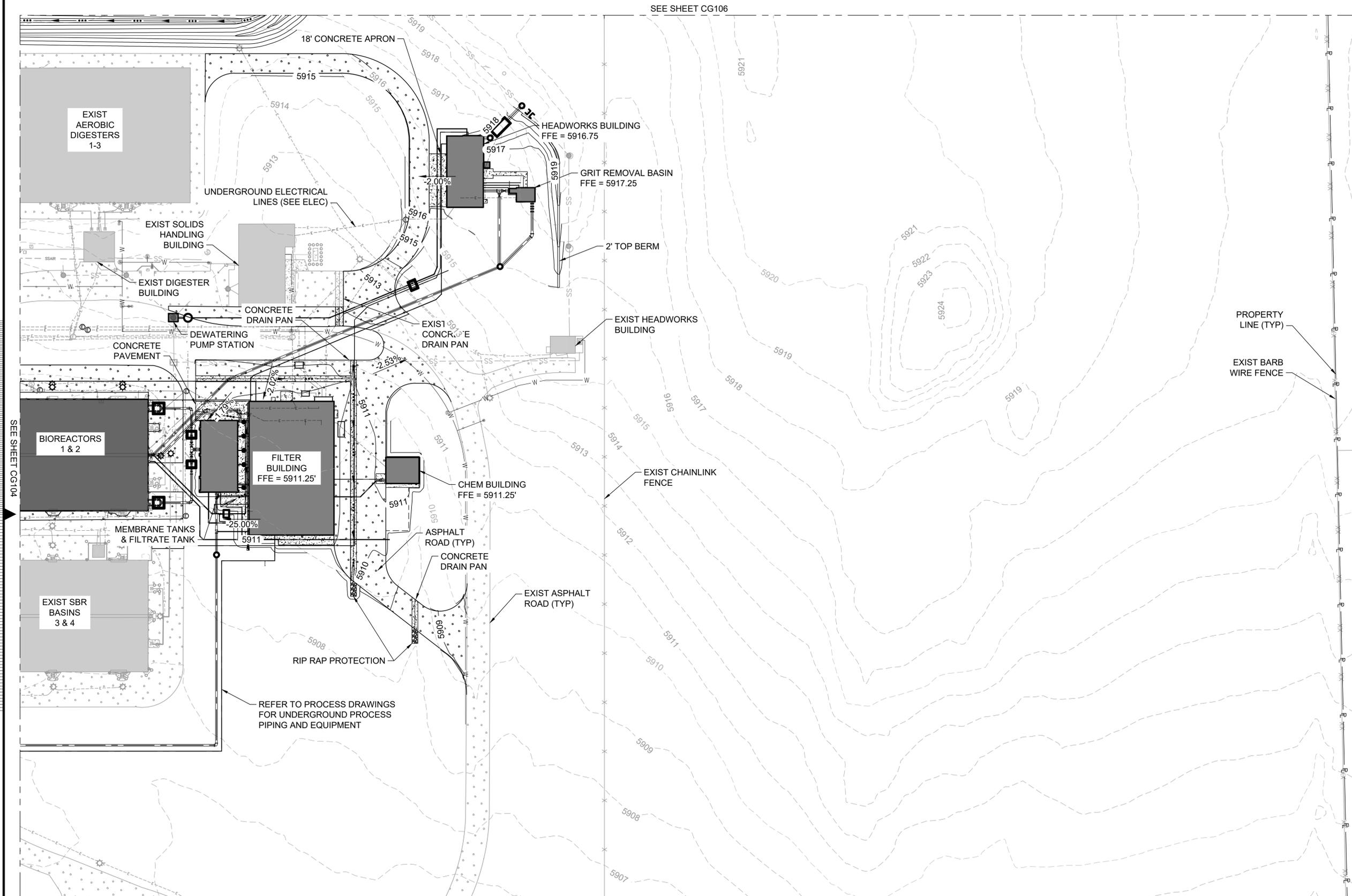
NORTH
 SCALE IN FEET



PCD FILING NO: PPR-20-044

SEE SHEET CG106

SEE SHEET CG108



Scale For Microfitting
 Millimeters
 SEE SHEET CG104
 Inches

no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

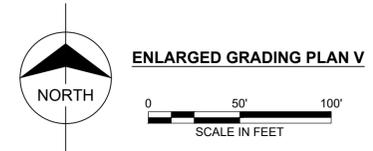
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 9785 Maroon Cir., Suite 400
 Centennial, CO 80112
 303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE

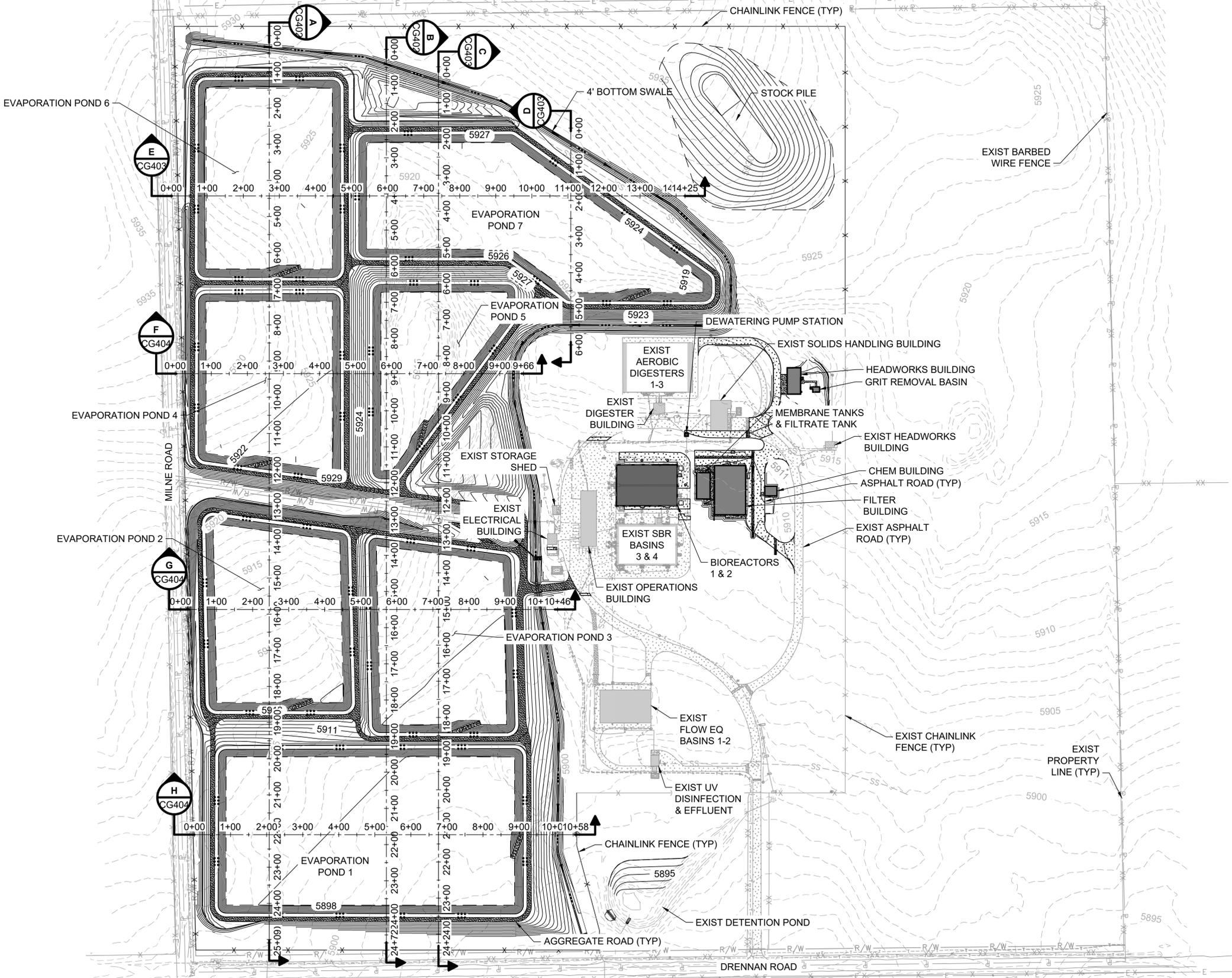


CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
 ENLARGED GRADING PLAN V

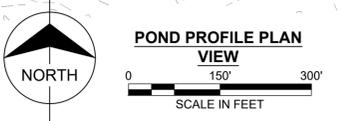
project 119461	contract
drawing CG107	rev. 2
sheet 23 of	sheets
file 119461_CG107.DWG	



PCD FILING NO: PPR-20-044



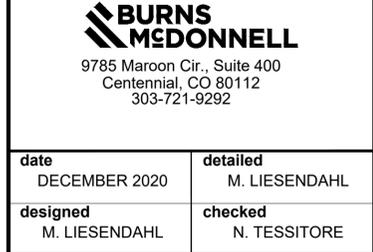
Scale For Microfining
Millimeters
Inches



no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

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303-721-9292

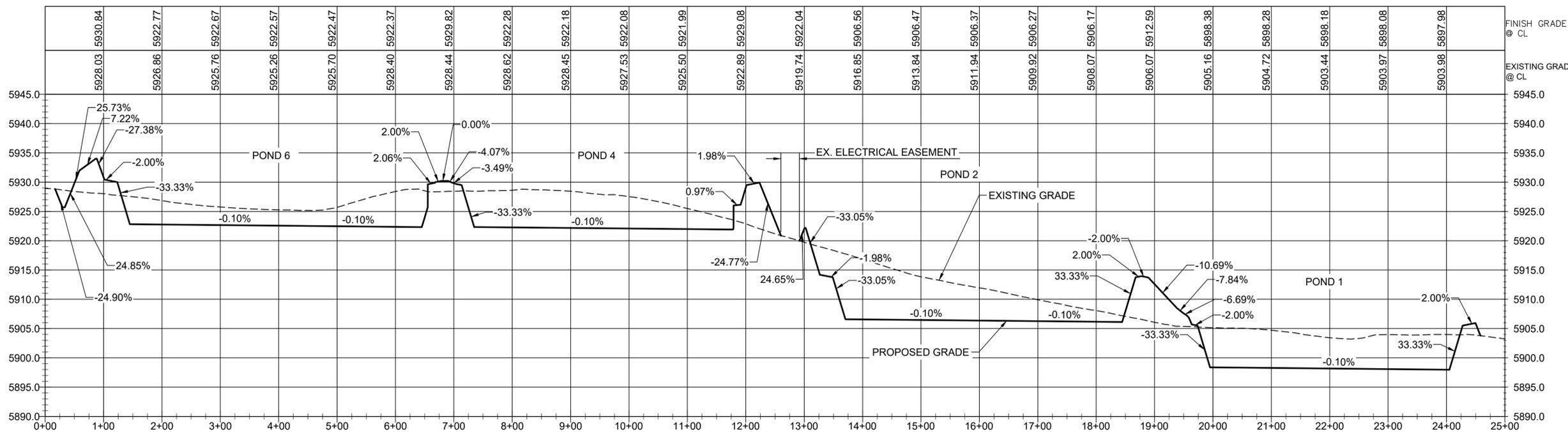
date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE



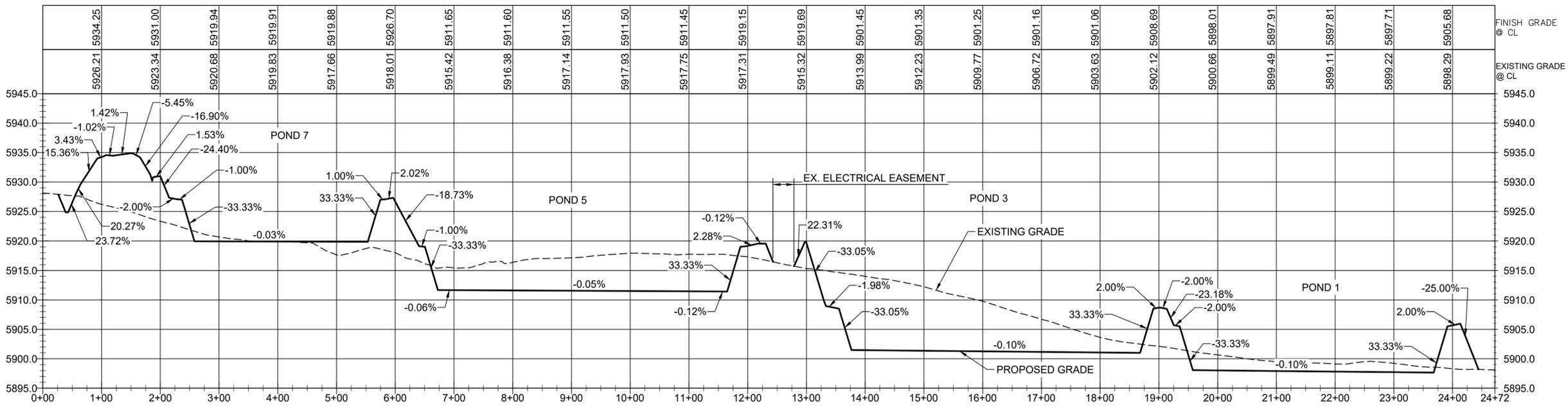
CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
POND PROFILE PLAN VIEW

project	119461	contract	
drawing	CG401	rev.	2
sheet	25 of	sheets	
file	119461_CG401.DWG		





SECTION A
CG402



SECTION B
CG402



no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW



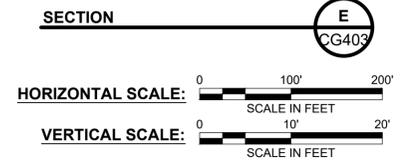
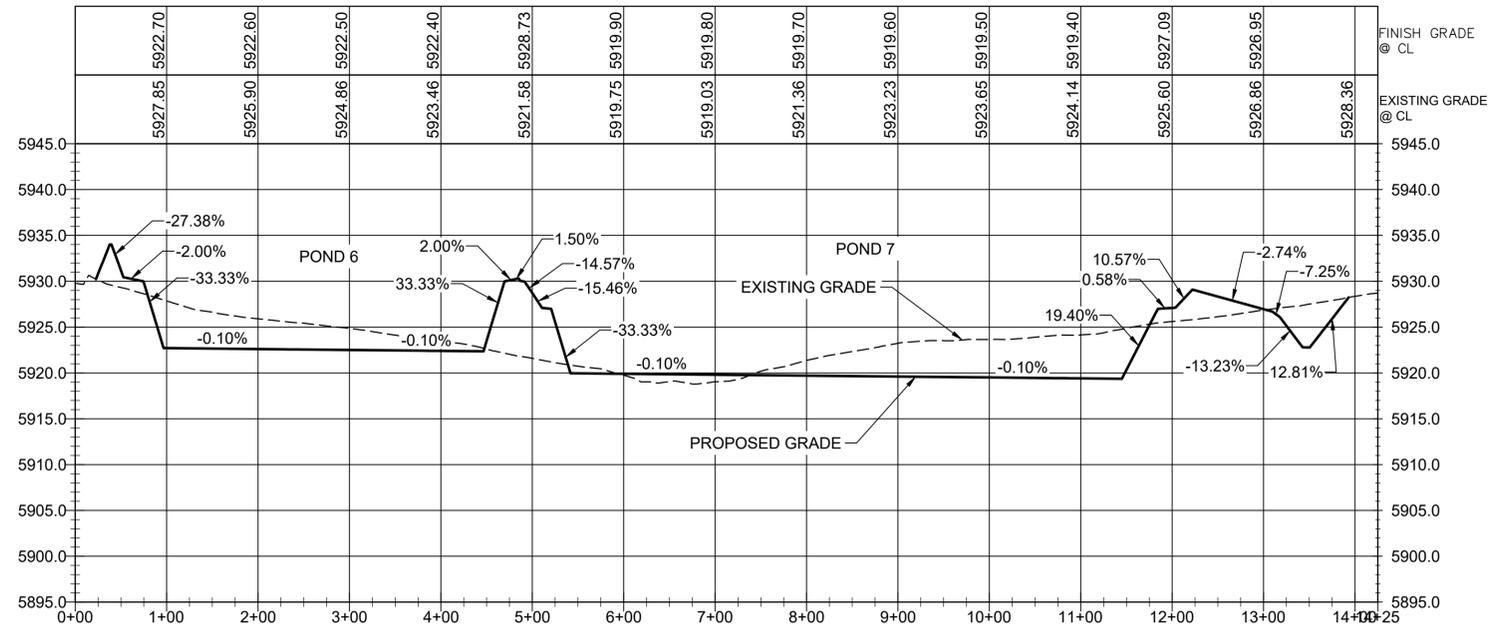
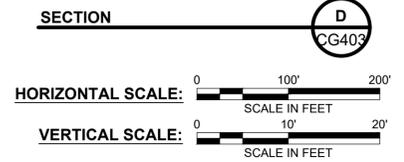
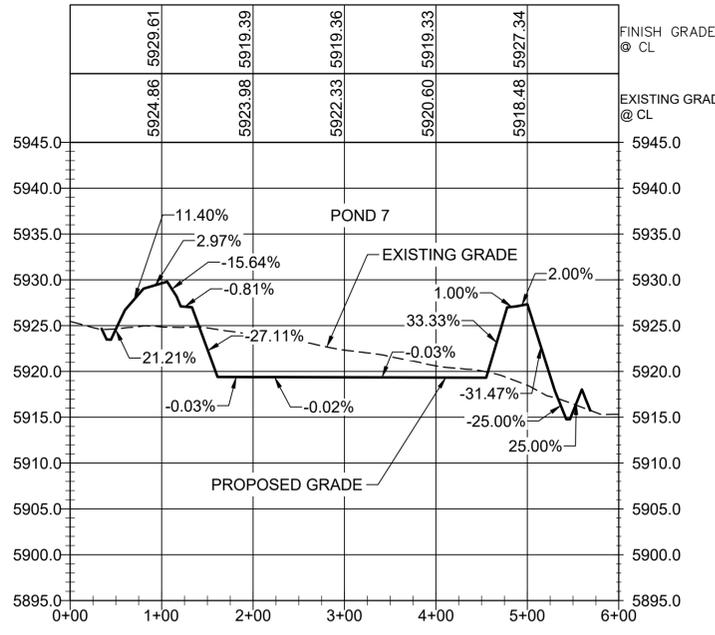
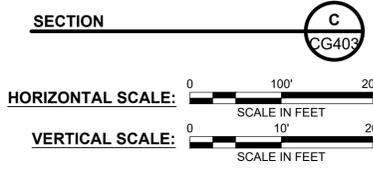
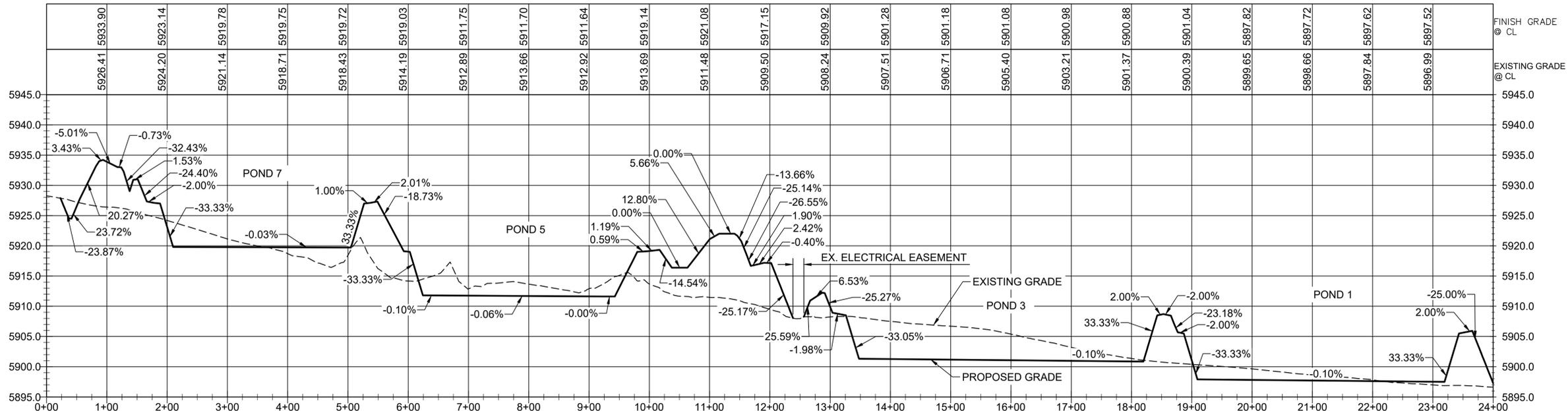
date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
POND PROFILES I

project	119461	contract	
drawing	CG402	rev.	2
sheet	26	of	sheets
file	119461_CG402.DWG		





