

**STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS**

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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), APPENDIX E CHECKLISTS AND PERMITS ADOPTED: 12/23/2004 REVISED: 12/13/2016 REVISION 6.
- 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.
- 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.
- 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.
- 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.
- EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
- 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. BMPs MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- 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.
- 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.
- 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. APPENDIX E CHECKLISTS AND PERMITS ADOPTED: 12/23/2004 REVISED: 12/13/2016 REVISION 6.
- 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.
- 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.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.
- INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 26, 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.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE OWNER HAS HAD A PAVEMENT EVALUATION REPORT PREPARED BY PARTNER ASSESSMENT CORPORATION/AMERICAN GEOSERVICES LLC DATED 11-17-16 AND PERTINENT RECOMMENDATIONS CONTAINED THEREIN HAVE BEEN FOLLOWED IN THE PREPARATION OF THIS GEC PLAN. ADDITIONALLY, SOILS INFORMATION WAS DERIVED FROM THE NATURAL RESOURCES CONSERVATION SERVICE.
- 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 CREEK DRIVE SOUTH DENVER, CO 80246-1530 ATTN: PERMITS UNIT.

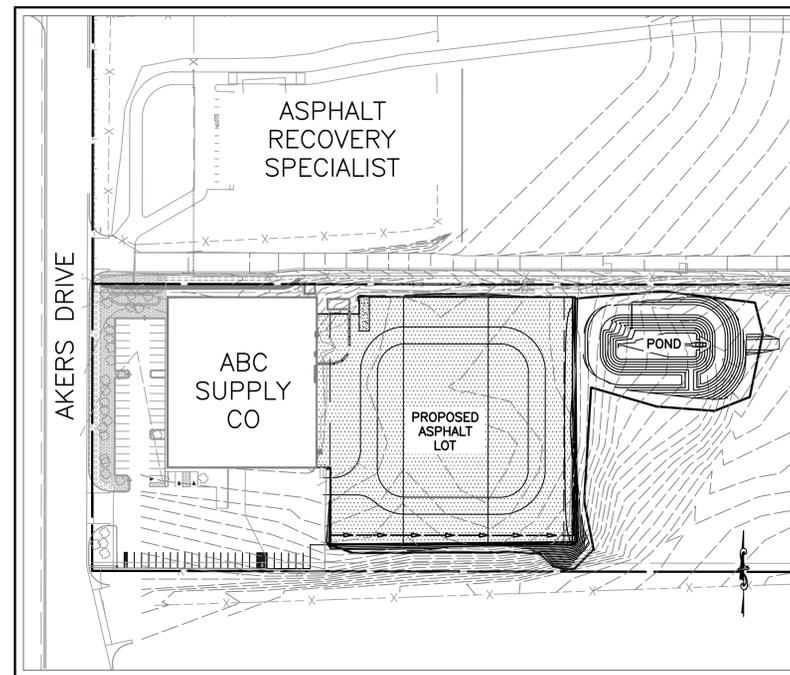
# LOT 8 AKERS ACRES EL PASO COUNTY, COLORADO

## GRADING & DRAINAGE IMPROVEMENTS

### GRADING & EROSION CONTROL PLANS



VICINITY MAP NTS



LOCATION MAP

**SIGNATURE BLOCK**  
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.

NAME \_\_\_\_\_ DATE \_\_\_\_\_

OWNER'S STATEMENT:  
THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

NAME \_\_\_\_\_ DATE \_\_\_\_\_

EL PASO COUNTY:  
COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT. FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JENNIFER IRVINE, P.E. COUNTY ENGINEER/ECM ADMINISTRATOR DATE \_\_\_\_\_

**OWNER/APPLICANT**  
ABC SUPPLY - COLORADO SPRINGS, CO  
2675 AKERS DR  
COLORADO SPRINGS, CO 80922-1502  
P: (719) 380-9911  
F: (719) 380-9907

**CONSULTANT/ENGINEER**  
OBERING, WURTH & ASSOCIATES  
CONSULTING CIVIL ENGINEERS  
PROFESSIONAL LAND SURVEYORS  
1042 ELKTON DRIVE  
COLORADO SPRINGS, COLORADO  
PHONE (719) 531-6200 - FAX (719) 531-6266  
OWACIVIL1@MINDSPRING.COM

**SHEET INDEX**

1	C1	GRADING & EROSION CONTROL COVER & NOTES
2	C2	GRADING AND DRAINAGE PLAN
3	C3	POND DETAILS
4	C4	POND DETAILS
5	C5	POND DETAILS
6	C6	STORMWATER MANAGEMENT PLAN
7	C7	STORMWATER MANAGEMENT DETAILS
8	C8	COORDINATE GEOMETRY

**PRE-EXCAVATION CHECKLIST**

- GAS AND OTHER UTILITY LINES SHOWN ON CONSTRUCTION PLANS
- UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) - TO BE CALLED AT LEAST TWO (2) BUSINESS DAYS AHEAD -
- UTILITIES LOCATED & MARKED
- EMPLOYEES BRIEFED ON MARKING AND COLOR CODES\*
- EMPLOYEES TRAINED ON EXCAVATION AND SAFETY PROCEDURES FOR NATURAL GAS LINES
- WHEN EXCAVATION APPROACHES GAS LINES, EMPLOYEES MUST EXPOSE LINES BY CAREFUL PROBING AND HAND DIGGING

**\*STANDARD UTILITY MARKING COLOR CODE**

NATURAL GAS	- YELLOW	IF YOU DAMAGE A GAS LINE, SMELL GAS OR HAVE A GAS
ELECTRIC	- RED	EMERGENCY, CALL THE GAS DEPARTMENT.
WATER	- BLUE	
WASTEWATER	- GREEN	

CALL TWO (2) BUSINESS DAYS BEFORE YOU DIG, FOR LOCATIONS MONDAY-FRIDAY FROM 7 A.M.-5 P.M.  
CALL 1-800-922-1997. FOR EMERGENCY LOCATIONS DURING NON-BUSINESS HOURS CALL 520-0022. (NO CHARGE FOR THIS SERVICE)

**ISSUED FOR REVIEW**  
**MONDAY, JANUARY 07, 2019**

PROJECT NAME: STAGE 2 GRADING IMPROVEMENTS  
CLIENT: ABC SUPPLY, WURTH & ASSOCIATES  
PROJECT NO: 18020 UPDATED VERSION: 1/7/2019 6:10 PM

REVIEWED FOR CONSTRUCTION:

BY \_\_\_\_\_

DATE \_\_\_\_\_

SCALE:  
HORIZONTAL: NOTED  
VERTICAL: \_\_\_\_\_  
BENCHMARK: \_\_\_\_\_

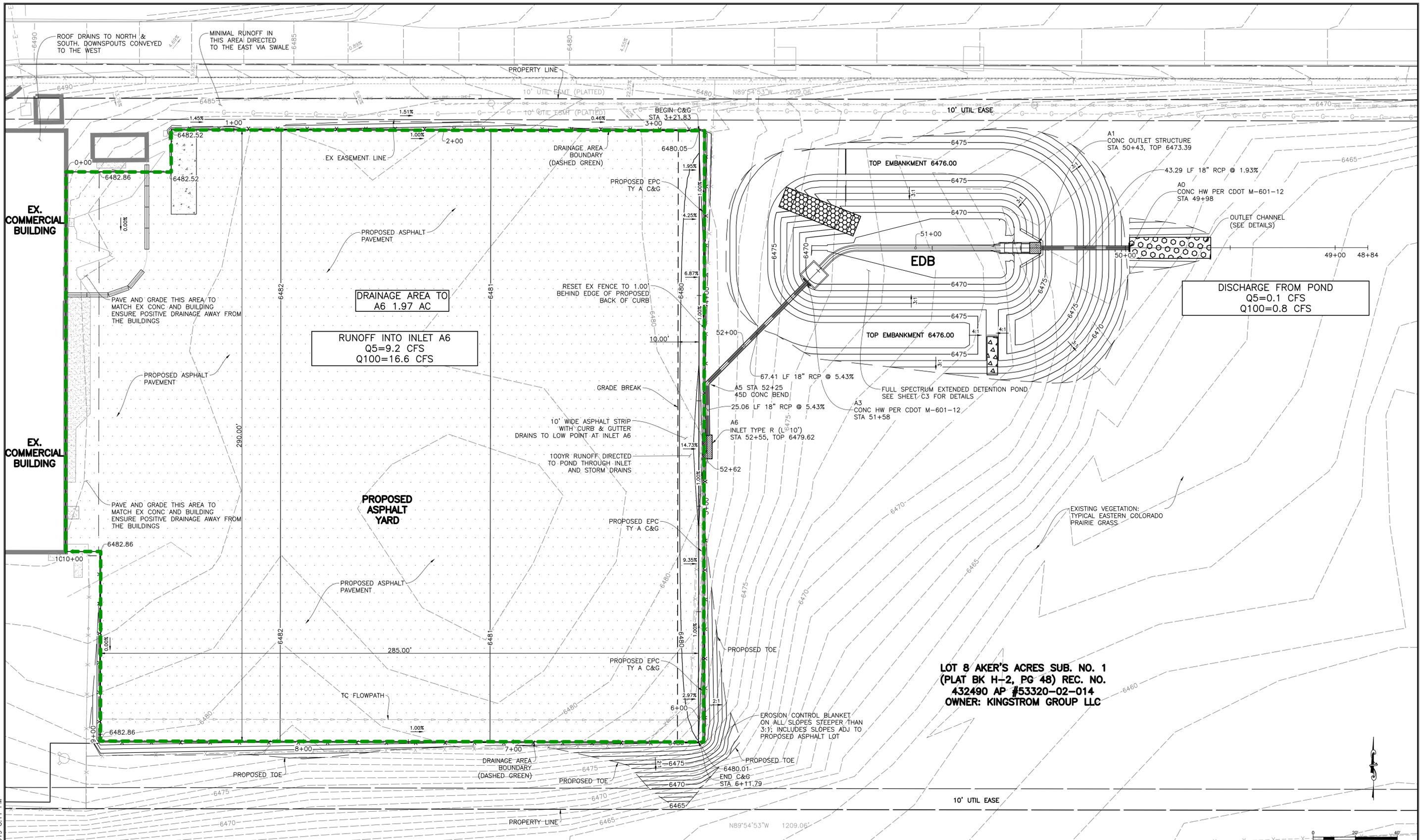
REVISIONS:			
NO.	DATE	DESCRIPTION	BY

THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF OBERING, WURTH & ASSOCIATES. ANY REPRODUCTION, MODIFICATION OR USE OF THIS DOCUMENT FOR OTHER THAN ITS ORIGINAL INTENT WITHOUT PRIOR CONSENT OF OBERING WURTH AND ASSOCIATES IS PROHIBITED.



SHEET TITLE: <b>GRADING &amp; EROSION CONTROL COVER &amp; NOTES</b>		FIELD BOOK NO.: N/A
PROJECT: LOT 8 AKERS ACRES COLORADO SPRINGS, COLORADO GRADING & DRAINAGE IMPROVEMENTS		SCALE: NOTED
DESIGNED BY: Obering, Wurth & Associates Consulting Civil Engineers Professional Land Surveyors		DATE: NOTED
CHECKED BY: CLD		DESIGNED BY: CLD
DRAWN BY: CLD		CHECKED BY: RGO
PROJECT NO: 18022		DRAWN BY: CLD
SHEET NO.: <b>C1</b>		PROJECT NO: 18022
OF 8 SHEETS		SHEET NO.: <b>C1</b>

1042 Elkton Drive  
Colorado Springs, Colorado  
Phone (719) 531-6200 - Fax (719) 531-6266  
E-mail Address: owacivil@mindspring.com



**LOT 8 AKER'S ACRES SUB. NO. 1**  
**(PLAT BK H-2, PG 48) REC. NO.**  
**432490 AP #53320-02-014**  
**OWNER: KINGSTROM GROUP LLC**

**ISSUED FOR REVIEW**  
**MONDAY, JANUARY 07, 2019**

PROJECT NAME: STAGE CO DRAINAGE IMPROVEMENTS  
 CLIENT: KINGSTROM GROUP LLC, WURTH & ASSOCIATES  
 PROJECT NO: 18020 UPDATED VERSION: 1/7/2019 8:11 PM

REVIEWED FOR CONSTRUCTION:  
 BY \_\_\_\_\_  
 DATE \_\_\_\_\_

SCALE:  
 HORIZONTAL: NOTED  
 VERTICAL: \_\_\_\_\_  
 BENCHMARK: \_\_\_\_\_

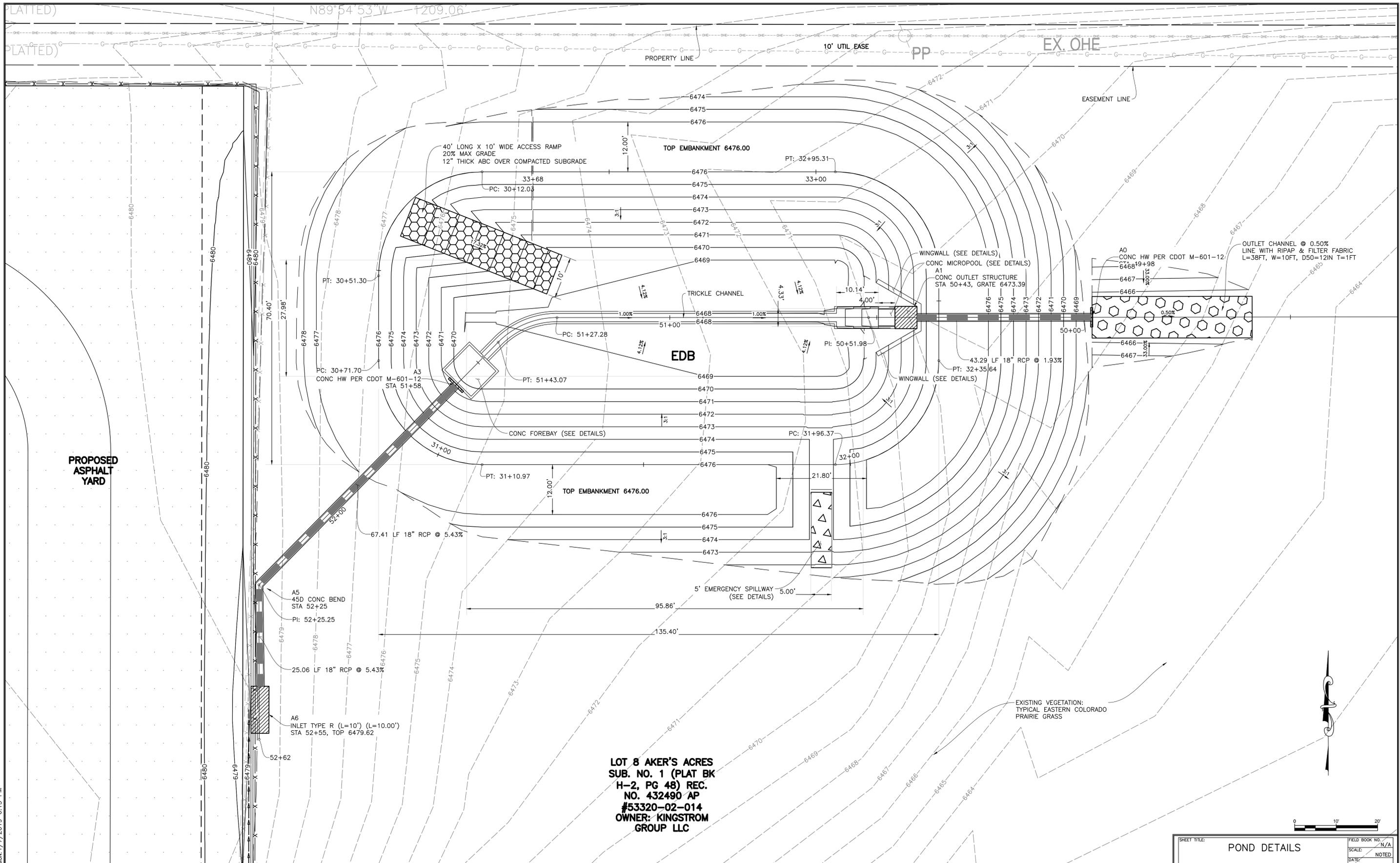
NO.	DATE	DESCRIPTION	BY

THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF OBERING, WURTH & ASSOCIATES. ANY REPRODUCTION, MODIFICATION OR USE OF THIS DOCUMENT FOR OTHER THAN ITS ORIGINAL INTENT WITHOUT PRIOR CONSENT OF OBERING WURTH AND ASSOCIATES IS PROHIBITED.

