TAMLIN ROAD RV STORAGE

LOCATED IN SECTION 21, TOWNSHIP 13S, RANGE 65W OF THE 6TH P.M., EL PASO COUNTY, COLORADO

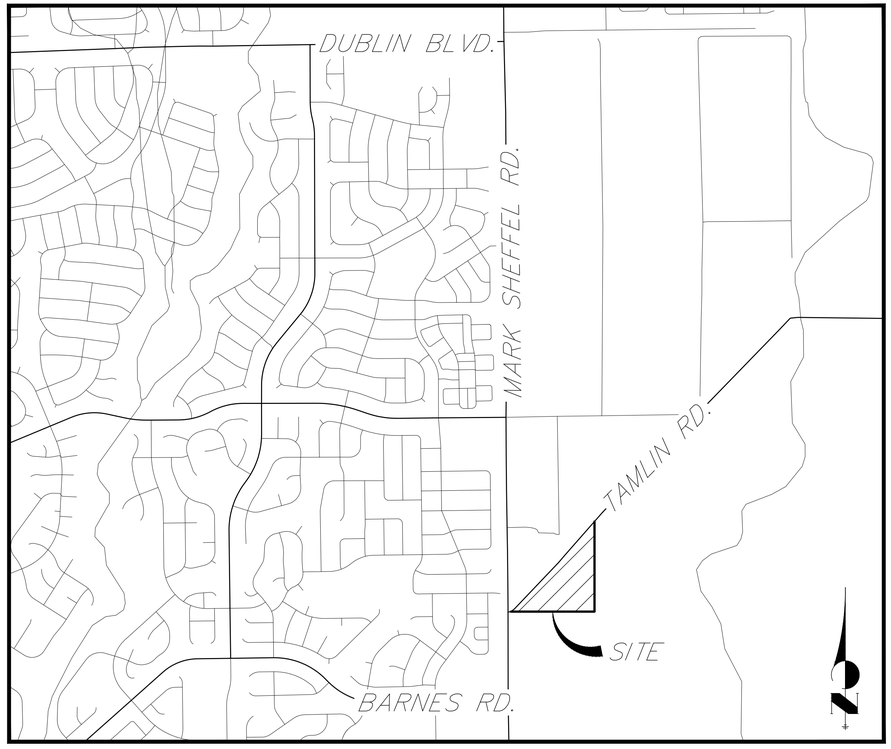
GRADING AND EROSION CONTROL PLANS (W/ POND DETAILS)

GRADING AND EROSION CONTROL STANDARD NOTES

1. CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM PLANNING AND COMMUNITY DEVELOPMENT AND A PRECONSTRUCTION CONFERENCE IS HELD WITH PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS.
2. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF SITE WATERS, INCLUDING WETLANDS.
3. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
4. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED STORMWATER MANAGER, SHALL BE LOCATED ON SITE AT ALL TIMES AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
5. ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMPS AS INDICATED ON THE GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY PCD INSPECTIONS STAFF.
6. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 21 CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMPS SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED.
7. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO STANDARDS AND SPECIFICATION PRESCRIBED IN THE DCM VOLUME II AND THE ENGINEERING CRITERIA MANUAL (ECM) APPENDIX I.
8. ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPS IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE DRAINAGE CRITERIA MANUAL (DCM) VOLUME II AND IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN (SWMP).
9. ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMPS AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS, THE SWMP AND THE DCM VOLUME II AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION.
10. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
11. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON-EROSIVE VELOCITY.
12. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
13. EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
14. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMP'S MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
15. VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
18. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
19. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.
20. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE ADEQUATE PROTECTION SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
21. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.
22. INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
23. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
24. PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
25. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
26. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING AND SHALL BE CONSIDERED A PART OF THESE PLANS.
27. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD - Permits
4300 Cherry Creek Drive South
Denver, CO 80246-1530
Attn: Permits Unit

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.



VICINITY MAP
SCALE: 1"=1000'

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOIL AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION
   3.4. CDOT M&S STANDARDS
4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSIONS OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE EINGEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
11. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.
12. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
13. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
14. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWENER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

CONTACTS:

OWNER/DEVELOPER	C&M PROPERTIES, LLC 12748 BAROSSA VALLEY ROAD COLORADO SPRINGS, CO P~719-210-9460
ENGINEER/SURVEYOR	JR ENGINEERING, LLC ATTN: MIKE A. BRAMLETT 5475 TECH CENTER DRIVE, SUITE 235 COLORADO SPRINGS, CO 80919 P~(303) 267-6240
FIRE PROTECTION DISTRICT	FALCON FIRE PROTECTION 12072 ROYAL COUNTY DOWN ROAD FALCON, CO 80831 P~(719) 495-4050

SHEET INDEX

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

BILL GUMAN — DATE

WILLIAM GUMAN AND ASSOCIATES
731 NORTH WEBER STREET
COLORADO SPRINGS, CO 80903

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

BILL GUMAN — DATE

WILLIAM GUMAN AND ASSOCIATES
731 NORTH WEBER STREET
COLORADO SPRINGS, CO 80903

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT 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. SAID PLAN AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

Know what's below. Call before you dig. 811

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
C&M PROPERTIES, LLC
12748 BAROSSA VALLEY ROAD
COLORADO SPRINGS, CO 80921
EDWARD MCDONALD
719-210-9480

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=1000'	DESIGNED BY	NQJ
V-SCALE	N/A	DRAWN BY	NQJ
DATE	7/11/19	CHECKED BY	

TAMLIN ROAD RV STORAGE
GRADING AND EROSION CONTROL PLANS (W/ POND DETAILS)
COVER SHEET

SHEET 1 OF 14

JOB NO. 25134.00

X:\25\25100.all\25134\00\Drawings\Sheet Dwgs\Grading and Erosion Control Plans\25134X00CV01.dwg, Cover Sheet, 7/12/2019 8:19:14 AM, CS

LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	W
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW–OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	TV	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL	E	
ELECTRICAL METER	E	
ELECTRICAL MANHOLE	E	
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	I	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	T	
TELEPHONE MANHOLE	T	
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	THD FIRM/AGENCY	

MONUMENTATION LEGEND

ALUMINUM CAP – FOUND	AC
BRASS CAP – FOUND	BC
BENCHMARK – FOUND	
CROSS – FOUND	
MONUMENT – SET	
MONUMENT – FOUND (DEFAULT)	
MONUMENT – FOUND (ALTERNATE 1)	
MONUMENT – FOUND (ALTERNATE 2)	
MONUMENT – FOUND (ALTERNATE 3)	
MONUMENT – FOUND (ALTERNATE 4)	
MONUMENT – FOUND (ALTERNATE 5)	
MONUMENT – FOUND (ALTERNATE 6)	
MONUMENT – FOUND (ALTERNATE 7)	
NAIL & WASHER – FOUND	NAIL & WASHER
PANEL – FOUND	
PK NAIL – FOUND	PK NAIL
ROW MONUMENT – FOUND	
ROW MARKER – FOUND	
SECTION CORNER – FOUND	
SECTION CORNER – SET	
QUARTER–SECTION CORNER – FOUND	
QUARTER–SECTION CORNER – SET	
SECTION CENTER – FOUND	
SECTION CENTER – FOUND	
CONTROL/TRAVERSE POINT – SET	

TRAFFIC LEGEND

	EXISTING	PROPOSED
PARKING METER		
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
TRAFFIC SIGNAL		
BARRICADE		
GUARD RAIL POST		
IMPACT ATTENUATOR		
BRIDGE STYLE HIGHWAY SIGN POST		
CANTILEVER STYLE HIGHWAY SIGN POST		
SIGN		
RAILROAD MARKER/SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		
ALTERNATE LUMINAIRE		
SIGNAL MAST ARM W/ LUMINAIRE		
PEDESTAL POLE FOUNDATION		
TRAFFIC SIGNAL POLE		
ROUND PULL BOX		
MEDIUM PULL BOX		
LARGE PULL BOX (20X33X15)		
SIGNAL HEAD WITHOUT BACK PLATE		
SIGNAL HEAD WITH BACK PLATE		
PEDESTRIAN SIGNAL HEAD		
VIDEO IMAGE DETECTOR		
OPTICOM DETECTOR		
VEHICLE DETECTION ZONE		V

STORM WATER MANAGEMENT

	KEY	SYMBOL
CHECK DAM	CD	
CONSTRUCTION ROAD STABILIZATION	CRS	
CURB SOCK INLET PROTECTION	CS	
CONCRETE WASHOUT AREA	CWA	
DIVERSION DITCH AND DIKE, TEMPORARY	DD	
DIVERSION CHANNEL, TEMPORARY	DV	
DEWATERING	DW	
EROSION CONTROL BLANKET	ECB	
INLET FILTER	IF	
INLET PROTECTION	IP	
MULCHING	MU	
OUTLET PROTECTION	OP	
PAVED FLUME	PF	
PERMENENT SEEDING	PS	
REINFORCED CONCRETE DAM	RCD	
ROUGH CUT STREET CONTROL	RCS	
SEDIMENT BASIN	SB	
SEDIMENT CONTROL LOG	SCL	
SILT FENCE	SF	
SURFACE ROUGHENING	SR	
STABILIZED STAGING AREA	SSA	
SEDIMENT TRAP	ST	
STRAW BALE BARRIER	STB	
TERRACING	TER	
TEMPORARY SEEDING	TS	
TEMPORARY STREAM CROSSING CULVERT/BRIDGE	TSC C	
TEMPORARY STREAM CROSSING FORD TYPE	TSC F	
TEMPORARY SLOPE DRAIN	TSD	
VEHICLE TRACKING CONTROL	VTC	
VEHICLE TRACKING CONTROL WITH WASH RACK	WR	

DRAINAGE REPORT PLANS

	KEY
BASIN DESIGNATION (NO COEFFICIENT)	# #.#
BASIN DESIGNATION (1 COEFFICIENT)	# #.# | #
BASIN DESIGNATION (2 COEFFICIENTS)	# #.# | # #.# | #
ANALISYS POINT IDENTIFIER	#
BASIN DESIGNATION (HISTORIC)	# ##
BASIN DESIGNATION (DEVELOPED)	# ##
SUB–BASIN DESIGNATION (DEVELOPED)	# ##
DRAINAGE PIPE IDENTIFIER	##
DRAINAGE POINT IDENTIFIER (HEXAGONAL)	##
DRAINAGE POINT IDENTIFIER (TRIANGULAR)	?
SWMM DESIGNATION 1	#
SWMM DESIGNATION 2	#
SWMM DESIGNATION 3	#
SWMM DESIGNATION 4	?