no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW



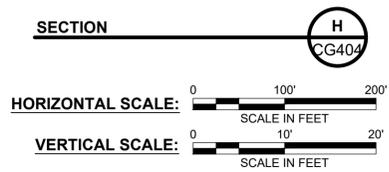
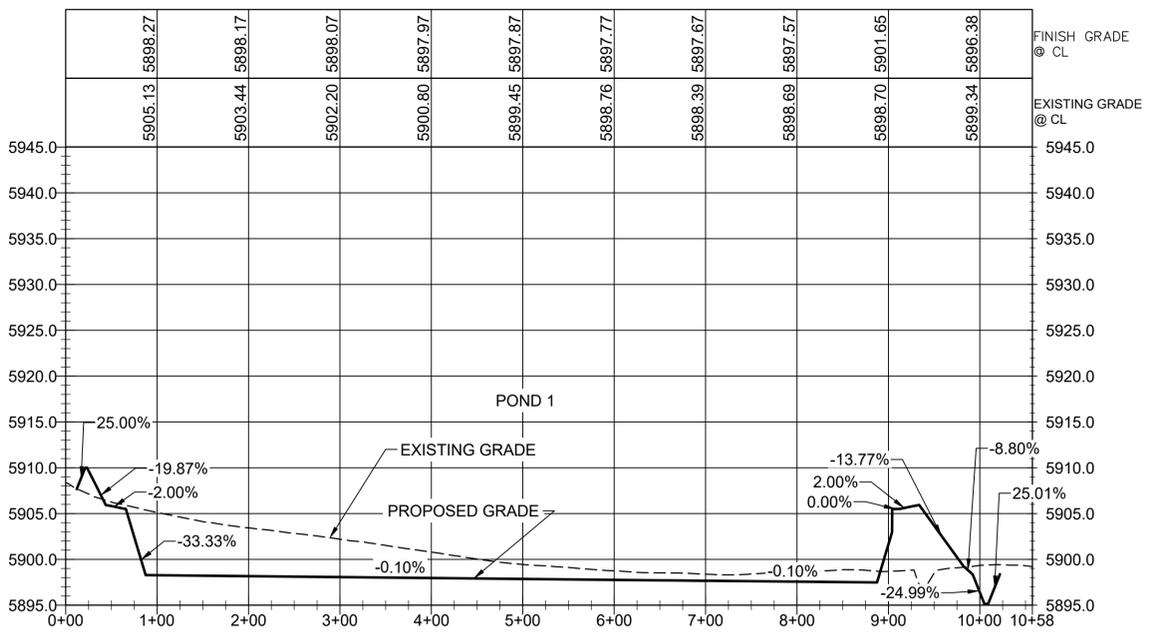
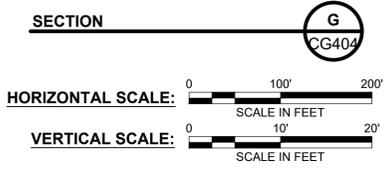
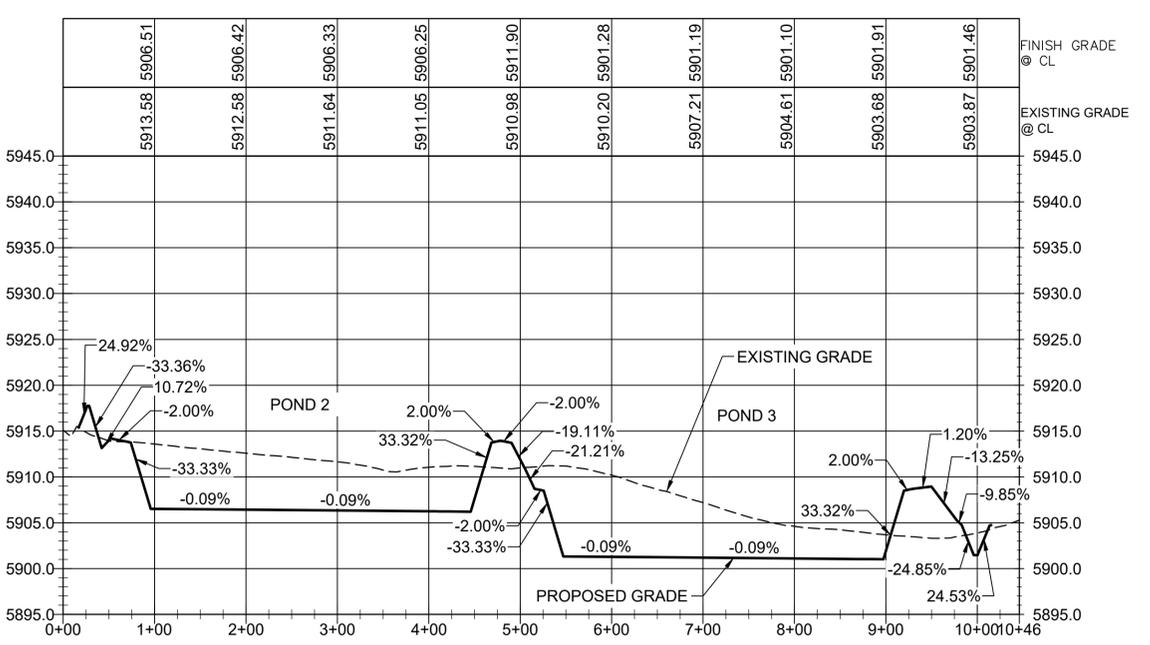
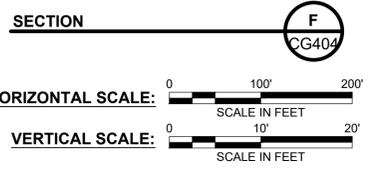
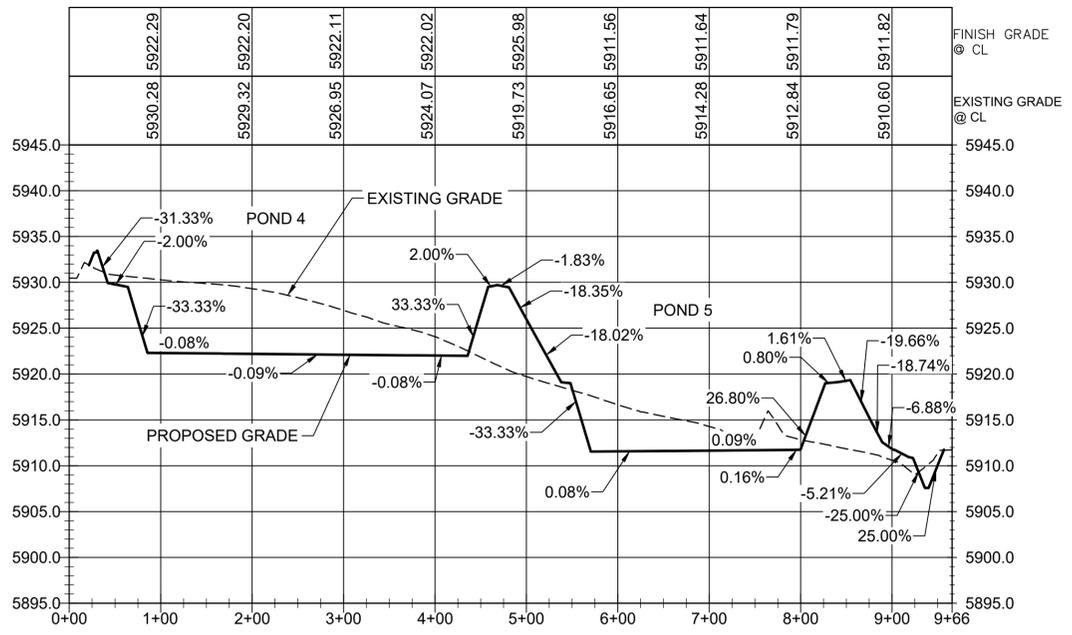
date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
 POND PROFILES II

project	119461	contract	
drawing	41295	rev.	2
sheet	27	of	sheets
file	119461_CG403.DWG		





no.	date	by	ckd	description
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1	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

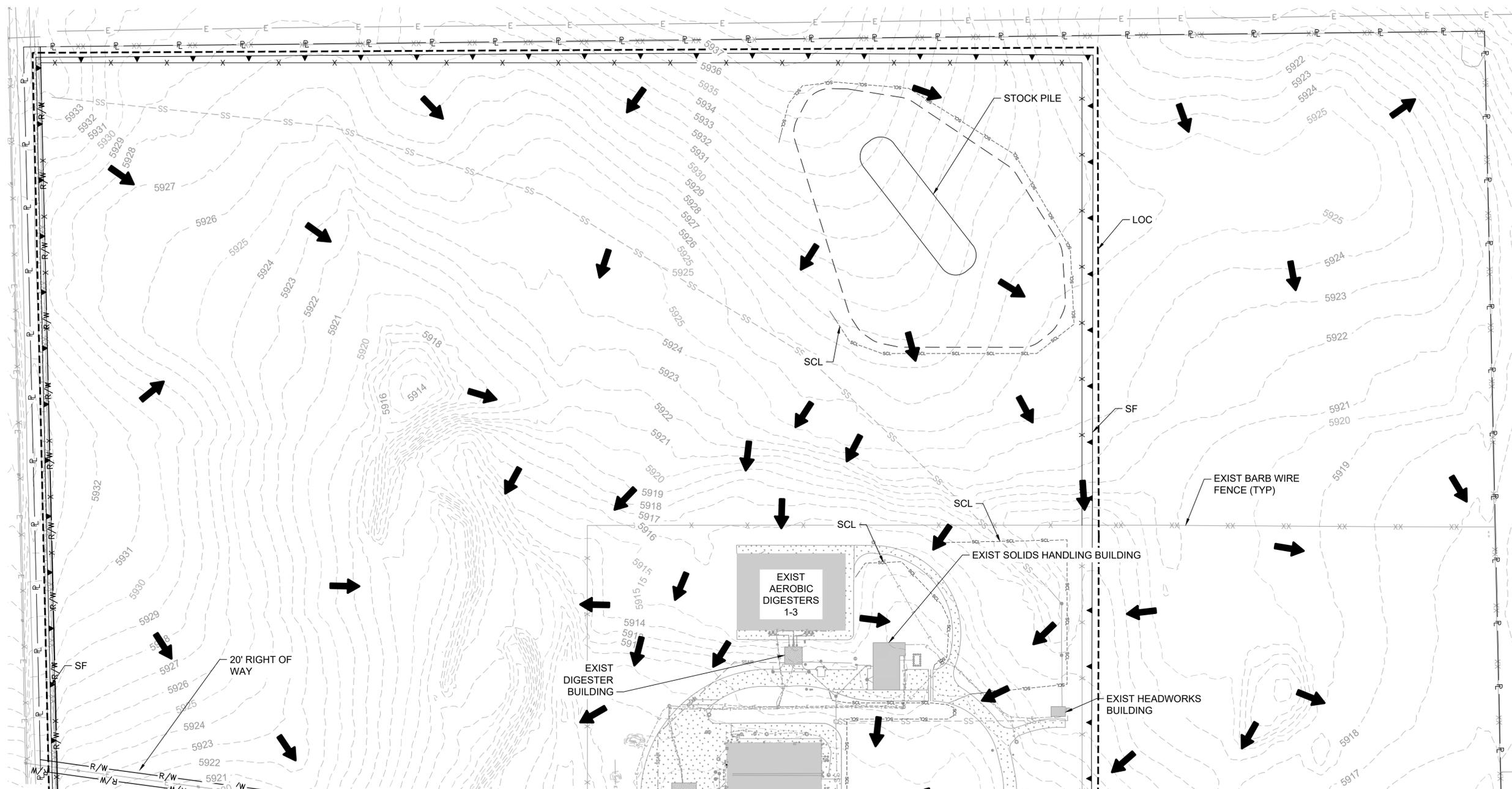
BURNS MEDONNELL
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE

CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
POND PROFILES III

project 119461	contract
drawing CG404	rev. 1
sheet 28	of sheets
file 119461_CG404.DWG	

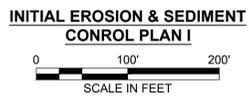
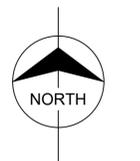




SEE SHEET CE102

LEGEND:

- NOTES:**
- DESIGN/BUILDER MAY CHOOSE TO USE ROCK SOCKS OR SEDIMENT CONTROL LOGS ON NATURAL GRASS AREA, WHERE INDICATED.
 - SEDIMENT CONTROL LOGS SHALL NOT BE USED ON PAVED, GRAVEL, OR RIPRAP SURFACES.
 - THE SITE IS LOCATED IN FEMA ZONE X "AREA OF MINIMAL FLOOD HAZARD."
 - THERE IS NO NOTABLE EXISTING VEGETATION ON SITE. ALL EXISTING VEGETATION IS GRASSES/WEEDS.
 - THIS PACKAGE WAS PREPARED UTILIZING THE GEOTECHNICAL RECOMMENDATIONS OUTLINED IN "GEOTECHNICAL ENGINEERING STUDY" FOR PROJECT NO. 20-2-126, PREPARED BY KUMAR & ASSOCIATES, INC. [REVISED 05/27/20]. SEE DOCUMENT FOR ADDITIONAL INFORMATION.



-  SILT FENCE (SF) 1
CG502
-  CONSTRUCTION BOUNDARY/LIMITS OF DISTURBANCE
-  CHAIN LINK FENCE
-  CONCRETE WASHOUT AREA (CWA) 2
CG502
-  STABILIZED STAGING AREA (SSA) 2
CG507
-  FODS TRACKOUT CONTROL MAT SYSTEM OR APPROVED EQUAL (VTC) 1
CG503
-  BARB WIRE FENCE
-  SEDIMENT CONTROL LOG (SCL) 3
CG502
-  FLOW DIRECTION

no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

A
B
C
D
E
F

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 9785 Maroon Cir., Suite 400
 Centennial, CO 80112
 303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE



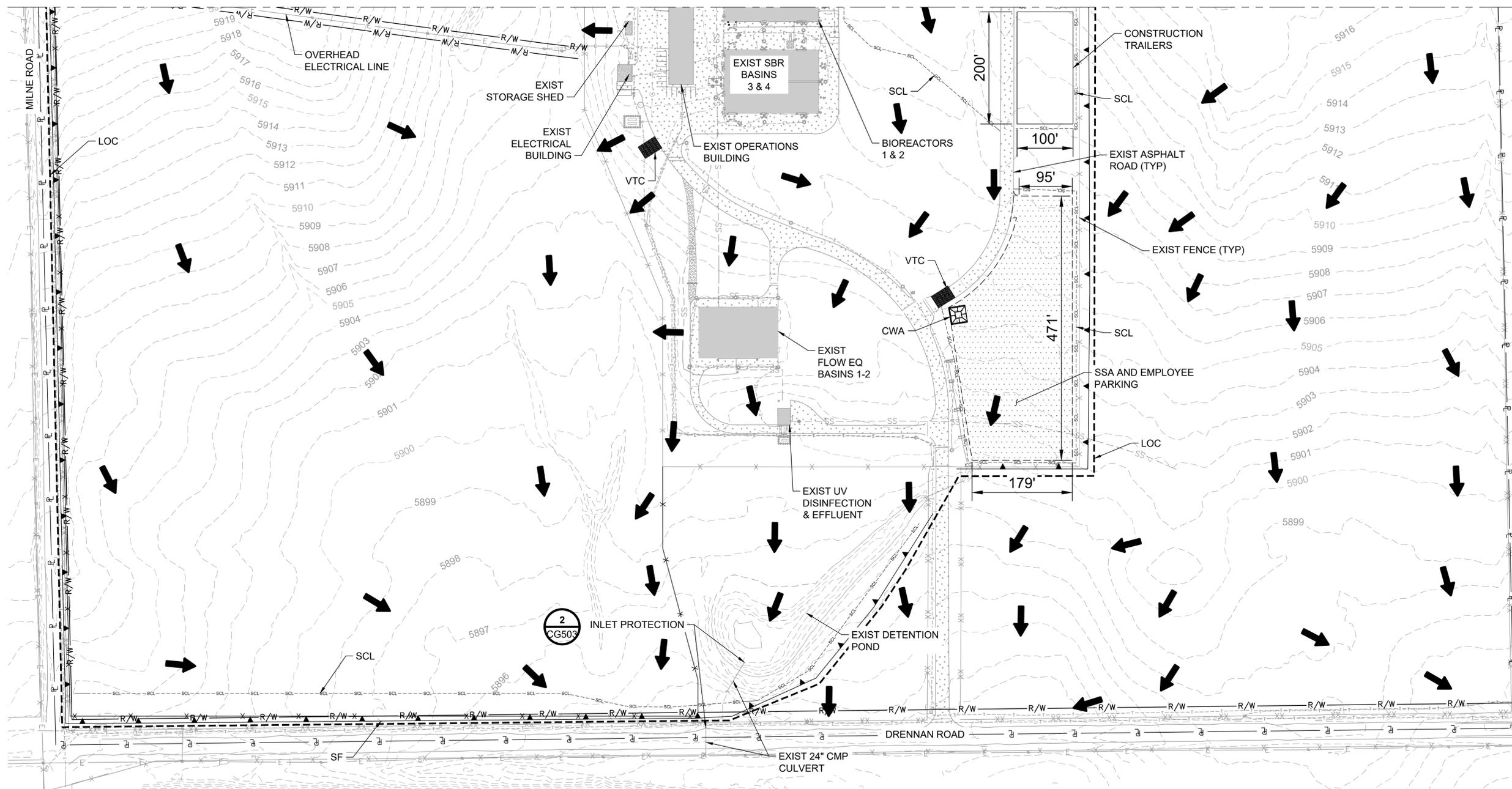
CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
 INITIAL EROSION & SEDIMENT CONTROL PLAN I

project 119461	contract
drawing 41295 12/11/2020	rev. 2
sheet 30	of sheets
file 119461_CE101.DWG	

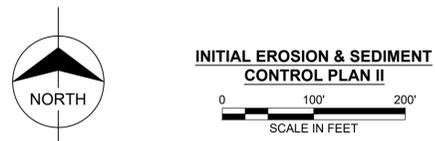


PCD FILING NO: PPR-20-044

SEE SHEET CE101



- NOTES:**
- DESIGN/BUILDER MAY CHOOSE TO USE ROCK SOCKS OR SEDIMENT CONTROL LOGS ON NATURAL GRASS AREA, WHERE INDICATED.
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- LEGEND:**
- ▲— SILT FENCE (SF) 1 CG502
 - - - CONSTRUCTION BOUNDARY/LIMITS OF DISTURBANCE
 - x-x- CHAIN LINK FENCE
 - CONCRETE WASHOUT AREA (CWA) 2 CG502
 - ▨ STABILIZED STAGING AREA (SSA) 2 CG507
 - ▤ FODS TRACKOUT CONTROL MAT SYSTEM OR APPROVED EQUAL (VTC) 1 CG503
 - x-x- BARB WIRE FENCE
 - scl-scl- SEDIMENT CONTROL LOG (SCL) 3 CG502
 - ➔ FLOW DIRECTION

no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

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 9785 Maroon Cir., Suite 400
 Centennial, CO 80112
 303-721-9292

date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE



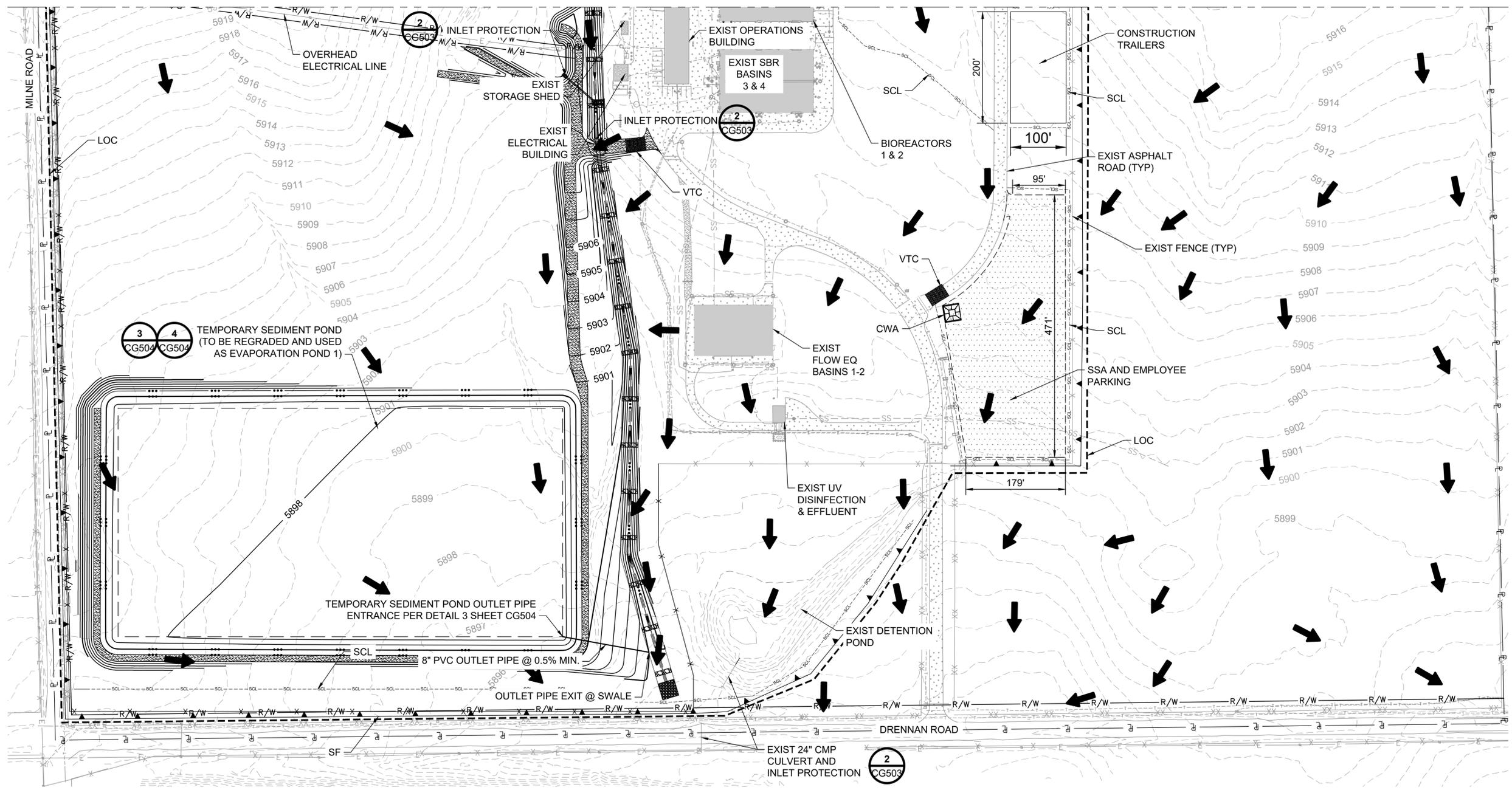
CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
 INITIAL EROSION & SEDIMENT CONTROL PLAN II

project	119461	contract	
drawing	CE102	rev.	2
sheet	31	of	sheets
file	119461_CE102.DWG		