PCD FILE NO. PPR 1848

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

SHEET TITLE: <b>GRADING &amp; DRAINAGE PLAN</b>		FIELD BOOK NO.: N/A
SCALE:		NOTED
DATE:		
DESIGNED BY:	CLD	
CHECKED BY:	RGD	
DRAWN BY:	CLD	
PROJECT NO.:	18022	
SHEET NO.:	<b>C2</b>	
PROJECT: <b>LOT 8 AKERS ACRES COLORADO SPRINGS, COLORADO GRADING &amp; DRAINAGE IMPROVEMENTS</b> PREPARED BY: <b>Obering, Wurth &amp; Associates</b> Consulting Civil Engineers Professional Land Surveyors 1042 Elkton Drive Colorado Springs, Colorado Phone (719) 531-8200 - Fax (719) 531-6286 E-mail Address: owacivil@mindspring.com		



**ISSUED FOR REVIEW**  
**MONDAY, JANUARY 07, 2019**

PROJECT NAME: STAGECO DRAINAGE IMPROVEMENTS  
DRAWN BY: CLD, CHECKED BY: RGO, DATE: 1/7/2019 6:13 PM  
PROJECT NO: 18020 UPDATED VERSION: 1/7/2019 6:13 PM

REVIEWED FOR CONSTRUCTION:  
BY \_\_\_\_\_  
DATE \_\_\_\_\_

SCALE:  
HORIZONTAL: NOTED  
VERTICAL: \_\_\_\_\_  
BENCHMARK: \_\_\_\_\_

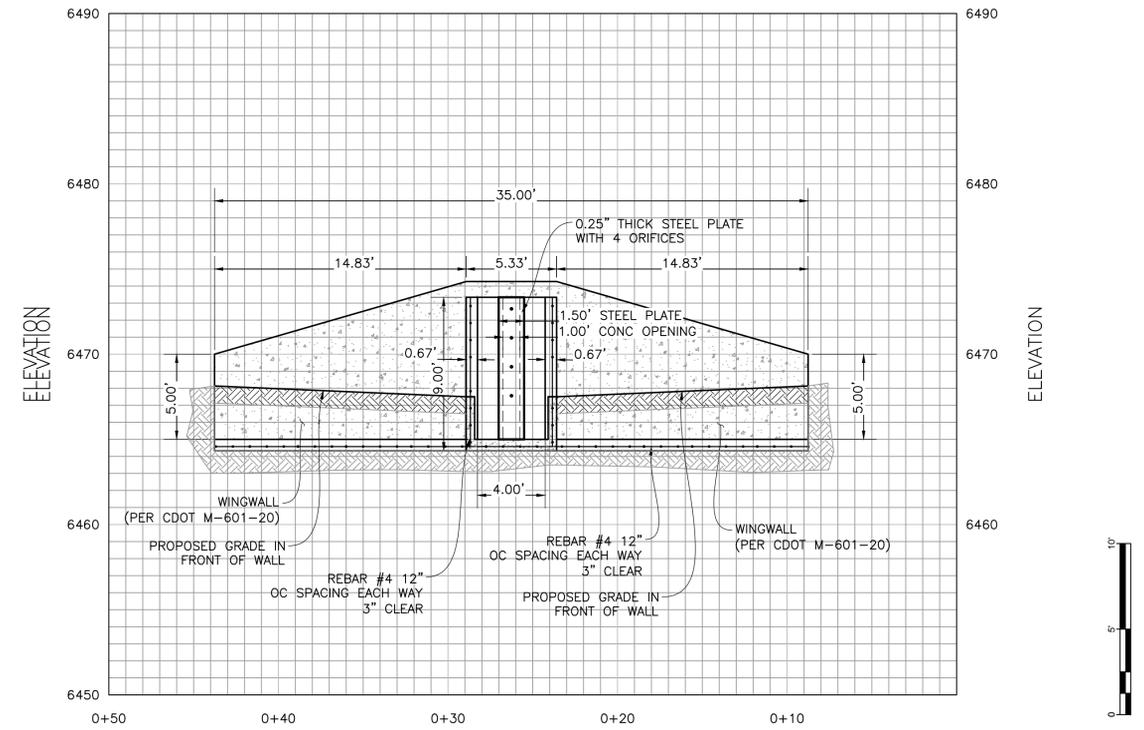
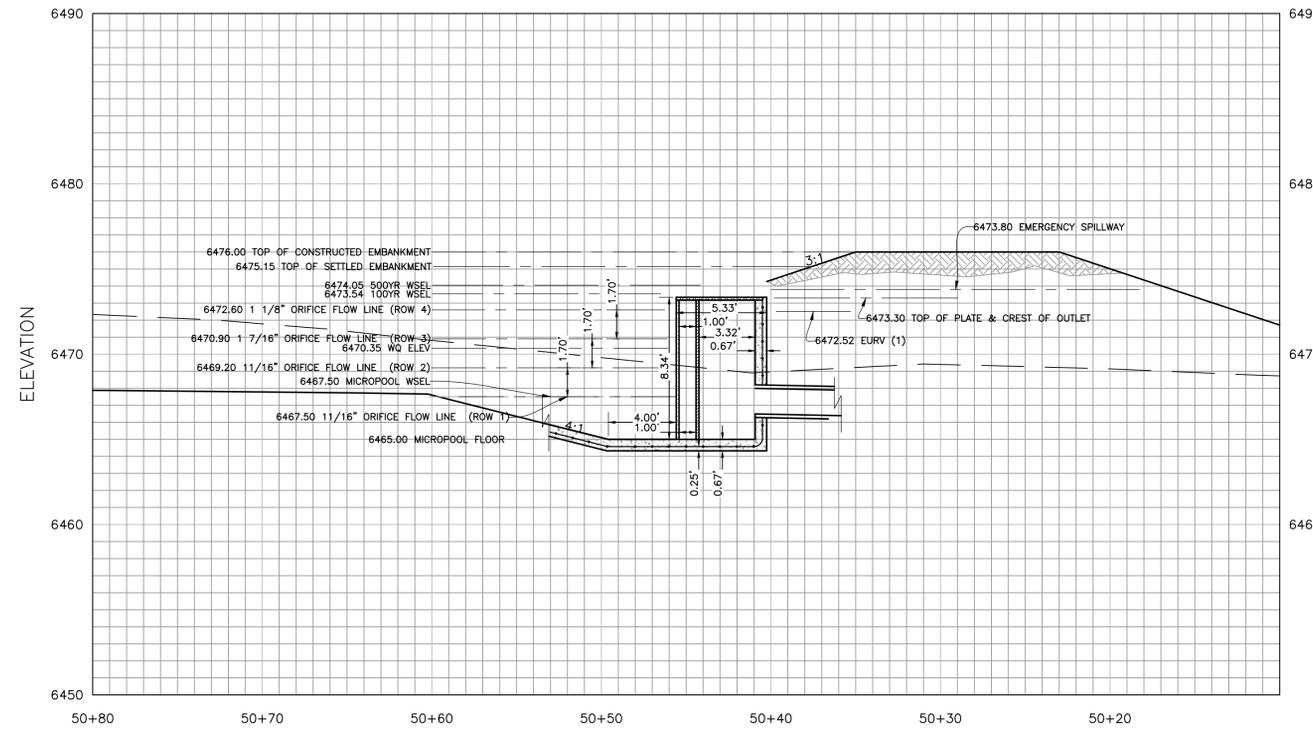
NO.	DATE	DESCRIPTION	BY

THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF OBERING, WURTH & ASSOCIATES. ANY REPRODUCTION, MODIFICATION OR USE OF THIS DOCUMENT FOR OTHER THAN ITS ORIGINAL INTENT WITHOUT PRIOR CONSENT OF OBERING WURTH AND ASSOCIATES IS PROHIBITED.