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE		FP

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC/A MCLAREN

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
C&M PROPERTIES, LLC
12748 BAROSSA VALLEY ROAD
COLORADO SPRINGS, CO 80921
EDWARD MCDONALD
719–210–9480

J·R ENGINEERING
A Westrian Company
Centennial 303–740–9393 • Colorado Springs 719–593–2593
Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

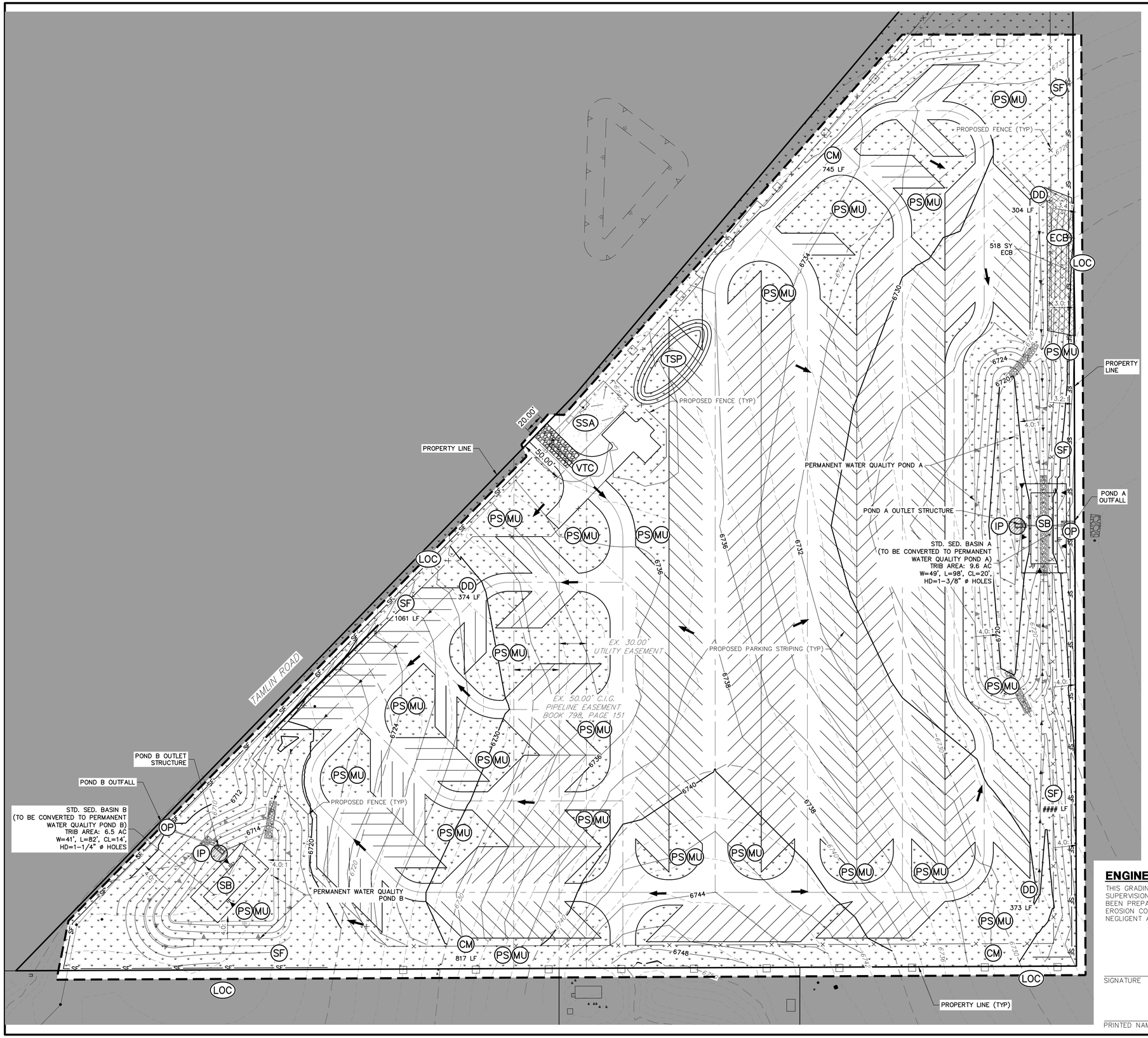
H–SCALE	V–SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
N/A	N/A	7/11/19	NQJ	NQJ	

TAMLIN ROAD RV STORAGE

LEGEND

SHEET 2 OF 14

JOB NO. 25134.00



LEGEND

- SEDIMENT BASIN (SB)
- SILT FENCE (SF)
- STABILIZED STAGING AREA (SSA)
- CONSTRUCTION MARKER (CM)
- VEHICLE TRACKING CONTROL (VTC)
- TEMPORARY STOCK PILE (TSP)
- EROSION CONTROL BLANKET (ECB)
- INLET PROTECTION (IP)
- OUTLET PROTECTION (OP)
- DIVERSION DITCH AND DIKE, TEMPORARY (DD)
- CUT AND FILL LINE — — — — C/F — — — — C/F —
- LIMITS OF CONSTRUCTION (LOC)
- CONCRETE WASHOUT AREA (CWA)
- PERMANENT SEEDING/MULCHING (MU)

EROSION CONTROL NOTES

1. THE REQUIRED SEEDING AND MULCHING AREA FOR THE SITE TOTALS 7.61 ACRES. ALL AREAS NOT PAVED OR GRAVEL, SHALL BE SEEDED AND MULCHED. SEE EROSION CONTROL PLAN FOR AREAS REQUIRING SEEDING AND MULCHING.

BMP PHASING

INITIAL (SEPTEMBER 2019):
1) INSTALL VTC
2) ESTABLISH SSA
3) INSTALL CONSTRUCTION MARKERS
4) INSTALL SILT FENCE
5) INSTALL SEDIMENT BASINS
6) INSTALL DIVERSION DITCHES

INTERIM (OCTOBER 2019):
1) LOCATE/INSTALL TEMPORARY STOCKPILE
2) MAINTAIN ALL BMPS
3) INSTALL INLET AND OUTLET PROTECTION
4) INSTALL EROSION CONTROL BLANKETS

FINAL (NOVEMBER 2019):
1) INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
2) REMOVE SILT FENCE AFTER STABILIZED

FINAL STABILIZATION ANTICIPATED NOVEMBER 2019.

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

Know what's **below.** **Call** before you dig.

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS REPORT.

SIGNATURE

PRINTED NAME

DATE

STATE OF COLORADO REGISTERED 32314 PROFESSIONAL ENGINEER

SEAL

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No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	N/A
DATE	7/11/19
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

TAMLIN ROAD RV STORAGE

GRADING AND EROSION CONTROL PLAN

SHEET 3 OF 14

JOB NO. 25134.00

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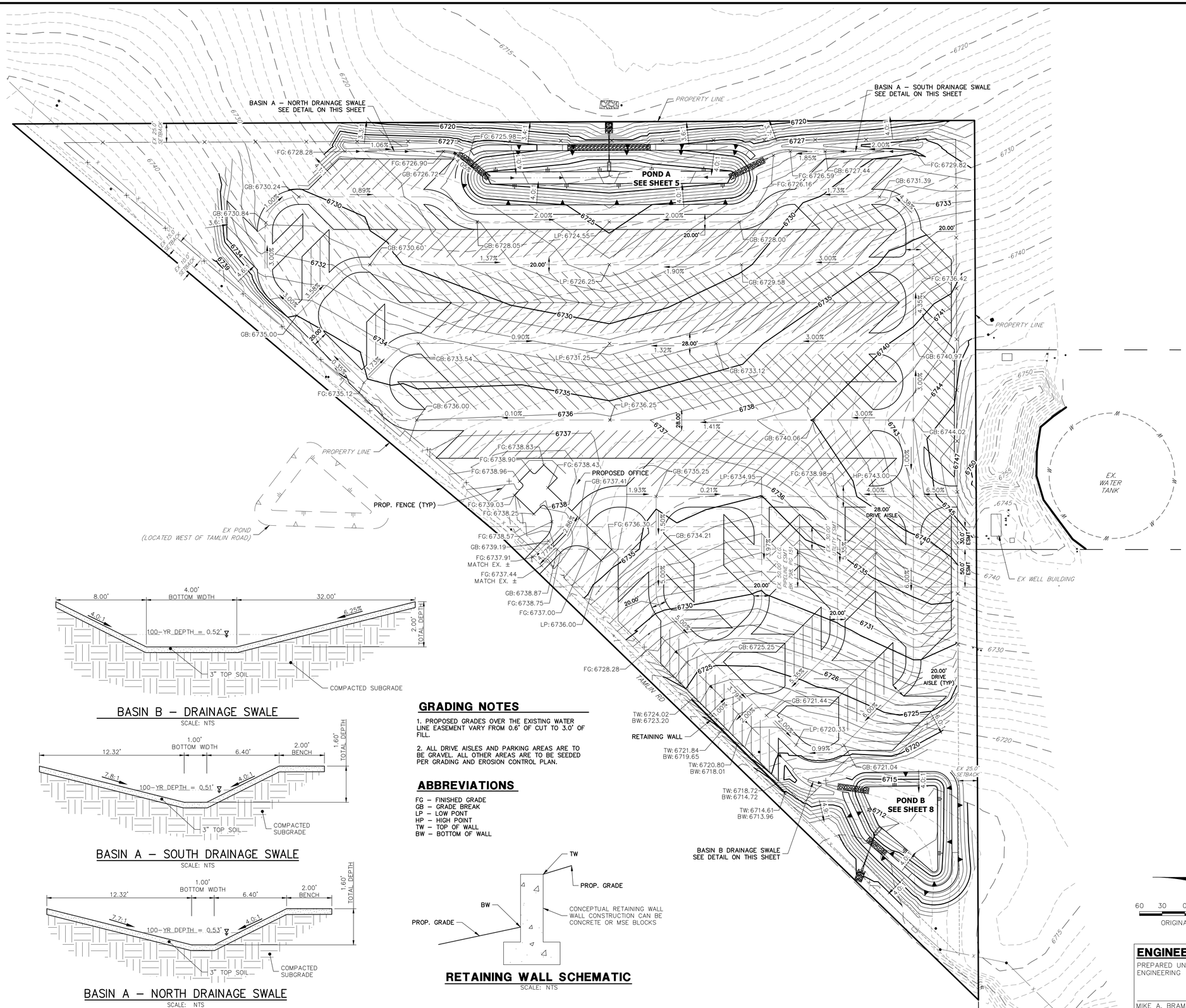

BASIN B – DRAINAGE SWALE

SCALE: NTS

BASIN A – SOUTH DRAINAGE SWALE

SCALE: NTS

BASIN A – NORTH DRAINAGE SWALE

SCALE: NTS

GRADING NOTES

1. PROPOSED GRADES OVER THE EXISTING WATER LINE EASEMENT VARY FROM 0.6' OF CUT TO 3.0' OF FILL.

2. ALL DRIVE AISLES AND PARKING AREAS ARE TO BE GRAVEL. ALL OTHER AREAS ARE TO BE SEEDED PER GRADING AND EROSION CONTROL PLAN.

ABBREVIATIONS

FG – FINISHED GRADE
GB – GRADE BREAK
LP – LOW PONT
HP – HIGH POINT
TW – TOP OF WALL
BW – BOTTOM OF WALL

RETAINING WALL SCHEMATIC

SCALE: NTS

60 30 0 60 120

ORIGINAL SCALE: 1" = 60'

811 Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

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No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	N/A
DATE	7/11/19
DESIGNED BY	DRC
DRAWN BY	NQJ
CHECKED BY	