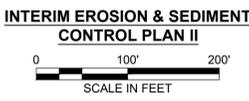
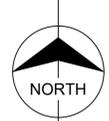


PCD FILING NO: PPR-20-044

SEE SHEET CE103



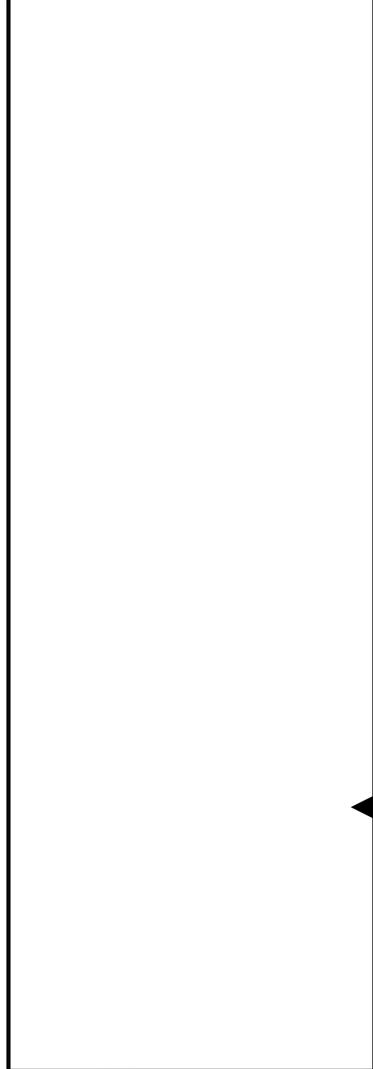
- NOTES:**
- DESIGN/BUILDER MAY CHOOSE TO USE ROCK SOCKS OR SEDIMENT CONTROL LOGS ON NATURAL GRASS AREA, WHERE INDICATED.
 - SEDIMENT CONTROL LOGS SHALL NOT BE USED ON PAVED, GRAVEL, OR RIPRAP SURFACES.
 - INSTALL ROCK CHECK DAMS WITH A 50FT SPACING PER DETAIL 1 ON SHEET CG501 IN SWALE.
 - THE SITE IS LOCATED IN FEMA ZONE X "AREA OF MINIMAL FLOOD HAZARD."
 - THERE IS NO NOTABLE EXISTING VEGETATION ON SITE. ALL EXISTING VEGETATION IS GRASSES/WEEDS.
 - THIS PACKAGE WAS PREPARED UTILIZING THE GEOTECHNICAL RECOMMENDATIONS OUTLINED IN "GEOTECHNICAL ENGINEERING STUDY" FOR PROJECT NO. 20-2-126, PREPARED BY KUMAR & ASSOCIATES, INC. [REVISED 05/27/20]. SEE DOCUMENT FOR ADDITIONAL INFORMATION.



LEGEND:

- SILT FENCE (SF) (1) CG502
- CONSTRUCTION BOUNDARY/LIMITS OF DISTURBANCE
- CHAIN LINK FENCE
- CONCRETE WASHOUT AREA (CWA) (2) CG502
- STABILIZED STAGING AREA (SSA) (2) CG501
- FODS TRACKOUT CONTROL MAT SYSTEM OR APPROVED EQUAL (VTC) (1) CG503
- BARB WIRE FENCE
- SEDIMENT CONTROL LOG (SCL) (3) CG502
- FLOW DIRECTION
- ROCK CHECK DAM (CD) (1) CG501

no.	date	by	ckd	description
0	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
1	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW



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 9785 Maroon Cir., Suite 400
 Centennial, CO 80112
 303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE



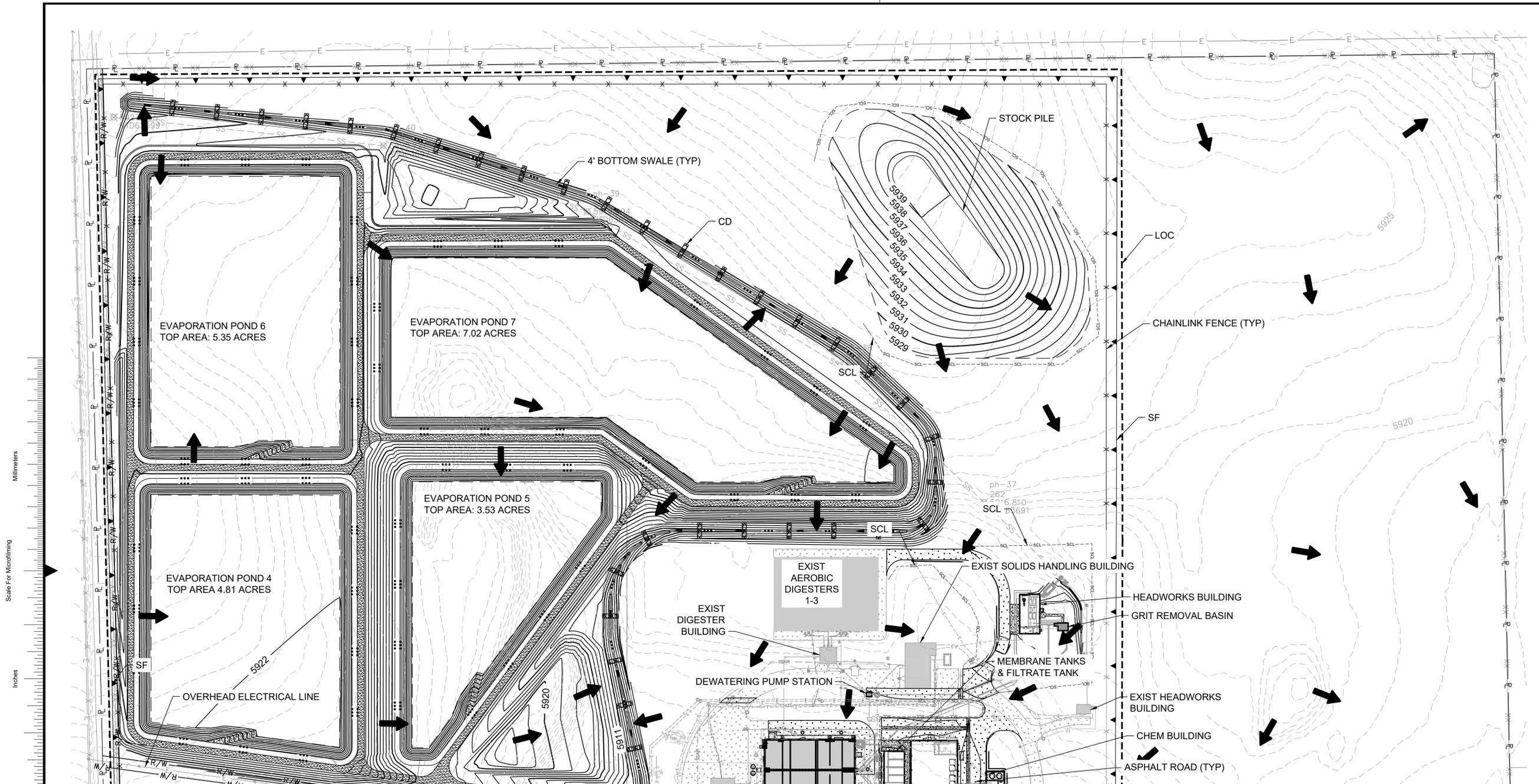
CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
 INTERIM EROSION & SEDIMENT CONTROL PLAN II

project 119461	contract
drawing CE104	rev. 1
sheet 33	of sheets
file 119461_CE104.DWG	



PCD FILING NO: PPR-20-044

no.	date	by	ckd	description
0	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW



Scale For Microfining
Millimeters
Inches

A
B
C
D
E
F

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9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

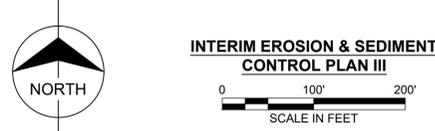
date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
INTERIM EROSION & SEDIMENT CONTROL PLAN III

project	119461	contract	
drawing	CE105	rev.	0
sheet	34	of	sheets
file	119461_CE105.DWG		

- NOTES:**
- DESIGN/BUILDER MAY CHOOSE TO USE ROCK SOCKS OR SEDIMENT CONTROL LOGS ON NATURAL GRASS AREA, WHERE INDICATED.
 - SEDIMENT CONTROL LOGS SHALL NOT BE USED ON PAVED, GRAVEL, OR RIPRAP SURFACES.
 - INSTALL ROCK CHECK DAMS WITH A 50 FT SPACING PER DETAIL 1 ON SHEET CG501 IN SWALE.
 - THE SITE IS LOCATED IN FEMA ZONE X "AREA OF MINIMAL FLOOD HAZARD."
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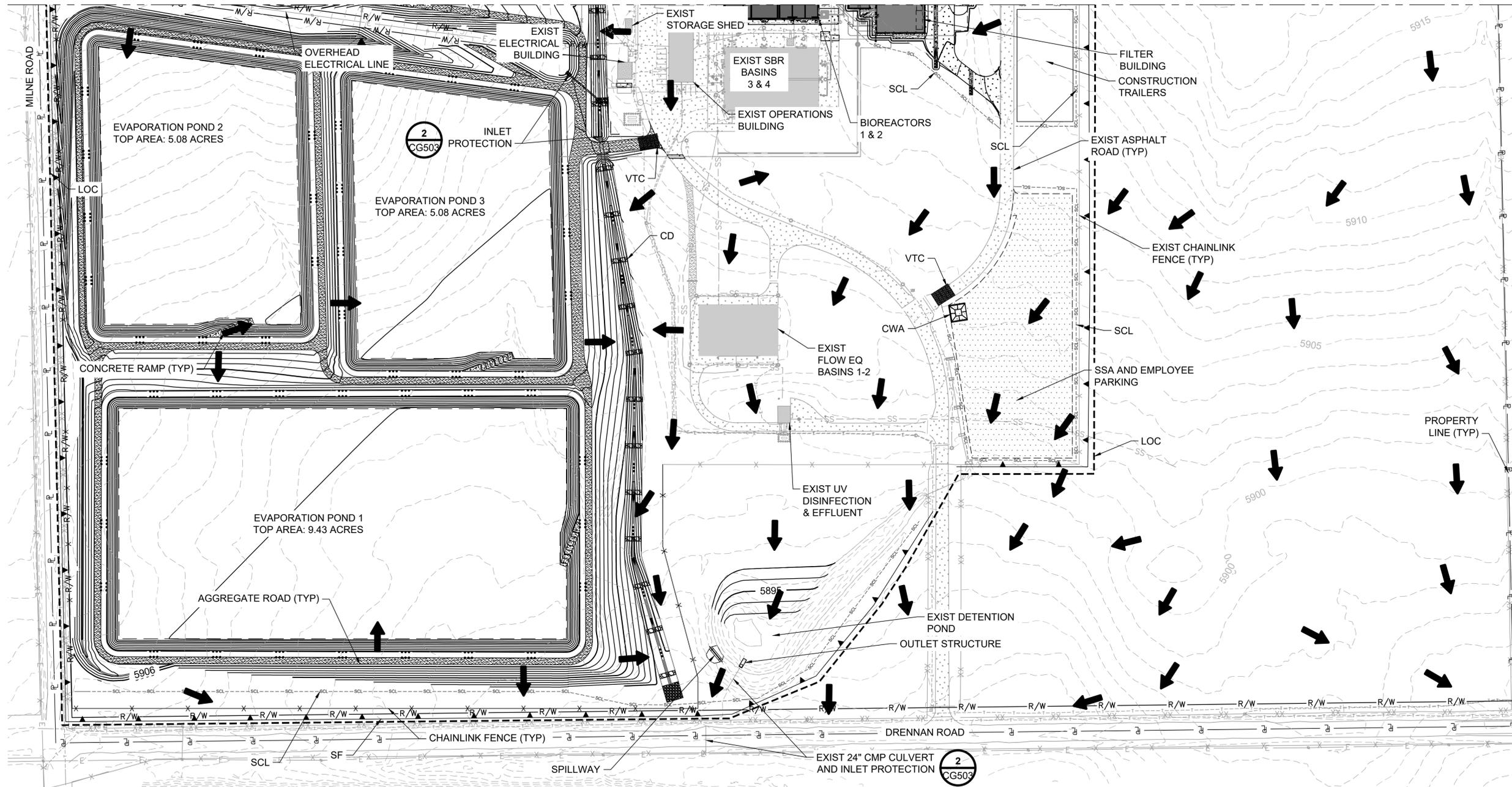


SEE SHEET CE106
LEGEND:

- SILT FENCE (SF) 1 CG502
- CONSTRUCTION BOUNDARY/LIMITS OF DISTURBANCE
- CHAIN LINK FENCE
- CONCRETE WASHOUT AREA (CWA) 2 CG502
- STABILIZED STAGING AREA (SSA) 2 CG501
- FODS TRACKOUT CONTROL MAT SYSTEM OR APPROVED EQUAL (VTC) 1 CG503
- BARB WIRE FENCE
- SEDIMENT CONTROL LOG (SCL) 3 CG502
- FLOW DIRECTION
- ROCK CHECK DAM (CD) 1 CG501



SEE SHEET CE105



Scale For Microfining
Millimeters
Inches

- NOTES:**
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 - INSTALL ROCK CHECK DAMS WITH A 50FT SPACING PER DETAIL 1 ON SHEET CG501 IN SWALE.
 - THE SITE IS LOCATED IN FEMA ZONE X "AREA OF MINIMAL FLOOD HAZARD."
 - THERE IS NO NOTABLE EXISTING VEGETATION ON SITE. ALL EXISTING VEGETATION IS GRASSES/WEEDS.
 - THIS PACKAGE WAS PREPARED UTILIZING THE GEOTECHNICAL RECOMMENDATIONS OUTLINED IN "GEOTECHNICAL ENGINEERING STUDY" FOR PROJECT NO. 20-2-126, PREPARED BY KUMAR & ASSOCIATES, INC. [REVISED 05/27/20]. SEE DOCUMENT FOR ADDITIONAL INFORMATION .



LEGEND:

- SILT FENCE (SF) 1
CG502
- CONSTRUCTION BOUNDARY/LIMITS OF DISTURBANCE
- CHAIN LINK FENCE
- CONCRETE WASHOUT AREA (CWA) 2
CG502
- STABILIZED STAGING AREA (SSA) 2
CG501
- FODS TRACKOUT CONTROL MAT SYSTEM OR APPROVED EQUAL (VTC) 1
CG503
- BARB WIRE FENCE
- SEDIMENT CONTROL LOG (SCL) 3
CG502
- FLOW DIRECTION
- ROCK CHECK DAM (CD) 1
CG501

no.	date	by	ckd	description
0	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

BURNS & MCDONNELL
 9785 Maroon Cir., Suite 400
 Centennial, CO 80112
 303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE



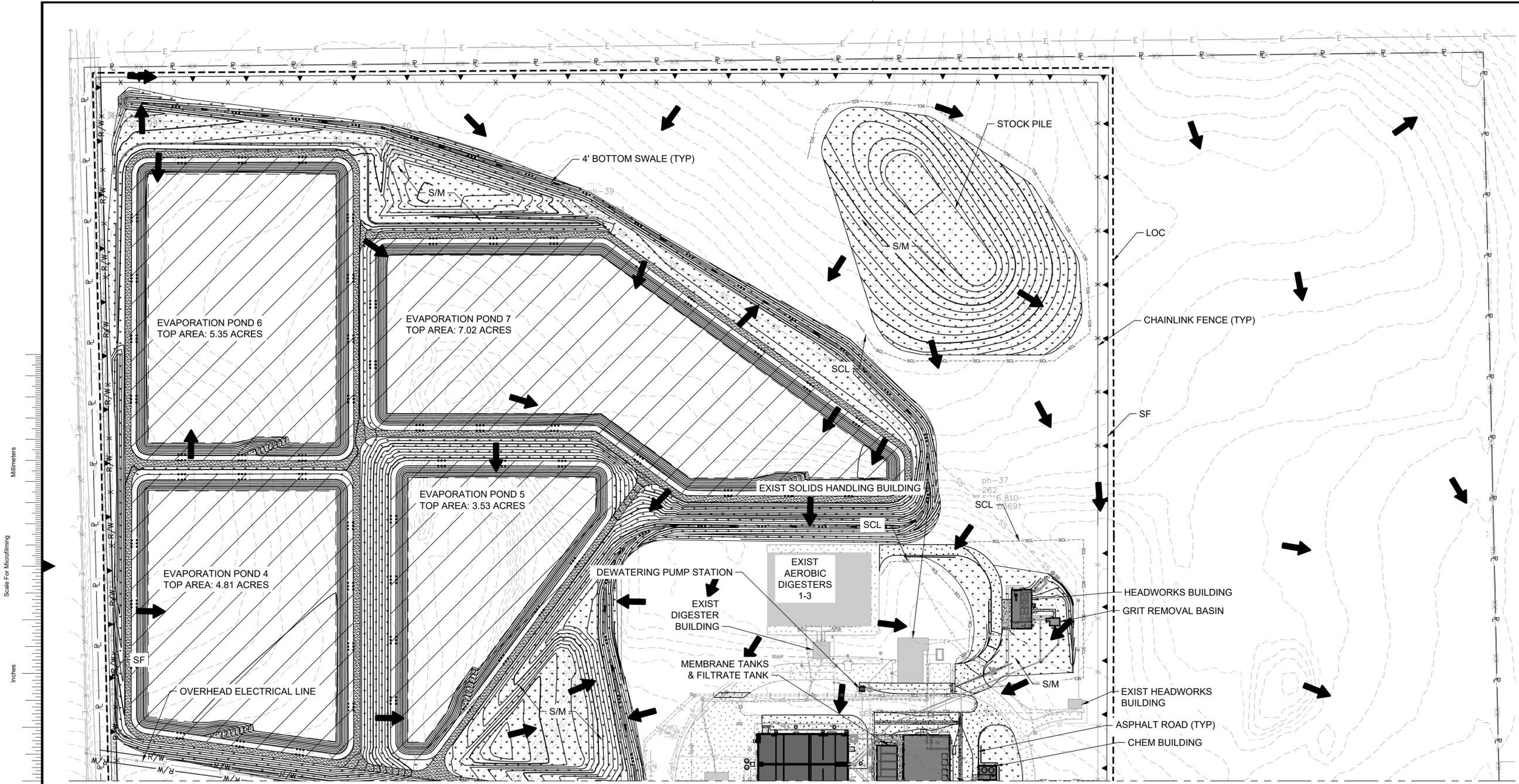
CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
 INTERIM EROSION & SEDIMENT CONTROL PLAN IV

project 119461	contract
drawing 41295 12/11/2020	rev. 0
sheet 35 of sheets	file 119461_CE106.DWG



PCD FILING NO: PPR-20-044

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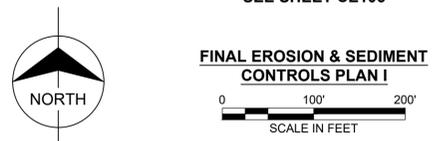


Scale For Microfining
Millimeters
Inches

A
B
C
D
E
F
G
H
I

BURNS MEDONNELL
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

- NOTES:**
- DESIGN/BUILDER MAY CHOOSE TO USE ROCK SOCKS OR SEDIMENT CONTROL LOGS ON NATURAL GRASS AREA, WHERE INDICATED.
 - SEDIMENT CONTROL LOGS SHALL NOT BE USED ON PAVED, GRAVEL, OR RIPRAP SURFACES.
 - ALL DISTURBED EARTHEN AREAS TO BE SEEDED AND MULCHED WITH A NATIVE SEED MIX
 - THE SITE IS LOCATED IN FEMA ZONE X "AREA OF MINIMAL FLOOD HAZARD."
 - THERE IS NO NOTABLE EXISTING VEGETATION ON SITE. ALL EXISTING VEGETATION IS GRASSES/WEEDS.
 - THIS PACKAGE WAS PREPARED UTILIZING THE GEOTECHNICAL RECOMMENDATIONS OUTLINED IN "GEOTECHNICAL ENGINEERING STUDY" FOR PROJECT NO. 20-2-126, PREPARED BY KUMAR & ASSOCIATES, INC. [REVISED 05/27/20]. SEE DOCUMENT FOR ADDITIONAL INFORMATION .



