

STORMWATER MANAGEMENT PLAN
Waterview East
EL PASO COUNTY, COLORADO

May 9, 2018

PREPARED FOR:

CPR Entitlements, LLC
31 N. Tejon
Suite 500
Colorado Springs, CO 80903

PREPARED BY:

Stantec
31 N. Tejon Street, Suite 500
Colorado Springs, CO 80903

PROJECT NO. 16-02

PCD File No. SP-17-010

Table of Contents

TABLE OF CONTENTS	1
INTRODUCTION	2
GENERAL LOCATION AND DESCRIPTION	3
DESCRIPTION OF CONSTRUCTION	3
DESCRIPTION OF CHANNELS	4
STEPS FOR CONSTRUCTION.....	4
ESTIMATES OF EXCAVATION	4
SOIL PROPERTIES.....	5
VEGETATION	5
POLLUTANTS	6
DISCHARGE	6
GRADING AND EROSION CONTROL PLAN	7
BEST MANAGEMENT PRACTICES	7
EROSION AND SEDIMENT CONTROLS.....	7
MATERIAL HANDLING AND SPILL PREVENTION	7
FINAL STABILIZATION AND LONG TERM STORM WATER MANAGEMENT.....	8
OTHER CONTROLS.....	8
INSPECTION AND MAINTENANCE	8
INSPECTION AND MAINTENANCE LOG	9
<i>SITE MAP, PHASING PLAN AND EROSION CONTROL PLAN</i>	10
GENERAL PERMIT APPLICATION	11

Introduction

This Stormwater Management Plan is being submitted on behalf of CPR Entitlements, LLC for a tract of land known as:

A TRACT OF LAND LOCATED IN A PORTION OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH 1/4 CORNER OF SAID SECTION 9; THENCE S00°19'32"E ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, A DISTANCE OF 1613.76 FEET TO THE TRUE POINT OF BEGINNING OF THIS DESCRIPTION:

1. THENCE S00°19'32"E CONTINUING ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, A DISTANCE OF 3638.37 FEET TO THE SOUTH QUARTER CORNER OF SAID SECTION 9;
2. THENCE S89°33'35"W ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 9, A DISTANCE OF 2495.44 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF POWERS BOULEVARD AS RECORDED IN BOOK 5307 AT PAGE 1472 OF THE RECORDS OF SAID EL PASO COUNTY;

THE FOLLOWING TWO (2) COURSES FOLLOW SAID EASTERLY RIGHT-OF-WAY LINE:

3. THENCE N00°29'10"W A DISTANCE OF 3037.92 FEET TO A POINT OF CURVE TO THE RIGHT;
4. THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT WITH A RADIUS OF 150.00 FEET, A DELTA ANGLE OF 87°49'03", AN ARC LENGTH OF 229.91 FEET, WHOSE LONG CHORD BEARS N43°25'21"E A DISTANCE OF 208.05 FEET TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF BRADLEY ROAD AS RECORDED IN BOOK 5307 AT PAGE 1472 OF THE RECORDS OF SAID EL PASO COUNTY;

THE FOLLOWING FIVE (5) COURSES FOLLOW SAID SOUTHERLY RIGHT-OF-WAY LINE:

5. THENCE N87°19'53"E A DISTANCE OF 53.06 FEET TO A POINT OF CURVE TO THE LEFT;
6. THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT WITH A RADIUS OF 2969.79 FEET, A DELTA ANGLE OF 12°59'05", AN ARC LENGTH OF 673.03 FEET, WHOSE LONG CHORD BEARS N80°50'20"E A DISTANCE OF 671.59 FEET;
7. THENCE N74°20'48"E A DISTANCE OF 952.02 FEET TO A POINT OF CURVE TO THE RIGHT;

8. THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT WITH A RADIUS OF 2759.79 FEET, A DELTA ANGLE OF 15°09'41", AN ARC LENGTH OF 730.29 FEET, WHOSE LONG CHORD BEARS N81°55'38"E A DISTANCE OF 728.16 FEET;
9. THENCE N89°30'29"E A DISTANCE OF 3.77 FEET TO THE TRUE POINT OF BEGINNING OF THIS DESCRIPTION.

THE ABOVE TRACT OF LAND CONTAINS 195.25 ACRES, MORE OR LESS.

The purpose of this Stormwater Management Plan (SWMP) is to identify possible pollutant sources that may contribute pollutants to stormwater, and identify Best Management Practices (BMPs) that will reduce or eliminate any possible water quality impacts.

General Location and Description

The site lies in Section 9 of Township 15 South, Range 65 West. The proposed Preliminary Plan south of Bradley Road and east of Powers Boulevard. The site is currently zoned A-35 and will be rezoned as RS-5000 and CS for planned residential and commercial development.

There is little existing development in the vicinity of Waterview east. There is some development associated with Colorado Center approximately ½ mile east and other Waterview Development in Painted Sky approximately ¾ mile west.

The proposed site encompasses 195.25 acres. The topography of the site and surrounding area is typical of a high desert; short prairie grass and weeds with slopes generally ranging from 1% to 9%. The area generally drains to the south and east. This development is in the Big Johnson/Crews Gulch and Jimmy Camp Creek Drainage Basins.

Description of Construction

Initial construction will consist of site grading and Detention Pond construction followed by utility installation and eventually road paving associated with Final Plat approvals.. The majority of the site will be disturbed. Erosion control will be provided prior to construction.

Phasing

First Phase of Construction will be the Detention Ponds. Overlot Grading will take place during the pond construction to provide on embankment fill. Phased grading will continue as shown on the phasing plan and may be subject to change based on the market and which areas will move toward final development first.

Description of Drainage Conveyance

The site drains to the west and southeast; the west drainage captures about 1/3 of the property and is conveyed to a 60” cmp under Powers Boulevard. This cmp discharges toward Big Johnson reservoir; the majority of the remainder of the property drains south and east to a natural drainage that leaves the property near the southeast corner. There are some smaller areas that drain toward the Bradley Road r.o.w. to the north and some areas that drain to the adjacent property to the south. Stormwater facilities to be constructed with the early grading permit will consist of two permanent detention ponds, swales for conveyance and sedimentation basins as required. A majority of the property will drain to one of the two permanent detention pond sites. Storm sewer facilities will be installed throughout the site and in the streets with future final plat approvals; these will eventually replace the swales and sedimentation basins to convey storm water runoff to the permanent detention facilities.

Steps for Construction

	<u>Estimated Start</u>	<u>Estimated End</u>
• Clearing and grubbing	May 1, 2018	June 1, 2018
• Detention Pond Construction	May 1, 2018	July 15, 2018
• Rough grading for lots and roads	May 15, 2018	Sept 30, 2018
• Grading Stabilization	Sept 1, 2018	Oct 30, 2018
• Final grading, curb and gutter and paving	Sept 1, 2018	Oct 30, 2019
• Final Stabilization		May 1, 2020

Estimates of Excavation

The proposed site encompasses 195.25 acres. Approximately 180 acres of the site will be graded during construction activities. Approximately 235,000 yards of soil will be excavated and placed all within the site boundary.

Soil Properties

The site is composed of several different soil types. From the NRCS report in Appendix A, the site falls into the following soil types:

8 - Blakeland loamy sand (1-9%) – Type A Soil

52 - Manzanst clay loam (3-8%) – Type C Soil

56 - Nelson Tassel fine sandy loam (3-19%) – Nelson Type B, Tassel Type D Soil

86 - Stoneham sandy loam (3-8%) – Type B Soil

108 - Wiley silt loam (3-9%) – Type B Soil

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Estimated Runoff Coefficients

Average Prior to Construction	C5=0.12 and C100=0.39
Average After Buildout	C5=0.51 and C100=0.65

Potential for soil erosion during construction is moderate and focused primarily on the steep slopes. The erosion control plan includes measures to reduce this potential. Sedimentation basins are located throughout the site and two large detention ponds where the majority of the property drains to will be constructed to capture any sediment that gets past the sedimentation basins. The west pond drains to a 60" cmp under Powers Boulevard. The east pond discharges to a natural drainage that leaves the property in the southeast corner.