TAMLIN ROAD RV STORAGE

OVERALL GRADING PLAN

SHEET 4 OF 14

JOB NO. 25134.00

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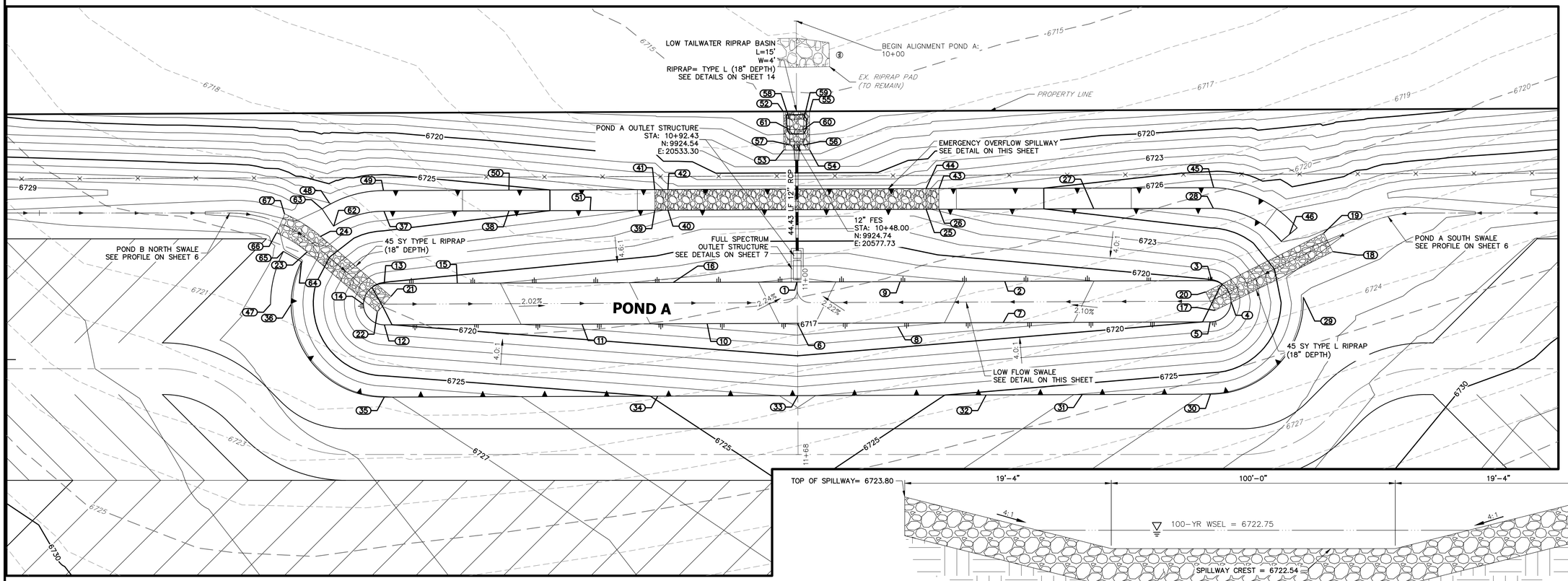
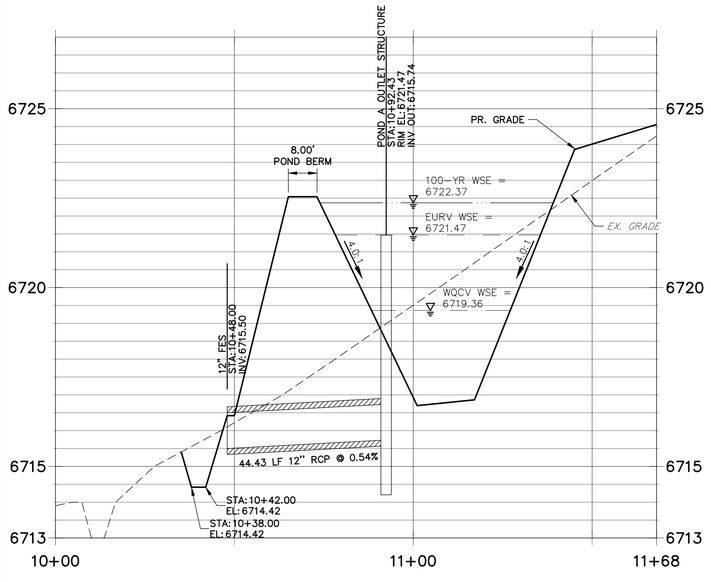


POND A EMERGENCY OVERFLOW SPILLWAY

SCALE: N.T.S.

POND A PROFILE
STA 10+00.00 TO 11+68.00

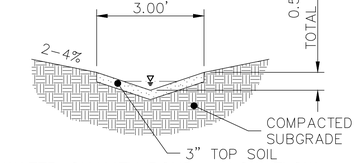


POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
1	OUTLET STRUCTURE	N: 9924.55 E: 20524.64	6716.70
2	TOE OF SLOPE	N: 9844.23 E: 20524.91	6718.31
3	TOE OF SLOPE	N: 9763.90 E: 20525.19	6719.91
4	TOE OF SLOPE	N: 9756.52 E: 20516.92	6720.15
5	TOE OF SLOPE	N: 9764.48 E: 20509.21	6720.06
6	TOE OF SLOPE	N: 9924.49 E: 20508.63	6716.86
7	TOE OF SLOPE	N: 9844.84 E: 20508.92	6718.45
8	TOE OF SLOPE	N: 9885.59 E: 20507.32	6718.00
9	TOE OF SLOPE	N: 9884.59 E: 20524.77	6717.50
10	TOE OF SLOPE	N: 9959.48 E: 20508.51	6717.56
11	TOE OF SLOPE	N: 10007.94 E: 20508.33	6718.53
12	TOE OF SLOPE	N: 10084.50 E: 20508.06	6720.06
13	TOE OF SLOPE	N: 10084.56 E: 20524.06	6719.90
14	TOE OF SLOPE	N: 10092.54 E: 20516.03	6720.15
15	TOE OF SLOPE	N: 10056.14 E: 20524.17	6719.33
16	TOE OF SLOPE	N: 9972.58 E: 20524.46	6717.66
17	RIPRAP	N: 9762.73 E: 20513.63	6720.05
18	RIPRAP	N: 9717.09 E: 20536.40	6726.29
19	RIPRAP	N: 9720.66 E: 20543.56	6726.78
20	RIPRAP	N: 9766.30 E: 20520.79	6719.91
21	RIPRAP	N: 10081.94 E: 20519.10	6719.90

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
22	RIPRAP	N: 10087.13 E: 20513.02	6720.06
23	RIPRAP	N: 10114.34 E: 20536.25	6726.48
24	RIPRAP	N: 10109.15 E: 20542.33	6726.36
25	SPILLWAY	N: 9874.65 E: 20552.82	6722.54
26	SPILLWAY	N: 9869.65 E: 20552.83	6723.80
27	TOP OF SLOPE	N: 9809.65 E: 20553.05	6725.57
28	TOP OF SLOPE	N: 9763.28 E: 20553.19	6726.91
29	TOP OF SLOPE	N: 9728.54 E: 20518.68	6727.14
30	TOP OF SLOPE	N: 9764.38 E: 20481.21	6727.06
31	TOP OF SLOPE	N: 9814.11 E: 20481.03	6726.07
32	TOP OF SLOPE	N: 9851.30 E: 20480.90	6725.32
33	TOP OF SLOPE	N: 9924.23 E: 20480.45	6723.87
34	TOP OF SLOPE	N: 9978.47 E: 20480.45	6724.94
35	TOP OF SLOPE	N: 10084.40 E: 20480.06	6727.06
36	TOP OF SLOPE	N: 10120.54 E: 20515.93	6727.14
37	TOP OF SLOPE	N: 10084.66 E: 20552.06	6726.90
38	TOP OF SLOPE	N: 10036.10 E: 20552.24	6725.47
39	SPILLWAY	N: 9979.65 E: 20552.44	6723.80
40	SPILLWAY	N: 9974.65 E: 20552.46	6722.54
41	SPILLWAY	N: 9979.67 E: 20560.44	6723.80
42	SPILLWAY	N: 9974.67 E: 20560.46	6722.54

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
43	SPILLWAY	N: 9869.67 E: 20560.83	6723.80
44	SPILLWAY	N: 9874.67 E: 20560.82	6722.54
45	TOP OF SLOPE	N: 9763.17 E: 20561.19	6726.90
46	TOP OF SLOPE	N: 9733.95 E: 20543.02	6727.04
47	TOP OF SLOPE	N: 10128.54 E: 20515.90	6727.14
48	TOP OF SLOPE	N: 10105.60 E: 20555.12	6727.02
49	TOP OF SLOPE	N: 10084.69 E: 20560.06	6726.90
50	TOP OF SLOPE	N: 10036.13 E: 20560.24	6725.47
51	TOP OF SLOPE	N: 10004.65 E: 20552.35	6724.54
52	DISSIPATOR	N: 9929.77 E: 20590.56	6715.42
53	DISSIPATOR	N: 9929.73 E: 20575.71	6716.42
54	TOP OF SLOPE	N: 9919.73 E: 20575.75	6716.42
55	DISSIPATOR	N: 9919.79 E: 20590.60	6715.39
56	DISSIPATOR	N: 9921.99 E: 20577.74	6716.42
57	DISSIPATOR	N: 9927.49 E: 20577.72	6716.42
58	DISSIPATOR	N: 9927.53 E: 20587.72	6714.42
59	DISSIPATOR	N: 9922.03 E: 20587.74	6714.42
60	DISSIPATOR	N: 9922.01 E: 20583.74	6714.42
61	DISSIPATOR	N: 9927.51 E: 20583.72	6714.42
62	TOP OF POND	N: 10104.13 E: 20546.26	6726.99
63	TOP OF POND	N: 10108.57 E: 20552.97	6727.00

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
64	TOP OF POND	N: 10116.56 E: 20532.52	6727.07
65	TOP OF POND	N: 10123.52 E: 20536.47	6727.07
66	RIPRAP	N: 10126.19 E: 20543.64	6727.30
67	RIPRAP	N: 10123.04 E: 20550.99	6727.47



WATER QUALITY POND – LOW FLOW SWALE

N.T.S.

811 Know what's below. Call before you dig.

20 10 0 20 40

HORIZONTAL
ORIGINAL SCALE: 1" = 20'

VERTICAL
ORIGINAL SCALE: 1" = 2'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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No.	REVISION	BY	DATE