LEGEND:

	SILT FENCE (SF) ¹ CG502
	CONSTRUCTION BOUNDARY/LIMITS OF DISTURBANCE
	CHAIN LINK FENCE
	SEEDING & MULCHING (S/M) ¹ CG504 ² CG504
	EVAPORATION POND LINER
	BARB WIRE FENCE
	FLOW DIRECTION
	ROCK CHECK DAM (CD) ¹ CG501

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE

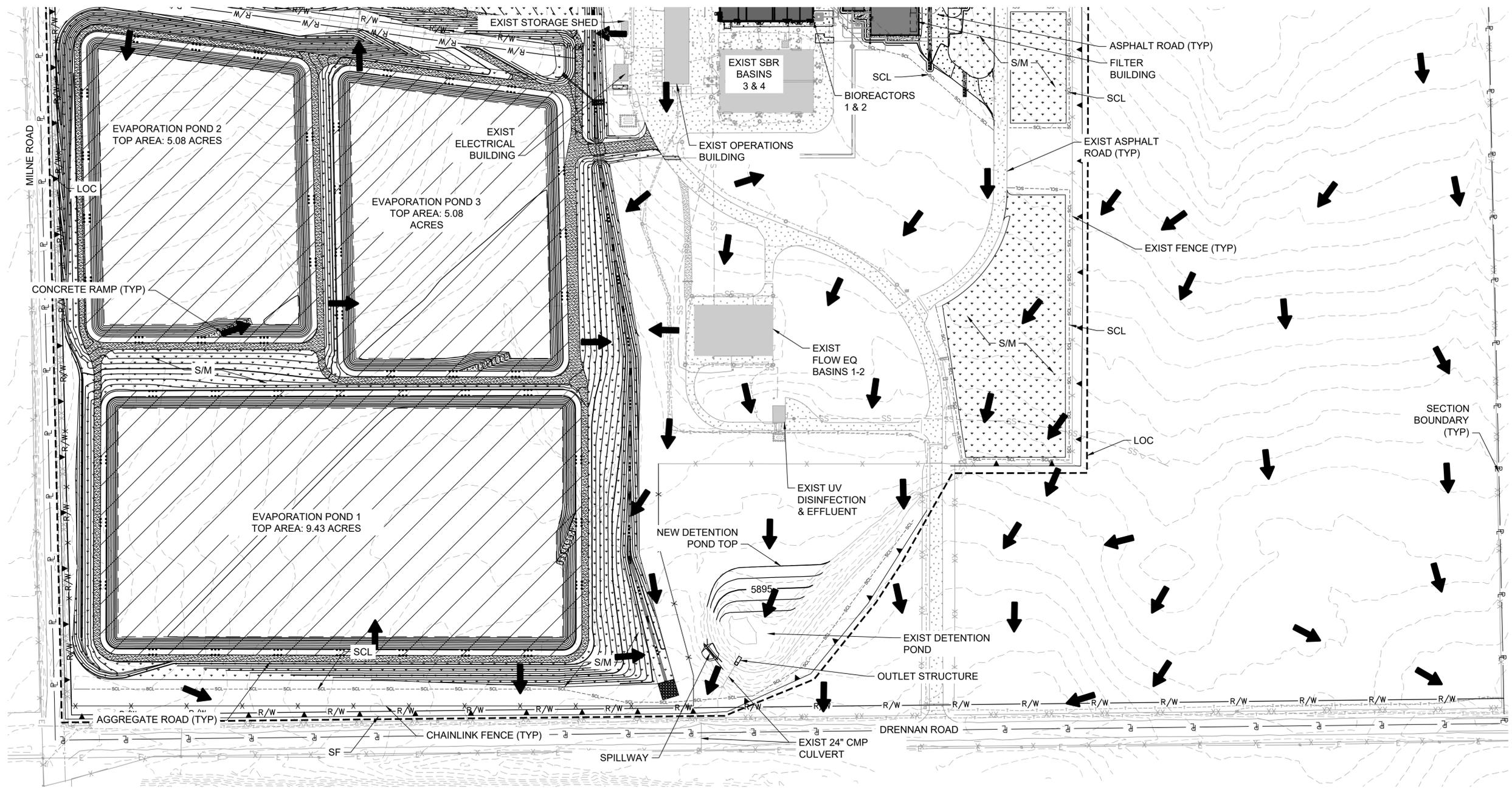


CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
FINAL EROSION & SEDIMENT CONTROLS PLAN I

project 119461	contract
drawing 41295 12/11/2020	rev. 0
sheet 36	of sheets
file 119461_CE107.DWG	

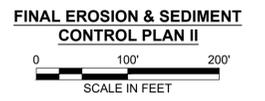
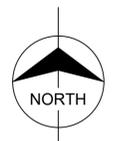


SEE SHEET CE107



Scale For Microfinishing
Millimeters
Inches

- NOTES:**
- DESIGN/BUILDER MAY CHOOSE TO USE ROCK SOCKS OR SEDIMENT CONTROL LOGS ON NATURAL GRASS AREA, WHERE INDICATED.
 - SEDIMENT CONTROL LOGS SHALL NOT BE USED ON PAVED, GRAVEL, OR RIPRAP SURFACES.
 - ALL DISTURBED EARTHEN AREAS TO BE SEEDED AND MULCHED WITH A NATIVE SEED MIX
 - THE SITE IS LOCATED IN FEMA ZONE X "AREA OF MINIMAL FLOOD HAZARD."
 - THERE IS NO NOTABLE EXISTING VEGETATION ON SITE. ALL EXISTING VEGETATION IS GRASSES/WEEDS.
 - THIS PACKAGE WAS PREPARED UTILIZING THE GEOTECHNICAL RECOMMENDATIONS OUTLINED IN "GEOTECHNICAL ENGINEERING STUDY" FOR PROJECT NO. 20-2-126, PREPARED BY KUMAR & ASSOCIATES, INC. [REVISED 05/27/20]. SEE DOCUMENT FOR ADDITIONAL INFORMATION .



LEGEND:

	SILT FENCE (SF) 1 CG502
	CONSTRUCTION BOUNDARY/LIMITS OF DISTURBANCE
	CHAIN LINK FENCE
	SEEDING & MULCHING (S/M) 1 CG504 2 CG504
	EVAPORATION POND LINER
	BARB WIRE FENCE
	FLOW DIRECTION
	ROCK CHECK DAM (CD) 1 CG501

no.	date	by	ckd	description
0	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

BURNS MEDONNELL
9785 Maroon Cir., Suite 400
Centennial, CO 80112
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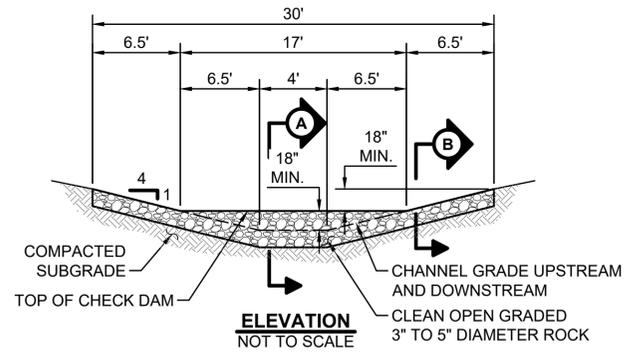
date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE



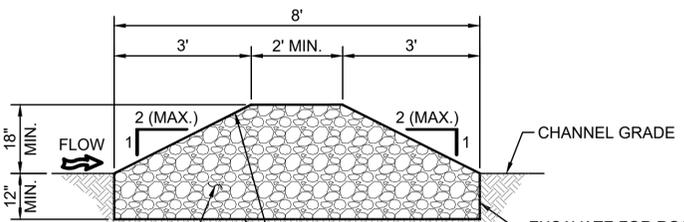
CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
FINAL EROSION & SEDIMENT CONTROL PLAN II

project 119461	contract
drawing CE108	rev. 0
sheet 37	of sheets
file 119461_CE108.DWG	

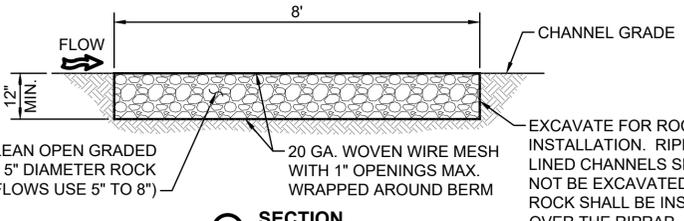




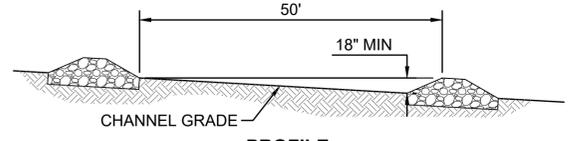
ELEVATION
NOT TO SCALE



SECTION A
NOT TO SCALE



SECTION B
NOT TO SCALE

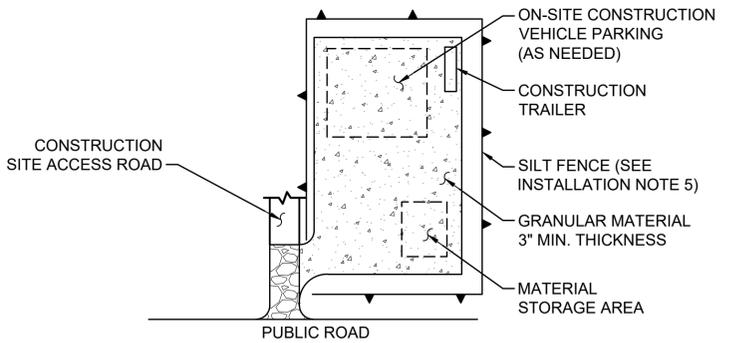


PROFILE
NOT TO SCALE

- INSTALLATION NOTES:**
- SEE SEDIMENT AND EROSION CONTROL PLAN FOR GENERAL LOCATION OF CHECK DAMS. DESIGN/BUILDER MAY MODIFY LOCATIONS AND QUANTITIES WITH APPROVAL FROM ENGINEER AND/OR OWNER.
 - CHECK DAMS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES IN THE CHANNELS THAT WILL NOT BE DISTURBED. DAMS LOCATED IN NEW CHANNELS THAT WILL BE GRADED SHALL BE INSTALLED AS SOON AS POSSIBLE AFTER CHANNEL GRADING HAS BEEN COMPLETED.
 - CHECK DAM AGGREGATE SHALL CONSIST OF 3" TO 5" DIAMETER ROCK (5" TO 8" FOR HIGH FLOW AREAS). CHECK DAM BERM STRUCTURE SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING A MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAGE GALVANIZED SECURED WITH SHOAT RINGS. WIRE SHALL BE INSTALLED PERPENDICULAR TO THE FLOW LINE, AND WRAPPED AROUND ROCK BERM AND TIED WITH TIE WIRE TO RETAIN THE BERMS SHAPE.
 - CHECK DAM SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 12 INCHES. CHECK DAMS THAT ARE INSTALLED ON RIPRAP LINED CHANNELS SHALL NOT BE EXCAVATED 12 INCHES. WOVEN WIRE SHALL BE PLACED ON OVER THE RIPRAP PRIOR TO CHECK DAM ROCK PLACEMENT TO SEPARATE THE CHECK DAM ROCK FROM THE RIPRAP.

- MAINTENANCE NOTES:**
- THE DESIGN/BUILDER SHALL INSPECT THE REINFORCED CHECK DAMS WEEKLY AND MAINTAIN THEM IN AN EFFECTIVE CONDITION. THEY SHALL ALSO BE INSPECTED WITHIN 24 HOURS AFTER A STORM EVENT AND REPAIRS SHOULD BE COMPLETED AS NEEDED.
 - SEDIMENT ACCUMULATED UPSTREAM OF REINFORCED CHECK DAMS SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST OF THE DAM.
 - CHECK DAMS THAT ARE SHOWN IN RIPRAP LINED DRAINAGE CHANNELS SHALL BE INSTALLED AFTER RIPRAP IS INSTALLED. IF RIPRAP IS NOT INSTALLED DURING CHANNEL CONSTRUCTION, THE CHECK DAMS SHALL BE TEMPORARILY INSTALLED UNTIL COMMENCING THE RIPRAP INSTALLATION.
 - REINFORCED CHECK DAMS SHALL BE REMOVED AT THE END OF CONSTRUCTION. AFTER REMOVAL OF THE DAMS THE EXCAVATION SHALL BE FILLED AND THE DISTURBED AREA SHALL BE TOP-SOILED, SEEDED AND MULCHED.

ROCK CHECK DAM DETAIL (CD)
NOT TO SCALE

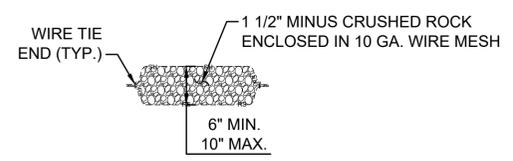


PLAN
NOT TO SCALE

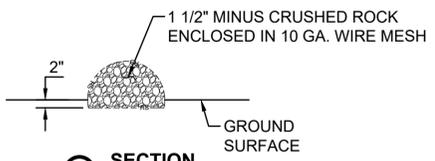
- INSTALLATION NOTES:**
- SEE SEDIMENT AND EROSION CONTROL PLAN FOR GENERAL LOCATION OF STAGING AREA. DESIGN/BUILDER MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH APPROVAL FROM ENGINEER AND/OR OWNER.
 - STABILIZED STAGING AREA SHALL BE SIZED APPROPRIATELY TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
 - STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
 - THE STABILIZED STAGING AREA SHALL CONSIST OF 2-4" DIAMETER AGGREGATE A MINIMUM OF 3 INCHES THICK.
 - STAGING AREA SHALL BE CONTAINED WITHIN THE SITE'S PERIMETER BMPS, OR HAVE ADDITIONAL PERIMETER BMPS (SILT FENCE) INSTALLED AROUND STAGING AREA.

- MAINTENANCE NOTES:**
- THE DESIGN/BUILDER SHALL INSPECT THE STABILIZED STAGING AREA WEEKLY AND MAINTAIN IT IN AN EFFECTIVE CONDITION. IT SHALL ALSO BE INSPECTED WITHIN 24 HOURS AFTER A STORM EVENT AND REPAIRS OR CLEAN OUT OF UPSTREAM SEDIMENT SHOULD BE COMPLETED AS NEEDED.
 - THE DESIGN/BUILDER SHALL PROVIDE ADDITIONAL THICKNESS OF AGGREGATE MATERIAL IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
 - STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
 - ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
 - THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED AND THE AREA TOPSOILED, SEEDED AND MULCHED.

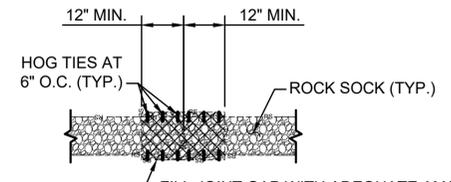
STABILIZED STAGING AREA DETAIL (SSA)
NOT TO SCALE



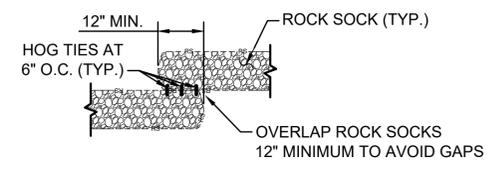
PLAN
NOT TO SCALE



SECTION A
NOT TO SCALE



LAPPED JOINT DETAIL
NOT TO SCALE



OVERLAP JOINT DETAIL
NOT TO SCALE

- INSTALLATION NOTES:**
- SEE SEDIMENT AND EROSION CONTROL PLAN FOR GENERAL LOCATION OF ROCK SOCKS. DESIGN/BUILDER MAY MODIFY LOCATIONS WITH APPROVAL FROM ENGINEER AND/OR OWNER.
 - CRUSHED ROCK SHALL BE 1-1/2" MINUS IN SIZE WITH A FRACTURED FACE ON ALL SIDES AND SHALL CONFORM TO THE GRADATION IN TABLE A.
 - WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF 1/2".
 - WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS AT ENDS OF SOCKS.

- MAINTENANCE NOTES:**
- THE DESIGN/BUILDER SHALL INSPECT THE ROCK SOCKS WEEKLY AND MAINTAIN THEM IN AN EFFECTIVE CONDITION. THEY SHALL ALSO BE INSPECTED WITHIN 24 HOURS AFTER A STORM EVENT AND REPAIRS SHOULD BE COMPLETED AS NEEDED.
 - SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCK SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE ROCK SOCK.
 - ROCK SOCKS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED.
 - ONCE CONSTRUCTION AND FINAL STABILIZATION IS COMPLETE THE ROCK SOCKS SHALL BE REMOVED. AFTER REMOVAL THE DISTURBED AREAS SHALL BE TOP-SOILED, SEEDED AND MULCHED.

GRADATION TABLE A

SIEVE SIZE	PERCENT PASSING
2"	100
1-1/2"	90 - 100
1"	20 - 55
3/4"	0 - 15
3/8"	0 - 5

ROCK SOCK DETAIL (RS)
NOT TO SCALE



no.	date	by	ckd	description
0	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
1	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW



date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE



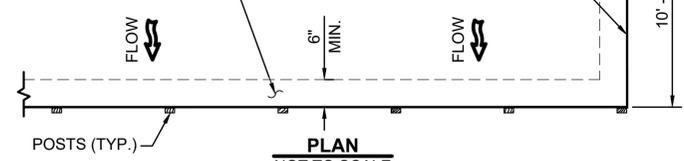
**CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
GRADING & EROSION CONTROL DETAILS I**

project 119461	contract
drawing CG501	rev. 1
sheet 38 of	sheets
file 119461_CG501.DWG	



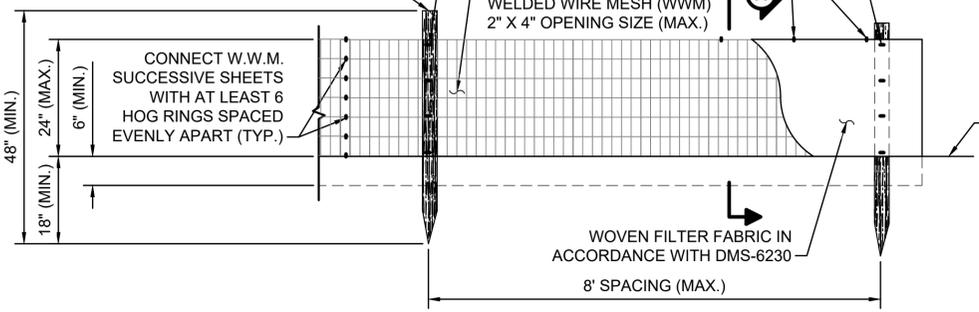
6" WIDE X 6" DEEP ANCHOR TRENCH
EXTEND FILTER FABRIC DOWN SIDE
OF ANCHOR TRENCH AND AT LEAST 2"
ACROSS BOTTOM OF TRENCH. BACKFILL
AND COMPACT PER INSTALLATION NOTES

ROTATE THE ENDS OF SILT FENCE
PERPENDICULAR TO THE CONTOUR
TO ASSURE SOILS ARE CONTAINED

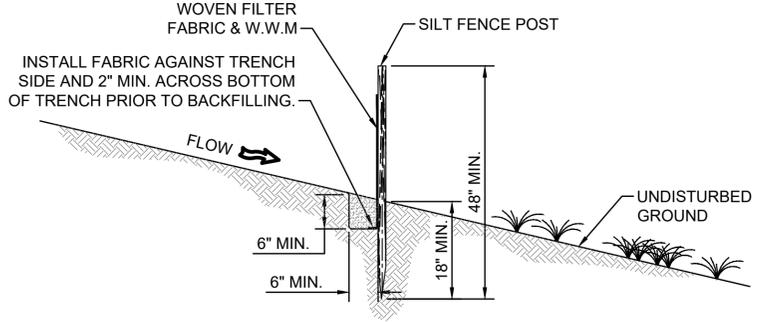


PLAN
NOT TO SCALE

SILT FENCE POST MINIMUM SIZES
3" DIAMETER OR 2" X 4" (SOFTWOOD)
1.5" X 1.5" CROSS SECTION (HARDWOOD)
1.3 LB. PER FOOT (T- OR L- SHAPED STEEL)



ELEVATION
NOT TO SCALE



SECTION A
NOT TO SCALE

INSTALLATION NOTES:

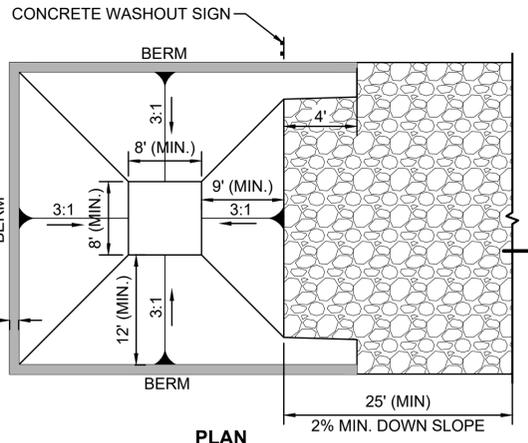
- SEE SEDIMENT AND EROSION CONTROL PLAN FOR GENERAL LOCATION OF SILT FENCE. CONTRACTOR MAY MODIFY LOCATIONS AND QUANTITIES WITH APPROVAL FROM ENGINEER AND/OR OWNER.
- SILT FENCE SHALL BE INSTALLED PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES.
- SILT FENCE SHALL BE PLACED AWAY FROM THE TOE OF A SLOPE TO ALLOW FOR WATER PONDING. IT SHALL BE INSTALLED AT LEAST 5 FEET BEYOND THE LIMITS OF GRADING.
- ANCHOR TRENCH SHALL BE EXCAVATED USING A TRENCHER OR SILT FENCE INSTALLATION DEVICE. GRADERS, BACKHOES OR OTHER SIMILAR EQUIPMENT SHALL NOT BE USED FOR INSTALLATION.
- COMPACTION OF THE ANCHOR TRENCH BACKFILL SHALL BE COMPLETED BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. THE COMPACTION EFFORT SHALL BE SUFFICIENT TO PREVENT THE SILT FENCE FROM BEING PULLED OUT BY HAND.
- WIRE MESH AND FABRIC SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE POSTS, THERE SHALL BE NO NOTICEABLE SAG BETWEEN POSTS AFTER INSTALLATION.
- STAPLES USED TO ANCHOR MESH AND FABRIC TO POSTS SHALL BE 3/4" HEAVY DUTY STAPLES WITH 1/2" LEGS MINIMUM.