Vegetation

The topography of the site and surrounding area is typical of a high desert; short prairie grass and weeds with slopes generally ranging from 1% to 9%. The estimated vegetative coverage is about 70%. There are no mature trees along the east boundary near the 60" cmp that drains under Powers Boulevard. The site and surrounding land is currently vacant.

Pollutants

During construction, the largest possible source of non-stormwater pollution will be during equipment refueling operations. The contractor shall be responsible for any spill cleanup while refueling, in accordance with applicable local, county and state regulations. The contractor will also be responsible for cleanup of any off-site vehicle tracking on paved roads. Tracking control will be provided at the entrances to the site. No other source of pollution such as vehicle washing, chemical storage or waste disposal is anticipated. No batch plants will be onsite. Any onsite facilities that could be identified as a source of pollutants will follow preventive measures found in the ***Material Handling and Spill Prevention*** section found below.

After construction any pollutants will be captured in the West and East pond; specifically in the fore bays and will be dealt with as part of regular maintenance by the Waterview II Metropolitan District.

Discharge

There are no anticipated non-stormwater components of the discharge. The receiving waters for this discharge are split between Big Johnson/Crew Gulch on the west and Jimmy Camp Creek on the east both of which drain to Fountain Creek and ultimately the Arkansas River.

Grading and Erosion Control Plan

A map is provided with this SWMP application that details the site, limits of construction and erosion control measures. This map will be used by the contractor to track installation, maintenance and removal of BMP's during construction; including any field changes that are required during construction.

Best Management Practices

Structural BMP's

Silt fences will be installed prior to any grading occurring on the site. The silt fence will be installed in the areas shown on the provided map. Vehicle tracking control will be provided at the entrances to the site on Bradley Road.

Both detention ponds will be constructed; East and West.

Sedimentation Basins will be installed around the site as shown on the GEC map. Swales will be constructed with associated check dams as shown on the map to direct storm water.

As preliminary roads are graded hay bales will be installed based on grades to slow storm water and sediment transport.

Non structural BMP's

Non-structure practices to control erosion and sedimentation will include reseeding of ground cover in disturbed areas according to the erosion control plan. Seeding of bank slopes and mulching along steep embankments will be performed as required. Seeding of disturbed areas will be mitigated until growth has reached 70% of pre-disturbed levels: $.7 \times .7 = 49\%$

Material Handling and Spill Prevention

The most probable source of non-stormwater pollution is refueling and daily maintenance operations. If mobile fuel trucks are used to service equipment, absorbent materials and containers for the storage of used absorbent material will be close by. If a fuel tank is left on site, berms will be built around the tank to capture any spilled fuel. Again, absorbent materials and their containers will be on hand.

Storage of chemicals on site will include construction of berms around the storage to capture any spilled material. Again, absorbent materials and their containers will be on hand

Final Stabilization and Long Term Storm Water Management

The silt fence installed on site will not be removed until the site is stabilized and the entire site is established with vegetation growth of 70% of pre-disturbed levels: $.7 \times .7 = 49\%$.

Other Controls

There are several best management practices that can be employed to prevent or mitigate the source of pollutants and contamination of stormwater runoff. Some of these are:

- All refuse dumpsters and receptacles shall be equipped with functional lids to prevent rain and snow from entering.
- Storage containers, drums and bags shall be stored away from direct traffic routes to prevent accidental spills.
- Empty drums shall be covered to prevent collection of precipitation.
- Containers shall be stored on pallets or other dunnage to prevent corrosion of containers, which can result when containers come in contact with moisture on the ground.
- Regularly scheduled removal of construction trash and debris.

The contractor is certainly not limited to these good housekeeping measures, and may implement further controls as prudence and good judgement deem necessary.

Inspection and Maintenance

A thorough inspection of the storm water management system shall be performed every 14 days as well as after any rain or snowmelt event that causes surface erosion:

- Erosion of channels and side slopes shall be repaired.
- Silt fences shall be cleaned whenever sediment has reached a depth of 6" at the fence, and broken wooden parts or torn fabric shall be repaired or replaced.
- Any accumulated trash or debris shall be removed from the site.

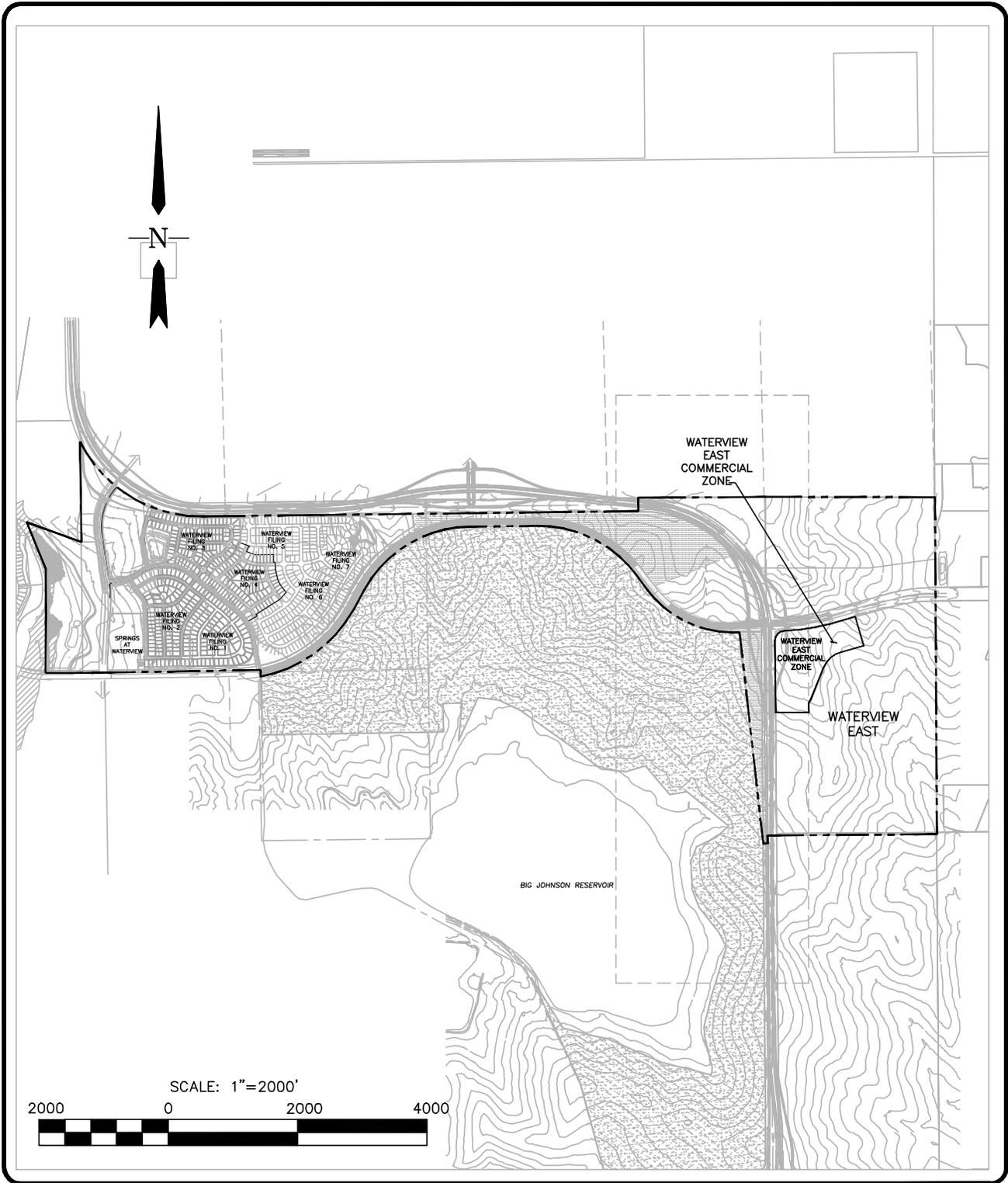
An Inspection and Maintenance Log follows this Storm Water Management Plan.