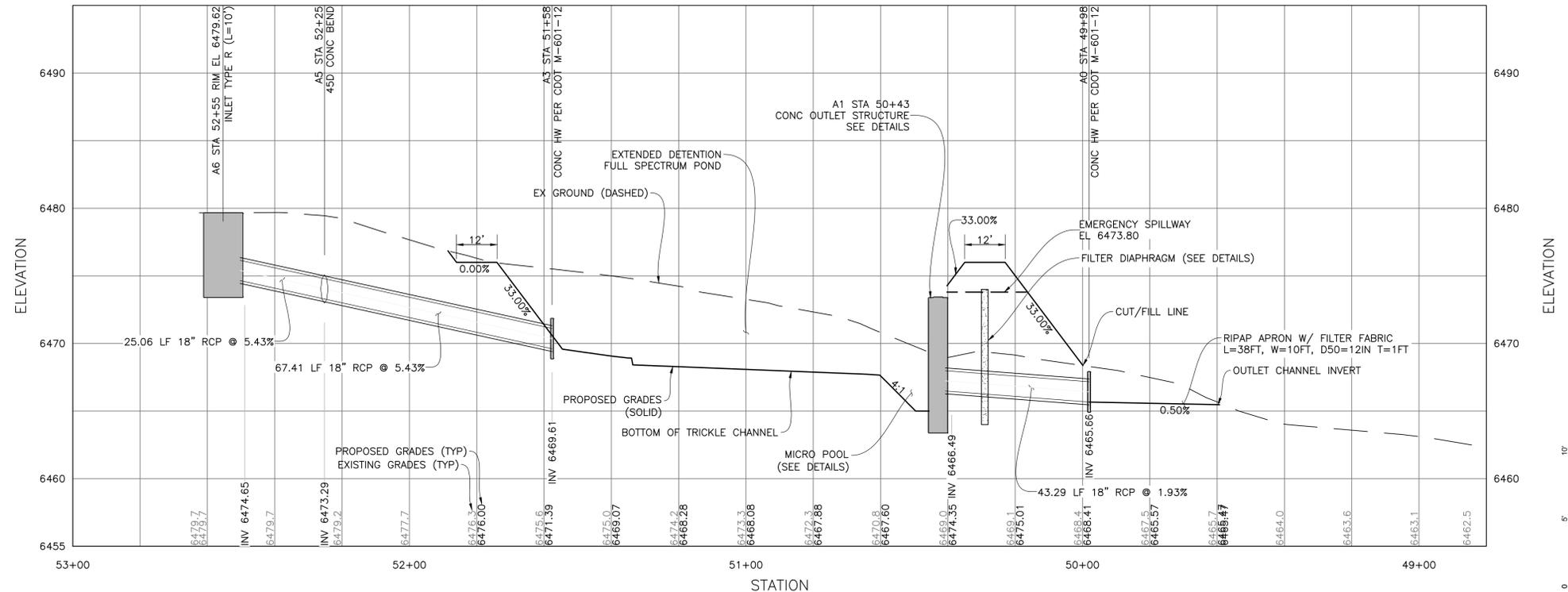
PCD FILE NO. PPR 1848

Know what's below.  
Call before you dig.

SHEET TITLE: POND DETAILS		FIELD BOOK NO.: N/A
SCALE: NOTED		DATE: NOTED
PROJECT: LOT 8 AKER'S ACRES COLORADO SPRINGS, COLORADO GRADING & DRAINAGE IMPROVEMENTS	DESIGNED BY: CLD	CHECKED BY: RGO
PREPARED BY: Obering, Wurth & Associates Consulting Civil Engineers Professional Land Surveyors	DRAWN BY: CLD	PROJECT NO: 18022
1042 Elkton Drive Colorado Springs, Colorado Phone (719) 531-8200 - Fax (719) 531-6286 E-mail Address: owacivil@mindspring.com	SHEET NO: C3	OF 8 SHEETS



**OUTLET STRUCTURE ELEVATION**  
SEE UDFCD DETAILS NEXT SHEET



**PROFILE STORM DRAIN THROUGH POND**

**ISSUED FOR REVIEW**  
**MONDAY, JANUARY 07, 2019**

REVIEWED FOR CONSTRUCTION:  
BY \_\_\_\_\_  
DATE \_\_\_\_\_

SCALE:  
HORIZONTAL: NOTED  
VERTICAL: \_\_\_\_\_  
BENCHMARK: \_\_\_\_\_

NO.	DATE	DESCRIPTION	BY

THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF OBERING, WURTH & ASSOCIATES. ANY REPRODUCTION, MODIFICATION OR USE OF THIS DOCUMENT FOR OTHER THAN ITS ORIGINAL INTENT WITHOUT PRIOR CONSENT OF OBERING WURTH AND ASSOCIATES IS PROHIBITED.

PCD FILE NO. PPR 1848

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

SHEET TITLE: <b>POND DETAILS</b>		FIELD BOOK NO.: N/A
SCALE: _____		DATE: NOTED
PROJECT: <b>LOT 8 AKERS ACRES COLORADO SPRINGS, COLORADO GRADING &amp; DRAINAGE IMPROVEMENTS</b>		DESIGNED BY: CLD
PREPARED BY: <b>Obering, Wurth &amp; Associates Consulting Civil Engineers Professional Land Surveyors</b>		CHECKED BY: RGO
1042 Elkton Drive Colorado Springs, Colorado Phone (719) 531-6200 - Fax (719) 531-6266 E-mail Address: owcivil@mindspring.com		DRAWN BY: CLD
PROJECT NO.: _____		PROJECT NO.: 18022
SHEET NO.: _____		SHEET NO.: C4
OF 8 SHEETS		

PROJECT NAME: STAGECO DRAINAGE IMPROVEMENTS  
DRAWN BY: CLD, RGO, WURTH & ASSOCIATES  
DATE: 1/7/2019 6:13 PM  
PROJECT NO.: 18020