- SILT FENCE SHALL BE INSTALLED AS CLOSE TO ON THE CONTOUR AS POSSIBLE. AT THE END OF A RUN OF SILT FENCE IT SHALL BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A J-HOOK. THE EXTENSION OF THE PERPENDICULAR SECTION SHOULD BE A SUFFICIENT LENGTH TO PREVENT RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE.

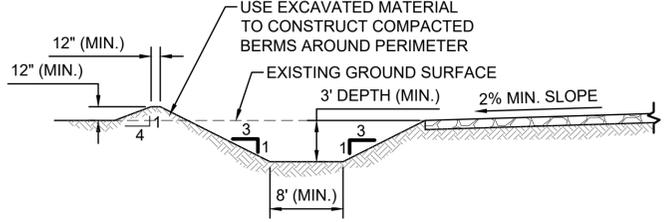
MAINTENANCE NOTES:

- THE CONTRACTOR SHALL INSPECT SILT FENCE WEEKLY AND MAINTAIN IT IN AN EFFECTIVE CONDITION. IT SHALL ALSO BE INSPECTED WITHIN 24 HOURS AFTER A STORM EVENT AND REPAIRS SHOULD BE COMPLETED AS NEEDED.
- SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS GREATER THAN 6 INCHES.
- REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING OR COLLAPSE.
- SILT FENCE SHALL REMAIN IN PLACE UNTIL UPSTREAM DISTURBED AREA HAS BEEN STABILIZED OR IT IS REPLACED BY ANOTHER EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
- SILT FENCE SHALL BE REMOVED AT THE END OF CONSTRUCTION. AFTER REMOVAL OF THE THE FABRIC, WIRE MESH AND POSTS THE DISTURBED AREAS SHALL BE TOP-SOILED, SEEDED AND MULCHED.

SILT FENCE DETAIL (SF)
NOT TO SCALE



PLAN
NOT TO SCALE



SECTION A
NOT TO SCALE

CONCRETE WASHOUT AREA DETAIL (CWA)
NOT TO SCALE

INSTALLATION NOTES:

- SEE SEDIMENT AND EROSION CONTROL PLAN FOR LOCATION OF CONCRETE WASHOUT AREA.
- THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
- VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- EXCAVATION MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES:

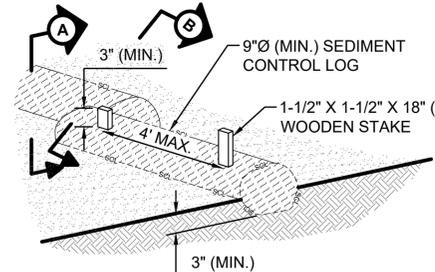
- THE CONCRETE WASHOUT AREA SHALL BE REPAIRED, ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE. CONCRETE WASTE MATERIALS SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
- THE CONTRACTOR SHALL INSPECT THE CONCRETE WASHOUT AREA WEEKLY AND MAINTAIN IT IN AN EFFECTIVE CONDITION. IT SHALL ALSO BE INSPECTED WITHIN 24 HOURS AFTER A STORM EVENT AND REPAIRS OR CLEAN OUT OF SEDIMENT SHOULD BE COMPLETED AS NEEDED.
- THE CONCRETE WASHOUT AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- THE CONCRETE WASHOUT AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE CONCRETE WASTE SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. AFTER REMOVAL OF THE WASTE MATERIAL THE AREA SHALL BE GRADED SMOOTH, TOPSOILED, SEEDED AND MULCHED.

INSTALLATION NOTES:

- SEE SEDIMENT AND EROSION CONTROL PLAN FOR GENERAL LOCATION OF SEDIMENT CONTROL LOGS. CONTRACTOR MAY MODIFY LOCATIONS AND QUANTITIES WITH APPROVAL FROM ENGINEER AND/OR OWNER.
- SEDIMENT CONTROL LOGS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES IN THE LOCATIONS THAT WILL NOT BE DISTURBED. LOGS LOCATED IN AREAS THAT WILL BE GRADED SHALL BE INSTALLED AS SOON AS POSSIBLE AFTER GRADING HAS BEEN COMPLETED.
- SEDIMENT CONTROL LOGS SHOULD BE AVOIDED IN CONCENTRATED HIGH FLOW AREAS.
- SEDIMENT CONTROL LOGS SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 3 INCHES.

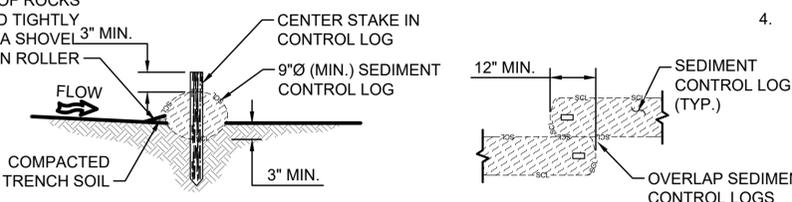
MAINTENANCE NOTES:

- THE CONTRACTOR SHALL INSPECT THE SEDIMENT CONTROL LOGS WEEKLY AND MAINTAIN THEM IN AN EFFECTIVE CONDITION. THEY SHALL ALSO BE INSPECTED WITHIN 24 HOURS AFTER A STORM EVENT AND REPAIRS SHOULD BE COMPLETED AS NEEDED.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST OF THE LOG.
- SEDIMENT CONTROL LOGS THAT ARE SHOWN IN RIPRAP LINED DRAINAGE CHANNELS DO NOT NEED TO BE INSTALLED IF RIPRAP IS INSTALLED DURING CHANNEL CONSTRUCTION. IF RIPRAP IS NOT INSTALLED DURING CHANNEL CONSTRUCTION, THE SEDIMENT CONTROL LOGS SHALL BE TEMPORARILY INSTALLED UNTIL COMMENCING THE RIPRAP INSTALLATION.
- SEDIMENT CONTROL LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION. AFTER REMOVAL OF THE LOGS THE DISTURBED AREAS SHALL BE TOPSOILED, SEEDED AND MULCHED.

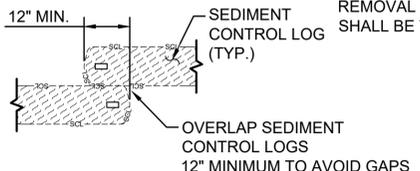


PERSPECTIVE VIEW
NOT TO SCALE

ON THE UPHILL SIDE OF THE LOG BACKFILL A WEDGE OF SOIL THAT IS FREE OF ROCKS AND DEBRIS AND TIGHTLY COMPACTED WITH A SHOVEL 3" MIN. OR WEIGHTED LAWN ROLLER



SECTION A
NOT TO SCALE



OVERLAP JOINT DETAIL
NOT TO SCALE

SEDIMENT CONTROL LOG DETAIL (SCL)
NOT TO SCALE

no.	date	by	ckd	description
0	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
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CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
GRADING & EROSION CONTROL DETAILS II

project 119461	contract
drawing 41295 12/11/2020	rev. 1
sheet 39	of sheets
file 119461_CG502.DWG	



FODS TRACKOUT CONTROL SYSTEM INSTALLATION

THE PURPOSE AND DESIGN OF THE FODS TRACKOUT CONTROL SYSTEM IS TO EFFECTIVELY REMOVE MOST SEDIMENT FROM VEHICLE TIRES AS THEY EXIT A DISTURBED LAND AREA ONTO A PAVED STREET. THIS MANUAL IS A PLATFORM FROM WHICH TO INSTALL A FODS TRACKOUT CONTROL SYSTEM. (NOTE: THIS IS NOT A ONE SIZE FITS ALL GUIDE.) THE INSTALLATION MAY NEED TO BE MODIFIED TO MEET THE EXISTING CONDITIONS, EXPECTATIONS, OR DEMANDS OF A PARTICULAR SITE. THIS IS A GUIDELINE. ULTIMATELY THE FODS TRACKOUT CONTROL SYSTEM SHOULD BE INSTALLED SAFELY WITH PROPER ANCHORING AND SIGNS PLACED AT THE ENTRANCE AND EXIT TO CAUTION USERS AND OTHERS.

KEY NOTES:

- A. FODS TRACKOUT CONTROL SYSTEM MAT.
- B. FODS SAFETY SIGN.
- C. ANCHOR POINT.
- D. SILT OR ORANGE CONSTRUCTION FENCE.

INSTALLATION:

1. THE SITE WHERE THE FODS TRACKOUT CONTROL SYSTEM IS TO BE PLACED SHOULD CORRESPOND TO BEST MANAGEMENT PRACTICES AS MUCH AS POSSIBLE. THE SITE WHERE FODS TRACKOUT CONTROL SYSTEM IS PLACED SHOULD ALSO MEET OR EXCEED THE LOCAL JURISDICTION OR STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS.
2. CALL FOR UTILITY LOCATES 3 BUSINESS DAYS IN ADVANCE OF THE OF FODS TRACKOUT CONTROL SYSTEM INSTALLATION FOR THE MARKING OF UNDERGROUND UTILITIES. CALL THE UTILITY NOTIFICATION CENTER AT 811.
3. ONCE THE SITE IS ESTABLISHED WHERE FODS TRACKOUT CONTROL SYSTEM IS TO BE PLACED, ANY EXCESSIVE UNEVEN TERRAIN SHOULD BE LEVELED OUT OR REMOVED SUCH AS LARGE ROCKS, LANDSCAPING MATERIALS, OR SUDDEN ABRUPT CHANGES IN ELEVATION.
4. THE INDIVIDUAL MATS CAN START TO BE PLACED INTO POSITION. THE FIRST MAT SHOULD BE PLACED NEXT TO THE CLOSEST POINT OF EGRESS. THIS WILL ENSURE THAT THE VEHICLE WILL EXIT STRAIGHT FROM THE SITE ONTO THE PAVED SURFACE.
8. AFTER THE FIRST MAT IS PLACED DOWN IN THE PROPER LOCATION, MATS SHOULD BE ANCHORED TO PREVENT THE POTENTIAL MOVEMENT WHILE THE ADJOINING MATS ARE INSTALLED. ANCHORS SHOULD BE PLACED AT EVERY ANCHOR POINT (IF FEASIBLE) TO HELP MAINTAIN THE MAT IN ITS CURRENT POSITION.
9. AFTER THE FIRST MAT IS ANCHORED IN ITS PROPER PLACE, AN H BRACKET SHOULD BE PLACED AT THE END OF THE FIRST MAT BEFORE ANOTHER MAT IS PLACED ADJACENT TO THE FIRST MAT.
10. ONCE THE SECOND MAT IS PLACED ADJACENT TO THE FIRST MAT, MAKE SURE THE H BRACKET IS CORRECTLY SITUATED BETWEEN THE TWO MATS, AND SLIDE MATS TOGETHER.
11. NEXT THE CONNECTOR STRAPS SHOULD BE INSTALLED TO CONNECT THE TWO MATS TOGETHER.
12. UPON PLACEMENT OF EACH NEW MAT IN THE SYSTEM, THAT MAT SHOULD BE ANCHORED AT EVERY ANCHOR POINT TO HELP STABILIZE THE MAT AND ENSURE THE SYSTEM IS CONTINUOUS WITH NO GAPS IN BETWEEN THE MATS.
13. SUCCESSIVE MATS CAN THEN BE PLACED TO CREATE THE FODS TRACKOUT CONTROL SYSTEM REPEATING THE ABOVE STEPS.

USE AND MAINTENANCE

1. VEHICLES SHOULD TRAVEL DOWN THE LENGTH OF THE TRACKOUT CONTROL SYSTEM AND NOT CUT ACROSS THE MATS.
2. DRIVERS SHOULD TURN THE WHEEL OF THEIR VEHICLES SUCH THAT THE VEHICLE WILL MAKE A SHALLOW S-TURN ROUTE DOWN THE LENGTH OF THE FODS TRACKOUT CONTROL SYSTEM.
3. MATS SHOULD BE CLEANED ONCE THE VOIDS BETWEEN THE PYRAMIDS BECOME FULL OF SEDIMENT. TYPICALLY THIS WILL NEED TO BE PERFORMED WITHIN TWO WEEKS AFTER A STORM EVENT. BRUSHING IS THE PREFERRED METHOD OF CLEANING, EITHER MANUALLY OR MECHANICALLY.
4. THE USE OF ICE MELT, ROCK SALT, SNOW MELT, DE-ICER, ETC. SHOULD BE UTILIZED AS NECESSARY DURING THE WINTER MONTHS AND AFTER A SNOW EVENT TO PREVENT ICE BUILDUP.

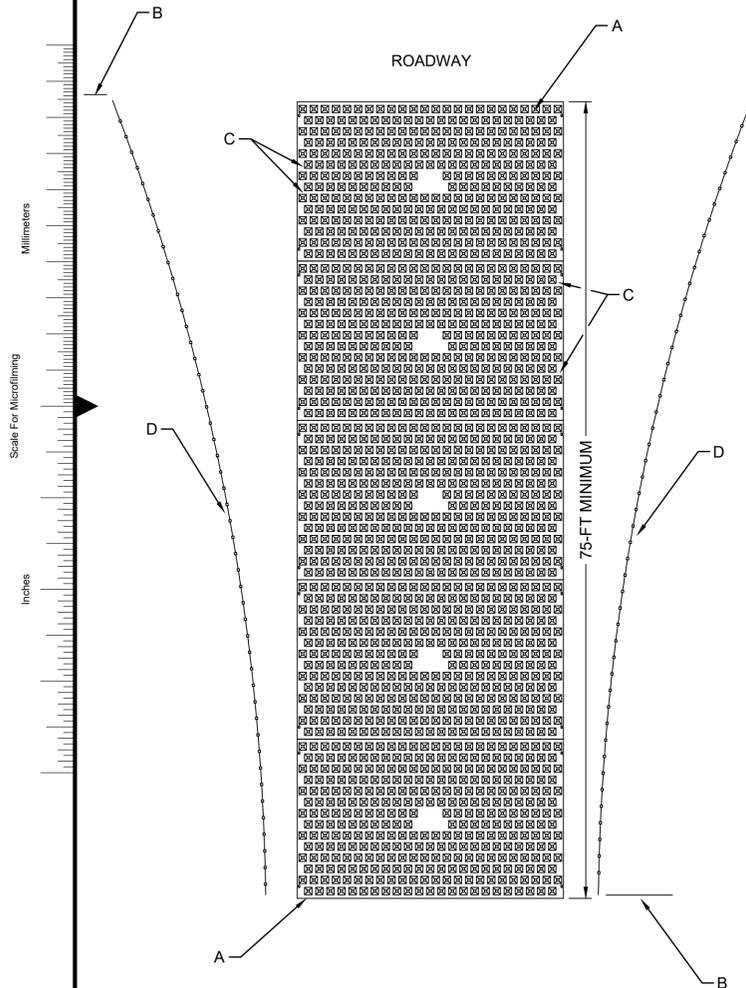
REMOVAL

1. REMOVAL OF FODS TRACKOUT CONTROL SYSTEM IS REVERSE ORDER OF INSTALLATION.
2. STARTING WITH THE LAST MAT, THE MAT THAT IS PLACED AT THE INNERMOST POINT OF THE SITE OR THE MAT FURTHEST FROM THE EXIT OR PAVED SURFACE SHOULD BE REMOVED FIRST.
3. THE ANCHORS SHOULD BE REMOVED.
4. THE CONNECTOR STRAPS SHOULD BE UNBOLTED AT ALL LOCATIONS IN THE FODS TRACKOUT CONTROL SYSTEM.
5. STARTING WITH THE LAST MAT IN THE SYSTEM, EACH SUCCESSIVE MAT SHOULD THEN BE MOVED AND STACKED FOR LOADING BY FORKLIFT OR EXCAVATOR ONTO A TRUCK FOR REMOVAL FROM THE SITE.

1
CG503

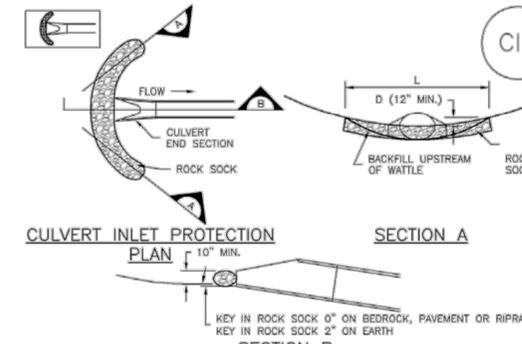
FODS TRACKOUT CONTROL MAT SYSTEM OR APPROVED EQUAL (VTC)
NOT TO SCALE

TYPICAL ONE-LANE LAYOUT



Inlet Protection (IP)

SC-6



CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION OF CULVERT INLET PROTECTION.
2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

CULVERT INLET PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS $\frac{1}{2}$ THE HEIGHT OF THE ROCK SOCK.
5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

August 2013

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

IP-7

CULVERT INLET PROTECTION
NOT TO SCALE

2
CG503

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0	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
1	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

BURNS & MCDONNELL
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date	detailed
DECEMBER 2020	M. LIESENDAHL
designed	checked
M. LIESENDAHL	N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
GRADING & EROSION CONTROL DETAILS III

project	contract	
119461		
drawing	rev.	
41295 12/11/2020	1	
sheet	of	sheets
40		
file	119461_CG503.DWG	



PCD FILING NO: PPR-20-044

RECOMMENDED ANNUAL GRASSES

SPECIES (COMMON NAME)	GROWTH SEASON	SEEDING DATE	POUNDS OF PURE LIVE SEED (PLS) (PLS/ACRE)	PLANTING DEPTH (INCHES)
1. OATS	COOL	MARCH 16 - APRIL 30	35-50	1-2
2. SPRING WHEAT	COOL	MARCH 16 - APRIL 30	25-35	1-2
3. SPRING BARLEY	COOL	MARCH 16 - APRIL 30	25-35	1-2
4. ANNUAL RYEGRASS	COOL	MARCH 16 - JUNE 30	10-15	1/2
5. MILLET	WARM	MAY 16 - JULY 15	3-15	1/2-3/4
6. SUDANGRASS	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
7. SORGHUM	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
8. WINTER WHEAT	COOL	SEPTEMBER 1 - 30	20-35	1-2
9. WINTER BARLEY	COOL	SEPTEMBER 1 - 30	20-35	1-2
10. WINTER RYE	COOL	SEPTEMBER 1 - 30	20-35	1-2
11. TRITICALE	COOL	SEPTEMBER 1 - 30	25-40	1-2

THIS TABLE WAS TAKEN FROM UIDFCD FOR RECOMMENDED ANNUAL GRASSES FOR THE DENVER METROPOLITAN AREA. THIS TABLE MAY BE USED UNLESS A SITE-SPECIFIC SEED MIX IS REQUESTED AND APPROVED.

TABLE TS-1

TEMPORARY SEEDING NOTES

INSTALLATION REQUIREMENTS

- DISTURBED AREAS ARE TO BE SEED WITHIN 21 DAYS AFTER CONSTRUCTION ACTIVITY OR GRADING ENDS IF SEASON ALLOWS.
- IF NECESSARY, SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER, OR LIME.
- SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOILS ESPECIALLY NEED TO BE LOOSENEED.
- SEEDING DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 2:1, AND 1 INCH FOR SLOPES STEEPER THAN 2:1.
- ANNUAL GRASSES LISTED IN TABLE TS-1 ARE TO BE USED FOR TEMPORARY SEEDING. SEED MIXES ARE NOT TO CONTAIN ANY NOXIOUS WEED SEEDS INCLUDING RUSSIAN OR CANADIAN THISTLE, KNAPWEED, PURPLE LOOSESTEM, EUROPEAN BINDWEED, JOHNSON GRASS, AND LEAFY SPURGE.
- TABLE TS-1 ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES.
- SEEDING IS TO BE APPLIED USING MECHANICAL TYPE DRILLS EXCEPT WHERE SLOPES ARE STEEP OR ACCESS IS LIMITED THEN HYDRAULIC SEEDING MAY BE USED.
- ALL SEEDED AREAS ARE TO BE MULCHED (SEE FACTSHEET ON MULCHING).
- IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH.