SWMP Revisions

Revisions to the SWMP will occur from time to time as construction proceeds. The contractor will be responsible for revisions to the plan to include the following:

1. Changes to the plan will be tracked by marking changes on the plan with date and note of the responsible party requesting/requiring the change.
2. Dates and responsible party for addition or removal of BMP's will be noted on the plan.
3. If there are any changes the contractor deems to be a significant modification of the approved GEC plan he must contact the owner prior to proceeding.
4. The SWMP will be kept on site and up to date at all times.

Site Map, Phasing Plan and Erosion Control Plan



**WATERVIEW EAST
COMMERCIAL ZONE**



1110 Elkton Dr., Suite B
Colorado Springs, CO 80907

PROJECT NO. 181710214

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

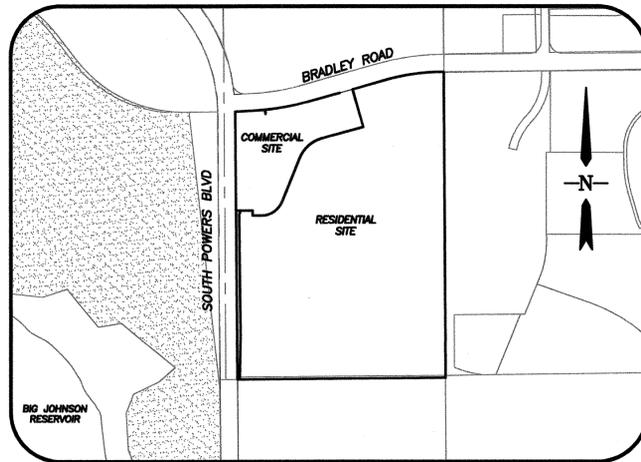
REVISED 7/07/10

- CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM DEVELOPMENT SERVICES AND A PRECONSTRUCTION CONFERENCE IS HELD WITH DEVELOPMENT SERVICES INSPECTORS.
- 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 BARRIERS AS INDICATED ON THE SPEC. 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 DSD 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 MULCHED. 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 SPECIFICATIONS PRESCRIBED IN THE DCM VOLUME I AND THE ENGINEERING CRITERIA MANUAL (ECM) APPENDIX L.
- 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).
- 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, TIESHEET 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 OFFSITE 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.
- 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 EGM 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" (CITE 25, ARTICLE 6 C.R.S.) AND THE CLEAN WATER ACT (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX L. 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 SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY KUMAR AND ASSOCIATES AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- 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:

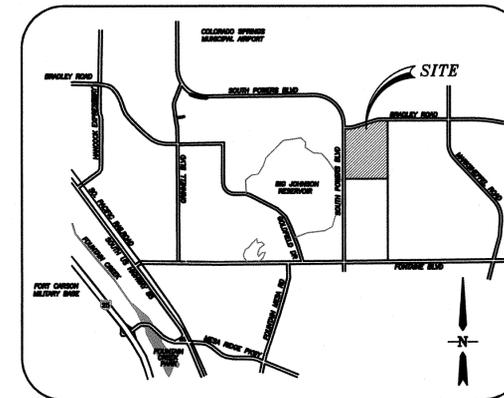
COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
1000 - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

WATERVIEW EAST PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN

LOCATED IN THE NW 1/4 OF SECTION 7, T15S, R65W OF THE 6TH P.M.,
EL PASO COUNTY, STATE OF COLORADO



LOCATION MAP
SCALE: 1"=1000'



VICINITY MAP
N.T.S.

SHEET INDEX

- TITLE SHEET
- INDEX MAP
- GRADING PLAN (1 OF 7)
- GRADING PLAN (2 OF 7)
- GRADING PLAN (3 OF 7)
- GRADING PLAN (4 OF 7)
- GRADING PLAN (5 OF 7)
- GRADING PLAN (6 OF 7)
- GRADING PLAN (7 OF 7)
- GRADING AND EROSION CONTROL NOTES AND DETAILS

LAND OWNER:
COLA, LLC
555 MIDDLE CREEK PARKWAY, SUITE 380
COLORADO SPRINGS, CO 80921

CPR ENTITLEMENTS, LLC
31 N. TEJON ST., SUITE 500
COLORADO SPRINGS, CO 80903

SUBDIVIDER/PETITIONER:
CPR ENTITLEMENT, LLC
31 N. TEJON ST., SUITE 500
COLORADO SPRINGS, CO 80903

PLAN PREPARED BY:
STANTEC
1110 ELKTON DRIVE, SUITE B
COLORADO SPRINGS, CO 80907

SITE DATA:
NAME OF SUBDIVISION: WATERVIEW EAST
EXISTING ZONING: A-5
PROPOSED ZONING: RS-5000 AND COMMERCIAL
PROPOSED USE: DETACHED SINGLE FAMILY RESIDENTIAL DWELLINGS AND OPEN SPACE
AREA (GROSS): 195.4 ac. (166.89 Residential, 28.36 Commercial)
AREA (NET): 160.9 ac. (134.27 Residential, 26.66 Commercial)
NO. OF RESIDENTIAL LOTS: 713
D.U./ACRES (GROSS): 4.2
D.U./ACRES (NET): 5.4
MINIMUM LOT AREA: 5,000 s.f.
ALLOWED LOT AREA COVERAGE: 40%
STREET PAVEMENT TYPE: BITUMINOUS PAVEMENT (TYPICAL RESIDENTIAL)
SETBACKS:
FRONT: 20' ON ALL LOTS
SIDE: 5' ON ALL LOTS
REAR: 15' ON ALL LOTS
ACCESSORY STRUCTURES (SHEDS, GAZEBOS, ETC.) SHALL HAVE A 5' REAR LOT SETBACK.
BUILDING HEIGHT:

LEGAL DESCRIPTION:

KNOW ALL MEN BY THESE PRESENTS:
THAT WATERVIEW INVESTMENTS LLC, BEING THE OWNER OF THE FOLLOWING DESCRIBED PARCEL OF LAND:
THAT INCLUDES: A TRACT OF LAND LOCATED IN A PORTION OF SECTION 19, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 65th P.M., EL PASO COUNTY, COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTH 1/4 CORNER OF SAID SECTION 9, A DISTANCE OF 1613.78 FEET TO THE POINT OF BEGINNING OF THIS DESCRIPTION:
1. THENCE S00°19'32"E CONTINUING ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, A DISTANCE OF 3639.37 FEET TO THE SOUTH QUARTER CORNER OF SAID SECTION 9;
2. THENCE S89°33'35"W ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 9, A DISTANCE OF 2485.44 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF POWERS BOULEVARD AS RECORDED IN BOOK 5307 AT PAGE 1472 OF THE RECORDS OF SAID EL PASO COUNTY;
THE FOLLOWING TWO (2) COURSES FOLLOW SAID EASTERLY RIGHT-OF-WAY LINE:
3. THENCE N00°29'10"W A DISTANCE OF 3037.92 FEET TO A POINT OF CURVE TO THE RIGHT;
4. THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT WITH A RADIUS OF 150.00 FEET, A DELTA ANGLE OF 87°49'03", AN ARC LENGTH OF 229.91 FEET, WHOSE LONG CHORD BEARS N43°25'21"E A DISTANCE OF 208.05 FEET TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF BRADLEY ROAD AS RECORDED IN BOOK 5307 AT PAGE 1472 OF THE RECORDS OF SAID EL PASO COUNTY;
THE FOLLOWING FIVE (5) COURSES FOLLOW SAID SOUTHERLY RIGHT-OF-WAY LINE:
5. THENCE N87°19'53"E A DISTANCE OF 53.06 FEET TO A POINT OF CURVE TO THE LEFT;
6. THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT WITH A RADIUS OF 2969.79 FEET, A DELTA ANGLE OF 12°59'05", AN ARC LENGTH OF 673.03 FEET, WHOSE LONG CHORD BEARS N80°02'01"E A DISTANCE OF 671.59 FEET;
7. THENCE N74°20'48"E A DISTANCE OF 952.02 FEET TO A POINT OF CURVE TO THE RIGHT;
8. THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT WITH A RADIUS OF 2759.79 FEET, A DELTA ANGLE OF 15°09'41", AN ARC LENGTH OF 730.29 FEET, WHOSE LONG CHORD BEARS N81°55'38"E A DISTANCE OF 728.16 FEET;
9. THENCE N89°30'29"E A DISTANCE OF 3.77 FEET TO THE TRUE POINT OF BEGINNING OF THIS DESCRIPTION.
THE ABOVE TRACT OF LAND CONTAINS 195.25 ACRES, MORE OR LESS.

