

# SAND CREEK REGIONAL DETENTION BASIN NO. 3 WESTERN DETENTION AND WATER QUALITY POND SCHEDULE A

CITY OF COLORADO SPRINGS, EL PASO COUNTY, STATE OF COLORADO  
OCTOBER 29, 2015

THE CITY OF COLORADO SPRINGS  
EL PASO COUNTY, COLORADO

TITLE	SIGNATURE	DATE
CITY ENGINEERING DIVISION		
CITY TRAFFIC ENGINEERING DIVISION		
PARKS, RECREATION & CULTURAL SERVICES		
CITY STREETS DIVISION		
COLORADO SPRINGS UTILITIES (WATER/WASTEWATER)		
COLORADO SPRINGS UTILITIES (GAS/ELECTRIC)		
COMCAST		
CENTURYLINK		
MOUNTAIN VIEW ELECTRIC		

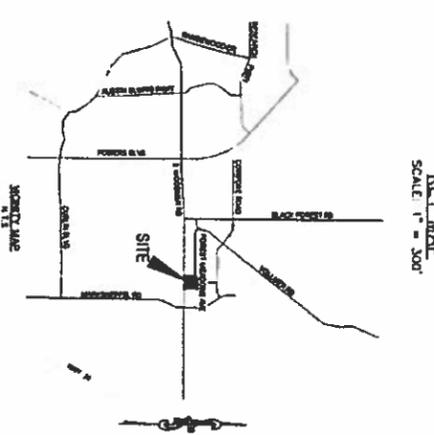
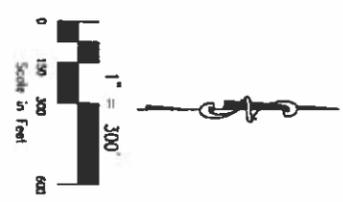
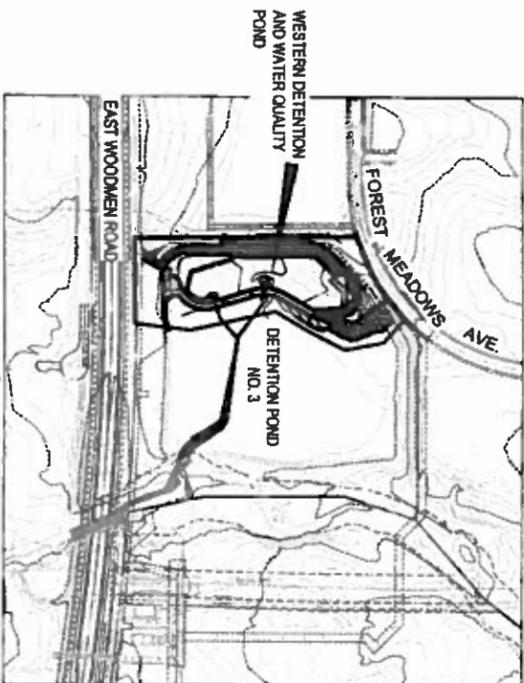
ACCEPTANCE BY THE CITY OF COLORADO SPRINGS OF DESIGN WORK BY DESIGN PROFESSIONALS CONSTITUTES BELIEF THAT THE WORK HAS BEEN DONE IN ACCORDANCE WITH THE CITY STANDARDS AND ORDINANCES. WORK PRODUCTS ARE THE RESPONSIBILITY OF THE DESIGN PROFESSIONAL AND CITY ACCEPTANCE DOES NOT RELIEVE THE PROFESSIONAL OF SAID RESPONSIBILITY.

DATE

CONTRACTOR:	SIGNATURE	DATE
PROJECT ENGINEER:		
PROJECT STARTED:		
PROJECT COMPLETED:		
AS CONSTRUCTED PLANS:		
APPROVED:		
TITLE:		
DATE:		

AGENCIES	THATRIC ENGINEERING	CITY OF COLORADO SPRINGS
CIVIL ENGINEER		
PROJECT ENGINEER		
PROJECT STARTED		
PROJECT COMPLETED		
AS CONSTRUCTED PLANS		
APPROVED		
TITLE		
DATE		

AGENCIES	THATRIC ENGINEERING	CITY OF COLORADO SPRINGS
CIVIL ENGINEER		
PROJECT ENGINEER		
PROJECT STARTED		
PROJECT COMPLETED		
AS CONSTRUCTED PLANS		
APPROVED		
TITLE		
DATE		



- SHEET INDEX**
1. TITLE SHEET
  2. GENERAL NOTES
  3. HORIZONTAL CONTROL PLAN
  4. SITE AND GRADING PLAN
  5. STORM SEWER PLAN & PROFILES
  6. OUTFALL STRUCTURE DETAILS
  7. EROSION CONTROL PLAN
  8. EROSION CONTROL NOTES & DETAILS
  9. MISCELLANEOUS DETAILS

**DETAILED DRAINAGE CONSTRUCTION PLANS AND SPECIFICATIONS ENGINEERS STATEMENT**

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID DETAILED PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE CITY FOR DETAILED DRAINAGE PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMANCE WITH THE MASTER PLAN OF THE DRAINAGE BASIN. SAID DETAILED DRAINAGE PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE DRAINAGE FACILITY(IES) IS DESIGNED. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENCE, ACT, ERRORS, OR OMISSIONS ON MY PART IN PREPARATION OF THE DETAILED DRAINAGE PLANS AND SPECIFICATIONS.

VIRGIL A. SANCHEZ, COLORADO P.E. 37160  
FOR AND ON BEHALF OF M & S CIVIL CONSULTANTS, INC. DATE

**FOR BARRIED UTILITY INFORMATION:**  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987  
FOR LOCATING & MARKING GAS,  
ELECTRIC, WATER & TELEPHONE LINES  
WITH CONDUCTORS 500-4300

REVISIONS:

NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE



**Kiowa**  
Engineering Corporation  
1804 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 530-7347



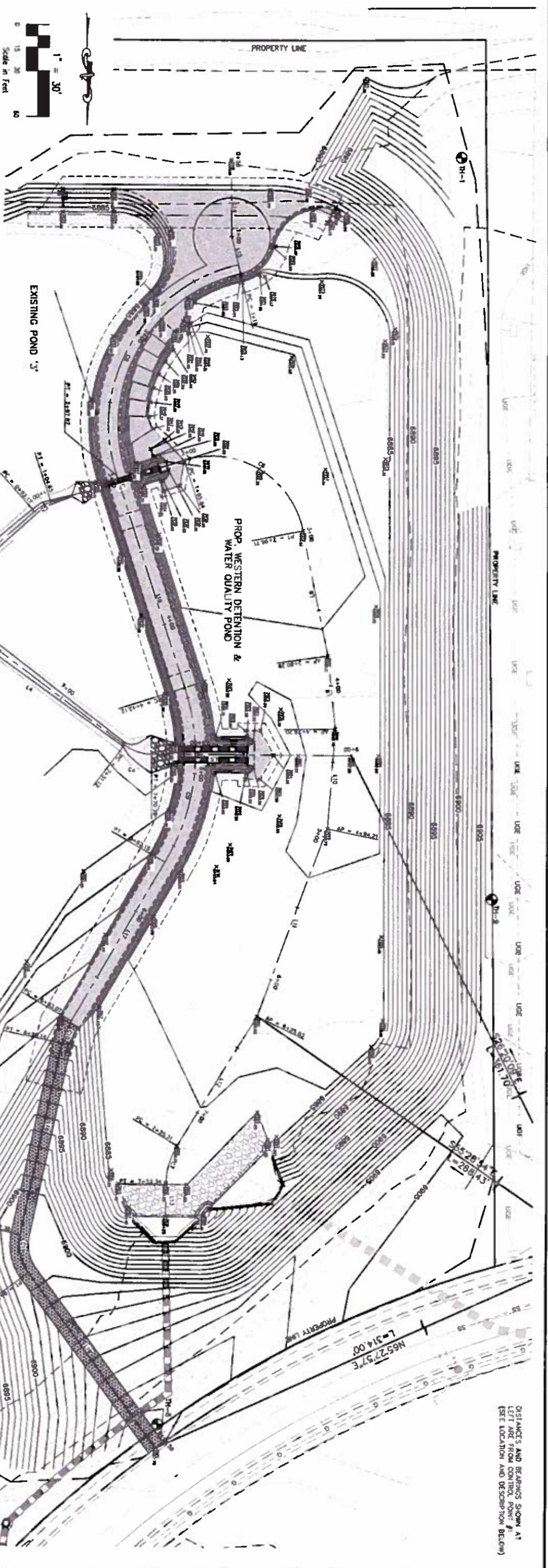
**M&S**  
CIVIL CONSULTANTS, INC.  
20 Boulder Creek Trail, Suite 110  
Colorado Springs, CO 80903  
(719) 955-5466

PROJECT NO.	FILE	SCALE	DATE
30-003	30003-WQ Pond Sh-1 Title.dwg	N/A	10/29/2015
DESIGNED BY:	DJM	HORIZ: N/A	
DRAWN BY:	DJM	VERT: N/A	
CHECKED BY:	WAS		

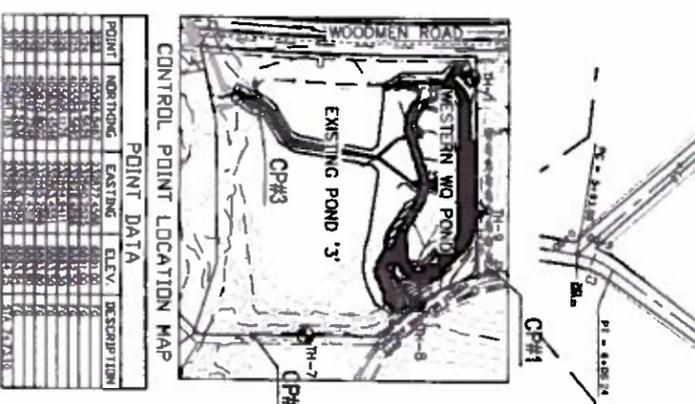
WESTERN DET. & WATER QUALITY POND (SCH. A)  
TITLE SHEET  
SHEET 1 OF 9