MAINTENANCE REQUIREMENTS

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL SEEDED AREAS TO ENSURE GROWTH.
- AREAS WHERE GROWTH IS NOT OCCURRING QUICKLY OR THE MULCH HAS BEEN REMOVED SHALL BE RE-SEEDED AS SOON AS POSSIBLE AND RE-MULCHED IF NEEDED.
- SEEDED AREAS ARE NOT TO BE DRIVEN OVER WITH CONSTRUCTION EQUIPMENT OR VEHICLES.

City of Colorado Springs
Stormwater Quality

Figure TS-1
Temporary Seeding
Construction Detail and Maintenance
Requirements

TEMPORARY SEEDING



MULCHING NOTES

INSTALLATION REQUIREMENTS

- ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDED AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.
- MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.
- HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED.
- MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.
- MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A TACKIFIER.
- HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

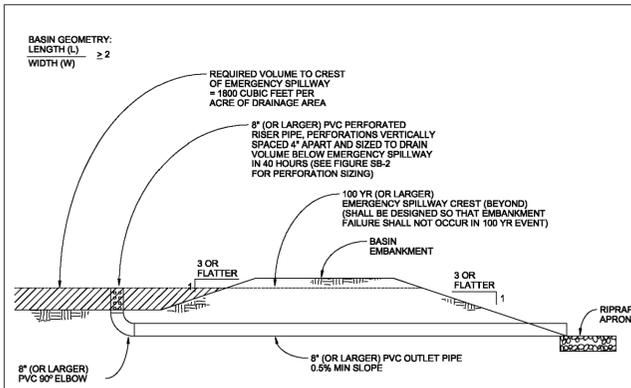
MAINTENANCE REQUIREMENTS

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.
- MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.

City of Colorado Springs
Stormwater Quality

Figure MU-1
Mulching
Construction Detail and Maintenance
Requirements

MULCHING



SEDIMENT BASIN

SEDIMENT BASIN NOTES

INSTALLATION REQUIREMENTS

- SEDIMENT BASINS SHALL BE INSTALLED BEFORE ANY CLEARING AND/OR GRADING IS UNDERTAKEN.
- THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
- THE OUTLET OF THE BASIN SHALL BE DESIGNED TO DRAIN ITS VOLUME IN 40 HOURS.
- THE OUTLET IS TO BE LOCATED AT THE FURTHEST DISTANCE FROM THE INLET OF THE BASIN. Baffles MAY BE NEEDED TO INCREASE THE FLOW LENGTH AND SETTLING TIME.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #20 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
- EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 898.
- WHEN A BASIN IS INSTALLED NEAR A RESIDENTIAL AREA, FOR SAFETY REASONS, A SIGN SHALL BE POSTED AND THE AREA SECURED WITH A FENCE.

MAINTENANCE REQUIREMENTS

- CONTRACTOR SHALL INSPECT SEDIMENT BASINS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
- SEDIMENT BASINS SHALL BE CLEANED OUT BEFORE SEDIMENT HAS FILLED HALF THE VOLUME OF THE BASIN.
- SEDIMENT BASINS SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.

City of Colorado Springs
Stormwater Quality

Figure SB-1
Sediment Basin
Construction Detail and Maintenance
Requirements

SEDIMENT BASIN



TABLE SB-1

Design Volume (acre-ft)	Depth at Outlet (ft)							
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
2	15.04	7.71	5.10	3.76	2.95	2.41	2.02	1.73
1	7.52	3.86	2.55	1.88	1.48	1.21	1.01	0.87
0.6	4.51	2.31	1.53	1.13	0.89	0.72	0.61	0.52
0.4	3.01	1.54	1.02	0.75	0.59	0.48	0.40	0.35
0.2	1.50	0.77	0.51	0.38	0.30	0.24	0.20	0.17
0.1	0.75	0.38	0.26	0.19	0.15	0.12	0.10	0.09
0.06	0.45	0.23	0.15	0.11	0.09	0.07	0.06	0.05
0.04	0.30	0.15	0.10	0.08	0.06	0.05	0.04	0.03
0.02	0.15	0.08	0.05	0.04	0.03	0.02	0.02	0.02
0.01	0.08	0.04	0.03	0.02	0.01	0.01	0.01	0.01

TABLE SB-1

TABLE SB-2

Hole Diameter (in)	Hole Diameter (in)	Area per Row (in ²)		
		n=1	n=2	n=3
1/4	0.250	0.05	0.10	0.15
5/16	0.313	0.08	0.15	0.23
3/8	0.375	0.11	0.22	0.33
7/16	0.438	0.15	0.30	0.45
1/2	0.500	0.20	0.39	0.59
9/16	0.563	0.25	0.50	0.75
5/8	0.625	0.31	0.61	0.92
11/16	0.688	0.37	0.74	1.11
3/4	0.750	0.44	0.88	1.33
7/8	0.875	0.60	1.20	1.80
1	1.000	0.79	1.57	2.36
1 1/8	1.125	0.99	1.99	2.98
1 1/4	1.250	1.23	2.45	3.68
1 3/8	1.375	1.48	2.97	4.45
1 1/2	1.500	1.77	3.53	5.30
1 5/8	1.625	2.07	4.15	6.22
1 3/4	1.750	2.41	4.81	7.22
1 7/8	1.875	2.76	5.52	8.28
2	2.000	3.14	6.28	9.42

n = Number of columns of perforations
Minimum steel plate thickness: 1/4" 5/16" 3/8"

TABLE SB-2

City of Colorado Springs
Stormwater Quality

Figure SB-2
Outlet Sizing
Application Techniques and Maintenance
Requirements

SEDIMENT BASIN OUTLET SIZING



no.	date	by	ckd	description
0	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

**BURNS
MEDONNELL**
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	----



**CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
GRADING & EROSION CONTROL DETAILS IV**

project	119461	contract	
drawing	CG504	rev.	0
sheet	41	of	sheets
file	119461_CG504.DWG		



no.	date	by	ckd	description
0	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
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Scale For Microfining
Millimeters

Inches

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9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE

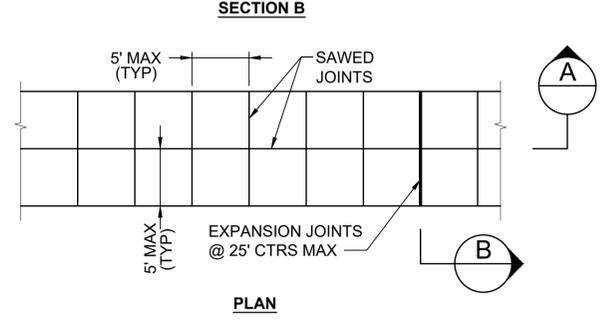
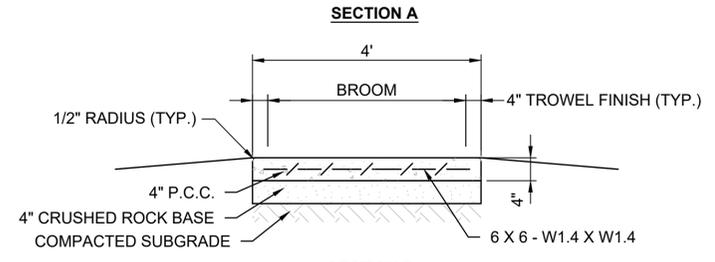
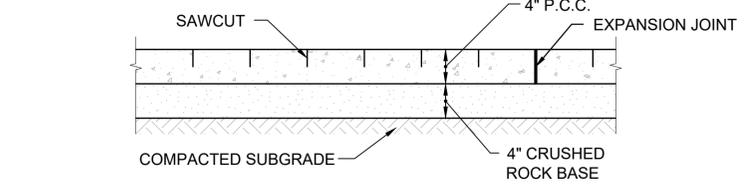
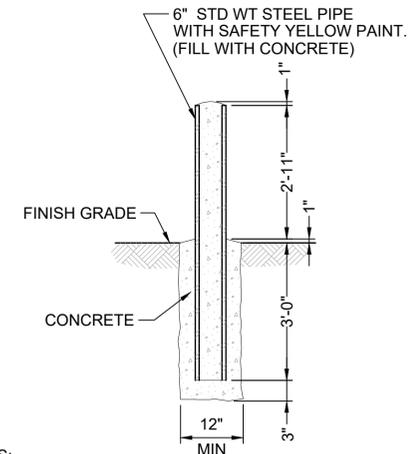
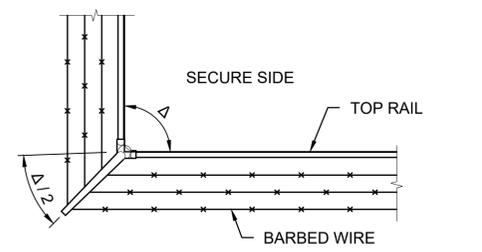


CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
OVERALL CUT FILL DIAGRAM

project 119461	contract
drawing 41295 12/11/2020	rev. 1
sheet 42 of sheets	file 119461_CG701.DWG

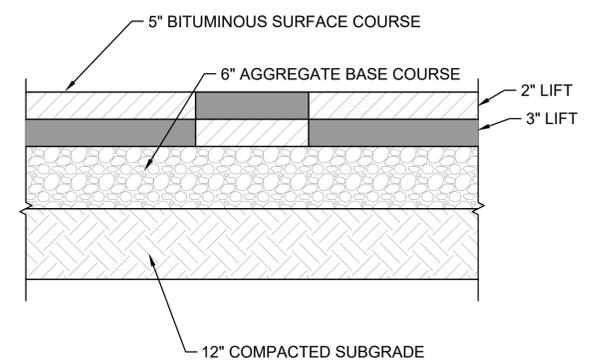


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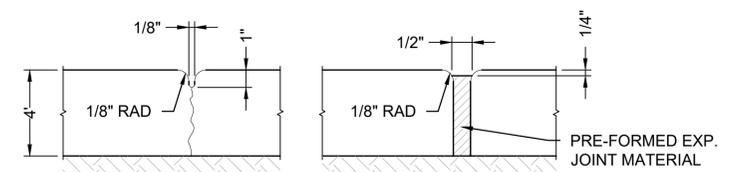
NOTES:
 1. PREPARE SURFACE IN FIELD BY SSPC-SP3 METHODS TO SSPC-SP6 QUALITY AND 1.0 MIL MIN PROFILE DEPTH. FIRST COAT IS TO BE ALKYD PRIMER AT MIN 40% SOLIDS BY VOLUME. APPLIED AT 2 MILS DRY. SECOND AND THIRD COATS ARE TO BE ALKYD GLOSS ENAMEL MIN 40% SOLIDS BY VOLUME. EACH COAT APPLIED AT 1.5 MILS DRY. TOTAL COATINGS MIL MIN DRY FILM.

BOLLARD DETAIL
 NOT TO SCALE



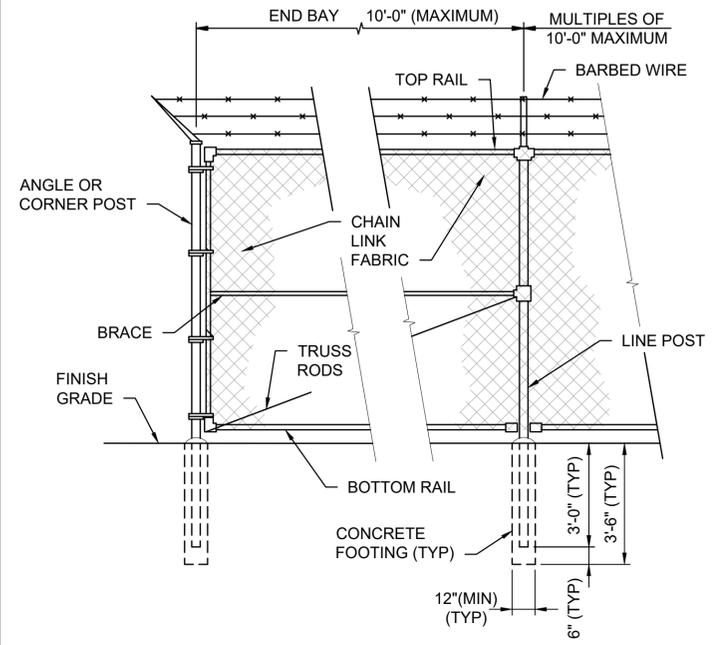
ASPHALT PAVEMENT DETAIL
 NOT TO SCALE

CONCRETE SIDEWALK DETAIL
 NOT TO SCALE

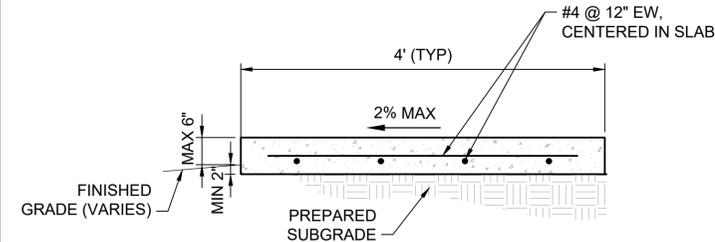


NOTES:
 1. SAW JOINTS TO BE LOCATED TO MAINTAIN AN APPROXIMATE SQUARE SLAB.
 2. EXPANSION JOINTS TO BE LOCATED WHERE WALK ABUTS CONCRETE CURBS, DRIVES, STRUCTURES AND WHERE WALK CHANGES DIRECTION.

TYPICAL SIDEWALK JOINTS
 NOT TO SCALE

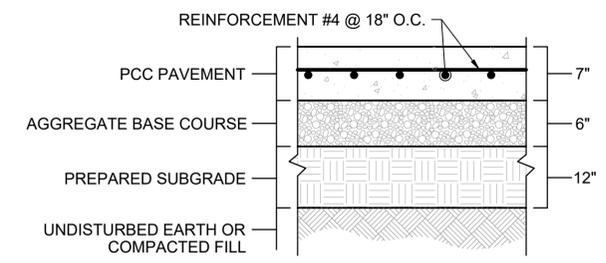


CHAINLINK FENCE DETAIL (TYP)
 NOT TO SCALE

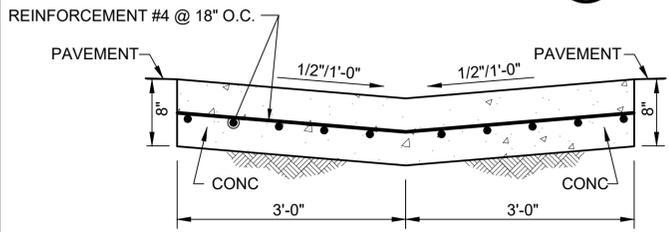


NOTES:
 1. STAIR LANDING TO BE 4'-0" X 4'-0" UNLESS NOTED OTHERWISE.
 2. WHEN STOOP IS BEING INSTALLED ADJACENT TO CONCRETE OR ASPHALT PAVING, THE AGGREGATE BASE COURSE OF SAID PAVING SHALL BE PLACED UNDER STOOP AS WELL.
 3. SLAB FOR STOOP AND/OR MISCELLANEOUS SMALL EXTERIOR EQUIPMENT. COORDINATE SIZE WITH EQUIPMENT MANUFACTURER.

CONCRETE STOOP DETAIL
 NOT TO SCALE



CONCRETE PAVEMENT DETAIL
 NOT TO SCALE



CONCRETE DRAIN PAN DETAIL
 NOT TO SCALE

no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
2	12/11/20	MJL	NT	REISSUED FOR EL PASO COUNTY PERMIT REVIEW

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 9785 Maroon Cir., Suite 400
 Centennial, CO 80112
 303-721-9292

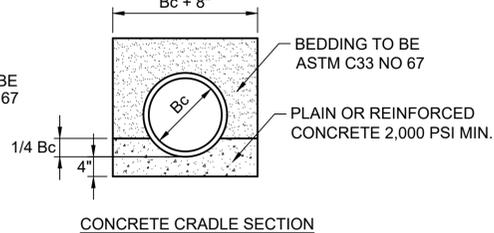
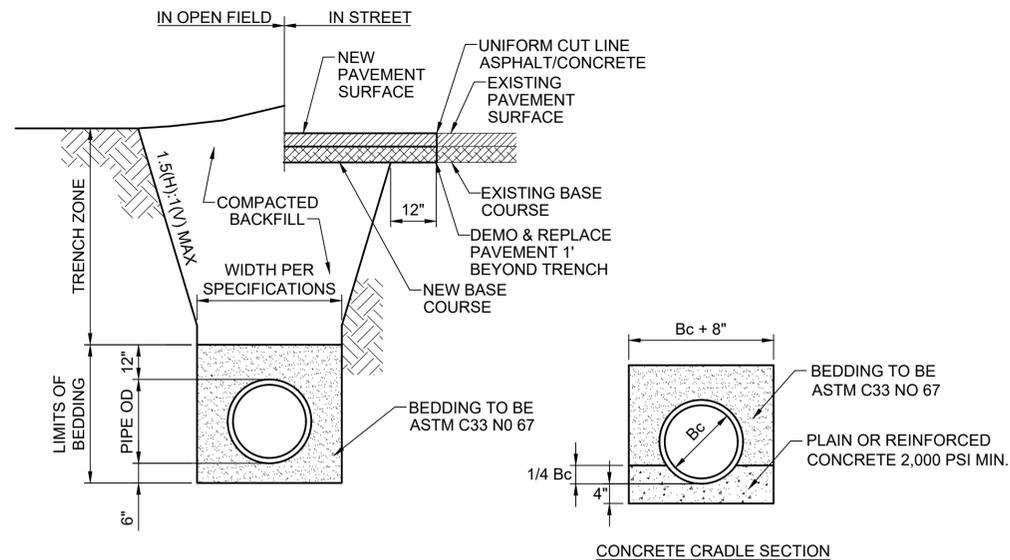
date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE



CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
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project 119461	contract
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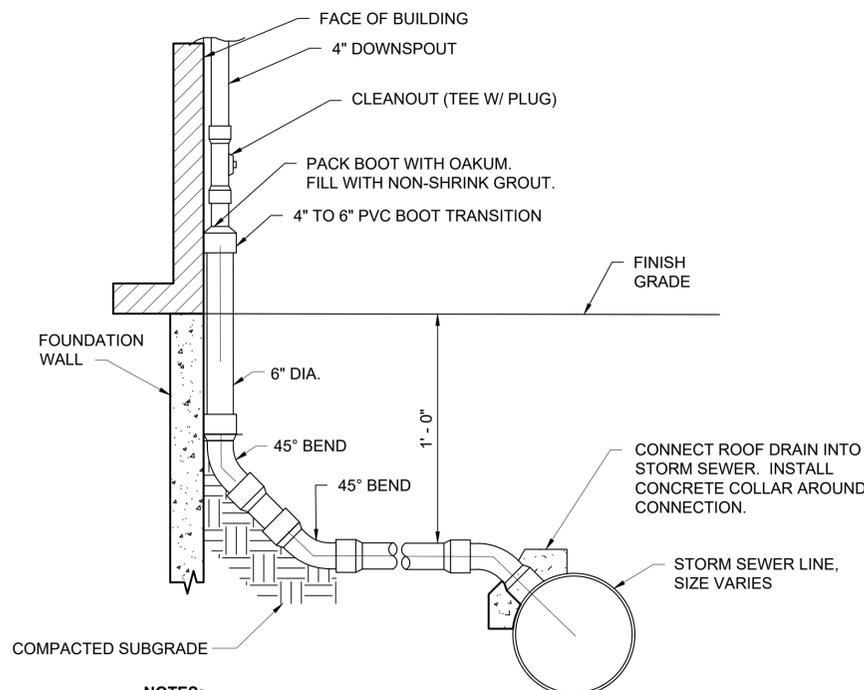




NOTES:

- TRENCHES**
TRENCHES SHALL BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND FOR THE PROTECTION OF EXISTING UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS. PVC PIPE TRENCH WIDTHS SHALL BE IN ACCORDANCE WITH THE UNI-BELL HANDBOOK OF PVC PIPE, LATEST EDITION. DUCTILE IRON PIPE TRENCH WIDTHS AT THE TOP OF PIPE SHALL BE IN ACCORDANCE WITH AWWA C-600 LATEST EDITION. SHOULD TRENCHES BE EXCAVATED WIDER THAN ALLOWED, THE CONTRACTOR MAY REQUIRE THAT A CONCRETE CRADLE BE PLACED AROUND THE PIPE IN CONFORMANCE WITH THE SPECIAL BEDDING DETAIL. SUPPORT PIPE FROM WALL TO FIRST JOINT WITH CONCRETE CRADLE STRUCTURALLY CONTINUOUS WITH BASE SLAB OR FOOTING.
- BEDDING**
SUBCONTRACTOR SHALL SUBMIT BEDDING GRADATION TEST RESULTS TO CONTRACTOR FOR REVIEW, PRIOR TO DELIVERING ANY MATERIAL TO THE PROJECT SITE. SEE SPECIFICATIONS FOR BEDDING GRADATION REQUIREMENTS. BEDDING LIMITS SHALL EXTEND FROM SIX INCHES UNDER THE PIPE TO TWELVE INCHES ABOVE THE PIPE. THE LIMITS OF BEDDING DEFINE THE "PIPE ZONE". CLASS B BEDDING MATERIAL SHALL BE USED AS PIPE BEDDING. WHERE COVER EXCEEDS 22 FEET, THE CONTRACTOR SHALL REVIEW THE INSTALLATION AND RECOMMEND BEDDING MATERIAL AND PIPE CLASS.
- COMPACTION**
PIPE ZONE (BEDDING) COMPACTION SHALL BE 90% STANDARD PROCTOR DENSITY OR EQUIVALENT RELATIVE DENSITY. TRENCH ZONE COMPACTION SHALL BE: 95% STANDARD OR MODIFIED PROCTOR DENSITY OR EQUIVALENT RELATIVE DENSITY INSIDE STREET RIGHTS-OF-WAY; AND 90% STANDARD OR MODIFIED PROCTOR DENSITY OR EQUIVALENT RELATIVE DENSITY OUTSIDE STREET RIGHTS-OF-WAY UNLESS SPECIFIED OTHERWISE.