H-SCALE 1"=20'
V-SCALE 1"=2'
DATE 7/11/19
DESIGNED BY NQJ
DRAWN BY NQJ
CHECKED BY

TAMLIN ROAD RV STORAGE

POND A GRADING PLAN

SHEET 5 OF 14

JOB NO. 25134.00

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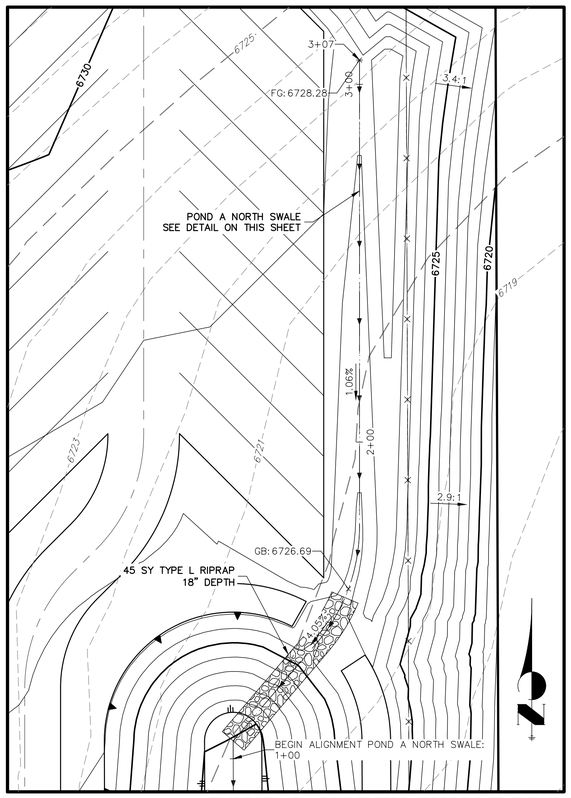
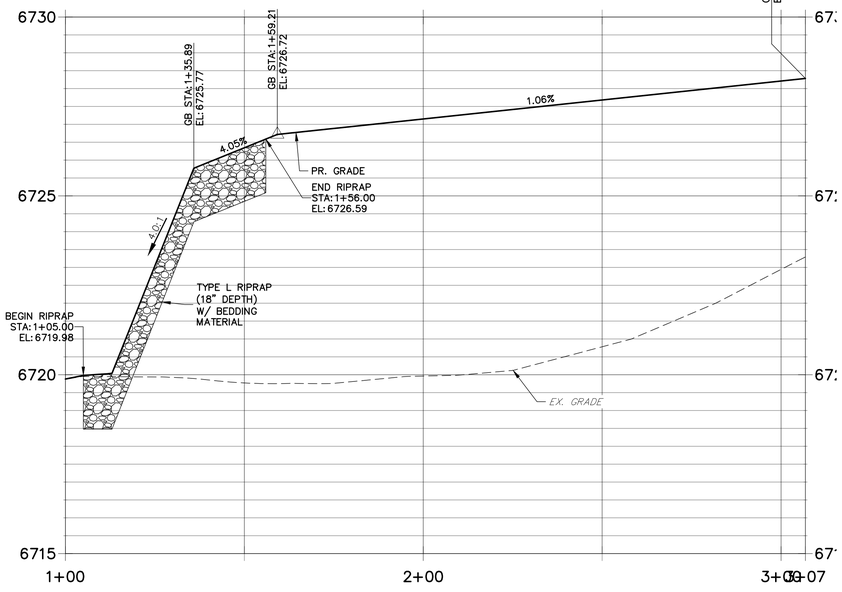
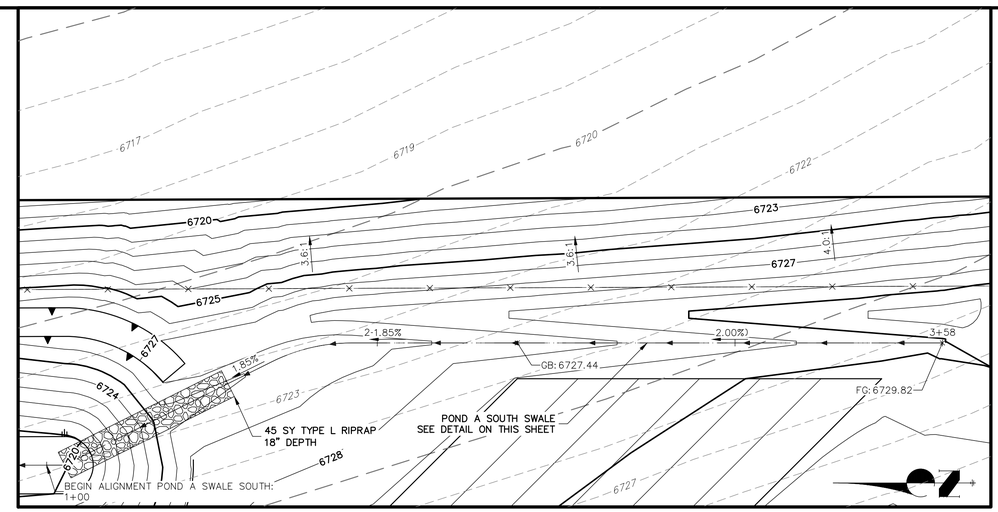
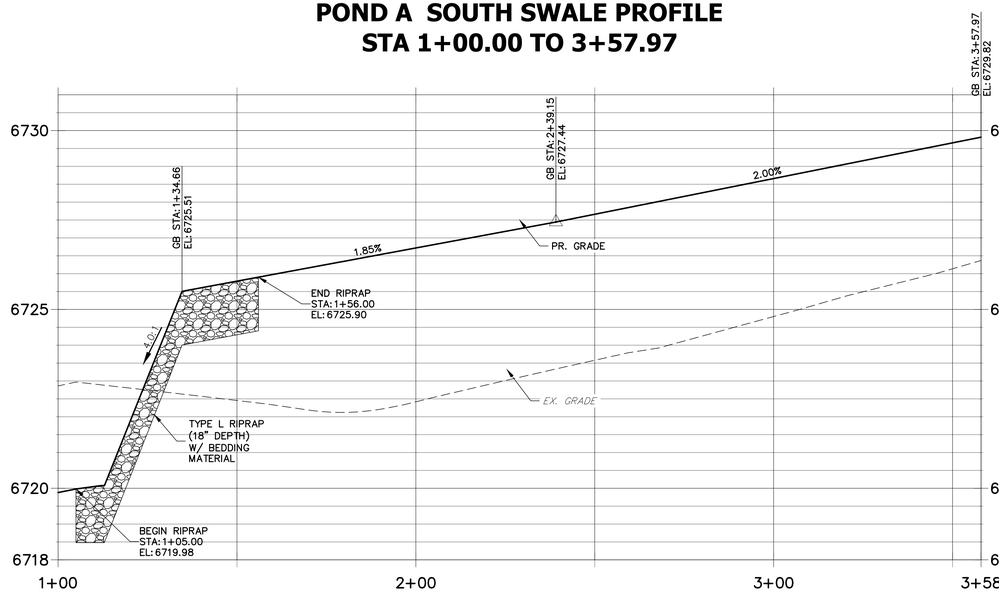


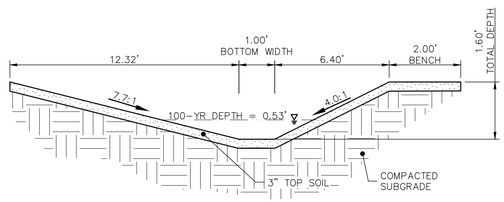
POND A NORTH SWALE PROFILE
STA 1+00.00 TO 3+06.80



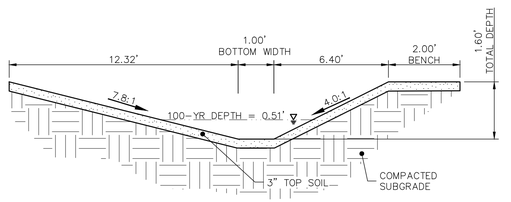


POND A SOUTH SWALE PROFILE
STA 1+00.00 TO 3+57.97





BASIN A – NORTH DRAINAGE SWALE
SCALE: NTS



BASIN A – SOUTH DRAINAGE SWALE
SCALE: NTS

811 Know what's **below.** **Call** before you dig.

20 10 0 20 40
HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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BY	DATE	No.	REVISION

H-SCALE	1"=20'
V-SCALE	1"=2'
DATE	7/11/19
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

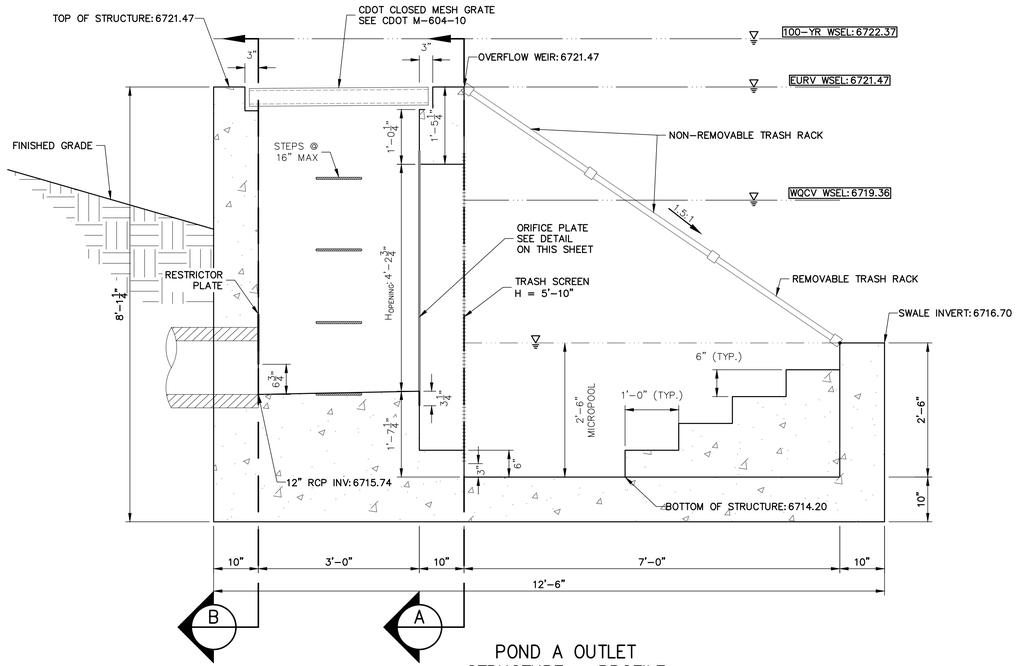
TAMLIN ROAD RV STORAGE

POND A PLAN & PROFILE

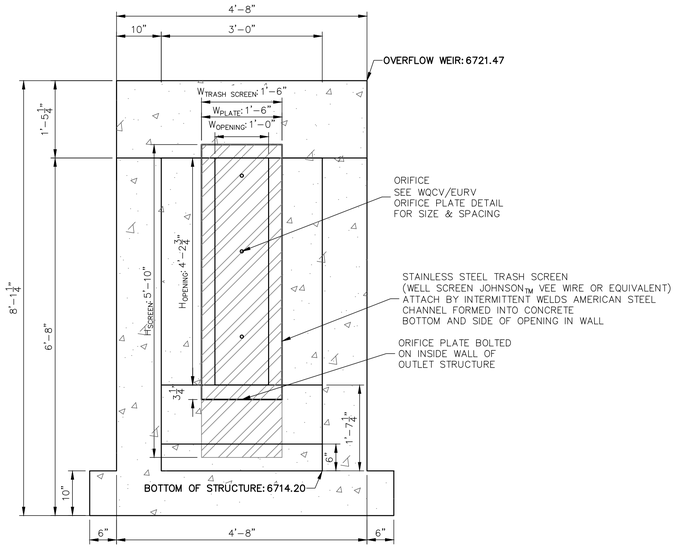
SHEET 6 OF 14

JOB NO. 25134.00

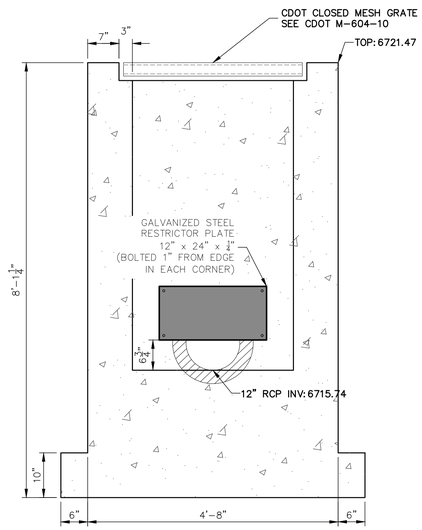
X:\25\10000-all\25134\00\Drawings\Sheet Dwgs\Grading and Erosion Control Plans\25134 Pond A.dwg, POND A PLANS (2), 7/12/2019 8:21:30 AM, CS



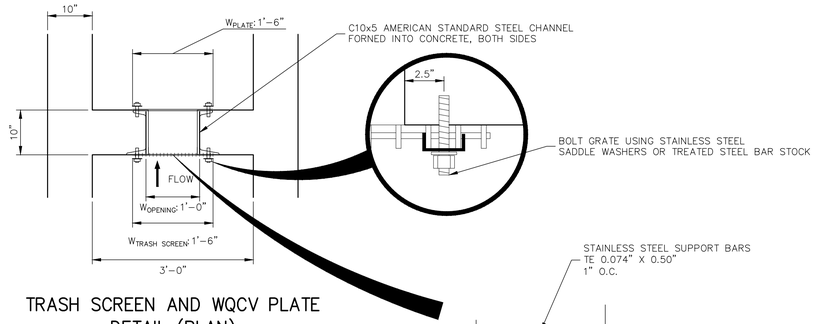
POND A OUTLET
STRUCTURE – PROFILE
SCALE: 3/4"=1'



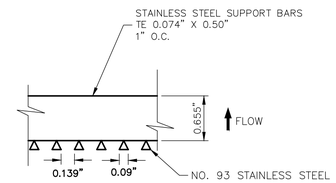
A 40 SECTION A AT ORIFICE (FRONT) WALL
SCALE: 3/4"=1'



B 40 SECTION B AT OUTLET (REAR) WALL
SCALE: 3/4"=1'