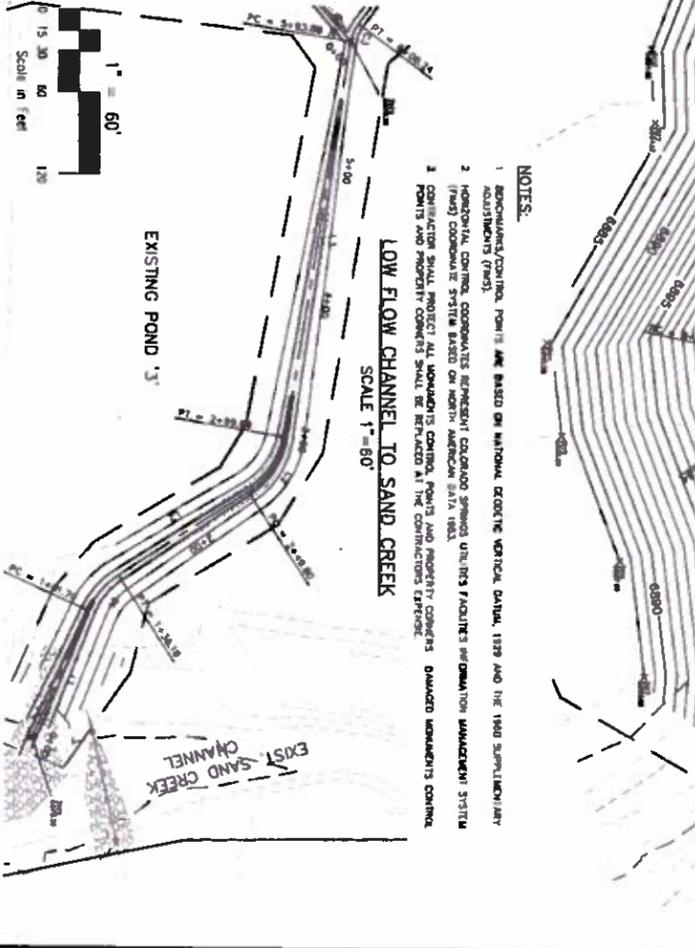
DISTANCES AND BEARINGS SHOWN AT LEFT ARE FROM CONTROL POINT #1 (SEE LOCATION AND DESCRIPTION BELOW)



POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
TH-1	1125.00	100.00	8980.00	TEST BORE HOLE
CP#1	1125.00	100.00	8980.00	CONTROL POINT
CP#2	1125.00	100.00	8980.00	CONTROL POINT
CP#3	1125.00	100.00	8980.00	CONTROL POINT
CP#4	1125.00	100.00	8980.00	CONTROL POINT
CP#5	1125.00	100.00	8980.00	CONTROL POINT
CP#6	1125.00	100.00	8980.00	CONTROL POINT
CP#7	1125.00	100.00	8980.00	CONTROL POINT
CP#8	1125.00	100.00	8980.00	CONTROL POINT
CP#9	1125.00	100.00	8980.00	CONTROL POINT
CP#10	1125.00	100.00	8980.00	CONTROL POINT
CP#11	1125.00	100.00	8980.00	CONTROL POINT
CP#12	1125.00	100.00	8980.00	CONTROL POINT
CP#13	1125.00	100.00	8980.00	CONTROL POINT
CP#14	1125.00	100.00	8980.00	CONTROL POINT
CP#15	1125.00	100.00	8980.00	CONTROL POINT
CP#16	1125.00	100.00	8980.00	CONTROL POINT
CP#17	1125.00	100.00	8980.00	CONTROL POINT
CP#18	1125.00	100.00	8980.00	CONTROL POINT
CP#19	1125.00	100.00	8980.00	CONTROL POINT
CP#20	1125.00	100.00	8980.00	CONTROL POINT
CP#21	1125.00	100.00	8980.00	CONTROL POINT
CP#22	1125.00	100.00	8980.00	CONTROL POINT
CP#23	1125.00	100.00	8980.00	CONTROL POINT
CP#24	1125.00	100.00	8980.00	CONTROL POINT
CP#25	1125.00	100.00	8980.00	CONTROL POINT
CP#26	1125.00	100.00	8980.00	CONTROL POINT
CP#27	1125.00	100.00	8980.00	CONTROL POINT
CP#28	1125.00	100.00	8980.00	CONTROL POINT
CP#29	1125.00	100.00	8980.00	CONTROL POINT
CP#30	1125.00	100.00	8980.00	CONTROL POINT
CP#31	1125.00	100.00	8980.00	CONTROL POINT
CP#32	1125.00	100.00	8980.00	CONTROL POINT
CP#33	1125.00	100.00	8980.00	CONTROL POINT
CP#34	1125.00	100.00	8980.00	CONTROL POINT
CP#35	1125.00	100.00	8980.00	CONTROL POINT
CP#36	1125.00	100.00	8980.00	CONTROL POINT
CP#37	1125.00	100.00	8980.00	CONTROL POINT
CP#38	1125.00	100.00	8980.00	CONTROL POINT
CP#39	1125.00	100.00	8980.00	CONTROL POINT
CP#40	1125.00	100.00	8980.00	CONTROL POINT
CP#41	1125.00	100.00	8980.00	CONTROL POINT
CP#42	1125.00	100.00	8980.00	CONTROL POINT
CP#43	1125.00	100.00	8980.00	CONTROL POINT
CP#44	1125.00	100.00	8980.00	CONTROL POINT
CP#45	1125.00	100.00	8980.00	CONTROL POINT
CP#46	1125.00	100.00	8980.00	CONTROL POINT
CP#47	1125.00	100.00	8980.00	CONTROL POINT
CP#48	1125.00	100.00	8980.00	CONTROL POINT
CP#49	1125.00	100.00	8980.00	CONTROL POINT
CP#50	1125.00	100.00	8980.00	CONTROL POINT



LINE	LENGTH	BEARING
L1	101.70	N65.0512°W
L2	113.61	N33.0930°W
L3	294.19	N80.4830°W
L4	142.89	N52.1200°W
L5	129.71	N90.0000°W
L6	92.17	S48.1806°W
L7	91.19	S72.0820°W
L8	83.68	N17.2926°W
L9	47.81	N67.3613°W
L10	66.02	N04.1047°E
L11	131.61	N02.0928°E
L12	99.49	N01.1210°E
L13	20.76	N00.4244°E
L14	50.00	N02.5800°W
L15	19.00	N17.3130°W
L16	163.28	N17.3130°W
L17	180.91	N28.1022°E
L18	178.24	N12.0702°E
L19	140.95	N38.2440°W



NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

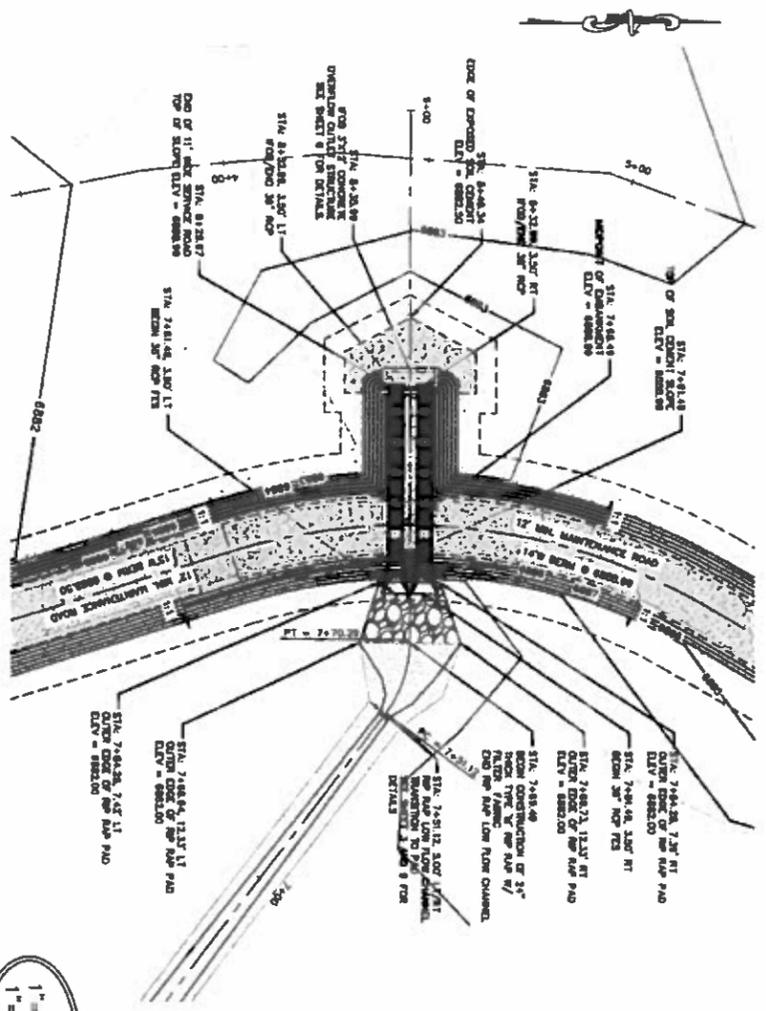
FOR BUREAU UTILITY INFORMATION  
 48 HRS BEFORE YOU DIG  
 CALL 1-800-922-1987



PROJECT NO. 30-003	FILE: \30003-NO Pond SH-3 Horiz. Ctrl. Plan.dwg
DESIGNED BY: DLM	SCALE: 1"=30'
DRAWN BY: DLM	DATE: 10/29/2015
CHECKED BY: VAS	VERT: N/A

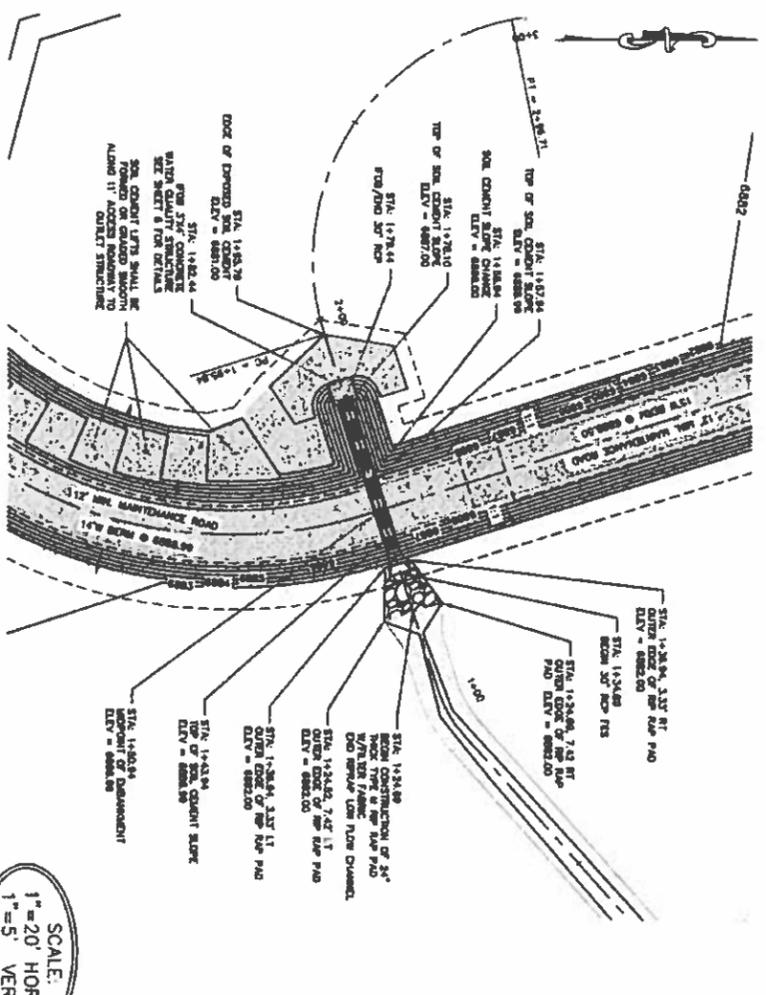
WESTERN DET. & WATER QUALITY POND (SCH. A)  
 HORIZONTAL CONTROL PLAN  
 SHEET 3 OF 9