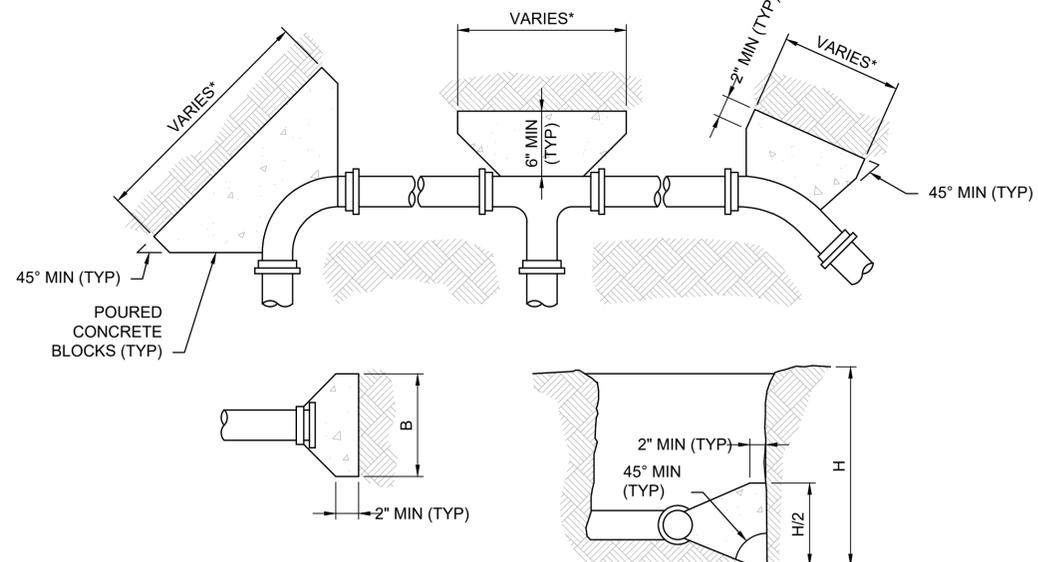
UTILITY TRENCH
NOT TO SCALE



NOTES:

- DIAMETER OF BOOT SHALL BE 1/2" GREATER THAN DOWNSPOUT'S LARGEST DIMENSION.
- BOOT MATERIAL SHALL BE PVC. ALL ELSE SHALL BE PVC UNLESS OTHERWISE INDICATED.

DOWNSPOUT
NOT TO SCALE



THRUST BLOCK BEARING AREA (SQ FT)

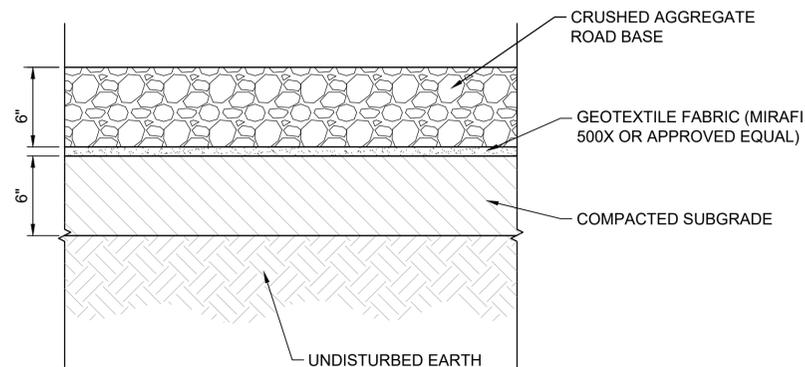
FITTING SIZE	TEE & END	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
1"	0.04	0.06	0.03	0.02	0.01
1.5"	0.09	0.12	0.07	0.03	0.02
2"	0.16	0.22	0.12	0.06	0.03
3"	0.35	0.5	0.27	0.14	0.07
4"	0.63	0.89	0.48	0.25	0.12
8"	2.51	3.55	1.92	0.98	0.49
10"	3.93	5.55	3.01	1.53	0.77
12"	5.65	8.00	4.33	2.21	1.11
20"	15.71	22.21	12.02	6.13	3.08
24"	22.62	31.99	17.31	8.83	4.43
30"	35.34	49.9800	27.05	13.79	6.93

NOTE: BEARING AREA BASED ON 3000 PSF SOIL BEARING PRESSURE AND A PIPE TEST PRESSURE OF 150 PSI.

NOTES:

- THRUST BLOCKS ARE REQUIRED AT ALL VERTICAL AND HORIZONTAL TEES, OR ELBOWS OF PRESSURIZED PIPING.
- BLOCKING PROVIDED SHALL BE ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
- THRUST BLOCK CONCRETE SHALL EXTEND TO UNDISTURBED EARTH.
- A NONPOROUS MATERIAL 8 MILS MIN VISQUEEN OR 15 LB MIN FELT SHALL BE PLACED BETWEEN THE FITTING AND CONCRETE THRUST BLOCK.
- JOINTS SHALL NOT BE COVERED WITH CONCRETE.
- DOUBLE LAYER OF TAR PAPER BETWEEN CONCRETE BLOCK AND PLUG TO PERMIT EASY REMOVAL FOR FUTURE EXTENSION OF WATER MAIN WHERE REQUIRED.
- JOINT RESTRAINTS CAN BE PROVIDED WHERE USE OF CONCRETE THRUST BLOCKING CANNOT BE USED BECAUSE OF OBSTRUCTIONS OR REQUIREMENTS IN THE SPECIFICATIONS. RESTRAINT DETAILS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

THRUST BLOCK
NOT TO SCALE



AGGREGATE BASE (ROAD) DETAIL
NOT TO SCALE

no.	date	by	ckd	description
0	10/2/20	MJL	NT	ISSUED FOR PERMIT REVIEW
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**BURNS
MCDONNELL**
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE

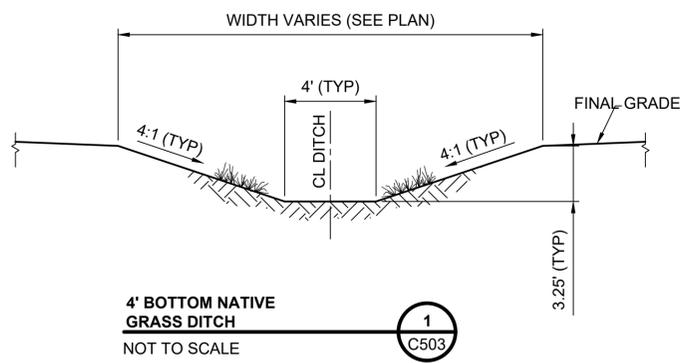


CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
CIVIL DETAILS II

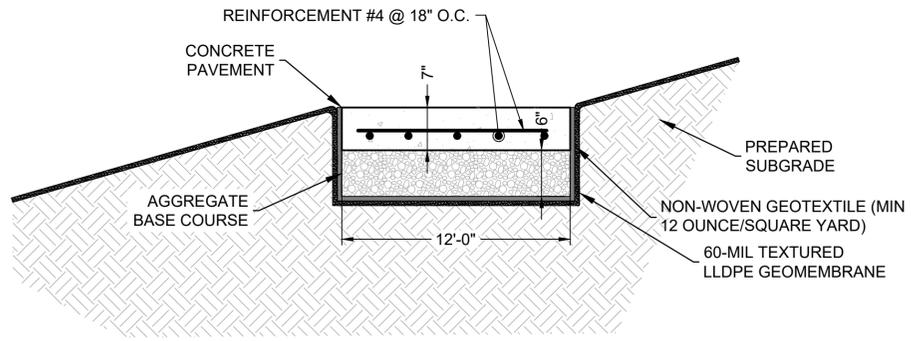
project 119461	contract
drawing C502	rev. 2
sheet 44	of sheets
file 119461_C502.DWG	



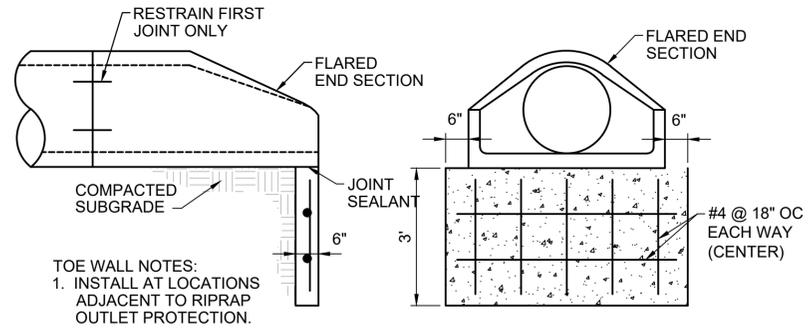
PCD FILING NO: PPR-20-044



4' BOTTOM NATIVE GRASS DITCH
NOT TO SCALE

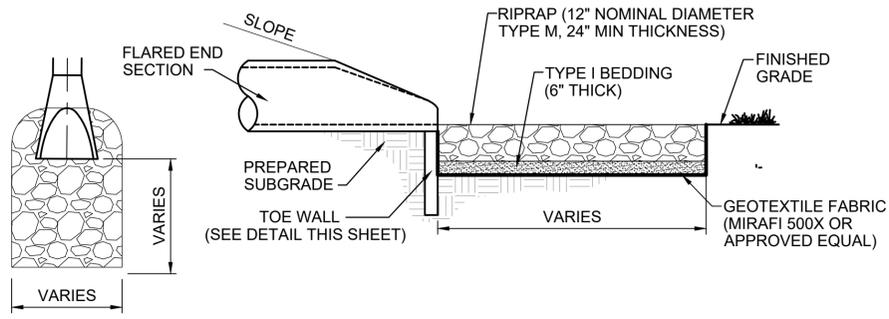


CONCRETE RAMP DETAIL
NOT TO SCALE

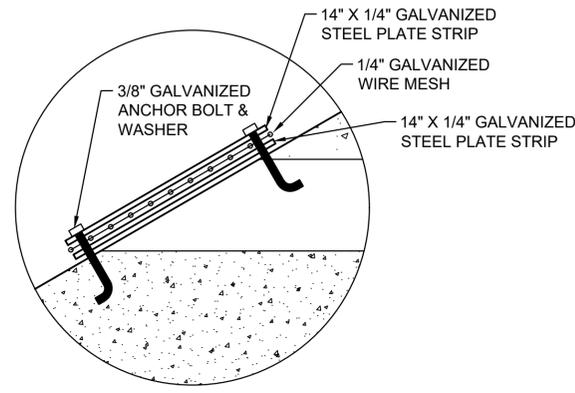


TOE WALL
NOT TO SCALE

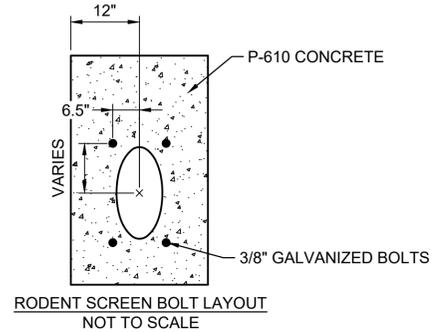
no.	date	by	ckd	description
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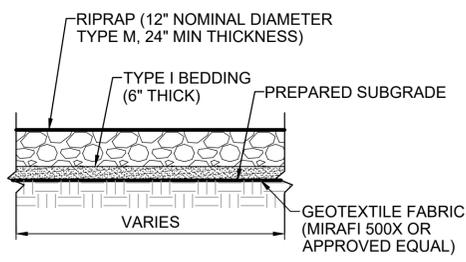
RIPRAP OUTLET PROTECTION
NOT TO SCALE



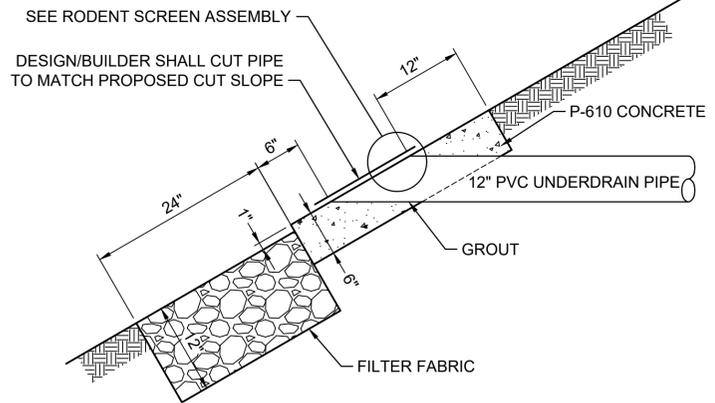
RODENT SCREEN ASSEMBLY
NOT TO SCALE



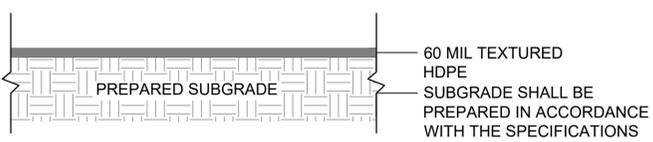
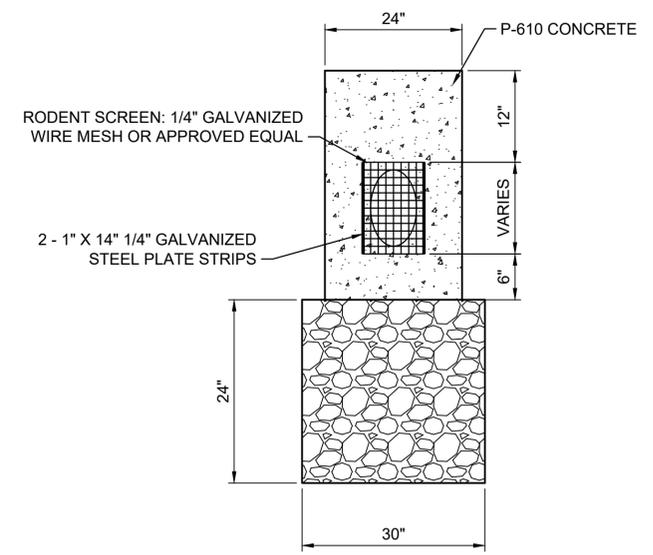
RODENT SCREEN BOLT LAYOUT
NOT TO SCALE



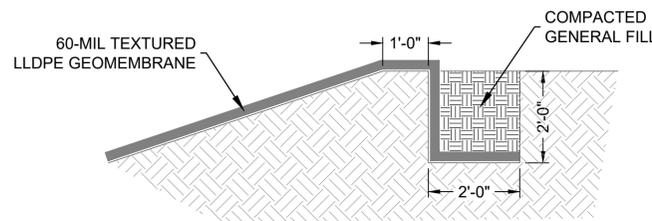
RIPRAP
NOT TO SCALE



12" PVC UNDERDRAIN HEADWALL SECTION
NOT TO SCALE



EVAPORATION POND LINER SYSTEM
NOT TO SCALE



TYPICAL ANCHOR TRENCH
NOT TO SCALE

- NOTES:**
- IF A PRECAST ENDWALL IS USED, THE PIPE WILL BE SECURED IN THE ENDWALL BY GROUTING THE OPENING BETWEEN PIPE AND PRECAST ENDWALL HOLE.
 - ANY MATERIAL CHANGES SHALL BE APPROVED BY THE ENGINEER BEFORE IMPLEMENTATION.
 - RODENT SCREEN SHALL OVERLAP PIPE DIAMETER BY ONE INCH ON EACH SIDE.

BURNS MEDONNELL
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE

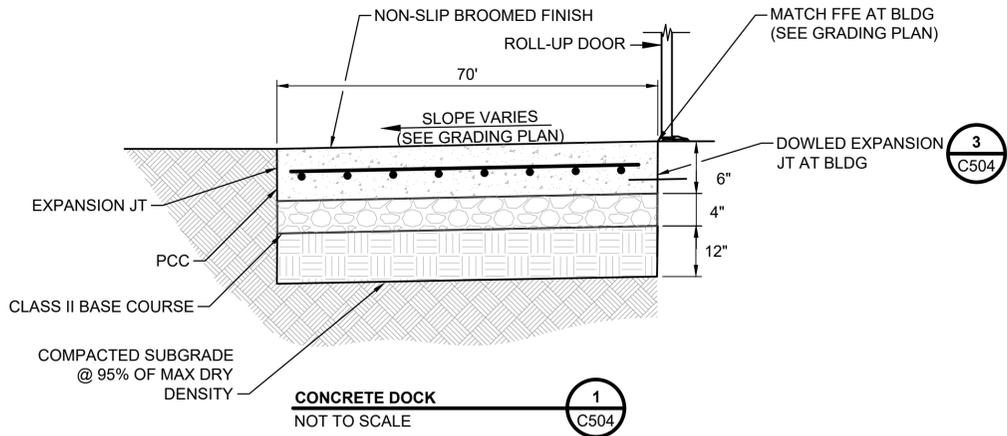


CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
CIVIL DETAILS III

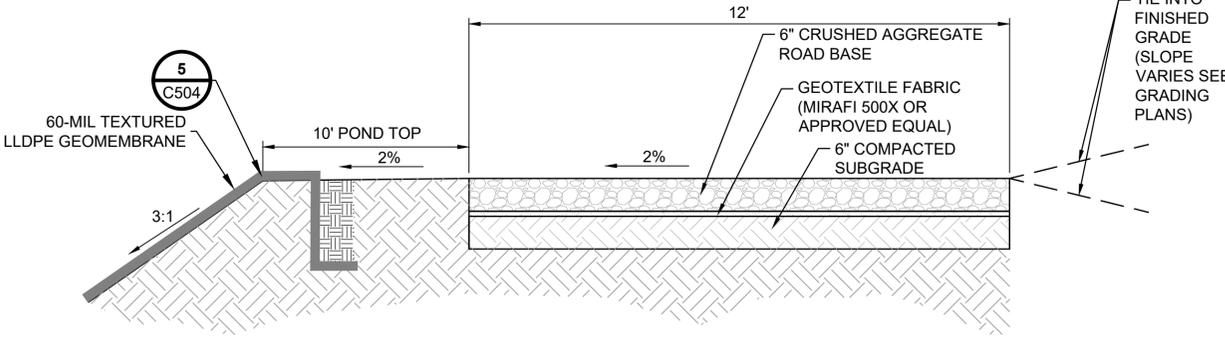
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drawing C503	rev. 2
sheet 45 of sheets	
file 119461_C503.DWG	