Charles K. Cothern
CHARLES K. COTHERN, P.E. 24997
10/18/18
DATE

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 PLAN.

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE EROSION CONTROL PLAN.
Jennifer Irvine
OWNER/REPRESENTATIVE
10/18/18
DATE

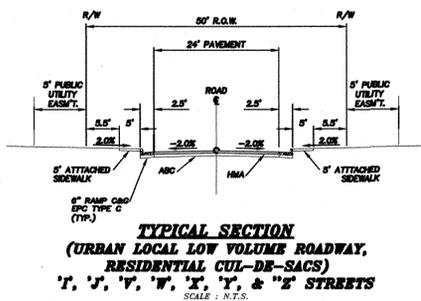
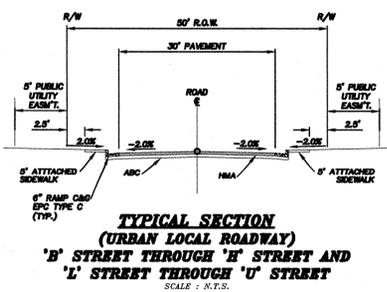
COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY 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 EGM 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/EGM ADMINISTRATOR
DATE

PCD File # SP-17-010



NOTE:

CROSS SECTIONS SHOWN ARE FOR REFERENCE ONLY. THIS PRE-DEVELOPMENT GRADING PLAN IS FOR ROUGH GRADING ONLY.

NOTES:

- COUNTY STANDARD BASE COURSE-REFER TO THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL STANDARD SPECIFICATIONS
- SUBGRADE COMPACTED IN ACCORDANCE WITH EL PASO COUNTY STANDARD
- REFER TO COUNTY SUBDIVISION POLICY MANUAL FOR REQUIRED ROW AND STREET WIDTHS AND OTHER STREET SECTIONS.
- REFER TO EL PASO COUNTY STANDARD DETAILS FOR CURB AND GUTTER.
- CUL-DE-SAC DESIGN STANDARDS PER EL PASO COUNTY ENGINEERING CRITERIA MANUAL STANDARD SPECIFICATIONS.

Computer File Information	
Creation Date: 4-3-17	Initials: CMD
Last Modification Date: 10-16-18	Initials: JM
Full Path & Drawing File Name: V:\1817\active\181710214\CAD\Plansheets Grading Plan	
Acad Ver. 2014	Scale: see plan Units: Feet

Index of Revisions	

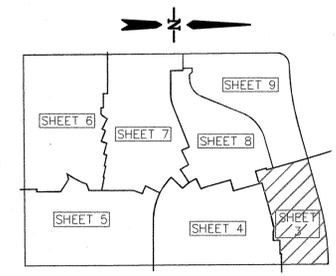
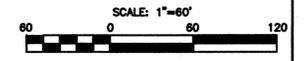
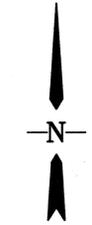
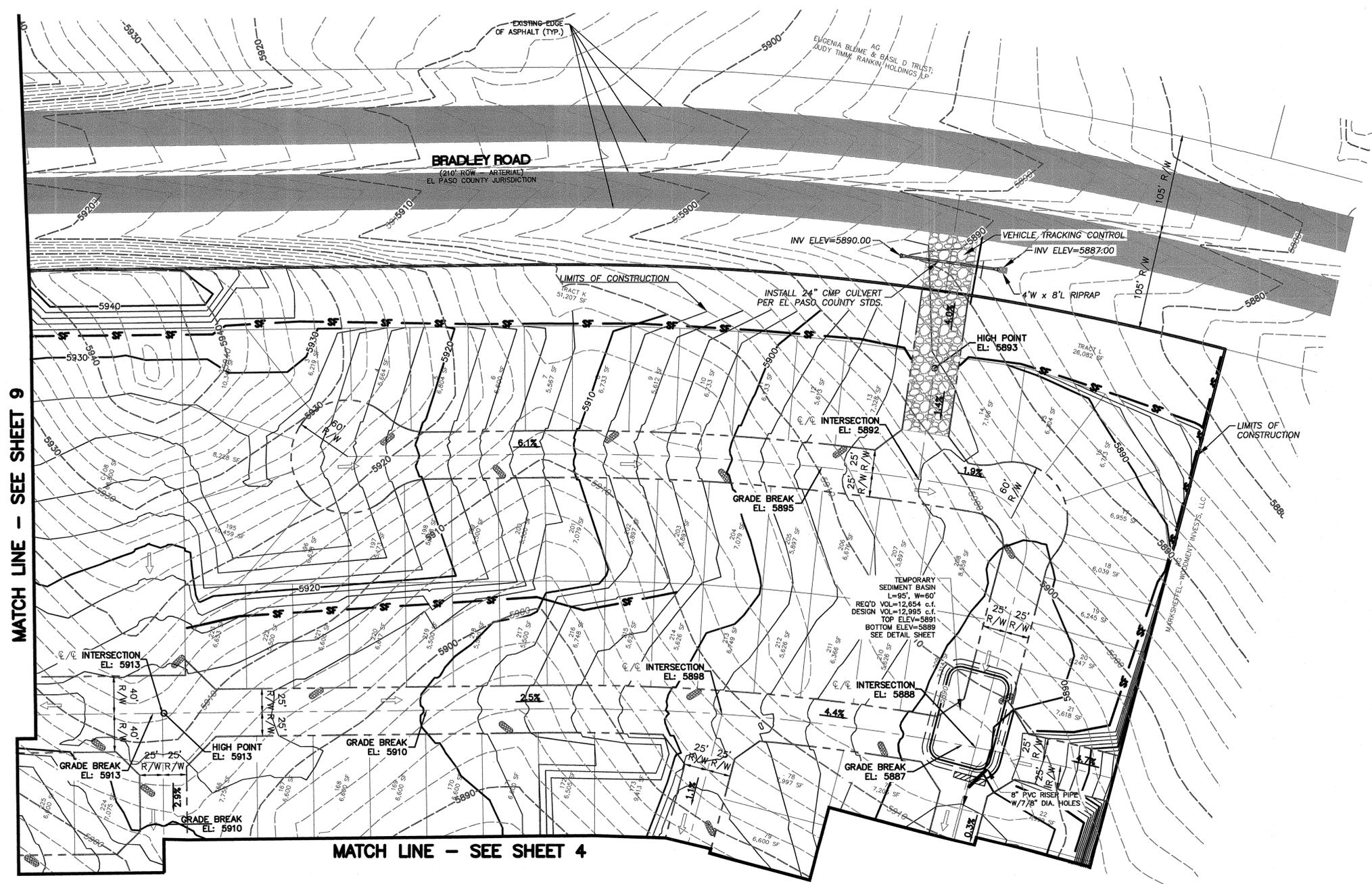
WATERVIEW EAST
PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN

Designer: CMD/BG
Detailer: PF/BG

Structure Numbers

Project No./Code
181710214

Sheet Number 1 of 10



KEY MAP

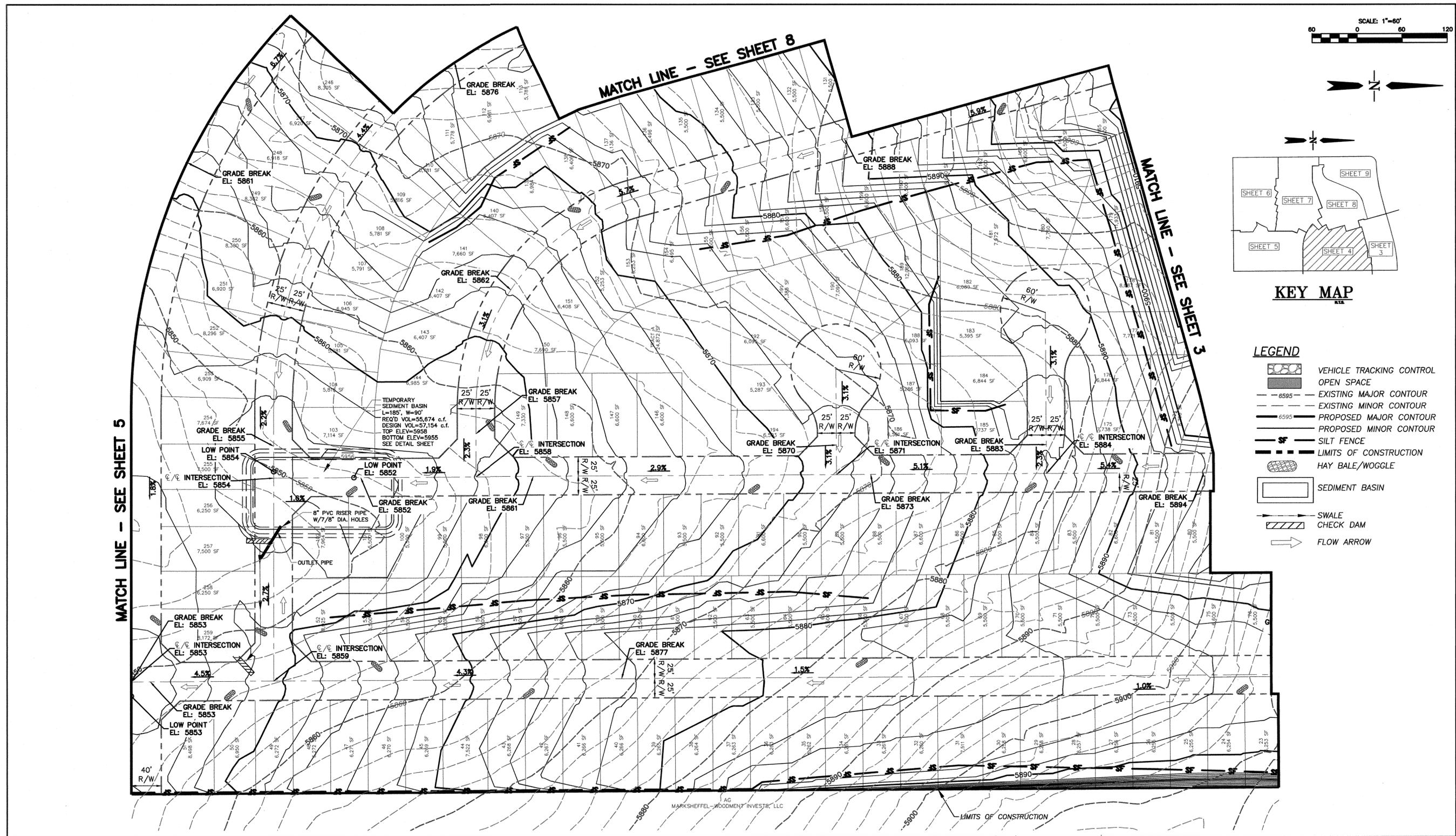
LEGEND

- VEHICLE TRACKING CONTROL
- OPEN SPACE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- SILTY FENCE
- LIMITS OF CONSTRUCTION
- HAY BALE/WOGGLE
- SEDIMENT BASIN
- SWALE
- CHECK DAM
- FLOW ARROW

MATCH LINE - SEE SHEET 9

MATCH LINE - SEE SHEET 4

Computer File Information		Index of Revisions		<p>Stantec Stantec Consulting Inc. 1110 Elston Drive Suite B Colorado Springs, CO 80907 Tel. (719) 432-6889 Fax. www.stantec.com</p>	WATERVIEW EAST PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN		Project No./Code	
Creation Date: 4-3-17 Initials: CMD					181710214			
Last Modification Date: 10-16-18 Initials: JM					Designer: CMD/BG		Structure Numbers	
Full Path & Drawing File Name: V:\1817\active\181710214\CAD\Plansheets Grading Plan					Detailer: PF/BG			
Acad Ver. 2014 Scale: see plan Units: Feet				Sheet Subst:		Sheet Number 3 of 10		



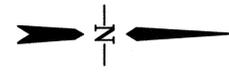
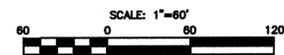
Computer File Information	
Creation Date: 4-3-17	Initials: CMD
Last Modification Date: 10-16-18	Initials: JM <i>JM 10/17/18</i>
Full Path & Drawing File Name: V:\1817\active\18170214\CAD\Plansheets Grading Plan	
Acad Ver. 2014	Scale: see plan Units: Feet