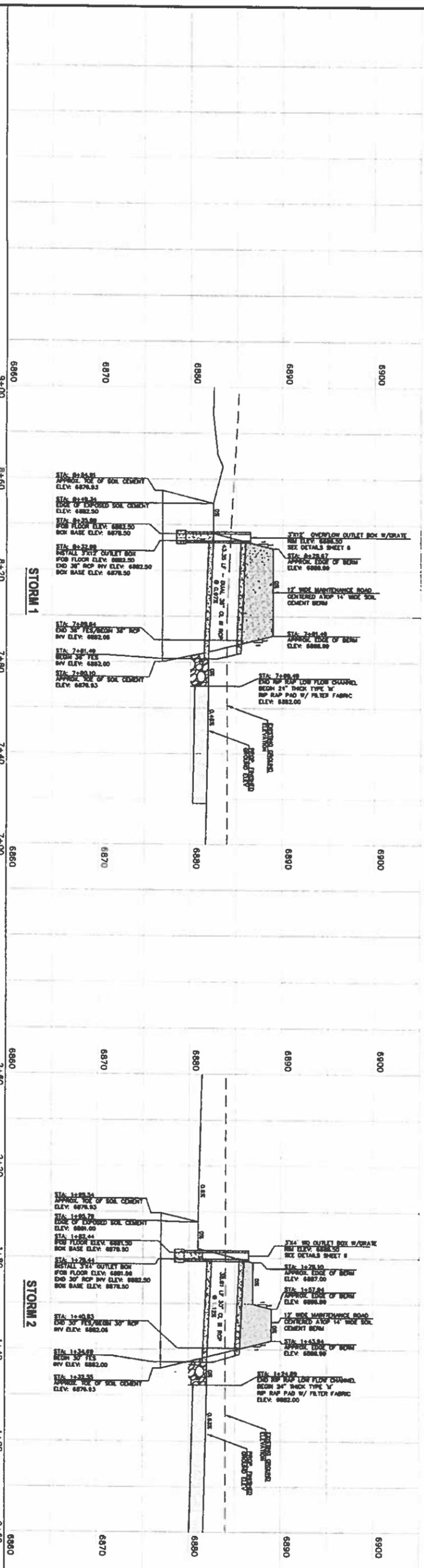
STORM 1

SCALE:  
1" = 20' HORIZ.  
1" = 5' VERT.



STORM 2

SCALE:  
1" = 20' HORIZ.  
1" = 5' VERT.



STORM 1

STORM 2

REVISIONS:

NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

FOR BURIED UTILITY INFORMATION  
CALL 1-800-922-1987  
FOR LOCATING & MARKING UTILITIES  
CALL 1-800-922-1987

**Kiowa**  
Engineering Corporation  
1804 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 530-7342

E&S ENVIRONMENTAL SERVICES, INC.  
20 BROADWAY SPRINGS, CO 80903  
(719) 583-5883

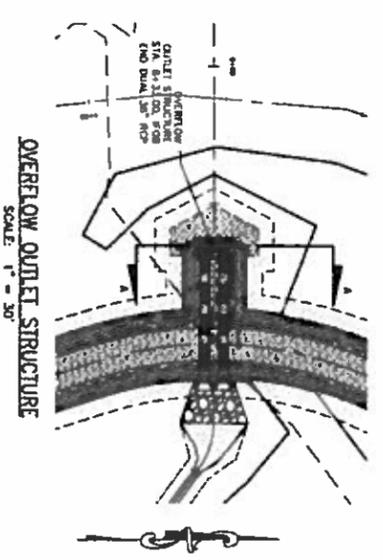
WESTERN DET. AND WATER QUALITY POND (SCH. A)  
STORM SEWER PLAN & PROFILES

PROJECT NO. 30-003	FILE: 30003-00 Prod SH-2 Storm-Prod Plan, Prof	DATE: 11/29/2015
DESIGNED BY: DLM	SCALE: HORIZ. 1"=30'	CHECKED BY: WAS
DRAWN BY: DLM	SCALE: VERT. N/A	

SHEET 5 OF 9

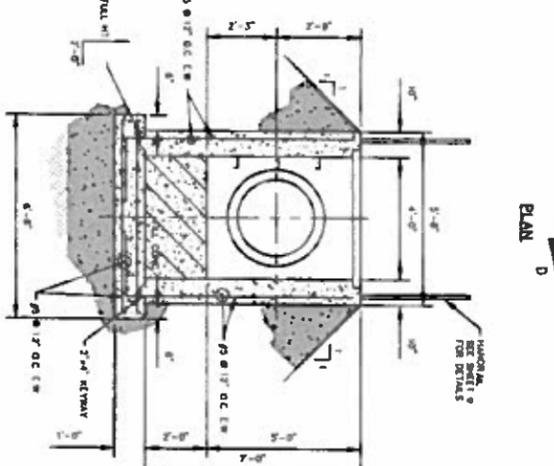
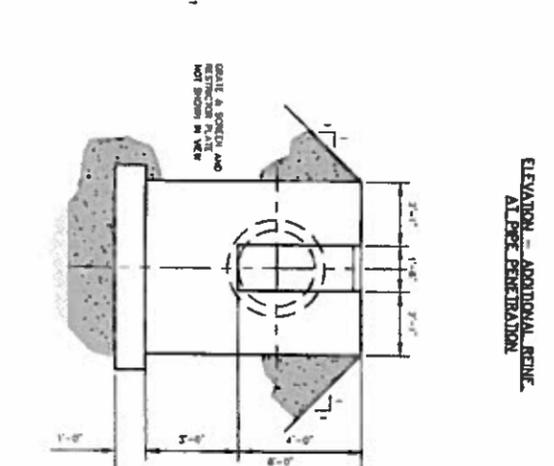
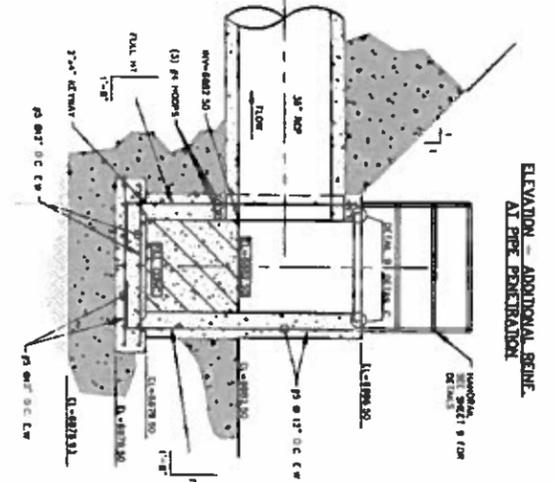
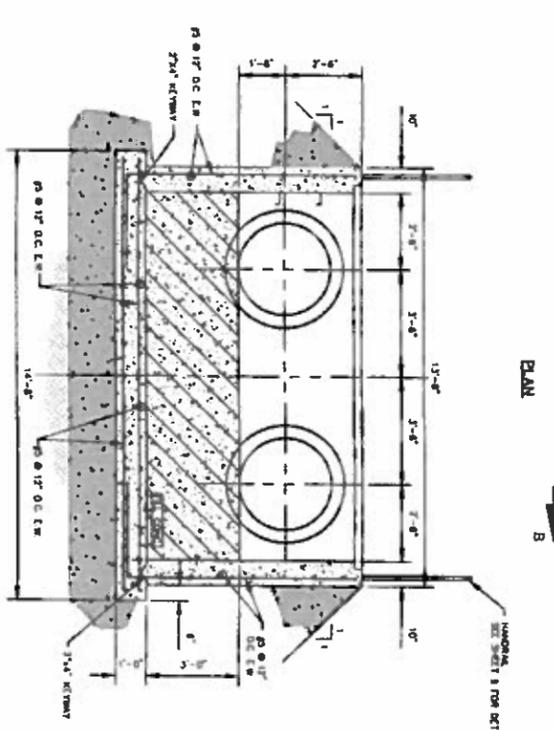
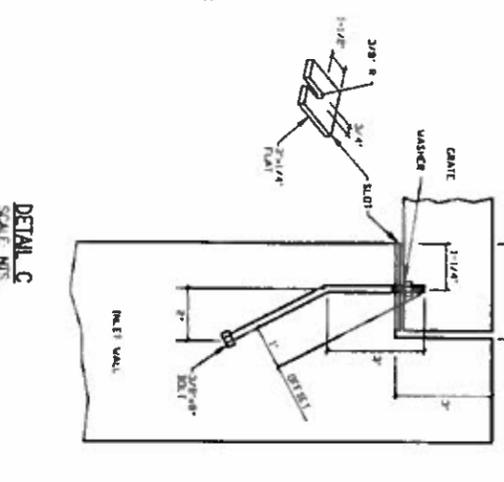
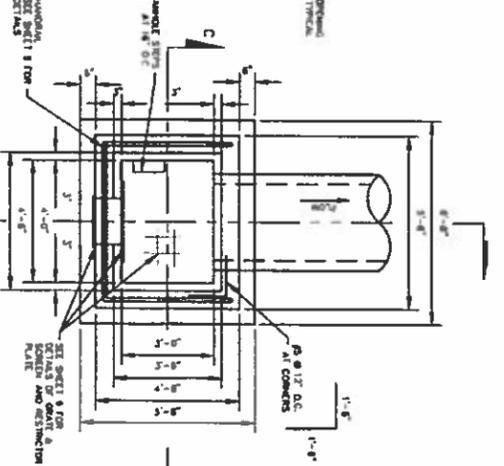
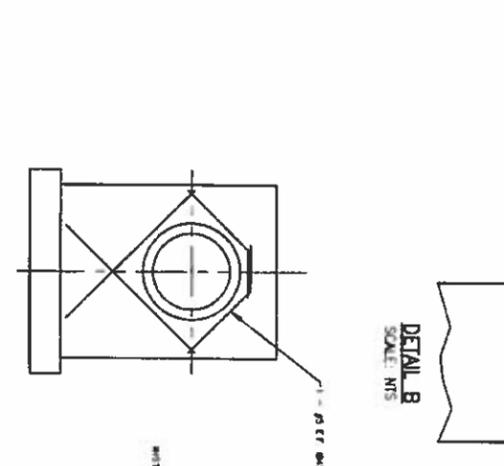
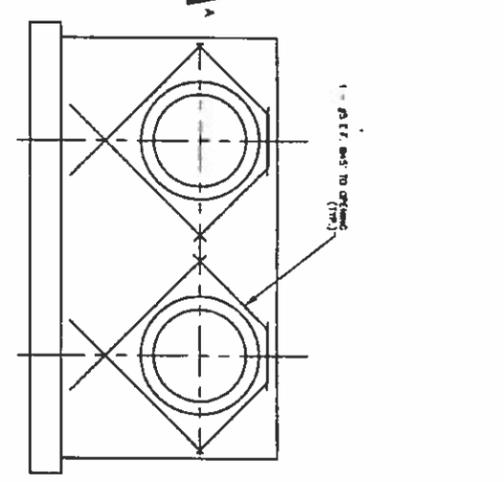
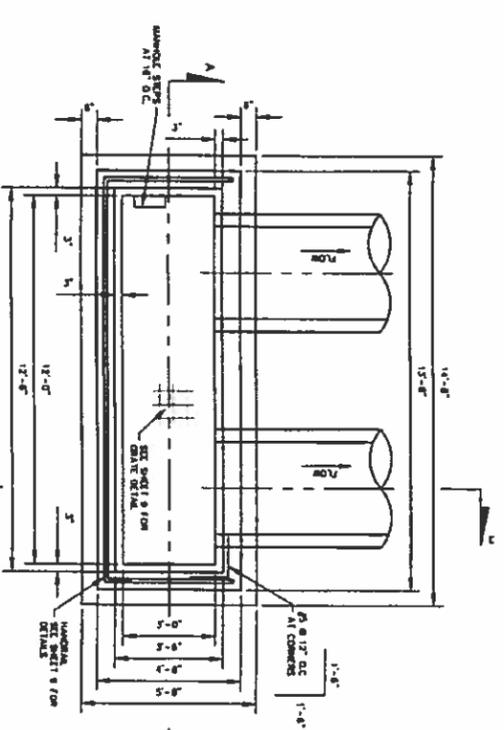
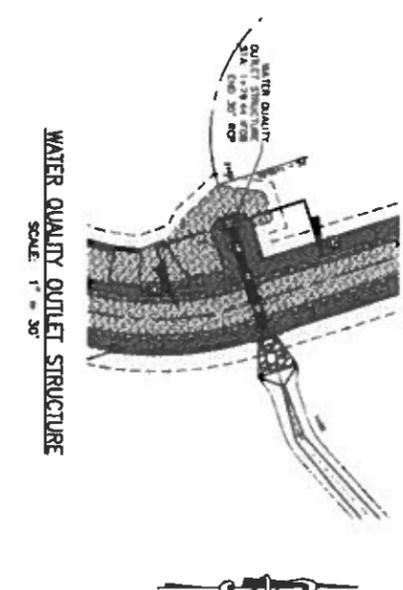
**CONCRETE CONSTRUCTION SPECIFICATIONS**