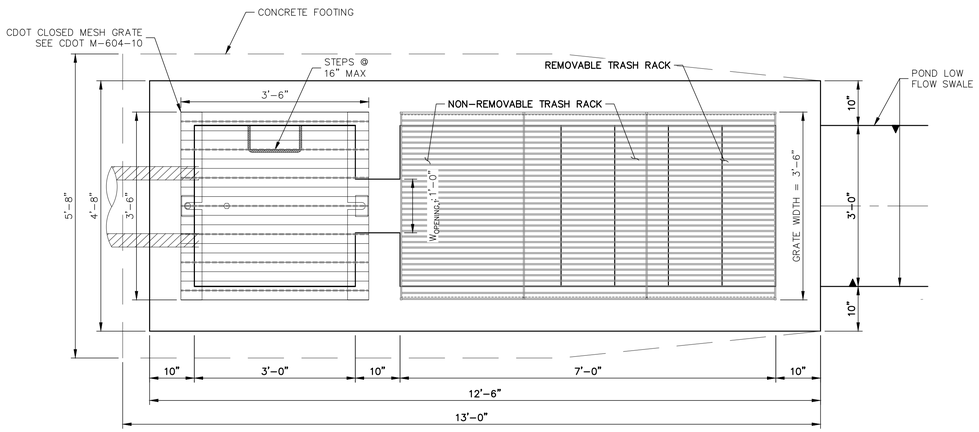


TRASH SCREEN AND WQCV PLATE
DETAIL (PLAN)
SCALE: 3/4"=1'



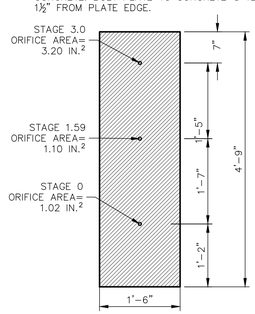
R VALUE = (NET OPEN AREA)/(GROSS RACK AREA) = 0.60

TRASH SCREEN DETAIL
N.T.S.



POND A OUTLET
STRUCTURE – PLAN
SCALE: 3/4"=1'

EURV/WQCV ORIFICE PLATE:
4'-9" x 1'-6" x ½" THICK FLOW GALVANIZED STEEL FLOW CONTROL PLATE. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE. BOLT PLATE TO CONCRETE @ 12" MAX O.C., 1½" FROM PLATE EDGE.



WQCV/EURV ORIFICE
PLATE DETAIL
SCALE: 3/4"=1'

3/4" 3/8" 0 3/4"
HORIZONTAL
ORIGINAL SCALE: 1" = 3/4"'
VERTICAL
ORIGINAL SCALE: 1" = 3/4"'

ENGINEER'S STATEMENT
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
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No.	REVISION	BY	DATE

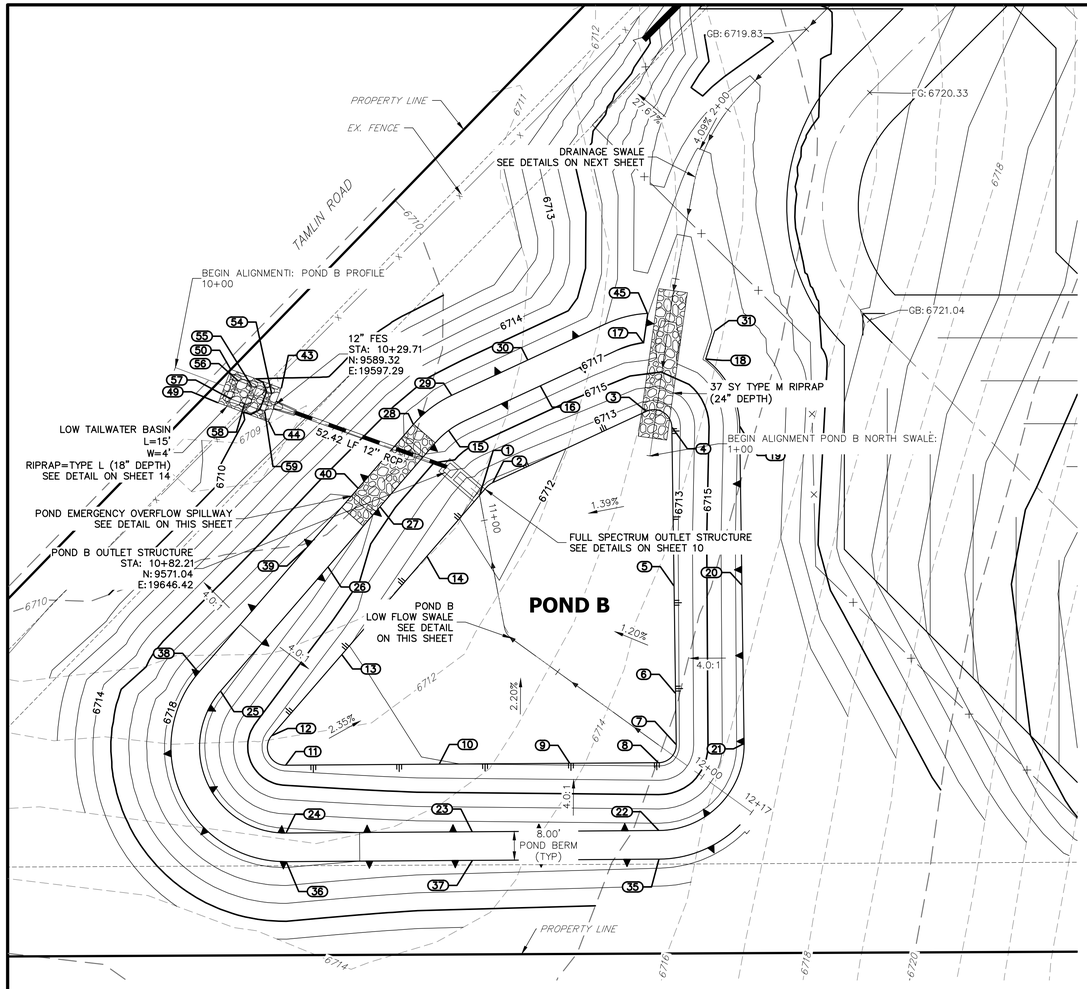
H-SCALE 3/4" = 1' | V-SCALE 3/4" = 1' | DATE 7/11/19 | DESIGNED BY NQJ | DRAWN BY NQJ | CHECKED BY

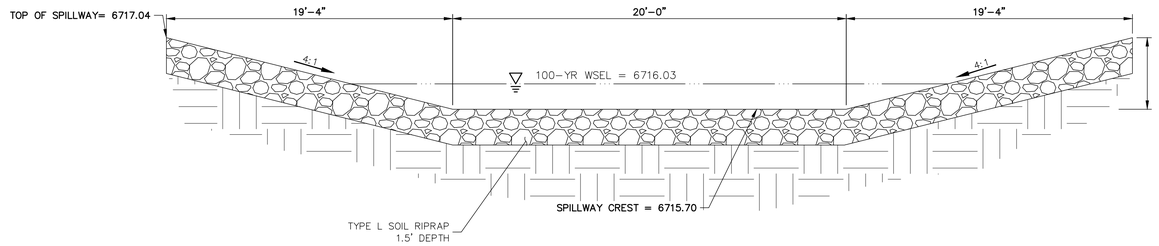
TAMLIN ROAD RV STORAGE

POND A OUTLET STRUCTURE

SHEET 7 OF 14

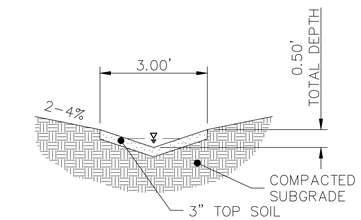
JOB NO. 25134.00





POND B EMERGENCY OVERFLOW SPILLWAY

SCALE: N.T.S.



WATER QUALITY POND – LOW FLOW SWALE

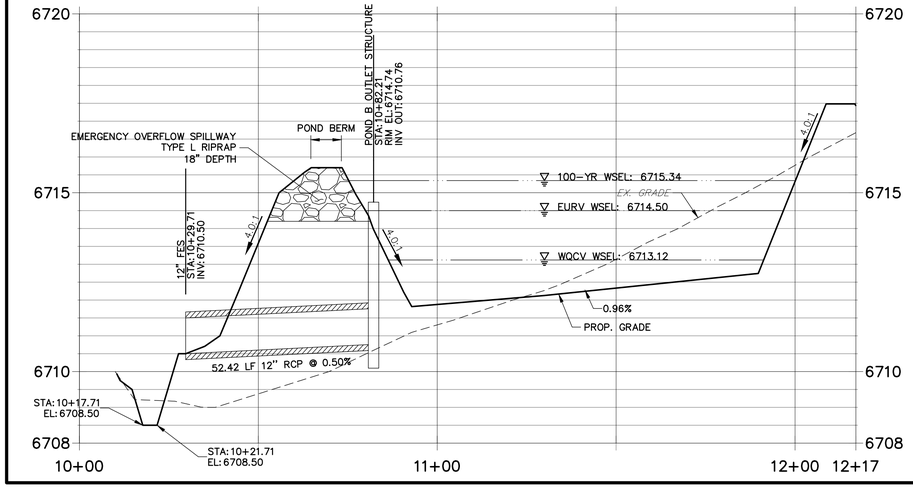
N.T.S.

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
1	OUTLET STRUCT.	N: 9564.06 E: 19654.49	6711.82
2	TOE OF SLOPE	N: 9567.60 E: 19658.13	6711.74
3	TOE OF SLOPE	N: 9587.58 E: 19701.14	6712.28
4	TOE OF SLOPE	N: 9583.11 E: 19708.24	6712.40
5	TOE OF SLOPE	N: 9538.76 E: 19708.86	6712.70
6	TOE OF SLOPE	N: 9508.75 E: 19709.28	6712.76
7	TOE OF SLOPE	N: 9494.41 E: 19709.48	6712.79
8	TOE OF SLOPE	N: 9489.34 E: 19704.52	6712.77
9	TOE OF SLOPE	N: 9489.18 E: 19679.76	6712.87
10	TOE OF SLOPE	N: 9488.93 E: 19643.15	6713.02
11	TOE OF SLOPE	N: 9488.64 E: 19600.23	6713.59
12	TOE OF SLOPE	N: 9496.91 E: 19596.42	6713.57
13	TOE OF SLOPE	N: 9519.52 E: 19615.96	6713.05
14	TOE OF SLOPE	N: 9547.03 E: 19639.76	6712.30
15	SPILLWAY	N: 9582.19 E: 19645.80	6717.00
16	SPILLWAY	N: 9594.68 E: 19671.43	6717.01
17	TOP OF SLOPE	N: 9606.82 E: 19700.32	6717.05
18	TOP OF SLOPE	N: 9602.15 E: 19717.69	6717.10
19	TOP OF SLOPE	N: 9583.37 E: 19727.20	6717.14
20	TOP OF SLOPE	N: 9539.03 E: 19727.82	6717.44

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
21	TOP OF SLOPE	N: 9494.68 E: 19728.44	6717.53
22	TOP OF SLOPE	N: 9470.38 E: 19704.64	6717.51
23	TOP OF SLOPE	N: 9470.03 E: 19652.50	6717.73
24	TOP OF SLOPE	N: 9469.68 E: 19600.36	6718.33
25	TOP OF SLOPE	N: 9509.31 E: 19582.07	6718.31
26	TOP OF SLOPE	N: 9544.02 E: 19612.09	6717.42
27	SPILLWAY	N: 9560.85 E: 19626.64	6715.70
28	SPILLWAY	N: 9583.97 E: 19636.06	6717.00
29	SPILLWAY	N: 9592.05 E: 19646.77	6717.01
30	SPILLWAY	N: 9601.94 E: 19668.06	6717.01
31	TOP OF SLOPE	N: 9610.10 E: 19720.25	6717.09
35	TOP OF SLOPE	N: 9462.38 E: 19704.70	6717.51
36	TOP OF SLOPE	N: 9461.68 E: 19600.41	6718.33
37	TOP OF SLOPE	N: 9462.03 E: 19652.55	6717.73
38	TOP OF SLOPE	N: 9514.55 E: 19576.02	6718.31
39	TOP OF SLOPE	N: 9549.26 E: 19606.04	6717.42
40	SPILLWAY	N: 9566.08 E: 19620.59	6715.70
43	LOW TAILWATER BASIN	N: 9594.00 E: 19599.05	6710.50
44	LOW TAILWATER BASIN	N: 9584.64 E: 19595.52	6710.50
45	LOW TAILWATER BASIN	N: 9614.95 E: 19701.48	6717.06

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
49	LOW TAILWATER BASIN	N: 9589.93 E: 19581.49	6709.50
50	LOW TAILWATER BASIN	N: 9599.29 E: 19585.02	6709.50
54	LOW TAILWATER BASIN	N: 9592.60 E: 19596.39	6710.50
55	LOW TAILWATER BASIN	N: 9594.72 E: 19590.77	6708.50
56	LOW TAILWATER BASIN	N: 9596.13 E: 19587.03	6708.50
57	LOW TAILWATER BASIN	N: 9590.98 E: 19585.09	6708.50
58	LOW TAILWATER BASIN	N: 9589.57 E: 19588.83	6708.50
59	LOW TAILWATER BASIN	N: 9587.45 E: 19594.45	6710.50

POND B PROFILE
STA 10+00.00 TO 12+17.00



Know what's below. Call before you dig.