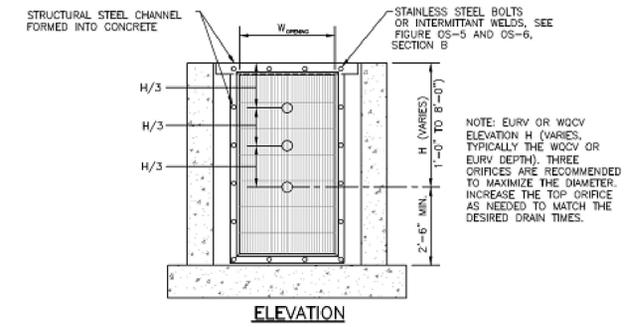
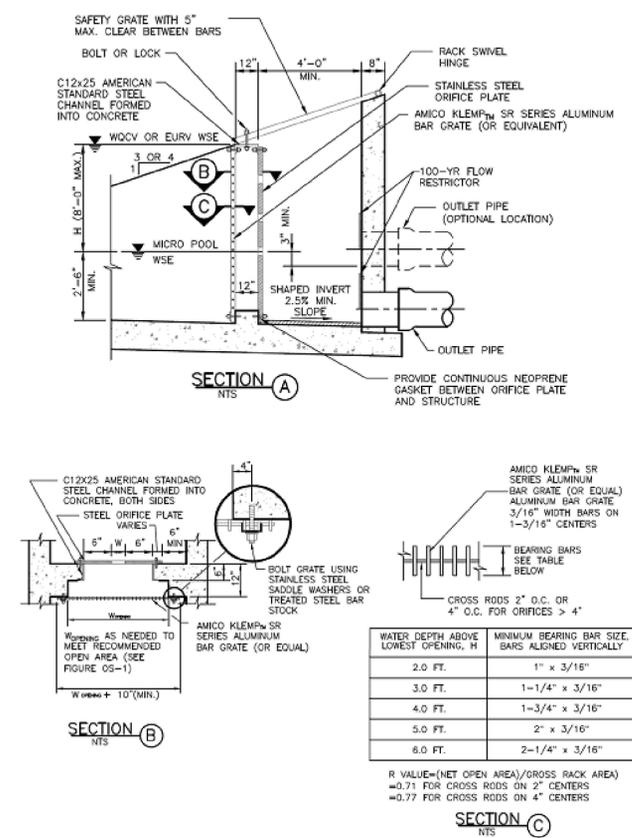
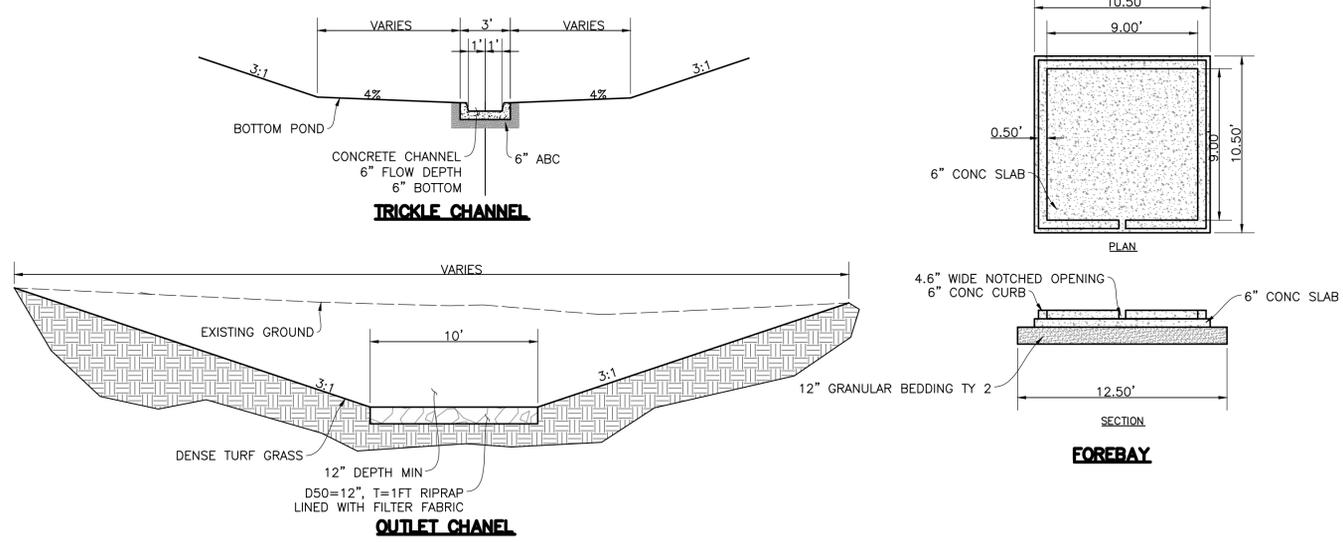
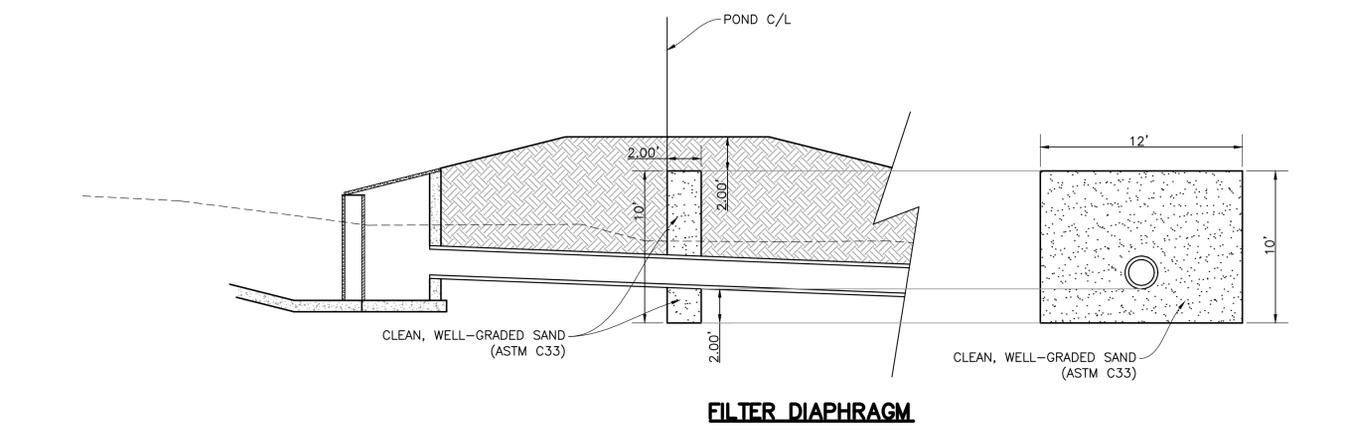
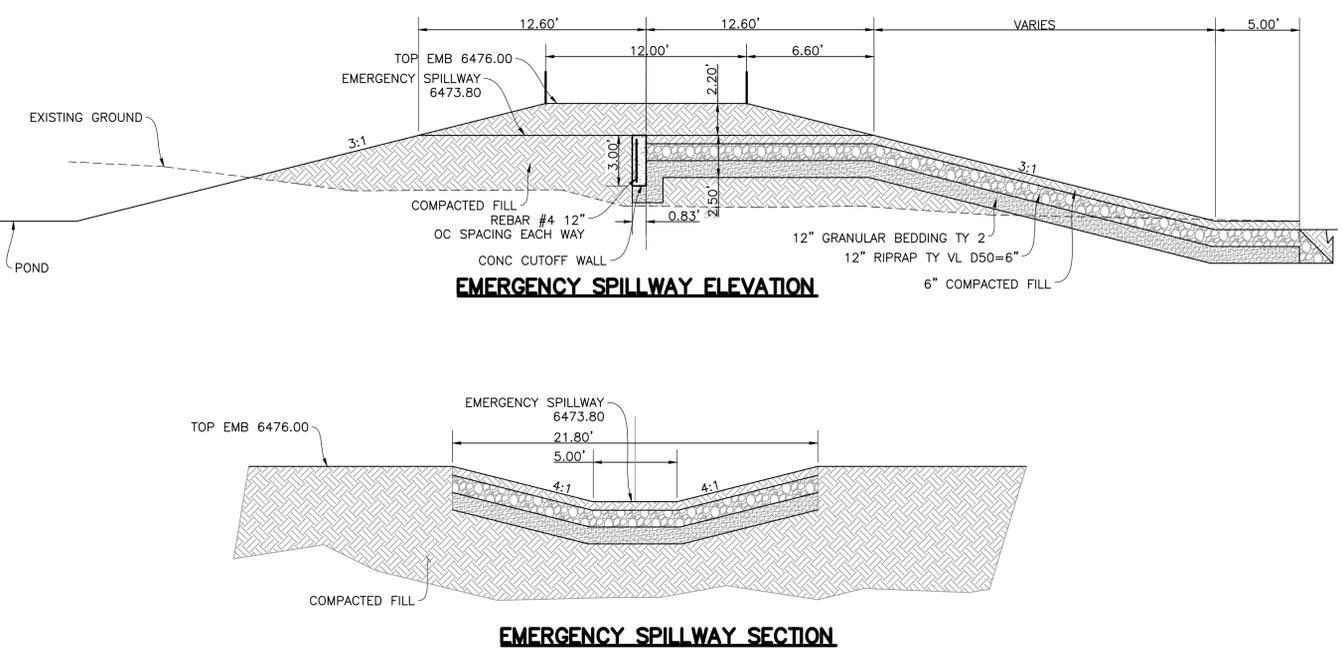


Figure OS-6. Typical outlet structure with bar grate trash rack  
OS-10 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2015

- ORIFICE PLATE NOTES:
1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
  2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER. SEE TABLE OS-2 FOR PLATE THICKNESS.
- EURY AND WOCV TRASH RACKS:
1. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
  2. BAR GATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
  3. TRASH RACK OPEN AREAS ARE FOR SPECIFIED TRASH RACK MATERIALS. TOTAL TRASH RACK SIZE MAY NEED TO BE ADJUSTED FOR MATERIALS HAVING DIFFERENT OPEN AREA/GROSS AREA RATIO (R VALUE).
  4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.
- OVERFLOW SAFETY GRATES:
1. ALL SAFETY GRATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
  2. SAFETY GRATES SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL GRATES SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
  3. SAFETY GRATES SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
  4. STRUCTURAL DESIGN OF SAFETY GRATES SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

Figure OS-4. Orifice plate and trash rack detail and notes  
November 2015 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 OS-7



REVIEWED FOR CONSTRUCTION:	SCALE: HORIZONTAL: NOTED VERTICAL:	REVISIONS:	THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF OBERING, WURTH & ASSOCIATES. ANY REPRODUCTION, MODIFICATION OR USE OF THIS DOCUMENT FOR OTHER THAN ITS ORIGINAL INTENT WITHOUT PRIOR CONSENT OF OBERING WURTH AND ASSOCIATES IS PROHIBITED.	<p>Know what's below. Call before you dig.</p>			
BY:	BENCHMARK:	NO.			DATE	DESCRIPTION	BY
DATE:							

**ISSUED FOR REVIEW**  
**MONDAY, JANUARY 07, 2019**

SHEET TITLE: **POND DETAILS**

FIELD BOOK NO.: N/A  
SCALE: NOTED  
DATE:

PROJECT: **LOT 8 AKERS ACRES COLORADO SPRINGS, COLORADO GRADING & DRAINAGE IMPROVEMENTS**

DESIGNED BY: CLD  
CHECKED BY: RGO  
DRAWN BY: CLD

PREPARED BY: **Obering, Wurth & Associates**  
Consulting Civil Engineers  
Professional Land Surveyors