1. ALL MATERIALS AND INSTALL PROCEDURES SHALL BE IN COMPLIANCE WITH THE CITY OF COLORADO SPRINGS CITY ENGINEERING DIVISION SUBDIVISION POLICY MANUAL AND STANDARD SPECIFICATIONS (LATEST EDITION)
  2. ALL CAST IN PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE YIELD STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED. HIGHER COMPRESSIVE STRENGTH CONCRETE IS ACCEPTABLE TO ACHIEVE EARLY CONCRETE STRENGTH THAN MAY BE DETAIL NECESSARY TO MEET CONSTRUCTION SCHEDULE PRIORITIES. CONCRETE SLUMP SHALL BE KEPT TO A MINIMUM WORKABLE LIMIT. AN "APPROVED" WATER REDUCING AGENT MAY BE USED. CONCRETE SHALL BE IN ACCORDANCE WITH THE CITY OF COLORADO SPRINGS ENGINEERING DIVISION STANDARD SPECIFICATIONS SECTION 500 CONCRETE AND ROOF STRUCTURAL CONCRETE WITH ATTENTION TO SUBSECTION 807 FOR CURING AND COLD WEATHER REQUIREMENTS.
  3. ALL CONCRETE REINFORCEMENT SHALL HAVE A MINIMUM TENSILE STRENGTH OF 60,000 PSI UNLESS OTHERWISE NOTED.
  4. THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPICE LENGTH FOR REINFORCING STEEL BARS, UNLESS OTHERWISE SHOWN OR OTHERWISE NOTED.
- | BAR SIZE            | #4    | #5    | #6    | #7    | #8    |
|---------------------|-------|-------|-------|-------|-------|
| CONCRETE PROJECTION | 1'-0" | 2'-2" | 2'-2" | 3'-4" | 4'-5" |
5. EARTH SOIL CURRENT AND 7" FOR CONCRETE POURED IN FORMS UNLESS OTHERWISE NOTED ON PLANS.
  6. CURTAIN SHALL BE TYPE II NO CALCIUM CHLORIDE ADDITIVES WILL BE PERMITTED



**CONCRETE CONSTRUCTION SPECIFICATIONS (CONT.)**

7. CONCRETE TESTING SHALL BE IN COMPLIANCE WITH THE CITY OF COLORADO SPRINGS ENGINEERING DIVISION STANDARD SPECIFICATIONS SECTION 500 CONCRETE SUBSECTION 508
8. ALL BACKFILL SUB-BASE AND OR BASE COURSE MATERIAL SHALL BE COMPACTED PER CITY SPECIFICATIONS
9. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4"
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURES DURING CONSTRUCTION



SECTION A - A  
OVERFLOW OUTLET STRUCTURE  
SCALE: 3/8" = 1'

SECTION B - B  
OVERFLOW OUTLET STRUCTURE  
SCALE: 3/8" = 1'

SECTION C - C  
WATER QUALITY OUTLET STRUCTURE  
SCALE: 3/8" = 1'

SECTION D - D  
WATER QUALITY OUTLET STRUCTURE  
SCALE: 3/8" = 1'

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPROVED BY:	DATE:

FOR BURIED UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987  
FOR LOCATING & MARKING GAS,  
ELECTRIC, WATER & TELEPHONE LINES  
WATER EMERGENCIES 330-0300

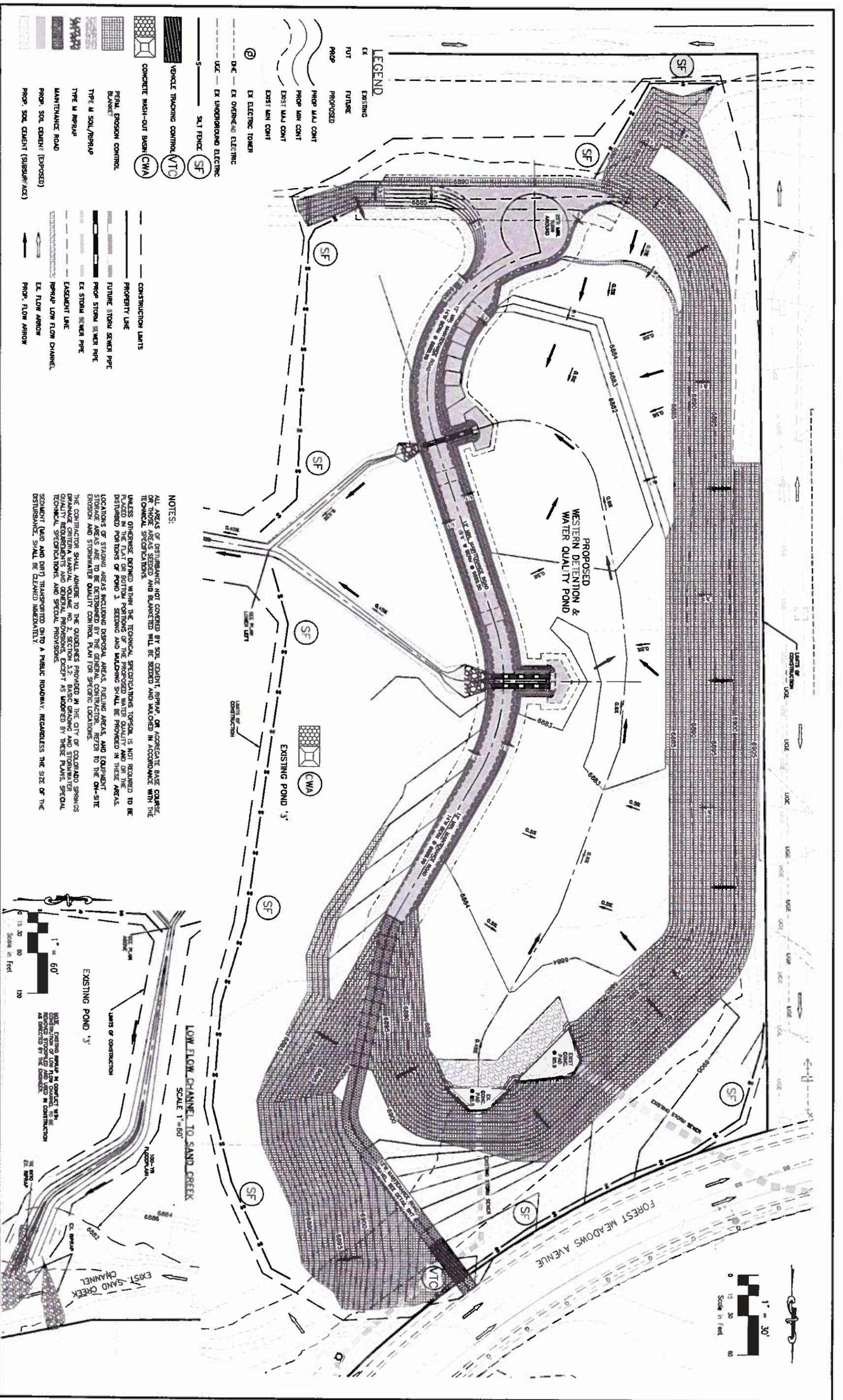
**Kiewit**  
Engineering Corporation  
1804 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 530-7348

**ES&S**  
CIVIL CONSULTANTS, INC.  
30 BOULDER CRESTWAY SUITE 110  
COLORADO SPRINGS, CO 80903  
(719) 855-5485

WESTERN DET. & WATER QUALITY POND (SCH. A)  
OUTFALL STRUCTURE DETAILS

PROJECT NO. 30-003	TITLE: 30003-WQ Pond SH-8 Struct Detail Rev. 04
DESIGNED BY: OJM	SCALE: 1" = 30'
DRAWN BY: OJM	DATE: 10/29/2015
CHECKED BY: VAS	VER: N/A