20 10 0 20 40

HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
C&M PROPERTIES, LLC
12748 BAROSSA VALLEY ROAD
COLORADO SPRINGS, CO 80921
EDWARD MCDONALD
719-210-9480

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=20'
V-SCALE	1"=2'
DATE	7/11/19
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

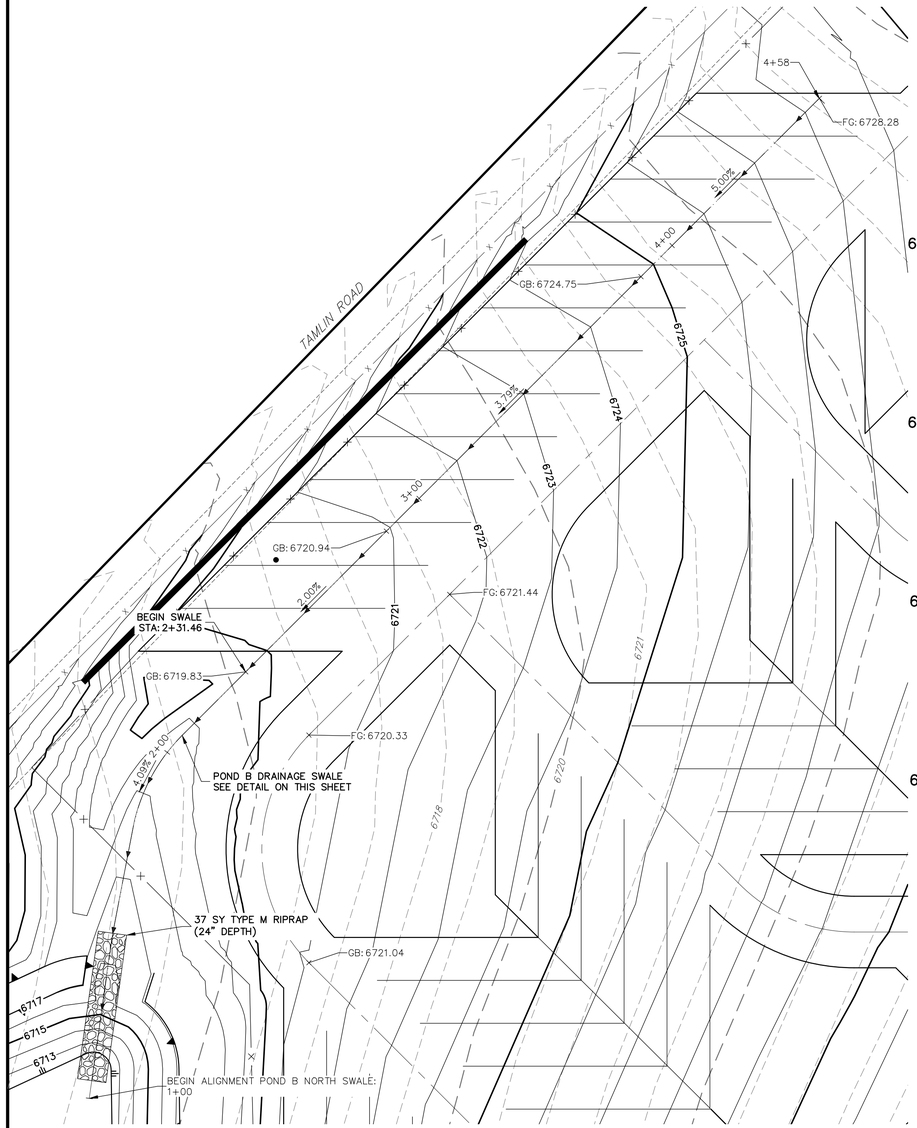
TAMLIN ROAD RV STORAGE

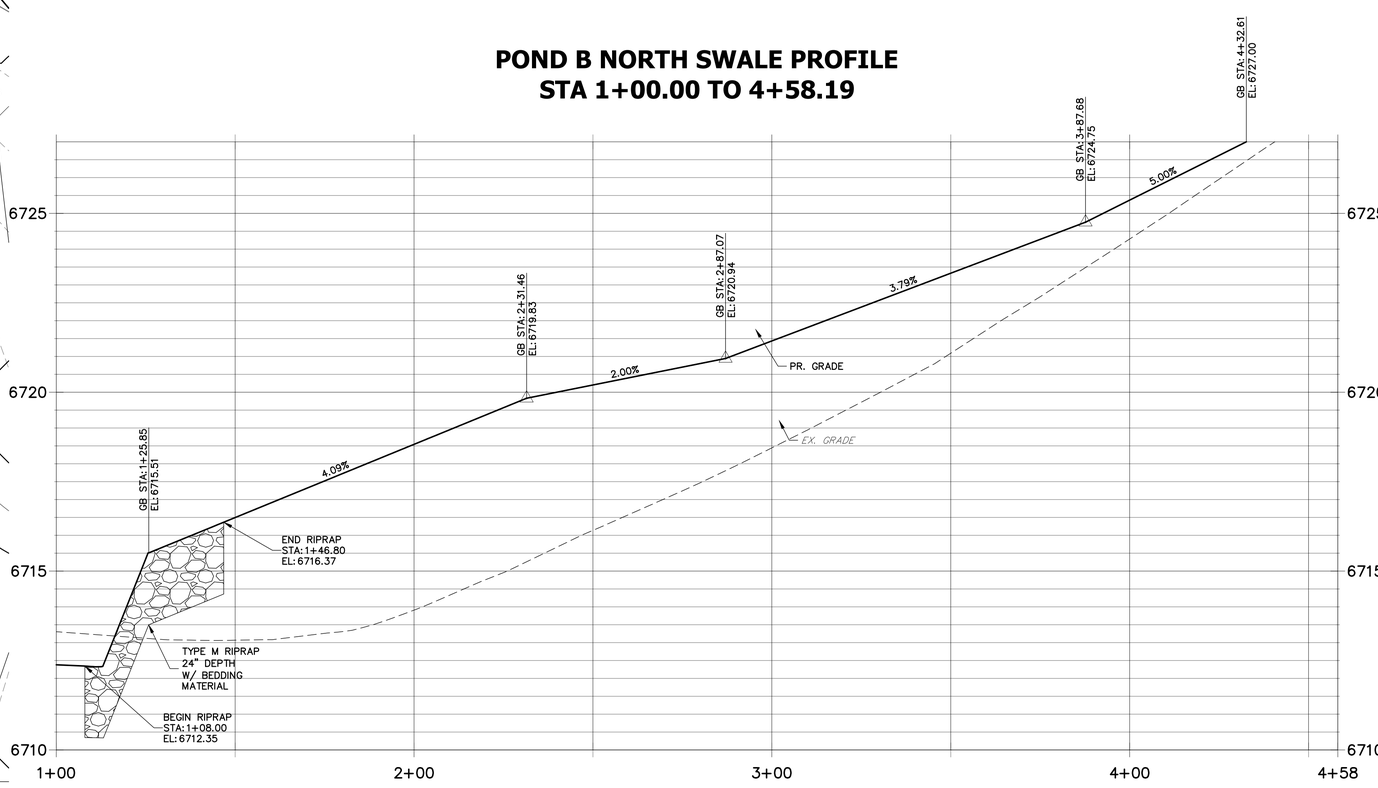
POND B PLAN & PROFILE

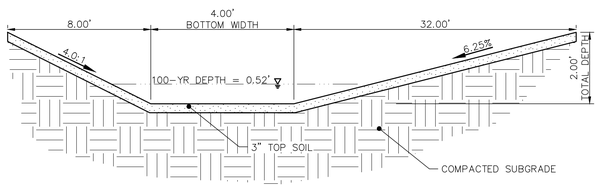
SHEET 8 OF 14

JOB NO. 25134.00

X:\25\10000 all\25134\00\Drawings\Sheet Dwgs\Grading and Erosion Control Plans\25134\00 Pond B.dwg, POND B PLANS, 7/12/2019 8:23:02 AM, CS







BASIN B – DRAINAGE SWALE
SCALE: NTS

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20 10 0 20 40
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VERTICAL
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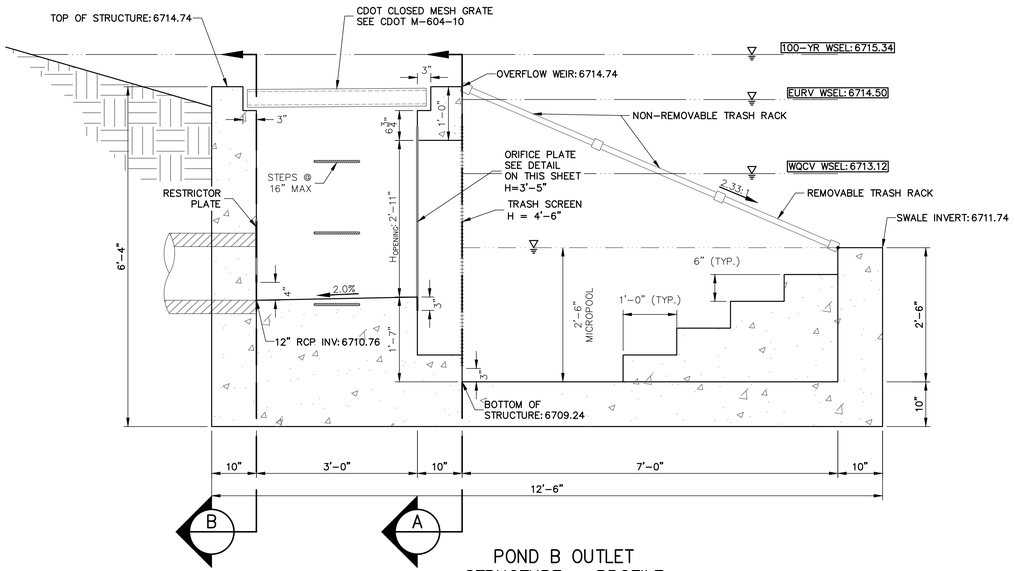
TAMLIN ROAD RV STORAGE