Index of Revisions	

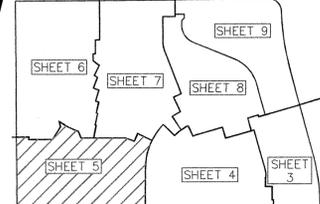
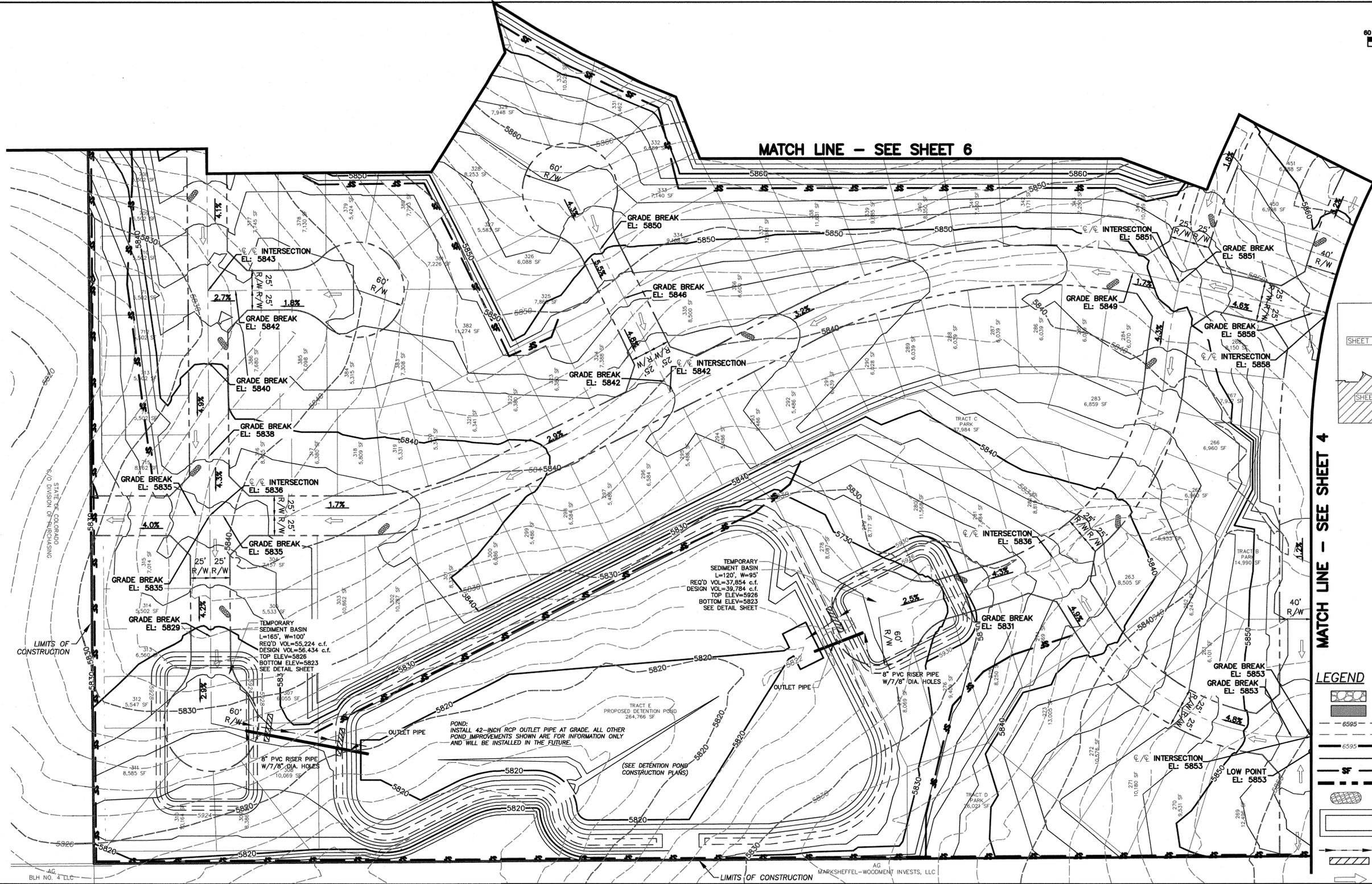
Stantec
Stantec Consulting Inc.
1110 Elkton Drive
Suite B
Colorado Springs, CO 80907
Tel: (719) 432-6889
Fax: (719) 432-6889
www.stantec.com

WATERVIEW EAST PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN	
Designer: CMD/BG	Structure Numbers
Detailer: PF/BG	
Sheet Subset:	

Project No./Code	181710214
Sheet Number	4 of 10



MATCH LINE - SEE SHEET 6



KEY MAP

MATCH LINE - SEE SHEET 4

- LEGEND**
- VEHICLE TRACKING CONTROL
 - OPEN SPACE
 - EXISTING MAJOR CONTOUR
 - EXISTING MINOR CONTOUR
 - PROPOSED MAJOR CONTOUR
 - PROPOSED MINOR CONTOUR
 - SILT FENCE
 - LIMITS OF CONSTRUCTION
 - HAY BALE/WOGGLE
 - SEDIMENT BASIN
 - SWALE
 - CHECK DAM
 - FLOW ARROW

Computer File Information

Creation Date: 4-3-17	Initials: CMD
Last Modification Date: 10-16-18	Initials: JM <i>JM</i> 10/17/18
Full Path & Drawing File Name: V:\1817\active\181710214\CAD\Plansheets Grading Plan	
Acad Ver. 2014	Scale: see plan Units: Feet

Index of Revisions

00	
00	
00	

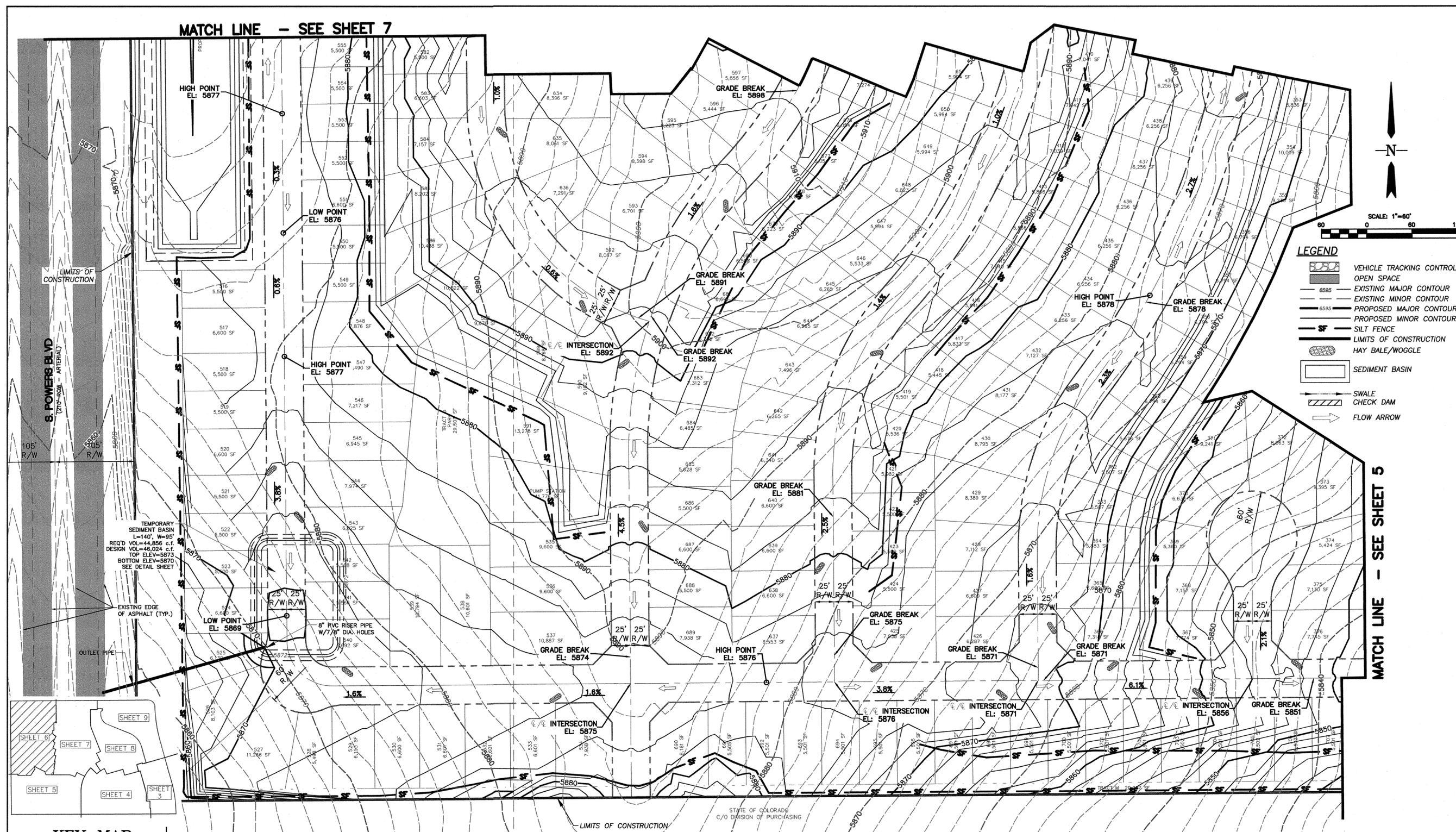
Stantec
 Stantec Consulting Inc.
 1110 Elton Drive
 Suite B
 Colorado Springs, CO 80907
 Tel. (719) 432-6889
 Fax.
 www.stantec.com