SHEET 6 OF 9



- LEGEND**
- EX EXISTING
  - PUT FUTURE
  - PROP PROPOSED
  - PROP MAJ CONT
  - PROP MIN CONT
  - EXIST MAJ CONT
  - EXIST MIN CONT
  - EX ELECTRIC TOWER
  - D-E EX OVERHEAD ELECTRIC
  - U-E EX UNDERGROUND ELECTRIC
  - S-S SALT FENCE
  - SF
  - VTC
  - CWA
  - CONCRETE WASH-OUT BASIN
  - VEHICLE TRACKING CONTROL
  - PERM. EROSION CONTROL BLANKET
  - TYPE M SOIL/RRRAP
  - TYPE M RRAP
  - MAINTENANCE ROAD
  - PROP. SOIL CEMENT (EXPOSED)
  - PROP. SOIL CEMENT (SUBSURFACE)
  - CONSTRUCTION LIMITS
  - PROPERTY LINE
  - FUTURE STORM SEWER PIPE
  - PROP STORM SEWER PIPE
  - EX STORM SEWER PIPE
  - EASEMENT LINE
  - RRRAP LOW FLOW CHANNEL
  - EX FLOW ARROW
  - PROP. FLOW ARROW

- NOTES:**
- ALL AREAS OF DISTURBANCE NOT COVERED BY SOIL CEMENT, RRRAP OR APPROPRIATE BASE COURSE OR THESE AREAS SEDED AND BLANKETED WILL BE SEDED AND BLANKETED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
- UNLESS OTHERWISE DEFINED WITHIN THE TECHNICAL SPECIFICATIONS TOPSOIL IS NOT REQUIRED TO BE PLACED IN THE FLAT OR BOTTOM PORTIONS OF THE PROPOSED WATER QUALITY POND OR THE DISTURBED PORTIONS OF POND 3. SEEDING AND MULCHING SHALL BE PROVIDED IN THESE AREAS.
- LOCATIONS OF STAGING AREAS INCLUDING DISPOSAL AREAS, FUELING AREAS, AND EQUIPMENT STORAGE TO BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY OF COLORADO SPRINGS EROSION AND STORMWATER QUALITY CONTROL PLAN FOR SPECIFIC LOCATIONS.
- THE CONTRACTOR SHALL ADHERE TO THE GUIDELINES PROVIDED IN THE CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL VOLUME NO. 2, SECTION 3.2, BASIC DRAINAGE AND STORMWATER QUALITY REQUIREMENTS AND GENERAL PROVISIONS, EXCEPT AS MODIFIED BY THESE PLANS, SPECIAL TECHNICAL SPECIFICATIONS, AND SPECIAL PROVISIONS.
- STORMWATER (LID AND DIRT) TRANSPORTED ONTO A PUBLIC ROADWAY, REGARDLESS THE SIZE OF THE DISTURBANCE, SHALL BE CLEANED IMMEDIATELY.

FOR BURIED UTILITY INFORMATION  
 48 HRS BEFORE YOU DIG  
 CALL 1-800-922-1987  
 FOR LISTING & TYPING OF  
 ELECTRIC, WATER & TELEPHONE LINES  
 WITH TOLERANCES 300-1300

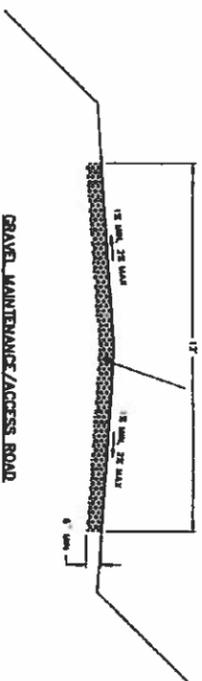
**Kiewit**  
 Engineering Corporation  
 1804 South 21st Street  
 Colorado Springs, Colorado 80904  
 (719) 530-7342

**ES&S**  
 ENVIRONMENTAL SERVICES, INC.  
 27 BALDWIN STREET, SUITE 110  
 COLORADO SPRINGS, CO 80903  
 (719) 585-5485

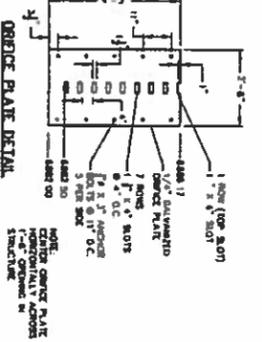
WESTERN DET. & WATER QUALITY POND (SCH. A)  
 EROSION CONTROL PLAN  
 PROJECT NO. 30-003 | P.L.C. | V0003-Gravel Control Plan SH-7.dwg  
 DESIGNED BY: DLH | SCALE: DATE: 10/28/2015  
 DRAWN BY: DLH | HORIZ: 1"=30'  
 CHECKED BY: WS | VERT: N/A  
**SHEET 7 OF 9**



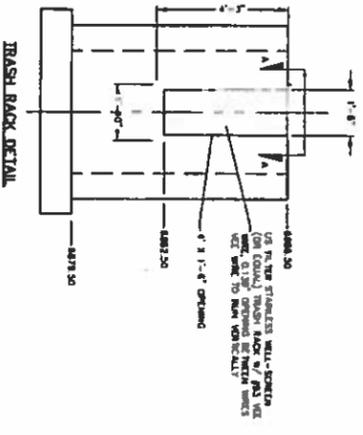
ACCESS MAINTENANCE ROAD WITH CLASS 3 GRAVEL  
BASE (ALL WATER) SURFACE DESIGNED TO CARRY  
THE 20 TONS AND CONSTRUCTED TO CITY OF  
COLORADO SPECIFICATIONS



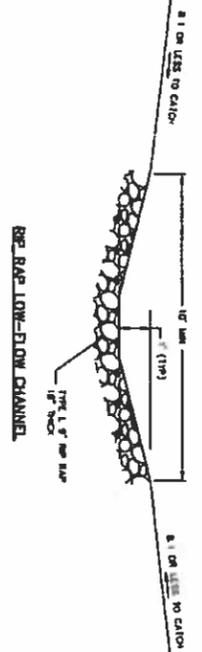
GRAVEL MAINTENANCE/ACCESS ROAD



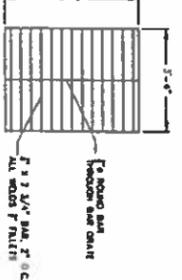
GRATE PLATE DETAIL



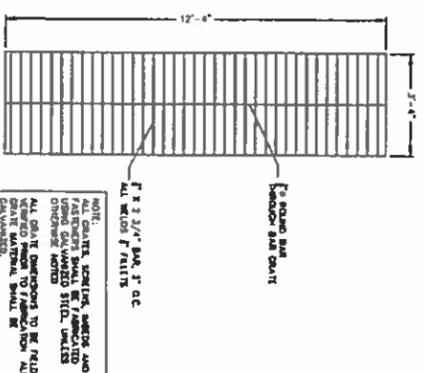
TRASH RACK DETAIL



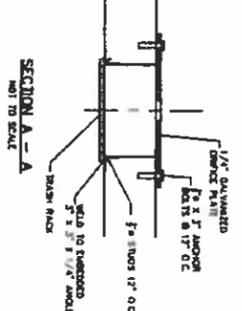
REBAR LOW-FLOW CHANNEL



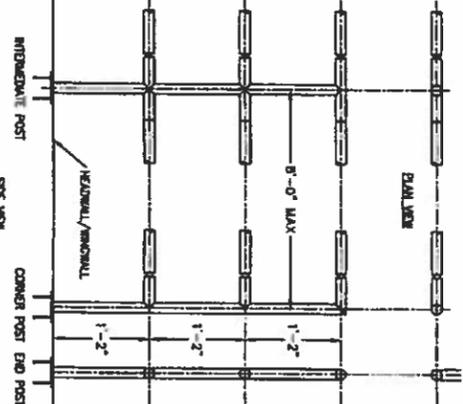
WATER QUALITY INLET  
GRATE DETAIL



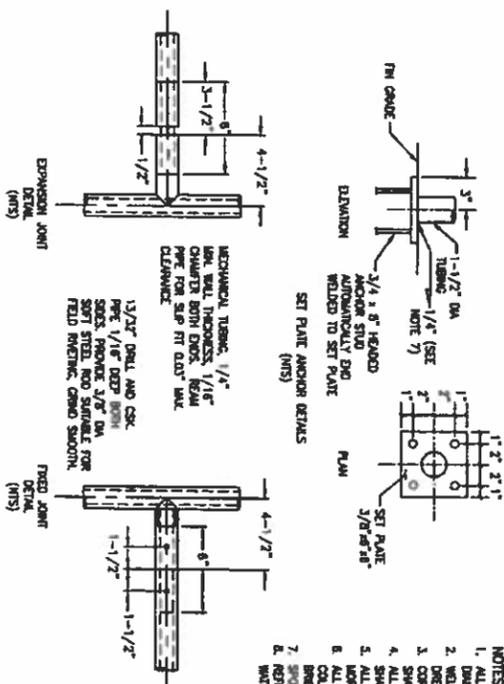
OVERFLOW INLET  
GRATE DETAIL



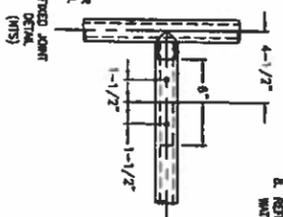
SECTION A-A  
NOT TO SCALE



HANDRAIL DETAIL  
NOT TO SCALE



EXPANSION JOINT  
DETAIL (MNS)



FIXED JOINT  
DETAIL (MNS)

- NOTES
1. ALL HANDRAILS SHALL BE FABRICATED WITH NEW 1-1/2" DIA. TUBING STANDARD ENERGY TUBING.
  2. WELD ALL PIPE JOINTS WITH 1/8" REINFORCED WELDS AND DRESS SMOOTH.
  3. CORNERS AND EDGES OF ALL BARS, PLATES, AND PIPE ENDS SHALL BE SAVED SMOOTH AND FREE OF BURRS.
  4. ALL HANDRAIL LATERAL REINFORCEMENT FOR COMPLETE INSTALLATION SHALL BE PROVIDED.
  5. ALL POSTS SHALL BE EMBEDDED IN NONREINFORCED CONCRETE.
  6. ALL HANDRAILS SHALL BE FINISHED AND PAINTED. THE FINISH COLOR SHALL BE SHERMAN-WILLIAMS COLORED SPRINGS BRONZE GREEN.
  7. SPOT WELD AT 4 QUADRANTS OF POST (NOT CONTIGUOUS) ON EACH SIDE.
  8. REFER TO SHEET 5 FOR HANDRAIL INSTALLATION LOCATIONS ON WATER QUALITY AND OVERFLOW OUTLET STRUCTURES.