PROJECT NO.: 18022  
SHEET NO.: **C5**

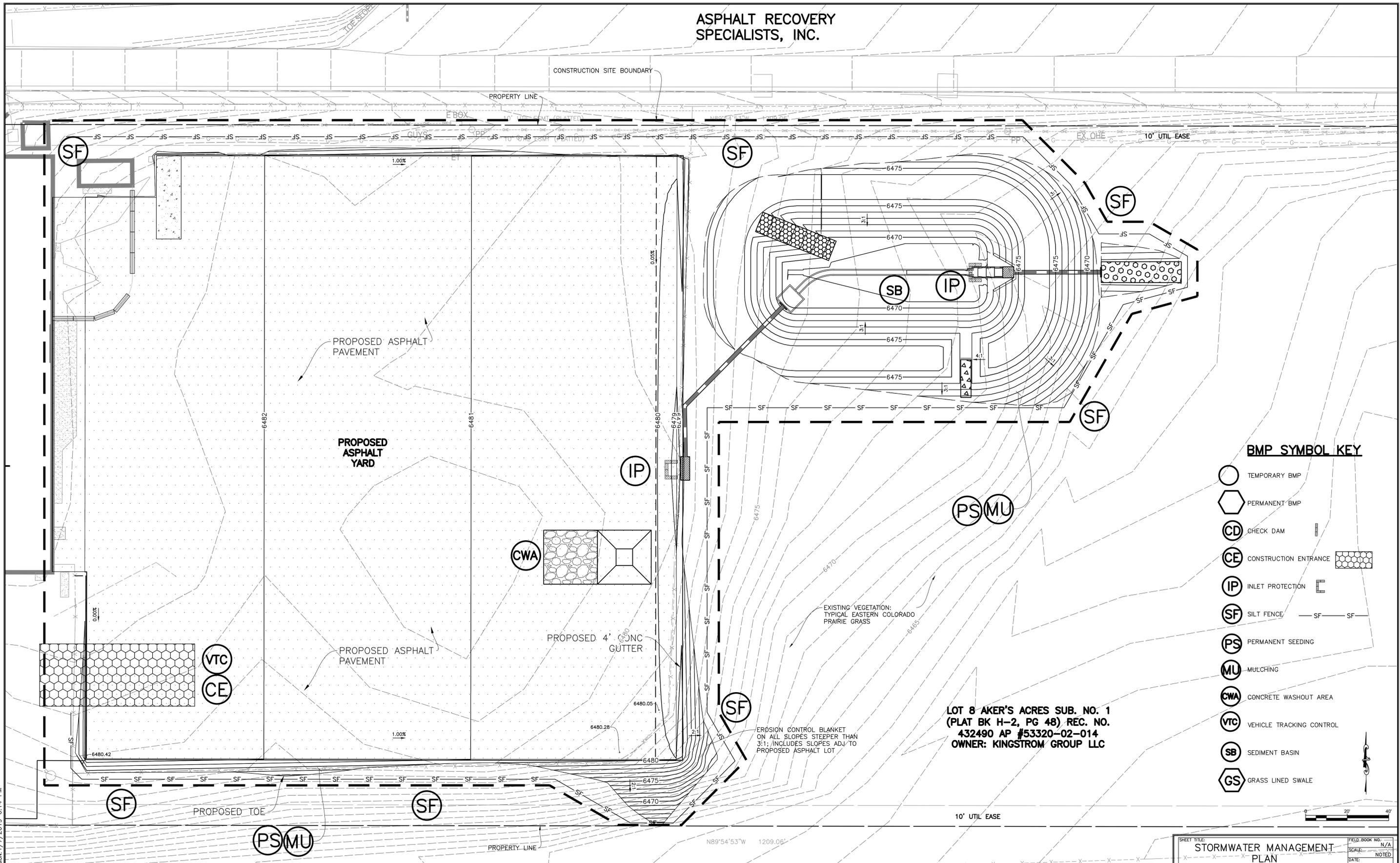
1042 Elkton Drive  
Colorado Springs, Colorado  
Phone (719) 531-6200 - Fax (719) 531-6286  
E-mail Address: owacivil@mindspring.com

PROJECT NAME: STAGECO DRAINAGE IMPROVEMENTS  
CLIENT: WURTH & ASSOCIATES  
DATE: 1/7/2019 6:13 PM  
PROJECT NO.: 18020

ASPHALT RECOVERY SPECIALISTS, INC.

CONSTRUCTION SITE BOUNDARY

PROPERTY LINE



**BMP SYMBOL KEY**

- TEMPORARY BMP
- PERMANENT BMP
- CHECK DAM
- CONSTRUCTION ENTRANCE
- INLET PROTECTION
- SILT FENCE
- PERMANENT SEEDING
- MULCHING
- CONCRETE WASHOUT AREA
- VEHICLE TRACKING CONTROL
- SEDIMENT BASIN
- GRASS LINED SWALE

LOT 8 AKER'S ACRES SUB. NO. 1  
 (PLAT BK H-2, PG 48) REC. NO.  
 432490 AP #53320-02-014  
 OWNER: KINGSTROM GROUP LLC

**ISSUED FOR REVIEW**  
**MONDAY, JANUARY 07, 2019**

PROJECT NAME: STAGECO DRAINAGE IMPROVEMENTS  
 CLIENT: KINGSTROM GROUP LLC, WURTH & ASSOCIATES  
 DRAWN BY: CLD  
 PROJECT NO: 18020 UPDATED VERSION: 1/7/2019 6:14 PM

REVIEWED FOR CONSTRUCTION:  
 BY \_\_\_\_\_  
 DATE \_\_\_\_\_

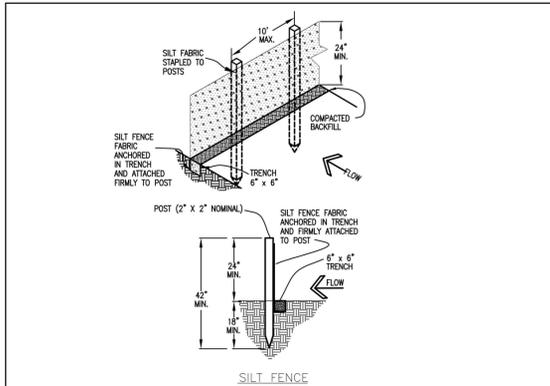
SCALE:  
 HORIZONTAL: NOTED  
 VERTICAL: \_\_\_\_\_  
 BENCHMARK: \_\_\_\_\_

REVISIONS:	NO.	DATE	DESCRIPTION	BY

THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF OBERING, WURTH & ASSOCIATES. ANY REPRODUCTION, MODIFICATION OR USE OF THIS DOCUMENT FOR OTHER THAN ITS ORIGINAL INTENT WITHOUT PRIOR CONSENT OF OBERING WURTH AND ASSOCIATES IS PROHIBITED.



SHEET TITLE: <b>STORMWATER MANAGEMENT PLAN</b>		FIELD BOOK NO.: N/A
PROJECT: <b>LOT 8 AKER'S ACRES COLORADO SPRINGS, COLORADO GRADING &amp; DRAINAGE IMPROVEMENTS</b>		SCALE: NOTED
DESIGNED BY: CLD	CHECKED BY: RGO	DATE: NOTED
PREPARED BY: <b>Obering, Wurth &amp; Associates</b> Consulting Civil Engineers Professional Land Surveyors		PROJECT NO: 18022
1042 Elkton Drive Colorado Springs, Colorado Phone (719) 531-6200 - Fax (719) 531-6286 E-mail Address: owacivil@mindspring.com		SHEET NO.: <b>C6</b>
PCD FILE NO. PPR 1848		OF 8 SHEETS



**SILT FENCE NOTES**

**INSTALLATION REQUIREMENTS**

- SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPUNLED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
- METAL POSTS SHALL BE "STUDDED TEE" OR "T" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
- THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG 80 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
- WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG, THE WIRES OR HOE RINGS, THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 2" ABOVE THE ORIGINAL GROUND SURFACE.
- ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.
- THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES. HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

**MAINTENANCE REQUIREMENTS**

- CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
- SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality Figure SF-2 Silt Fence Construction Detail and Maintenance Requirements 3-38

**MULCHING NOTES**

**INSTALLATION REQUIREMENTS**

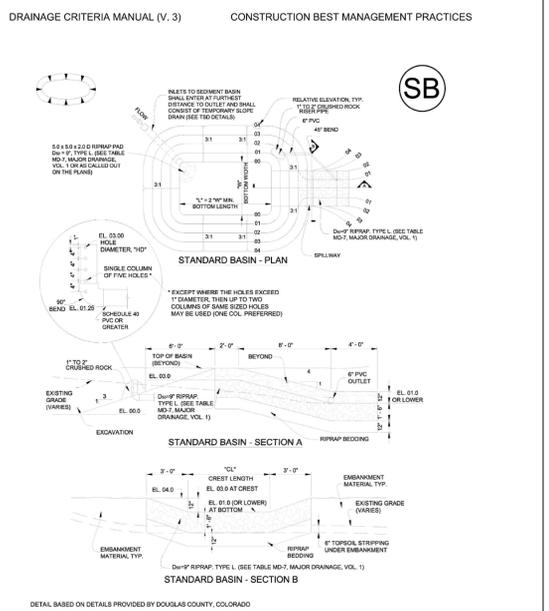
- ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDING AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.
- MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED AND SEED-FREE LONG STEMMED FIELDS OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED 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 RESEEDING.