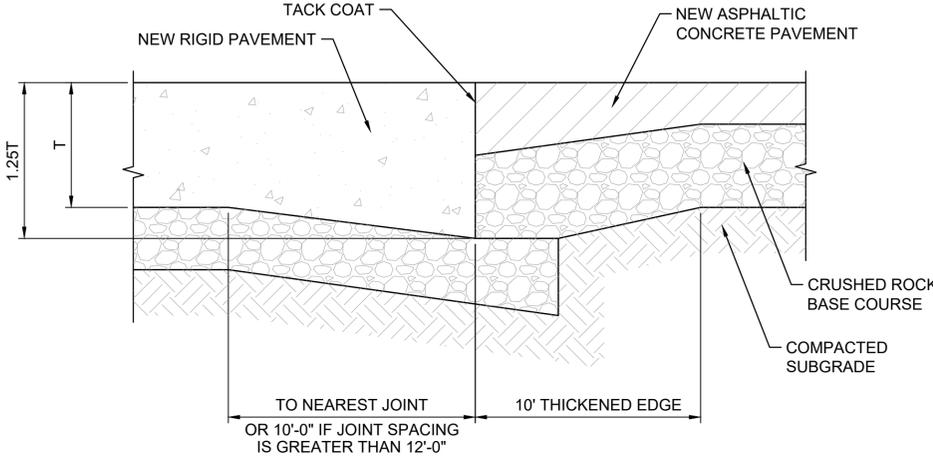
PCD FILING NO: PPR-20-044



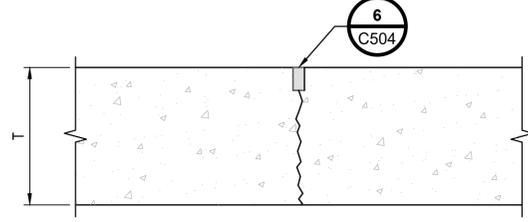
CONCRETE DOCK
NOT TO SCALE



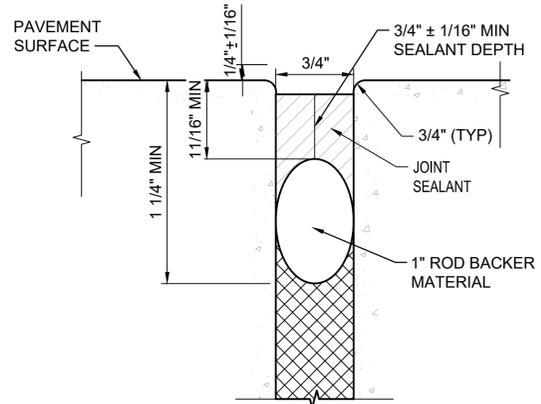
AGGREGATE ROADWAY SECTION
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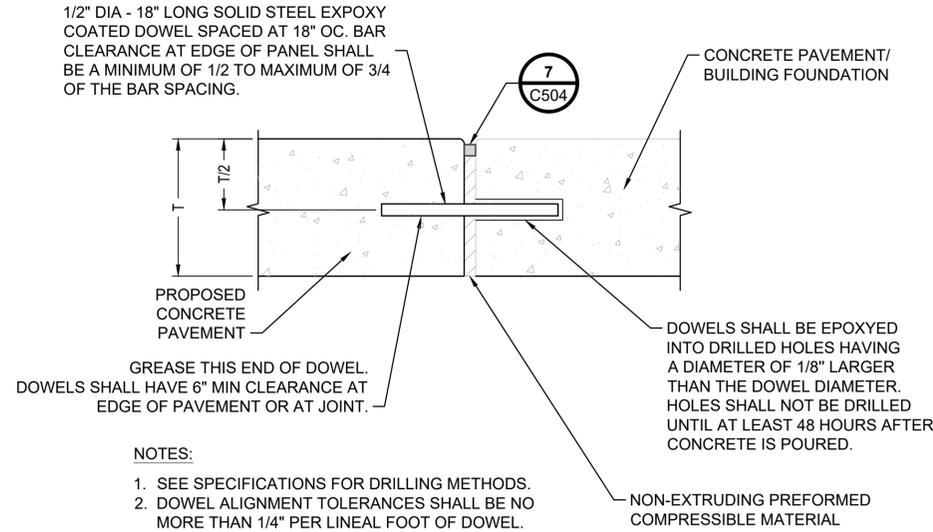
CONCRETE PAVEMENT THICKEN EDGED
NOT TO SCALE



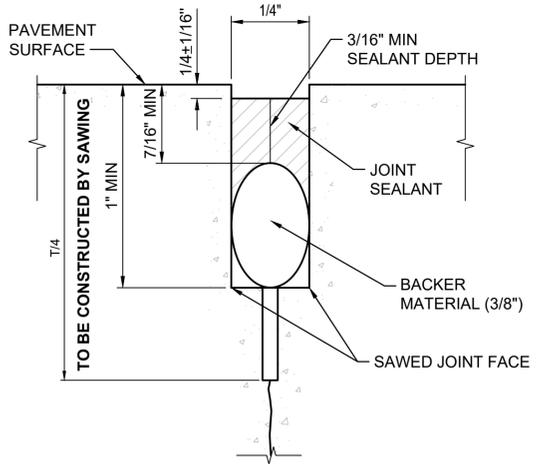
CONTRACTION JOINT SEALING
NOT TO SCALE



ISOLATION JOINT SEALING
NOT TO SCALE



TYPE D - DOWELED EXPANSION JOINT
NOT TO SCALE



CONTRACTION JOINT SEALING
NOT TO SCALE

- NOTES**
1. SURFACE JOINTS SHALL BE DOW 890-SL SILICONE JOINT SEALANT.
 2. JOINT SEALANT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

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1. SURFACE JOINTS SHALL BE DOW 890-SL SILICONE JOINT SEALANT.
 2. JOINT SEALANT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

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Scale For Microfinishing
Millimeters
Inches

BURNS MEDONNELL
9785 Maroon Cir., Suite 400
Centennial, CO 80112
303-721-9292

date DECEMBER 2020	detailed M. LIESENDAHL
designed M. LIESENDAHL	checked N. TESSITORE

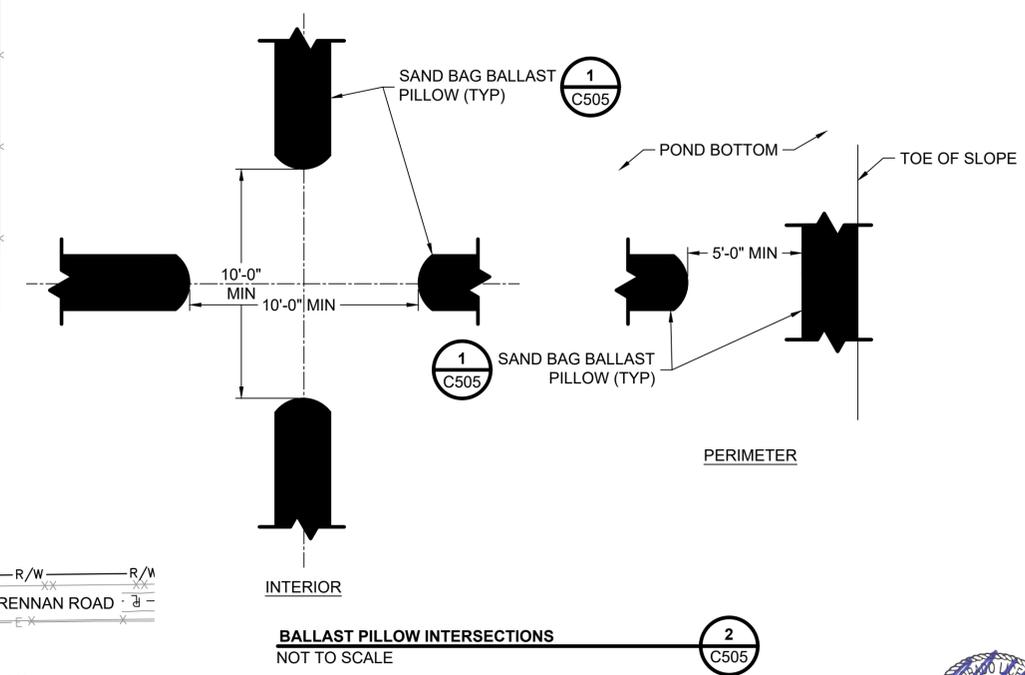
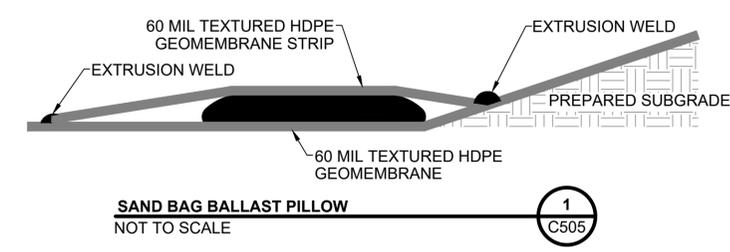
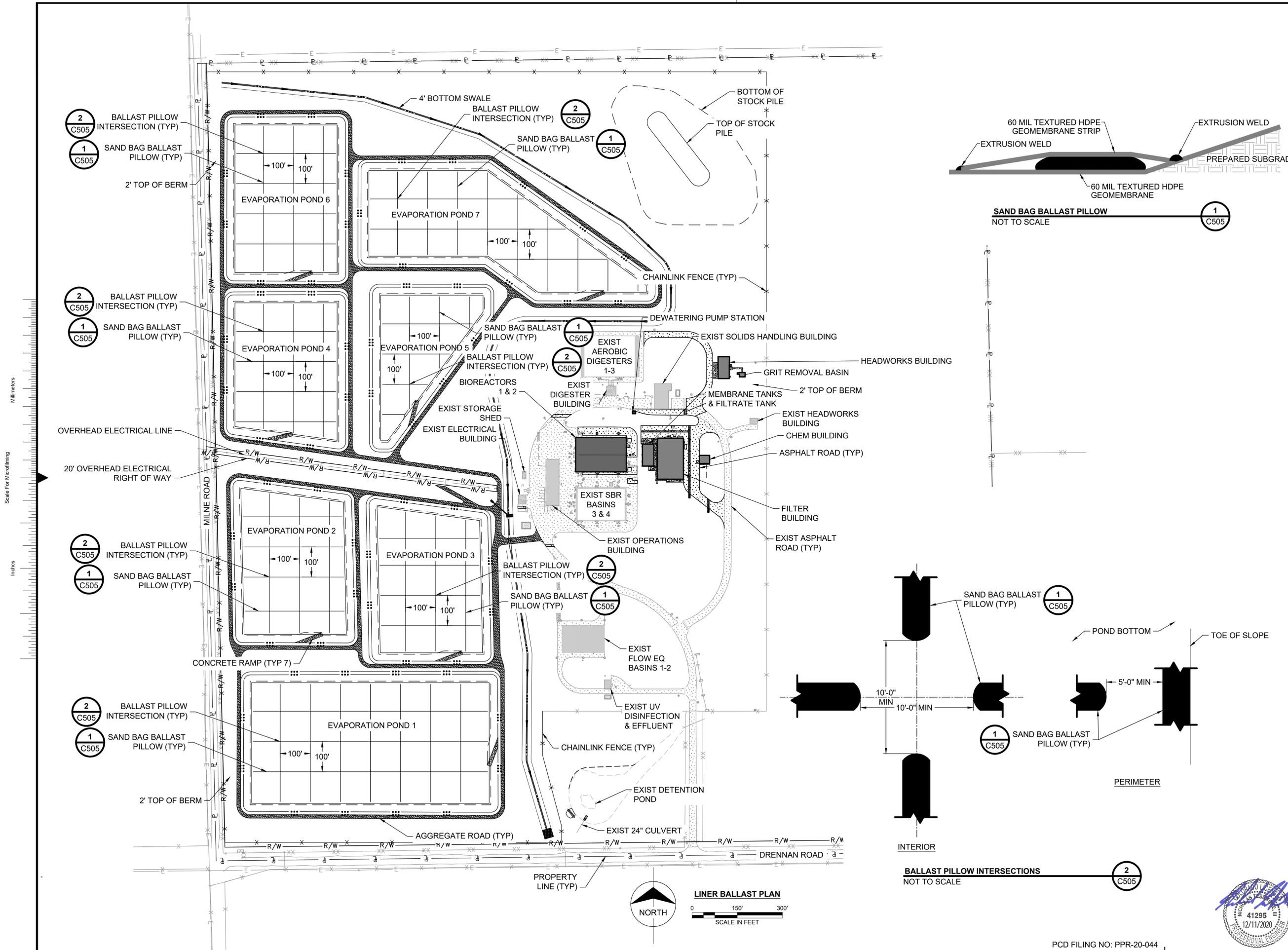


CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
CIVIL DETAILS IV

project 119461	contract
drawing C504	rev. 2
sheet 46 of sheets	
file 119461_C504.DWG	



no.	date	by	ckd	description
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1	11/13/20	MJL	NT	ISSUED FOR EL PASO COUNTY PERMIT REVIEW
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A

B

C

D

E

F

G

H

I

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 9785 Maroon Cir., Suite 400
 Centennial, CO 80112
 303-721-9292

date	DECEMBER 2020	detailed	M. LIESENDAHL
designed	M. LIESENDAHL	checked	N. TESSITORE

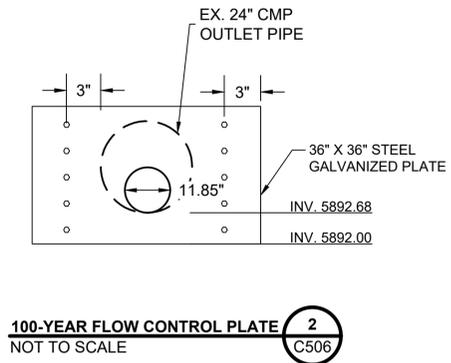
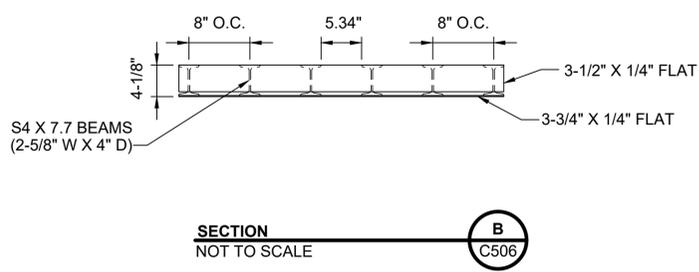
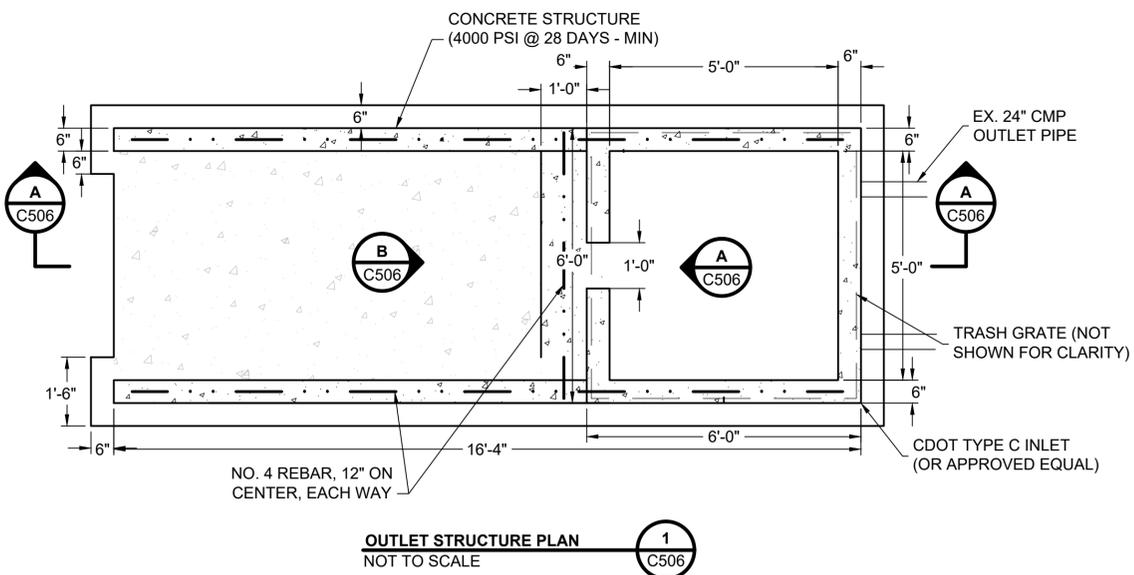


CHEROKEE METROPOLITAN DISTRICT
TDS REDUCTION FACILITY
 CIVIL DETAILS V

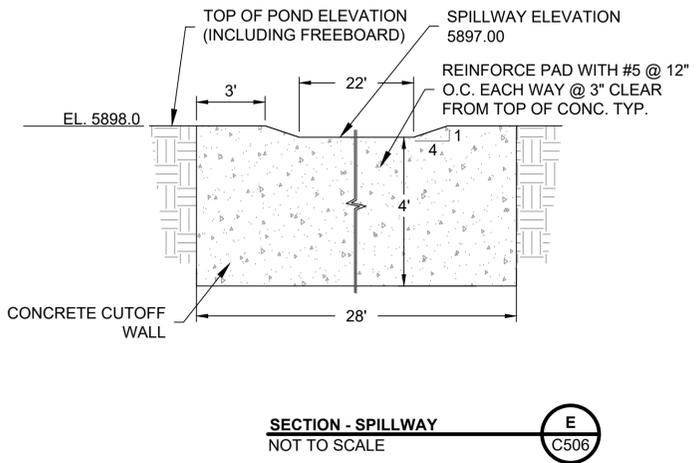
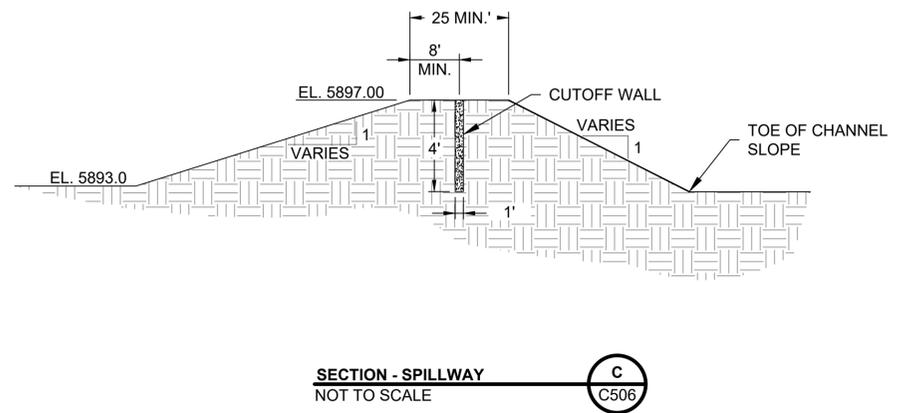
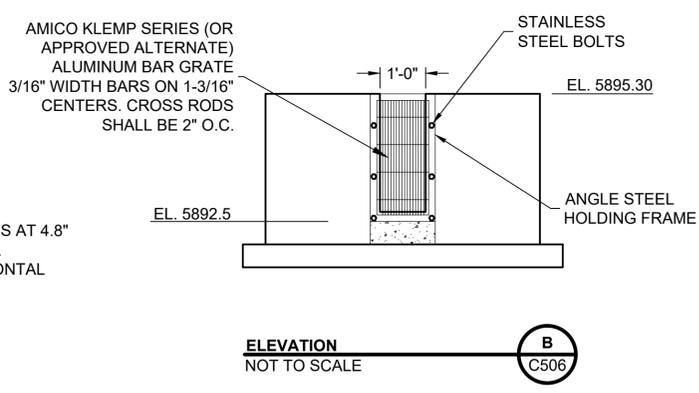
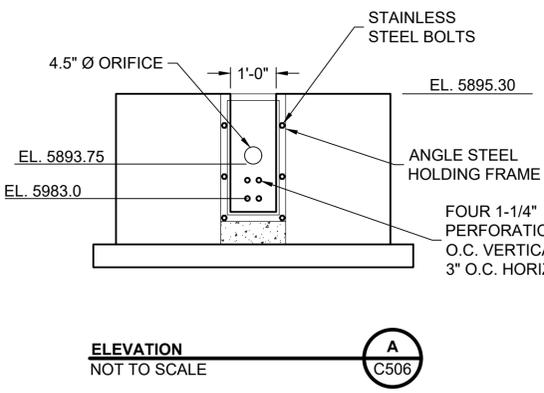
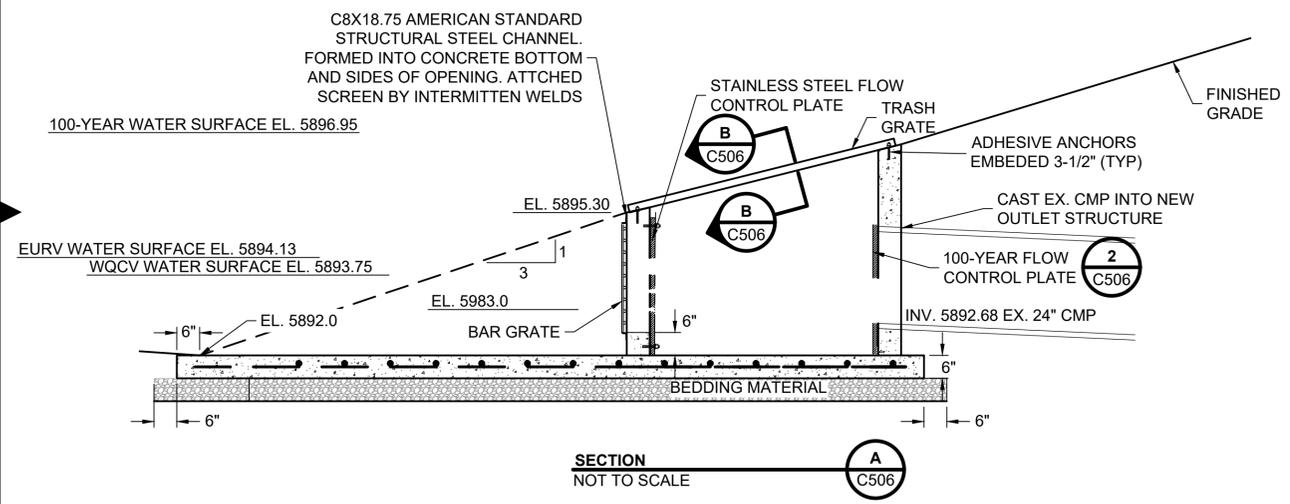
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drawing	C505	rev.	2
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file	119461_C505.DWG		



PCD FILING NO: PPR-20-044



Scale For Microfinishing
Millimeters
Inches



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PRELIMINARY - NOT FOR CONSTRUCTION

BURNS & MCDONNELL
 9785 Maroon Cir., Suite 400
 Centennial, CO 80112
 303-721-9292

date DECEMBER 2020	detailed MSL REBENDAHIL
designed MSL REBENDAHIL	checked N. TESLIERE



CHEROKEE METROPOLITAN DISTRICT
 TDS REDUCTION FACILITY
 CIVIL DETAILS VI
 DETENTION POND DETAILS

project 119461	contract
drawing C506	rev. 2
sheet 48	of sheets
file 119461_C506.DWG	