POND B PLAN & PROFILE

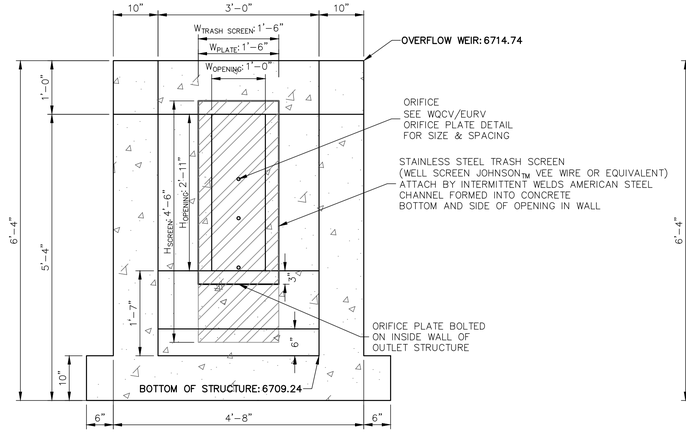
SHEET 9 OF 14

JOB NO. 25134.00



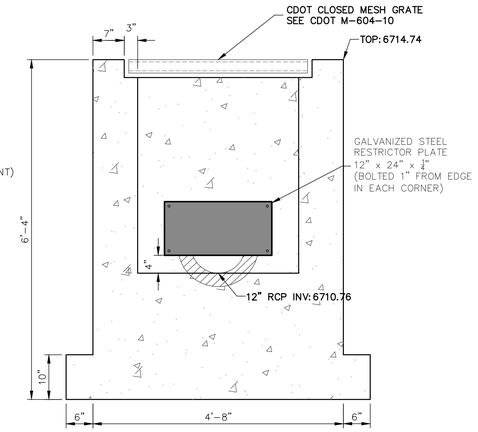
POND B OUTLET STRUCTURE – PROFILE

SCALE: 3/4"=1'



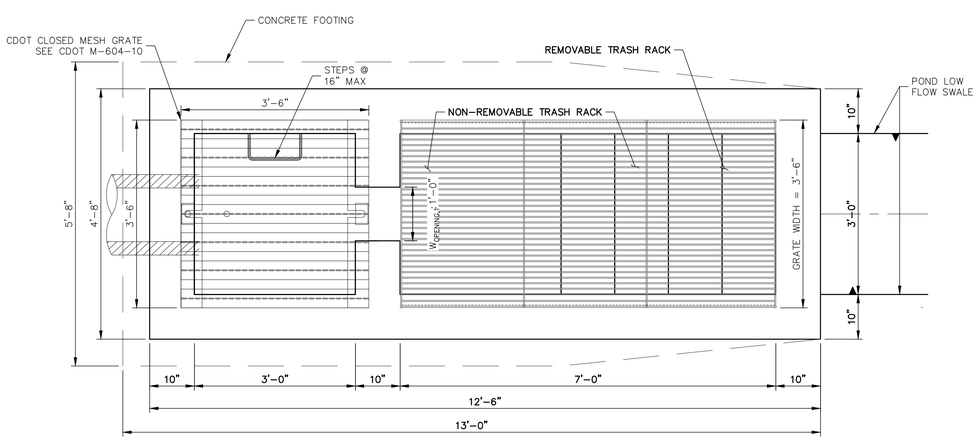
A 40 SECTION A AT ORIFICE (FRONT) WALL

SCALE: 3/4"=1'



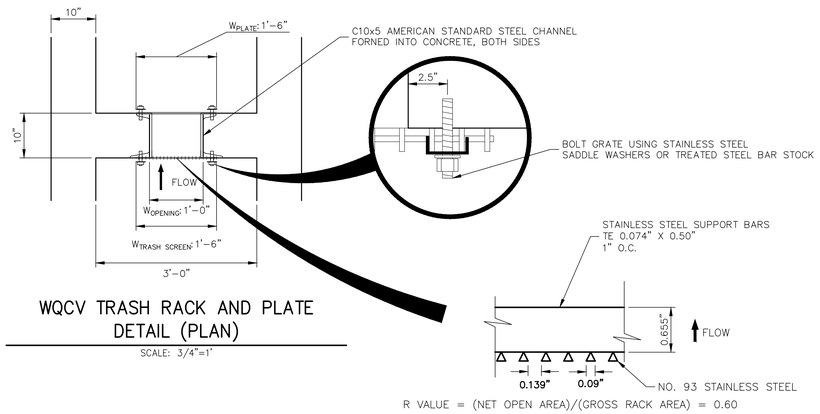
B 40 SECTION B AT OUTLET (REAR) WALL

SCALE: 3/4"=1'



POND B OUTLET STRUCTURE – PLAN

SCALE: 3/4"=1'



WQCV TRASH RACK AND PLATE DETAIL (PLAN)

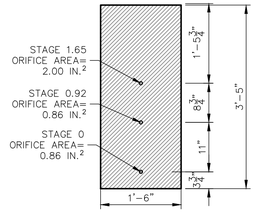
SCALE: 3/4"=1'

R VALUE = (NET OPEN AREA)/(GROSS RACK AREA) = 0.60

TRASH SCREEN DETAIL

N.T.S.

EURV/WQCV ORIFICE PLATE:
3'–5" x 1'–6" x ½" THICK FLOW GALVANIZED STEEL FLOW CONTROL PLATE. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE. BOLT PLATE TO CONCRETE @ 12" MAX O.C., 1½" FROM PLATE EDGE.



WQCV/EURV ORIFICE PLATE DETAIL

SCALE: 3/4"=1'

3/4" 3/8" 0 3/4"

HORIZONTAL
ORIGINAL SCALE: 1" = 3/4"'

VERTICAL
ORIGINAL SCALE: 1" = 3/4"'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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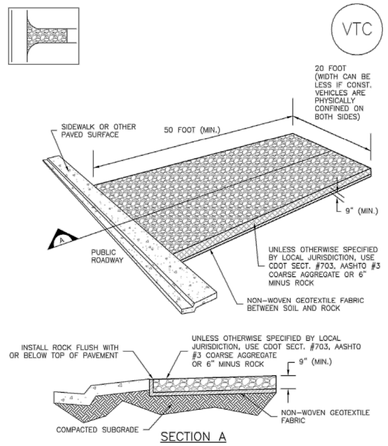
TAMLIN ROAD RV STORAGE

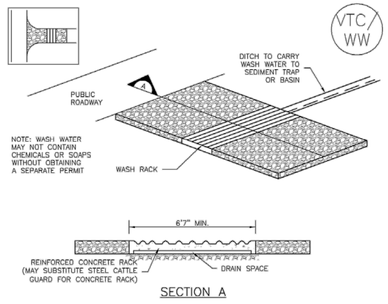
POND B OUTLET STRUCTURE

SHEET 10 OF 14

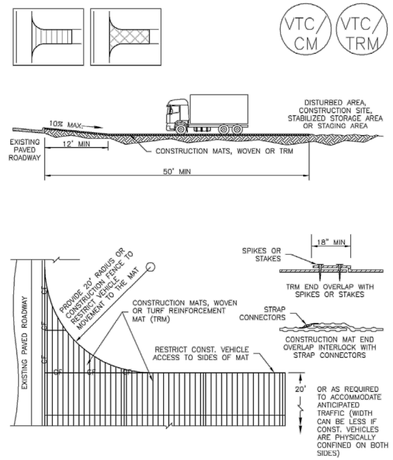
JOB NO. 25134.00



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL



VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK



VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT 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.

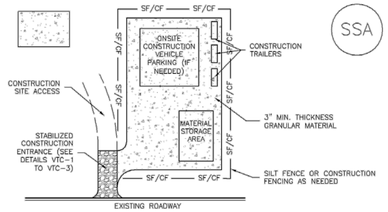
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

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.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF STAGING AREA(S).
   -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA 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. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

STABILIZED STAGING AREA MAINTENANCE NOTES

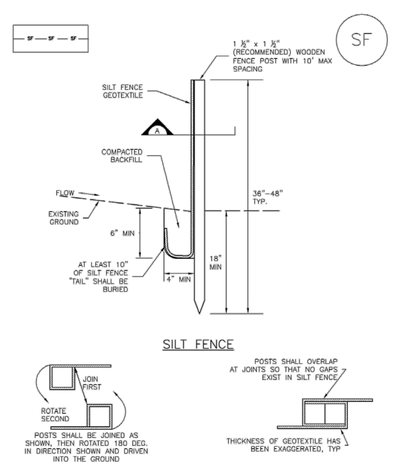
5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

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.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)



SF-1. SILT FENCE

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.

5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' – 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE 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 SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, 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.

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No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	NQJ
V-SCALE	N/A	DRAWN BY	NQJ
DATE	7/11/19	CHECKED BY	

TAMLIN ROAD RV STORAGE

GRADING AND EROSION CONTROL DETAILS

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

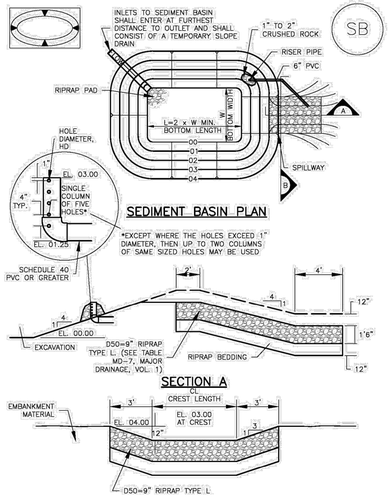


TABLE SB-1, SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 ½	2	9/32
2	21	3	13/64
3	28	5	1/4
4	33 ½	6	9/32
5	38 ½	8	21/64
6	43	9	23/64
7	47 ¼	11	25/64
8	51	12	27/64
9	55	13	7/16
10	58 ¼	15	15/32
11	61	16	33/64
12	64	18	17/32
13	67 ½	19	1 3/4
14	70 ½	21	1 7/8
15	73 ¼	22	1 31/32

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF SEDIMENT BASIN.
   –TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
   –FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
   –FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS AS A STORMWATER CONTROL.
4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
6. PIPE SCH 40 OR GREATER SHALL BE USED.
7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SEDIMENT BASIN 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 IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

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.

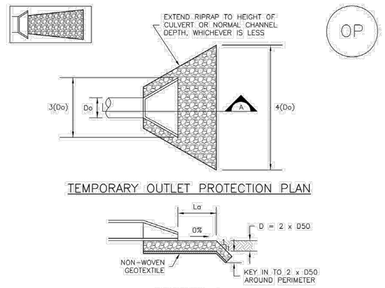
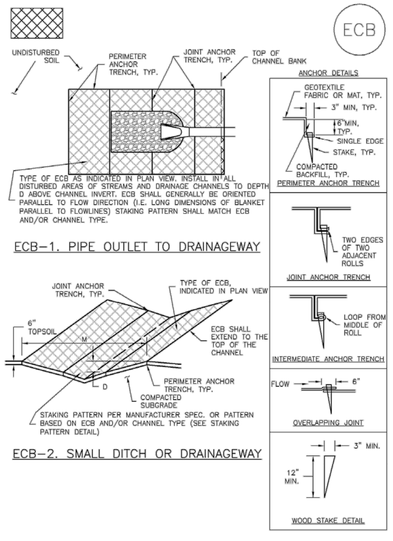
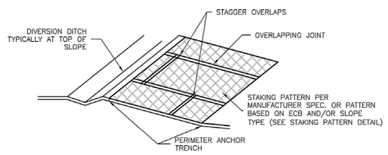


TABLE OP-1, TEMPORARY OUTLET PROTECTION SIZING TABLE

PIPE DIAMETER, Do (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, La (FT)	RIPRAP D50 DIAMETER MIN (INCHES)
8	2.5	5	4
	5	10	6
12	5	10	4
	10	13	6
18	10	10	6
	20	16	9
	30	23	12
	40	26	16
24	30	16	9
	40	26	9
	50	26	12
	60	30	16

OP–1, TEMPORARY OUTLET PROTECTION





EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF ECB.
   –TYPE OF ECB (STRAW, STRAW–COCONUT, COCONUT, OR EXCELSIOR).
   –AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.
2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE–HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB–1.
9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS SHALL BE RESEEDED AND MULCHED.
10. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TABLE ECB–1, ECB MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**
STRAW*	–	100%	–	DOUBLE/ NATURAL
STRAW–COCONUT	30% MIN	70% MAX	–	DOUBLE/ NATURAL
COCONUT	100%	–	–	DOUBLE/ NATURAL
EXCELSIOR	–	–	100%	DOUBLE/ NATURAL

*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNEL.
**ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS

EROSION CONTROL BLANKET 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. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

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.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

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No.	REVISION	BY	DATE

H-SCALE N/A
V-SCALE N/A
DATE 7/11/19
DESIGNED BY NQJ
DRAWN BY NQJ
CHECKED BY

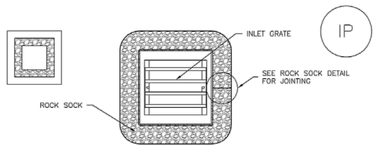
TAMLIN ROAD RV STORAGE

GRADING AND EROSION CONTROL DETAILS (CONT.)