**MU**

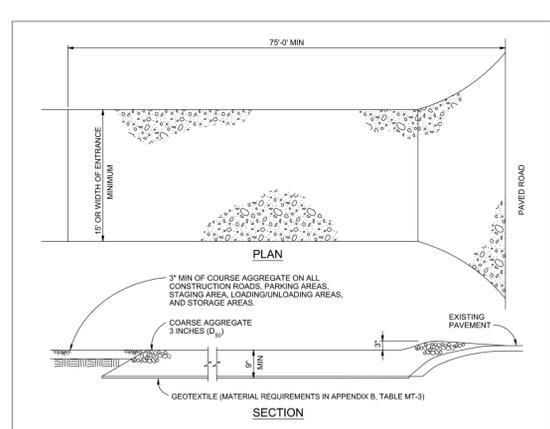
City of Colorado Springs Stormwater Quality Figure MU-1 Mulching Construction Detail and Maintenance Requirements 3-30



2007-10 Urban Drainage and Flood Control District Figure C5-12—Standardized Temporary Sediment Basin (Sheet 1 of 2) SB C-65



2007-10 Urban Drainage and Flood Control District Figure C5-12—Standardized Temporary Sediment Basin (Sheet 2 of 2) SB C-66



**VEHICLE TRACKING**

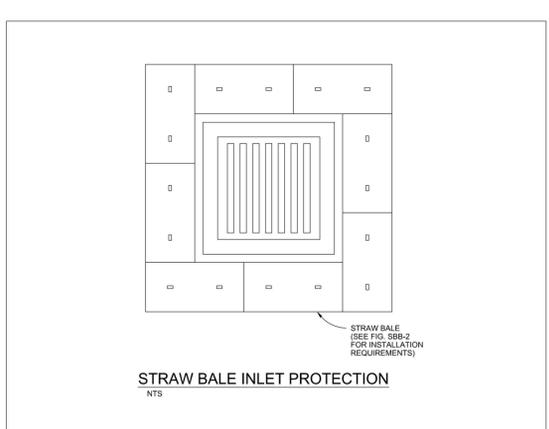
**INSTALLATION REQUIREMENTS**

- ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
- CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
- CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
- CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE STEEP SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

**MAINTENANCE REQUIREMENTS**

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- STONES ARE TO BE REPLACED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
- STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
- OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs Stormwater Quality Figure VT-2 Vehicle Tracking Application Examples 3-54



**STRAW BALE INLET PROTECTION**

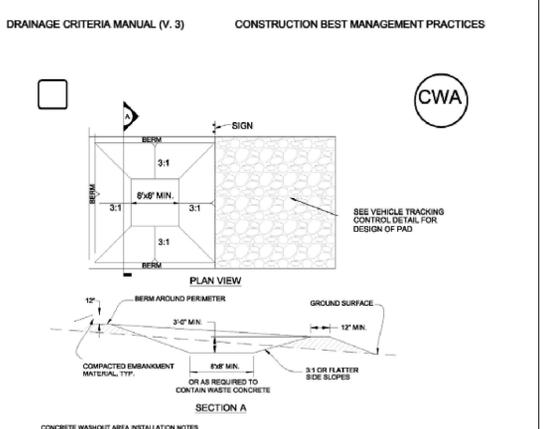
**INSTALLATION REQUIREMENTS**

- INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
- BALES ARE TO BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
- SEE STRAW BALE BARRIER FIGURE SB8-2 FOR INSTALLATION REQUIREMENTS.

**MAINTENANCE REQUIREMENTS**

- CONTRACTOR SHALL INSPECT STRAW BALE INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL.
- DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED. REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
- SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALES WHEN IT ACCUMULATES TO APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
- INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality Figure IP-2 Straw Bale Inlet Protection Construction Detail and Maintenance Requirements 3-26



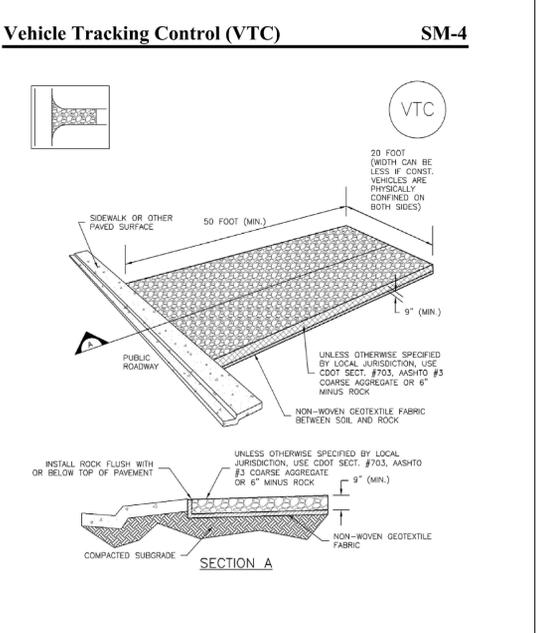
**CONCRETE WASHOUT AREA INSTALLATION NOTES**

- SEE PLAN VIEW FOR LOCATIONS 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 OPERATIONS OF CONCRETE TRUCKS AND PUMPS.
- EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

**CONCRETE WASHOUT AREA MAINTENANCE NOTES**

- THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT WHEN IT FILL OR AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
- AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
- WHEN THE CONCRETE WASHOUT AREA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, DRILL SEED AND CRIMP MULCH OR OTHERWISE STABILIZE IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

2007-10 Urban Drainage and Flood Control District Figure C3-2—Concrete Washout Area CWA C-29



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 VTC-3

**ISSUED FOR REVIEW**  
**MONDAY, JANUARY 07, 2019**

REVIEWED FOR CONSTRUCTION:

BY	DATE

SCALE:

HORIZONTAL: NOTED

VERTICAL: \_\_\_\_\_

BENCHMARK: \_\_\_\_\_

REVISIONS:

NO.	DATE	DESCRIPTION	BY

THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF OBERING, WURTH & ASSOCIATES ANY REPRODUCTION, MODIFICATION OR USE OF THIS DOCUMENT FOR OTHER THAN ITS ORIGINAL INTENT WITHOUT PRIOR CONSENT OF OBERING WURTH AND ASSOCIATES IS PROHIBITED



SHEET TITLE: **STORMWATER MANAGEMENT DETAILS**

FIELD BOOK NO.: N/A

SCALE: NOTED

DATE: \_\_\_\_\_

PROJECT: **LOT 8 AKERS ACRES COLORADO SPRINGS, COLORADO GRADING & DRAINAGE IMPROVEMENTS**

DESIGNED BY: CLD

CHECKED BY: RGO

DRAWN BY: CLD

PREPARED BY: **Obering, Wurth & Associates**  
Consulting Civil Engineers  
Professional Land Surveyors