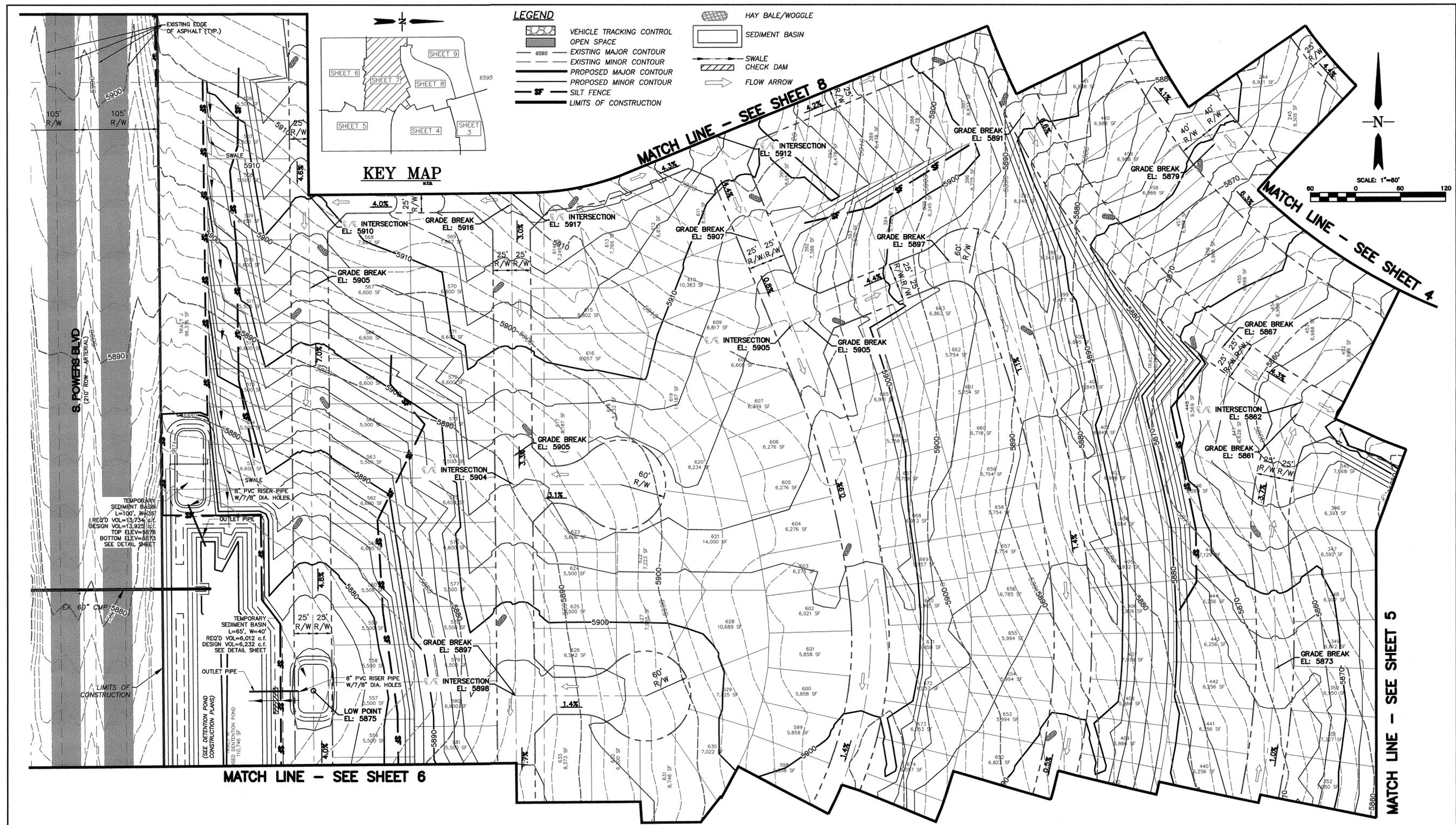


**WATERVIEW EAST
 PRE-DEVELOPMENT GRADING AND EROSION
 CONTROL PLAN**

Designer: CMD/BG	Structure Numbers
Detailer: PF/BG	
Sheet Subset:	

Project No./Code	181710214
Sheet Number	5 of 10



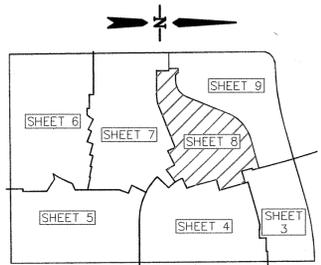


Computer File Information	
Creation Date: 4-3-17	Initials: CMD
Last Modification Date: 10-16-18	Initials: JM 10/17/18
Full Path & Drawing File Name: V:\1817\active\181710214\CAD\Plansheets Grading Plan	
Acad Ver. 2014	Scale: see plan Units: Feet

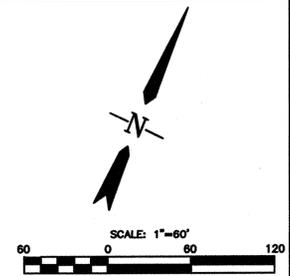
Index of Revisions	
0000	
0000	
0000	

Stantec
Stantec Consulting Inc.
1110 Elkton Drive
Suite B
Colorado Springs, CO 80907
Tel. (719) 432-8889
Fax. (719) 432-8889
www.stantec.com

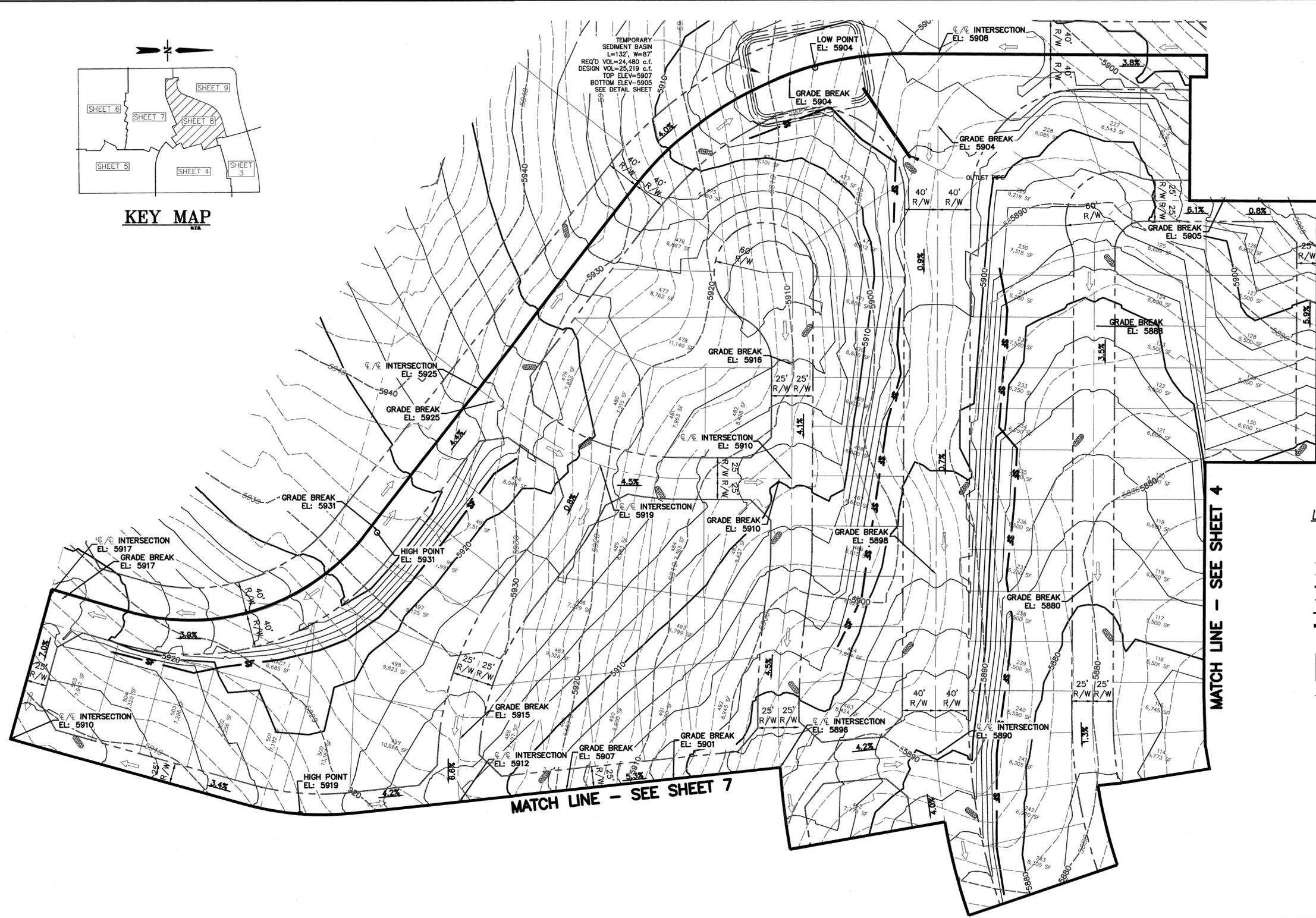
WATERVIEW EAST PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN		Project No./Code
Designer: CMD/BG	Structure Numbers	181710214
Sheet Subset:		Sheet Number 7 of 10