ENGINEER'S STATEMENT
STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC DATE

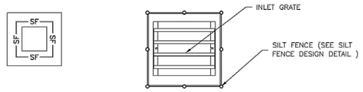
SHEET 12 OF 14
JOB NO. 25134.00



IP–3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



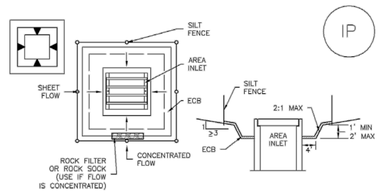
IP–4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.

3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



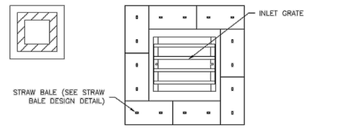
IP–5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES

1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.

2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.

3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.



IP–6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF INLET PROTECTION.
   –TYPE OF INLET PROTECTION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6)

2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

3. 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.

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 INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR ¼ OF THE HEIGHT FOR STRAW BALES.

5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.

6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF 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.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.
- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided above).
- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.
- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydroseeding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.
- Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch. Normally, use of these products will be restricted to relatively small areas. Biodegradable mats made of straw and jute, straw-coconut, coconut fiber, or excelsior can be used instead of mulch. (See the ECM/TRM BMP for more information.)
- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer's recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)
- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

Seeding dates for the highest success probability of perennial species along the Front Range are generally in the spring from April through early May and in the fall after the first of September until the ground freezes. If the area is irrigated, seeding may occur in summer months, as well. See Table TS/PS-3 for appropriate seeding dates.

Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species[a] (Common name)	Growth Season[b]	Pounds of Pure Live Seed (PLS)/acre[c]	Planting Depth (inches)
1. Oats	Cool	35 - 50	1 - 2
2. Spring wheat	Cool	25 - 35	1 - 2
3. Spring barley	Cool	25 - 35	1 - 2
4. Annual ryegrass	Cool	10 - 15	½
5. Millet	Warm	3 - 15	½ - ¾
6. Sudangrass	Warm	5–10	½ - ¾
7. Sorghum	Warm	5–10	½ - ¾
8. Winter wheat	Cool	20–35	1 - 2
9. Winter barley	Cool	20–35	1 - 2
10. Winter rye	Cool	20–35	1 - 2
11. Triticale	Cool	25–40	1 - 2

[a] Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

[b] See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

[c] Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses

Common[a] Name	Botanical Name	Growth Season[b]	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Alakali Soil Seed Mix					
Alkali sacaton	*Sporobolus airoides*	Cool	Bunch	1,750,000	0.25
Basin wildrye	*Elymus cinereus*	Cool	Bunch	165,000	2.5
Sodar streambank wheatgrass	*Agropyron riparium 'Sodar'*	Cool	Sod	170,000	2.5
Jose tall wheatgrass	*Agropyron elongatum 'Jose'*	Cool	Bunch	79,000	7.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**17.75**
Fertile Loamy Soil Seed Mix					
Ephriam crested wheatgrass	*Agropyron cristatum 'Ephriam'*	Cool	Sod	175,000	2.0
Dural hard fescue	*Festuca ovina 'duriuscula'*	Cool	Bunch	565,000	1.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Sodar streambank wheatgrass	*Agropyron riparium 'Sodar'*	Cool	Sod	170,000	2.5
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	7.0
Total					**15.5**
High Water Table Soil Seed Mix					
Meadow foxtail	*Alopecurus pratensis*	Cool	Sod	900,000	0.5
Redtop	*Agrostis alba*	Warm	Open sod	5,000,000	0.25
Reed canarygrass	*Phalaris arundinacea*	Cool	Sod	68,000	0.5
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Pathfinder switchgrass	*Panicum virgatum 'Pathfinder'*	Warm	Sod	389,000	1.0
Alkar tall wheatgrass	*Agropyron elongatum 'Alkar'*	Cool	Bunch	79,000	5.5
Total					**10.75**
Transition Turf Seed Mix[c]					
Ruebens Canadian bluegrass	*Poa compressa 'Ruebens'*	Cool	Sod	2,500,000	0.5
Dural hard fescue	*Festuca ovina 'duriuscula'*	Cool	Bunch	565,000	1.0
Citation perennial ryegrass	*Lolium perenne 'Citation'*	Cool	Sod	247,000	3.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Total					**7.5**

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses (cont.)

Common Name	Botanical Name	Growth Season[b]	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Sandy Soil Seed Mix					
Blue grama	*Boutelous gracilis*	Warm	Sod-forming bunchgrass	825,000	0.5
Camper little bluestem	*Schizachyrium scoparium 'Camper'*	Warm	Bunch	240,000	1.0
Prairie sandreed	*Calamovilfa longifolia*	Warm	Open sod	274,000	1.0
Sand dropseed	*Sporobolus cryptandrus*	Cool	Bunch	5,298,000	0.25
Vaughn sideoats grama	*Boutelous curtipendula 'Vaughn'*	Warm	Sod	191,000	2.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**10.25**
Heavy Clay, Rocky Foothill Seed Mix					
Ephriam crested wheatgrass[d]	*Agropyron cristatum 'Ephriam'*	Cool	Sod	175,000	1.5
Oahe Intermediate wheatgrass	*Agropyron intermedium 'Oahe'*	Cool	Sod	115,000	5.5
Vaughn sideoats grama[e]	*Boutelous curtipendula 'Vaughn'*	Warm	Sod	191,000	2.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**17.5**

[a] All of the above seeding mixes and rates are based on drill seeding followed by crimped straw mulch. These rates should be doubled if seed is broadcast and should be increased by 50 percent if the seeding is done using a Brillion Drill or is applied through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If hydraulic seeding is used, hydraulic mulching should be done as a separate operation.

[b] See Table TS/PS-3 for seeding dates.

[c] If site is to be irrigated, the transition turf seed rates should be doubled.

[d] Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

[e] Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sideoats grama.

Table TS/PS-3. Seeding Dates for Annual and Perennial Grasses

	Annual Grasses (Numbers in table reference species in Table TS/PS-1)		Perennial Grasses	
Seeding Dates	**Warm**	**Cool**	**Warm**	**Cool**
January 1–March 15			✓	✓
March 16–April 30	4	1,2,3	✓	✓
May 1–May 15	4		✓	
May 16–June 30	4,5,6,7			
July 1–July 15	5,6,7			
July 16–August 31				
September 1–September 30		8,9,10,11		
October 1–December 31			✓	✓

Mulch

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the Mulching BMP Fact Sheet for additional guidance.

Maintenance and Removal

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

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No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	7/11/19
DESIGNED BY	NQJ
DRAWN BY	NQJ
CHECKED BY	

TAMLIN ROAD RV STORAGE

GRADING AND EROSION CONTROL DETAILS (CONT.)

SHEET 13 OF 14

JOB NO. 25134.00

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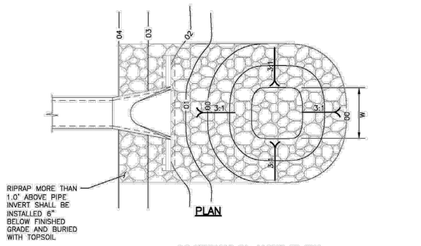
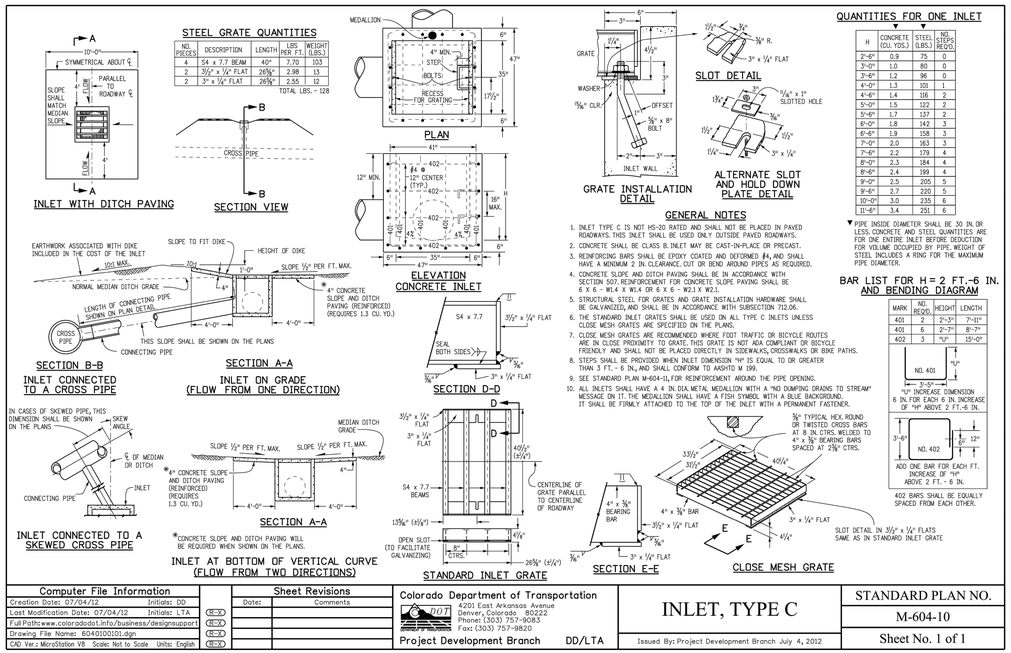


PIPE SIZE OR BOX HEIGHT	D	W*	L
18" – 24"	1'–0"	4'	15'
30" – 36"	1'–6"	6'	20'
42" – 48"	2'–0"	7'	24'
54" – 60"	2'–6"	8'	28'
66" – 72"	3'–0"	9'	32'

* IF OUTLET PIPE IS A BOX CULVERT WITH A WIDTH GREATER THAN W, THEN W = CULVERT WIDTH

Figure 9-37. Low tailwater riprap basin



Computer File Information		Sheet Revisions	
Creation Date: 07/04/12	Initials: DD	Date:	Comments
Last Modification Date: 07/04/12	Initials: LTA		
Full Path: www.coloradodot.info/business/designsupport			
Drawing File Name: 604010010.dgn			
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English			

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INLET, TYPE C

Issued By: Project Development Branch July 4, 2012

STANDARD PLAN NO. M-604-10
Sheet No. 1 of 1

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STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

32314

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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TAMLIN ROAD RV STORAGE

STORM SEWER DETAILS

SHEET 14 OF 14
JOB NO. 25134.00