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPROVED BY:	DATE:

FOR BURIED UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987  
FOR LOCATING & MARKING GAS,  
ELECTRIC, WATER & TELEPHONE LINES  
WATER CHECKERS: 530-0300

**Kiewit**  
Engineering Corporation  
1804 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 530-7342

**ES&S**  
CIVIL CONSULTANTS, INC.  
20 BOULDER CREST, SUITE 110  
COLORADO SPRINGS, CO 80903  
(719) 955-5485

WESTERN DET. & WATER QUALITY POND (SCH A)

MISCELLANEOUS DETAILS

PROJECT NO:	30-003	FILE:	30003-NO Pond SH-9 Misc. Outlets.Dwg
DESIGNED BY:	DJM	SCALE:	DATE: 10/29/15
DRAWN BY:	DJM	HORIZ: N/A	SHEET 9 OF 9
CHECKED BY:	VAS	VERT: N/A	



**GENERAL NOTES:**

ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF THE CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS, THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS AND SPECIFICATIONS WHICH HAVE BEEN APPROVED BY THE CITY OF COLORADO SPRINGS (CITY).

THE CONTRACTOR SHALL NOTIFY THE OWNER (CITY) AND ENGINEER OF ANY PROBLEM IN CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.

THE CONTRACTOR SHALL PROTECT ALL EXISTING FACILITIES IN THE GENERAL AREA OF CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OPERATIONS AT NO COST TO THE PROJECT.

UTILITY LINES AS SHOWN ON THESE DRAWINGS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CALL ALL UTILITY LOCATIONS AT LEAST TWO WORKING DAYS PRIOR TO ANY DIGGING. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND SHALL PROTECT THEM FROM DAMAGE DURING CONSTRUCTION.

A CITY OF COLORADO SPRINGS UTILITIES INSPECTOR IS REQUIRED TO BE ON SITE DURING EXCAVATION AND CONSTRUCTION AROUND GAS FACILITIES. IT IS THE RESPONSIBILITY TO COORDINATE WITH THE GAS DEPARTMENT FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION NEAR GAS FACILITIES.

EXCAVATION REQUIRED FOR COMPACTON OF BASES OF CUTS AND FILLS WILL BE CONSIDERED AS SUBSIDIARY TO THAT OPERATION AND WILL NOT BE PAID FOR SEPARATELY. THE TESTING OF COMPACTON FOR THIS PROJECT WILL BE PER AASHTO T 99.

SURGRADE UNDER TRAIL SHALL BE RECOMPACTED TO 95% STANDARD PROCTOR IN ACCORDANCE WITH THE ABOVE REFERENCED SPECIFICATIONS.

THIS MONUMENT BLDG IS A BERNSTEIN TOP SECURITY MONUMENT IN A RANGE BOX IN WEST ROW OF MARKSHEFFEL RD. 4' EAST OF CONCRETE ROW FENCE, 1500' +/- NORTH OF TAYLOR RD. E-1-8804 TO N-1-1529 AND THE 1980 SUPPLEMENTARY ADJUSTMENT.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE CONSTRUCTION SCHEDULE & ACCESS TO THE WORK AREA.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT, MAINTENANCE, & DEMOBILIZATION OF CONSTRUCTION STAGING AREA(S) WITH THE CITY OF COLORADO SPRINGS. WATER SHALL BE USED AS A DUST PALMATIVE WHERE REQUIRED. LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER. WATER WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE SUBSIDIARY TO THE EXCAVATION ITEM.

THE SOIL TO BE PLACED AS TOPSOIL MATERIAL SHALL BE FREE OF REUSE, STUMPS, ROOTS, ROCK, BRUSH, WEEDS, HARD GLOBS, TOXIC SUBSTANCES OR OTHER MATERIAL WHICH WOULD BE DETRIMENTAL TO ITS USE ON THE PROJECT. IT SHALL HAVE A MINIMUM P.I. OF 5 BUT SHALL NOT BE SUCH HEAVY CLAY AS TO PRECLUDE PLACEMENT WITH A SHOULDER MACHINE.

REUSEABLE MATERIAL: MATERIAL THAT CAN BE SAVED OR SALVAGED, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT ALL SALVAGEABLE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

TOPOGRAPHIC DATA INDICATED ON THESE DRAWINGS WAS COMPILED FROM FIELD SURVEY. CONTRACTOR MUST VERIFY EXTENT OF WORK WITHIN THESE AREAS. DIMENSIONS, ELEVATIONS, AND LOCATIONS OF EXISTING STRUCTURES, PIPELINES, UTILITIES AND UTILITIES ARE APPROXIMATE WHERE SUCH DIMENSIONS OR LOCATIONS DETERMINE THE LIMITS OF THE WORK, SUCH DIMENSIONS OR LOCATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.

THE LOCATIONS OF EXISTING STRUCTURES, PIPELINES, UTILITIES, ETC. SHOWN ON THE DRAWINGS HAVE BEEN APPROXIMATED. THERE MAY BE OTHER STRUCTURES, PIPELINES, UTILITIES, ETC. NOT SHOWN ON THE DRAWINGS WHICH PRESENTLY EXIST IN THE AREA OF CONSTRUCTION. THE ENGINEER AND/OR OWNER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL IMPACTED EXISTING STRUCTURES, PIPELINES, UTILITIES, ETC. IN THE PROJECT SITE.

THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL MONUMENTS, BENCHMARKS, PROPERTY MARKERS, REFERENCE POINTS, AND STAKES. IN CASE OF HIS DESTRUCTION OF THESE, THE CONTRACTOR WILL BE RESPONSIBLE FOR RESTITING SAME, AT NO COST TO THE OWNER, AND SHALL BE RESPONSIBLE FOR ANY LOSS OF TIME THAT MAY BE CAUSED.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHERE UTILITIES CONFLICT WITH THE WORK IN CONFORMANCE WITH THE SPECIFICATIONS. WHERE FIELD VERIFICATION IS NOTED ON THE PLANS THIS SHALL REQUIRE THE CONTRACTOR TO DETERMINE THE LOCATION OF THE FACILITY IN QUESTION PRIOR TO CONSTRUCTION. A DETERMINATION SHALL BE MADE BY THE CONTRACTOR IF THE CURRENT DESIGN WILL CONFLICT WITH THE EXISTING FACILITY AND NOTIFY THE ENGINEER IN WRITING.

ALL EXISTING AREAS DISTURBED OUTSIDE THE LIMITS OF CONSTRUCTION ACTIVITIES SHALL BE REVEGETATED IN CONFORMANCE WITH THE SPECIFICATIONS AT NO ADDITIONAL COST TO THE PROJECT.

ALL EXISTING ROADWAYS AND SIDEWALKS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR RECONSTRUCTED IN CONFORMANCE WITH THE SPECIFICATIONS.

SIGNAGE SHALL FOLLOW THE 2008 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009 EDITION) OR LATEST EDITION AND THE CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING STANDARDS & PAVEMENT MARKING STANDARDS. CONTRACTOR SHALL SUBMIT TO THE CITY A TRAFFIC CONTROL PLAN PRIOR TO COMMENCING WITH THE WORK.

ALL DISCHARGES TO DRAINAGE COLENS AND STORM SEWER SYSTEMS MUST COMPLY WITH THE APPLICABLE PROVISIONS OF THE COLORADO WATER QUALITY CONTROL ACT AND THE COLORADO DISCHARGE PERMIT REGULATION AND BE SUBJECT TO INSPECTION BY THE CITY OF COLORADO SPRINGS. COLORADO SPRINGS HAS A US-4 PERMIT. CONTRACTOR SHALL DEVISE AND IMPLEMENT A PERMANENT PLAN FOR PERIODIC REMOVAL AND DISPOSAL OF SEDIMENT FROM EROSION CONTROL FACILITIES AND FOR MAINTENANCE OF EROSION CONTROL FACILITIES.

SURFACE AND GROUNDWATER AT SITE MAY CREATE A NEED FOR DEWATERING DURING THE CONSTRUCTION OF THE DETENTION BASIN FACILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TEMPORARY DEWATERING STRUCTURES, AND PROVIDE FOR SAFE AND STABLE DISCHARGE OF WATER FROM THE CONSTRUCTION SITE. THE COST OF DEWATERING IS INCIDENTAL TO THE CONSTRUCTION AND WILL NOT BE PAID FOR UNDER A SPECIFIC ITEM IN THE BID DOCUMENTS.

SITE TOPOGRAPHY WAS FIELD SURVEYED IN AUGUST 2015 BY M&S CIVIL CONSULTANTS, INC.

CLASS III RCP SHALL BE USED FOR ALL STORM SEWER PIPES UNLESS OTHERWISE SPECIFIED.

**SOIL RIPRAP**

THE SOIL MATERIAL SHALL BE NATIVE OR TOPSOIL AND MIXED WITH SIXTY FIVE PERCENT (65%) RIPRAP AND THIRTY FIVE PERCENT (35%) SOIL BY VOLUME.

SOIL RIPRAP SHALL CONSIST OF A UNIFORM MIXTURE OF SOIL AND RIPRAP WITHOUT Voids.

CONTRACTOR SHALL COOPERATE WITH ENGINEER IN OBTAINING AND PROVIDING SAMPLES OF ALL SPECIFIED MATERIALS.

CONTRACTOR SHALL SUBMIT CERTIFIED LABORATORY TEST CERTIFICATES FOR ALL ITEMS REQUIRED FOR SOIL RIPRAP.

RIPRAP USED SHALL BE THE TYPE DESIGNATED ON THE DRAWINGS AND SHALL CONFORM TO TABLE SHOWN TO THE RIGHT.

THE RIPRAP DESIGNATION AND TOTAL THICKNESS OF RIPRAP SHALL BE AS SHOWN ON THE DRAWINGS. THE MAXIMUM STONE SIZE SHALL NOT LARGER THAN THE THICKNESS OF THE RIPRAP.

NEITHER WIDTH NOR THICKNESS OF A SINGLE STONE OF RIPRAP SHALL BE LESS THAN ONE-THIRD (1/3) OF ITS LENGTH.

THE SPECIFIC GRAVITY OF THE RIPRAP SHALL BE TWO AND ONE-HALF (2.5) OR GREATER.

MINIMUM DENSITY FOR ACCEPTABLE RIPRAP SHALL BE ONE HUNDRED AND SIXTY FIVE (165) POUNDS PER CUBIC FOOT.

RIPRAP SPECIFIC GRAVITY SHALL BE ACCORDING TO THE BULK-SATURATED, SURFACE-DRY BASIS, IN ACCORDANCE WITH AASHTO T85.

THE RIPRAP SHALL HAVE A PERCENTAGE LOSS OF NOT MORE THAN FORTY PERCENT (40%) AFTER FIVE HUNDRED (500) REVOLUTIONS WHEN TESTED IN ACCORDANCE WITH AASHTO T98.