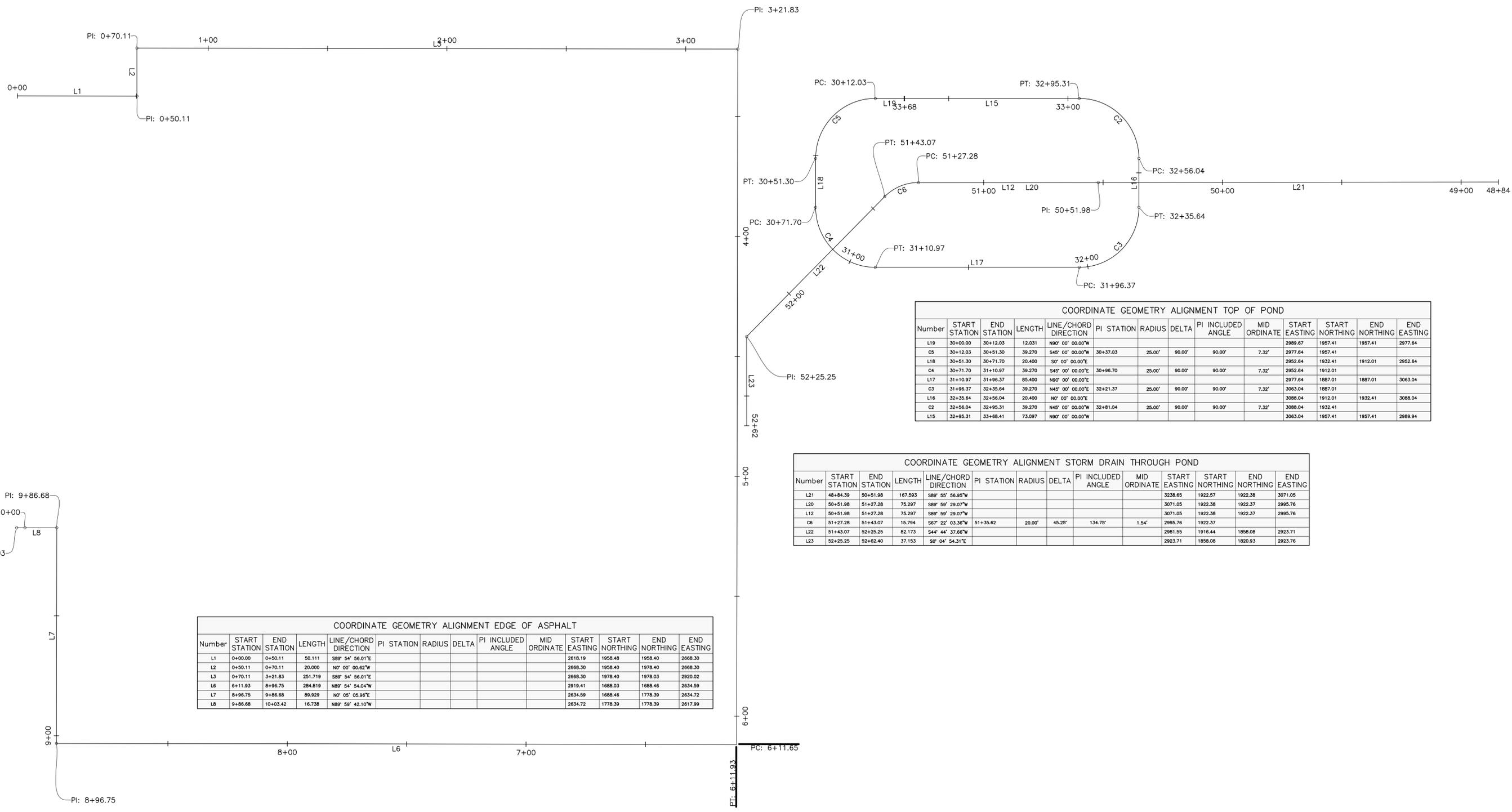
PROJECT NO.: 18022

SHEET NO.: **G7**

1042 Elkton Drive  
Colorado Springs, Colorado  
Phone (719) 531-8200 - Fax (719) 531-6286  
E-mail Address: owacivil@midrange.com

PCD FILE NO. PPR 1848

PROJECT NAME: STAGG DR DRAINAGE IMPROVEMENTS  
CLIENT: WURTH & ASSOCIATES  
DATE: 1/7/2019 6:14 PM  
PROJECT NO.: 18022



**COORDINATE GEOMETRY ALIGNMENT TOP OF POND**

Number	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END EASTING	END NORTHING
L19	30+00.00	30+12.03	12.031	N89° 00' 00.00"W						2989.67	1957.41	1957.41	2977.64
C5	30+12.03	30+51.30	39.270	S45° 00' 00.00"E	30+37.03	25.00'	90.00'	90.00'	7.32'	2977.64	1957.41	1912.01	2952.64
L18	30+51.30	30+71.70	20.400	S0° 00' 00.00"E						2952.64	1932.41	1912.01	2952.64
C4	30+71.70	31+10.97	39.270	S45° 00' 00.00"E	30+96.70	25.00'	90.00'	90.00'	7.32'	2952.64	1912.01	1887.01	3063.04
L17	31+10.97	31+96.37	85.400	N90° 00' 00.00"E						2977.64	1887.01	1887.01	3063.04
C3	31+96.37	32+56.64	39.270	N45° 00' 00.00"E	32+21.37	25.00'	90.00'	90.00'	7.32'	3063.04	1887.01	1932.41	3088.04
L16	32+56.64	32+95.31	20.400	N0° 00' 00.00"E						3088.04	1912.01	1932.41	3088.04
C2	32+95.31	33+68.41	39.270	N45° 00' 00.00"E	32+81.04	25.00'	90.00'	90.00'	7.32'	3088.04	1932.41	1957.41	2989.64
L15	33+68.41	33+68.41	73.097	N90° 00' 00.00"W						3063.04	1957.41	1957.41	2989.64

**COORDINATE GEOMETRY ALIGNMENT STORM DRAIN THROUGH POND**

Number	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END EASTING	END NORTHING
L21	48+84.39	50+51.98	167.593	S89° 55' 56.95"W						3238.65	1922.57	1922.58	3071.05
L20	50+51.98	51+27.28	75.297	S89° 59' 29.07"W						3071.05	1922.38	1922.37	2995.76
L12	50+51.98	51+27.28	75.297	S89° 59' 29.07"W						3071.05	1922.38	1922.37	2995.76
C6	51+27.28	51+43.07	15.794	S67° 22' 03.95"W	51+35.62	20.00'	45.25'	134.75'	1.54'	2995.76	1922.37		
L22	51+43.07	52+25.25	82.173	S44° 44' 37.66"W						2981.55	1916.44	1858.08	2923.71
L23	52+25.25	52+62.40	37.153	S0° 04' 54.31"E						2923.71	1858.08	1820.93	2923.76

**COORDINATE GEOMETRY ALIGNMENT EDGE OF ASPHALT**

Number	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END EASTING	END NORTHING
L1	0+00.00	0+50.11	50.111	S89° 54' 56.01"E						2618.19	1958.48	1958.40	2668.30
L2	0+50.11	0+70.11	20.000	N0° 00' 00.02"W						2668.30	1958.40	1978.40	2668.30
L3	0+70.11	3+21.83	251.719	S89° 54' 56.01"E						2668.30	1978.40	1978.03	2920.02
L6	8+11.93	8+96.75	284.819	N89° 54' 54.04"W						2919.41	1688.03	1688.46	2634.59
L7	8+96.75	9+86.68	89.929	N0° 05' 05.94"E						2634.59	1688.46	1778.39	2634.72
L8	9+86.68	10+03.42	16.738	N89° 59' 42.10"W						2634.72	1778.39	1778.39	2617.99

**ISSUED FOR REVIEW  
MONDAY, JANUARY 07, 2019**

PROJECT NAME: STAGE COORDINATE GEOMETRY  
DRAWN BY: CLD  
CHECKED BY: RGO  
DATE: 1/7/2019 6:12 PM  
PROJECT NO: 18020 UPDATED VERSION: 1/7/2019 6:12 PM

REVIEWED FOR CONSTRUCTION:  
BY \_\_\_\_\_  
DATE \_\_\_\_\_

SCALE:  
HORIZONTAL: NOTED  
VERTICAL: \_\_\_\_\_  
BENCHMARK: \_\_\_\_\_

REVISIONS:

NO.	DATE	DESCRIPTION	BY

THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF OBERING, WURTH & ASSOCIATES. ANY REPRODUCTION, MODIFICATION OR USE OF THIS DOCUMENT FOR OTHER THAN ITS ORIGINAL INTENT WITHOUT PRIOR CONSENT OF OBERING WURTH AND ASSOCIATES IS PROHIBITED.

PCD FILE NO. PPR 1848



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

SHEET TITLE: <b>COORDINATE GEOMETRY</b>		FIELD BOOK NO. N/A
SCALE: NOTED		DATE: NOTED
PROJECT: <b>LOT 8 AKERS ACRES COLORADO SPRINGS, COLORADO GRADING &amp; DRAINAGE IMPROVEMENTS</b>		DESIGNED BY: CLD
PREPARED BY: <b>Obering, Wurth &amp; Associates Consulting Civil Engineers Professional Land Surveyors</b>		CHECKED BY: RGO
1042 Elkton Drive Colorado Springs, Colorado Phone (719) 531-8200 - Fax (719) 531-6286 E-mail Address: owacivil@mindspring.com		DRAWN BY: CLD
PROJECT NO: 18022		PROJECT NO: 18022
SHEET NO: <b>C8</b>		SHEET NO: C8
OF 8 SHEETS		OF 8 SHEETS