KEY MAP



TEMPORARY
SEDIMENT BASIN
L=132', W=87'
REQ'D VOL=24,480 c.f.
DESIGN VOL=25,219 c.f.
TOP ELEV=5907
BOTTOM ELEV=5905
SEE DETAIL SHEET



LEGEND

- VEHICLE TRACKING CONTROL
- OPEN SPACE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- SILT FENCE
- LIMITS OF CONSTRUCTION
- HAY BALE/WOGGLE
- SEDIMENT BASIN
- SWALE
- CHECK DAM
- FLOW ARROW

MATCH LINE - SEE SHEET 4

MATCH LINE - SEE SHEET 7

Computer File Information	
Creation Date: 4-3-17	Initials: CMD
Last Modification Date: 10-16-18	Initials: JM <i>JM</i> 10/17/18
Full Path & Drawing File Name: V:\1817\active\181710214\CAD\Plansheets Grading Plan	
Acad Ver. 2014	Scale: see plan Units: Feet

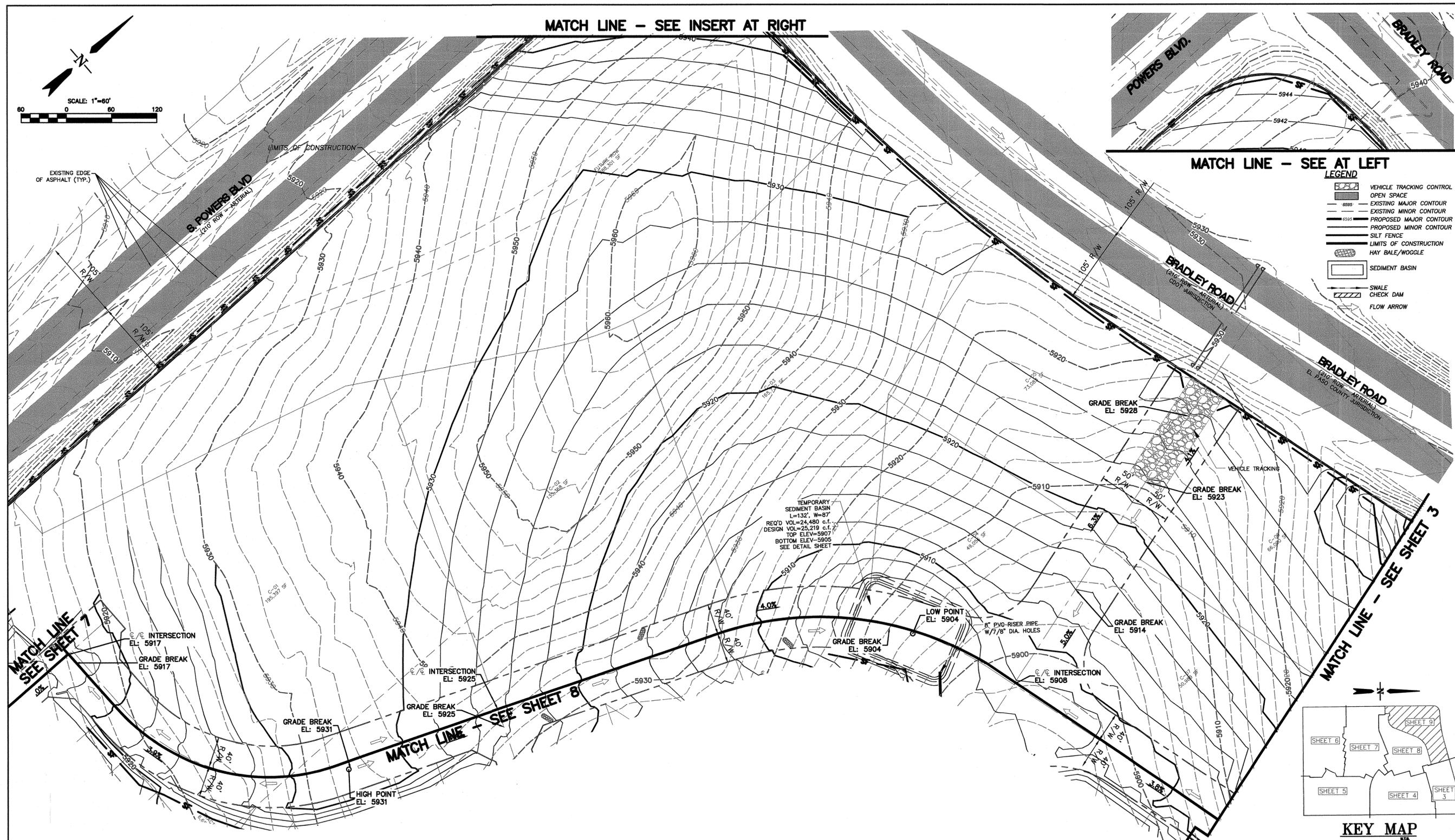
Index of Revisions	

Stantec
Stantec Consulting Inc.
1110 Elkton Drive
Suite B
Colorado Springs, CO 80907
Tel. (719) 432-6899
Fax. (719) 432-6899
www.stantec.com



WATERVIEW EAST PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN	
Designer: CMD/BG	Structure Numbers
Detailer: PF/BG	
Sheet Subset:	

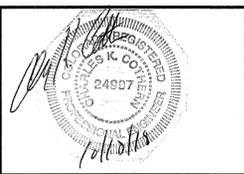
Project No./Code	181710214
Sheet Number	8 of 10



Computer File Information	
Creation Date: 4-3-17	Initials: CMD
Last Modification Date: 10-16-18	Initials: JM <i>10/17/18</i>
Full Path & Drawing File Name: V:\1817\active\181710214\CAD\Plansheets Grading Plan	
Acad Ver. 2014	Scale: see plan Units: Feet

Index of Revisions	
0000	
0000	
0000	

Stantec
 Stantec Consulting Inc.
 1110 Elkton Drive
 Suite B
 Colorado Springs, CO 80907
 Tel. (719) 432-6889
 Fax:
 www.stantec.com



WATERVIEW EAST PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN	
Designer: CMD/BG	Structure Numbers
Detailer: PF/BG	
Sheet Subset:	

Project No./Code	
181710214	
Sheet Number 9 of 10	

General Permit Application