THE RIPRAP SHALL HAVE A PERCENTAGE LOSS OF NOT MORE THAN TEN (10%) AFTER FIVE (5) CYCLES WHEN TESTED IN ACCORDANCE WITH AASHTO T104 FOR LEDGE ROCK USING SODIUM SULFATE.

THE RIPRAP SHALL HAVE A PERCENTAGE LOSS OF NOT MORE THAN TEN PERCENT (10%) AFTER TWELVE (12) CYCLES OF FREEZING AND THAWING WHEN TESTED IN ACCORDANCE WITH AASHTO T103 FOR LEDGE ROCK. PROCEDURE A. ROCK SHALL BE FREE FROM CALCIUM IMPURITIES.

RUBBLE FOR USE AS SOIL/RIPRAP SHALL BE GRADED TO MEET THE EQUIVALENT ROCK RIPRAP GRADATION. RUBBLE PROPOSED FOR USE IN PLACE OF ROCK RIPRAP SHALL BE STOCKPILED FOR OBSERVATION BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE WORK.

GRADATION:

A. EACH LOAD OF RIPRAP SHALL BE REASONABLY WELL GRADED FROM THE SMALLEST TO THE LARGEST SIZE SPECIFIED.

B. STONES SMALLER THAN THE 20 TO TEN PERCENT (20-10%) SIZE WILL NOT BE PERMITTED IN AN AMOUNT EXCEEDING TEN PERCENT (10%) BY WEIGHT OF EACH LOAD.

C. CONTROL OF GRADATION SHALL BE BY VISUAL INSPECTION. HOWEVER IN THE EVENT THE ENGINEER DETERMINES THE RIPRAP TO BE UNACCEPTABLE, THE ENGINEER SHALL PICK TWO (2) RANDOM TRUCKLOADS TO BE DUMPED AND THE FIELD FOR GRADATION.

1) MECHANICAL EQUIPMENT AND LABOR NEEDED TO ASSIST IN CHECKING GRADATION SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.

BROKEN ASPHALT PAVEMENT SHALL NOT BE ACCEPTABLE FOR USE IN THE WORK.

ROUNDED RIPRAP (RIVER ROCK) IS NOT ACCEPTABLE, UNLESS SPECIFICALLY DESIGNATED ON THE DRAWINGS.

**STRUCTURAL CONCRETE NOTES:**

ALL CONSTRUCTION INVOLVING THE PLACEMENT OF STRUCTURAL CONCRETE SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 400 OF THE CITY OF COLORADO SPRINGS ENGINEERING DESIGN STANDARD SPECIFICATIONS, AND AS SUPPLEMENTED BY THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION.

STEEL REINFORCING SHALL BE GRADE 60 FOR ALL REINFORCING STEEL GREATER THAN #4. A TABLE SPECIFYING MINIMUM SPOCE LENGTHS HAS BEEN PROVIDED ON THE STRUCTURAL DETAIL SHEETS.

ALL REINFORCING SHALL HAVE A 2-INCH MINIMUM COVER UNLESS OTHERWISE SPECIFIED. ALL REINFORCED STEEL TO BE EPOXY COATED.

CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f<sub>c</sub>) OF 4,000 PSI AT 28 DAYS. ALL CONCRETE PLACED AGAINST SOIL SHALL BE TYPE II PORTLAND CEMENT. ALL EXPOSED CONCRETS SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS OTHERWISE SPECIFIED.

EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213.

BACKFILL AGAINST STRUCTURES SHALL NOT COMMENCE UNTIL ALL SUPPORTING DIAPHRAGMS ARE IN PLACE AND CONCRETE HAS OBTAINED ITS FULL SEVEN DAY STRENGTH. BACKFILL SHALL BE PLACED EQUALLY ON EACH SIDE OF RETAINING WALL STRUCTURES AND CUTOFF WALLS UNTIL THE FINAL GRADE IS REACHED.

FOOTING EXCAVATIONS SHALL BE EXAMINED BY THE GEOTECHNICAL ENGINEER WITH A 24-HOUR MINIMUM NOTIFICATION FOR SOIL AND/OR CONCRETE TESTING. PLACEMENT OF CONCRETE ABSENCE OF TESTING SHALL BE COMPLETED AT THE SOLE RISK OF THE CONTRACTOR.

ABBREVIATIONS

EC -- EPOXY COATED O.P. -- OUTSIDE FACE EF -- EACH FACE

IF -- INSIDE FACE IF -- INSIDE FACE

IF -- EACH FACE OF CONCRETE B.O.C. -- BOTTOM OF CONCRETE

CONV -- CONDUITS

PRIOR TO THE PLACEMENT OF CONCRETE THE SOIL SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6-INCHES. THE MOISTURE CONTENT SHALL BE ADJUSTED TO WITHIN PLUS OR MINUS 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT AND RECOMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION (AASHTO-T-180).

RIPPRAP DESCRIPTION	RIPPRAP SIZE BY WEIGHT	% SMALLER INTERMEDIATE SIZE BY WEIGHT (MONOES)	Max. (INCHES)
TYPE VI	70-100 50-70 2-10	12 6 2	6
TYPE I	70-100 50-70 2-10	15 12 3	8
TYPE II	70-100 50-70 2-10	21 18 4	12
TYPE III	70-100 50-70 2-10	20 18 4	18
TYPE IV	70-100 50-70 2-10	24 20 4	24

\*Max = MEAN PARTICLE SIZE

**PRE-EXCAVATION CHECKLIST:**

- GAS AND OTHER UTILITY LINES OF RECORD SHOWN ON PLANS.
- UTILITIES CENTRAL LOCATING CALLED AT LEAST 2 BUSINESS DAYS AHEAD. (011)
- UTILITIES LOCATED AND 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 EXPOSE LINES BY CAREFUL PROBING AND HAND DIGGING.

**\*A.G.A./A.P.W.A. STANDARD UTILITY MARKING COLOR CODE**

- NATURAL GAS YELLOW
- ELECTRIC RED
- WATER BLUE
- WASTEWATER GREEN

REVISIONS:

NO.	DATE	BY:	DESCRIPTION:	APPROVED BY:	DATE

FOR BUREAU UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987  
FOR LOCATING & MARKING GAS,  
ELECTRIC, WATER & FIBEROPTIC LINES  
WITH EMPLOYEES 580-4300

**Kiewit**  
Engineering Corporation  
1804 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 630-7342

**M&S**  
CIVIL CONSULTANTS, INC.  
20 BOULDER CREEK DRIVE, STE. 110  
COLORADO SPRINGS, CO 80903  
(719) 935-5465, FAX (719) 444-8427

**SAND CREEK INFLOW DROP STRUCTURE**

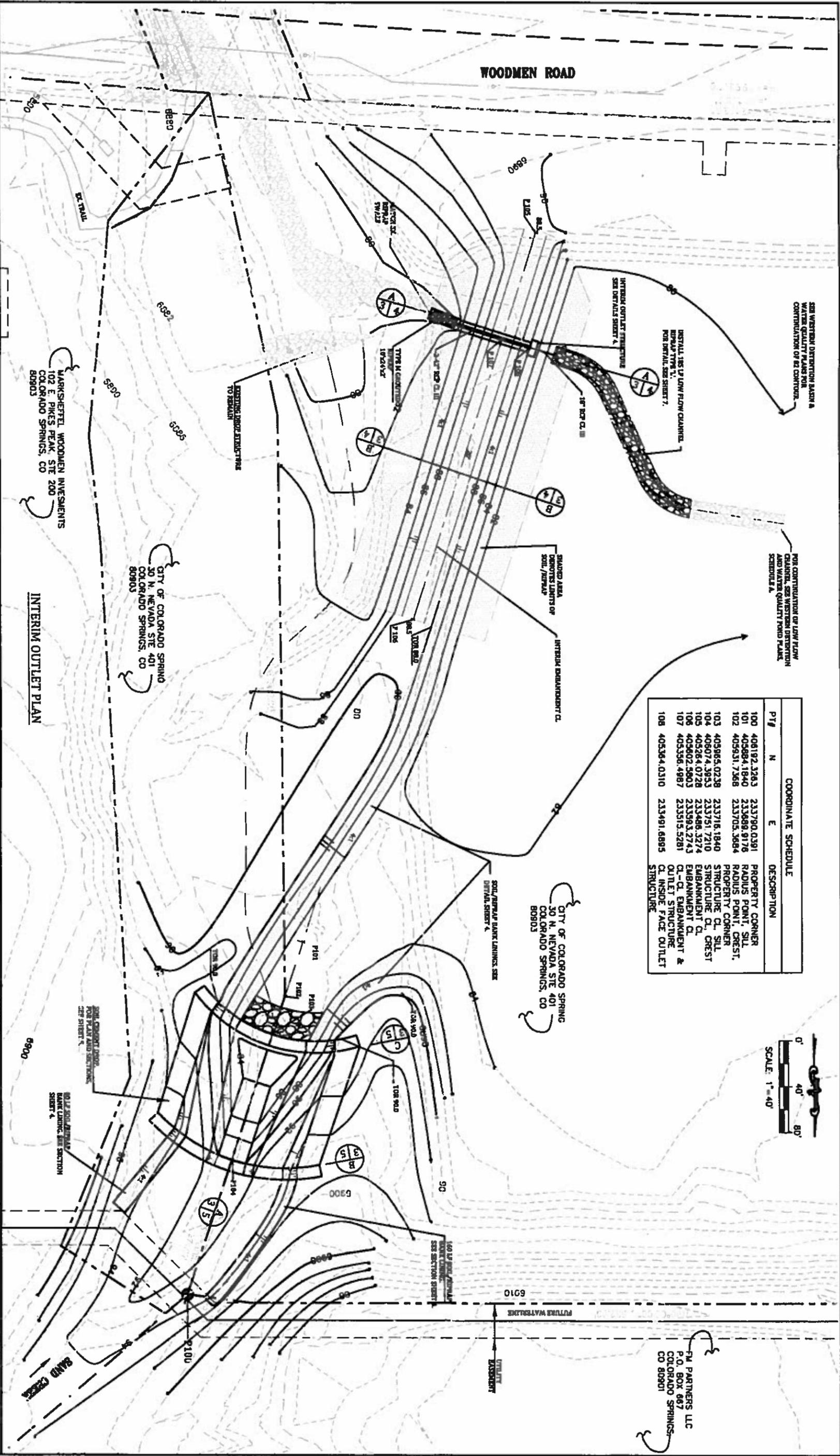
GENERAL NOTES

PROJECT NO. 13023  
DESIGNED BY: RNV  
DRAWN BY: EAK  
CHECKED BY: RNV

SCALE AS NOTED

DATE: 10/29/2015

SHEET 2



COORDINATE SCHEDULE		DESCRIPTION	
PT#	N	E	
100	408192.3263	233790.0391	PROPERTY CORNER
101	405884.1840	233889.9176	RADIUS POINT, SILL
102	405931.7368	233705.3684	RADIUS POINT, CREST,
103	405985.0239	233716.1840	PROPERTY CORNER
104	406074.3853	233751.7210	STRUCTURE CL, SILL
105	405824.0728	233486.3274	STRUCTURE CL, CREST
106	405802.5803	233593.2743	EMBANKMENT CL
107	405396.4987	233515.5281	EMBANKMENT CL
108	405364.0310	233491.6895	CL, INSIDE FACE OUTLET STRUCTURE



**INTERIM OUTLET PLAN**

**SAND CREEK INFLOW DROP STRUCTURE  
STRUCTURE PLAN & LAYOUT**

REVISIONS:

NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

FOR QUOTE ONLY, INFORMATION  
48 HRS BEFORE YOU DKG  
CALL 1-900-922-1987  
Kiewit Construction Company  
SAND CREEK INFLOW DROP STRUCTURE

**Kiewit**  
Engineering Corporation  
1804 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 530-3462

**ES&S**  
ENGINEERING & SURVEYING  
301 BULLOCK DRIVE, STE 110  
COLORADO SPRINGS, CO 80903  
(719) 535-5465, FAX (719) 444-9477

PROJECT NO. 13023	SCALE	DATE: 10/29/2013
DESIGNED BY: RHW	AS NOTED	
DRAWN BY: LAK		
CHECKED BY: RHW		
<b>SHEET 3</b>		

FM PARTNERS LLC  
P.O. BOX 667  
COLORADO SPRINGS,  
CO 80901





**STORMWATER QUALITY CONTROL NOTES:**

1. STORM WATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION OR DEGRADATION OF STATE WATERS.
2. CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
3. BUILDING, CONSTRUCTION, EXCAVATION OR OTHER WASTE 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 CITY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES (E.G., ESTIMATED TIME OF EXPOSURE, SEASON OF THE YEAR, ETC.).
4. VEHICLE TRACKING OF SOILS OFF-SITE SHALL BE MINIMIZED.
5. ALL WASTES COMPOSED OF BUILDING MATERIALS MUST BE REMOVED FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED OR DISCHARGED AT THE SITE.
6. THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE CITY ENGINEER. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
7. BULK STORAGE CONTAINERS 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 SYSTEMS OR FACILITIES.
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 MANUAL AND IN ACCORDANCE WITH THE EROSION AND STORM WATER QUALITY CONTROL PLAN APPROVED BY THE CITY OF COLORADO SPRINGS, IF REQUIRED.
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 AND THE MANUAL AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION. THE INSTALLATION OF THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMPs SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE.
10. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION.
11. ALL EARTH DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
12. ALL WORK AND EARTH DISTURBANCES SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
13. SUSPENDED SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE MINIMIZED IN RUNOFF WATER BEFORE IT LEAVES THE SITE OF THE EARTH DISTURBANCE.
14. 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.
15. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO THE STANDARDS AND SPECIFICATIONS PRESCRIBED IN THE MANUAL, AND IN ACCORDANCE WITH THE PERMANENT EROSION CONTROL FEATURES SHOWN ON THE EROSION AND STORM WATER QUALITY CONTROL PLANS APPROVED BY THE CITY OF COLORADO SPRINGS, IF REQUIRED.

16. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. DISTURBED AREAS AND STOCK PILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 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.
17. NO PERSON SHALL CAUSE, PERMIT OR CONTRIBUTE TO THE DISCHARGE INTO THE MUNICIPAL SEWER SEWER POLLUTANTS THAT COULD CAUSE DISCHARGE PERMIT SYSTEM MUNICIPAL STORMWATER DISCHARGE PERMIT.
18. 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.
19. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER, INCLUDING THE TEMPORARY OR PERMANENT RAMMING WITH MATERIALS FOR VEHICLE ACCESS.
20. INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), REGULATIONS PROMULGATED, CERTIFICATIONS OR PERMITS ISSUED, IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE MANUAL. IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND WATER QUALITY CONTROL LAWS, RULES OR REGULATIONS OF OTHER FEDERAL OR STATE AGENCIES, THE MORE RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.
21. 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 THERE ORIGINAL CONTAINERS, WITH THE ORIGINAL MANUFACTURER'S LABELS. MATERIALS SHALL NOT BE STORED IN A LOCATION WHERE THEY MAY BE CARRIED BY STORMWATER RUNOFF INTO A STATE WATER AT ANY TIME.
22. SPILL PREVENTION AND CONTAINMENT MEASURES SHALL BE USED AT STORAGE AND EQUIPMENT FUELING AND SERVICING AREAS TO PREVENT THE POLLUTION OF ANY STATE WATERS, INCLUDING WETLANDS. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY OR CONTAINED UNTIL APPROPRIATE CLEAN UP METHODS CAN BE EMPLOYED. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP SHALL BE FOLLOWED, ALONG WITH PROPER DISPOSAL METHODS.
23. WATER TRUCK IF CALLED FOR BY THE CITY INSPECTOR WILL BE PROVIDED TO KEEP WIND EROSION IN CHECK. COST OF WATER USED FOR DUST CONTROL IS CONSIDERED INCIDENTAL TO THE GRADING WORK.
24. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE PROPERTY LIMITS DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR.

**EROSION CONTROL NOTES:**

1. AT ALL TIMES DURING THE CONSTRUCTION OF THE PROJECT, EROSION AND SEDIMENT CONTROL SYSTEMS SHALL BE MAINTAINED TO PREVENT DAMAGING FLOWS ON THE SITE AND IN THE WATERSHED BELOW THE SITE. CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO STRIPPING OF NATIVE VEGETATIVE COVER AND AS GRADING PROGRESSES. CONTROL SYSTEMS SHALL INCLUDE, AS A MINIMUM, STRAW BALE SEDIMENT TRAPS (OR EQUAL) ALONG NATURAL DRAINAGEWAYS PRIOR TO GRADING AND UTILIZATION OF DESIGNED STORM DETENTION BASINS PRIOR TO FINAL GRADING REVEGETATION.
  2. WHERE AREAS ARE TO BE LEFT BARE FOR EXTENDED PERIODS (TOPSOIL, STOCKPILES, EMPTY LOTS, RIGHTS-OF-WAY, HOMESITES AWAITING PURCHASE, ETC.) MECHANICAL MULCHING (STRAW CRIMP) IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS SHALL BE APPLIED WITHIN 30 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. SOIL STABILIZATION MEASURES SHALL BE APPLIED WITHIN 30 DAYS TO DISTURBED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL BE LEFT DORMANT FOR LONGER THAN 60 DAYS.
  3. TOPSOIL WILL BE STOCKPILED AND USED AS A TOPDRESSING OVER CUT AND FILL AREAS TO HELP IN THE ESTABLISHMENT OF ADAPTED VEGETATION. TOPSOIL STOCKPILE WILL BE SEEDED AND/OR MULCHED TO MINIMIZE SOIL LOSS UNTIL TOPSOIL IS USED.
  4. TEMPORARY STOCKPILES (8' MAX. HEIGHT) DUE TO UTILITY CONSTRUCTION SHALL BE KEPT MOIST BY THE CONTRACTOR TO PREVENT BLOWING SOILS.
  5. AREAS LEFT OPEN FOR 30 DAYS OR MORE, OTHER THAN FOR UTILITY AND DRAINAGE CONSTRUCTION SHALL BE SEEDED AND/OR MULCHED.
  6. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING MEASURES TO PREVENT EROSION OF DISTURBED SOIL BY ABNORMAL WINDS.
  7. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
  8. PROPERTIES AND ROADWAYS ADJACENT TO THE SITE OF A LAND DISTURBANCE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION.
- GRADING NOTES:**
1. SITE ACCESS, SCHEDULING, EROSION CONTROL, MATERIALS STOCK PILING AND EQUIPMENT STORAGE TO BE DISCUSSED WITH THE OWNER PRIOR TO BEGINNING WORK.
  2. ALL PROPOSED CONTOURS ARE TO FINISHED GRADE.
  3. OUTLET STRUCTURE PROTECTION WILL BE REQUIRED UNTIL AND REVEGETATION IS COMPLETE.
  4. EARTHEN CUT AND FILL SLOPES SHALL BE 3:1 MAXIMUM. SLOPES IN EXCESS OF 3:1 SHALL BE COVERED WITH SOIL RETENTION BLANKET OVER 6" MIN. THICKNESS OF TOPSOIL AND SEEDED.
  5. DISTURBED SURFACES SHALL BE LEFT IN A ROUGHENED CONDITION AT ALL TIMES DURING CONSTRUCTION.
  6. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON-SITE AND WILL BE RE-SPREAD AFTER GRADING IS COMPLETE. CONTRACTOR TO COORDINATE WITH OWNERS REPRESENTATIVE ON ACCEPTABLE LOCATIONS FOR PLACEMENT.
  7. PLACEMENT OF TOPSOIL, SEEDING AND MULCHING WILL NOT BE DONE IN A SINGLE OPERATION, BUT SHALL BE COMPLETED AFTER EACH CONSTRUCTION PHASE. DOES NOT INCLUDE WETLAND MITIGATION AREAS.
  8. DURING THE SUMMER WHEN SEEDING IS NOT ALLOWED, APRIL 1-1/2 TONS OF CERTIFIED WEED FREE MULCH PER ACRE MECHANICALLY CRIMPED INTO THE SOIL IN COMBINATION WITH AN ORGANIC MULCH TACKIFIER, DOES NOT INCLUDE WETLAND MITIGATION AREAS.
  9. PRIOR TO ANY CONSTRUCTION ACTIVITIES THE PROPOSED SILT FENCE SHOWN ON THE EROSION CONTROL SHEET SHALL BE CONSTRUCTED. THE FENCE SHALL BE REMOVED UPON THE LATER OF STABILIZATION OF THE SITE OR COMPLETION OF CONSTRUCTION.
  10. OVERLOT GRADING SHALL BE COMPLETED TO A SUBGRADE TOLERANCE OF PLUS OR MINUS 0.2'.

REVISIONS:

NO.	DATE	BY:	DESCRIPTION:	APPROVED BY:	DATE



<b>SAND CREEK INFLOW DROP STRUCTURE</b>			
<b>STORMWATER QUALITY AND EROSION CONTROL NOTES</b>			
PROJECT NO. 13023	SCALE AS NOTED	DATE 10/29/2015	SHEET 6
DESIGNED BY: RWW	CHECKED BY: RWW	DATE: 10/29/2015	
DRAWN BY: EAK			



