

FINAL DRAINAGE LETTER FOR LOT 3 OF CLAREMONT BUSINESS PARK 2 FILING NO. 1

EL PASO COUNTY, COLORADO

APRIL 2021

Prepared for:

**Hammers Construction, Inc.
1411 Woosley Heights
Colorado Springs, CO 80906
(719) 570-1599**

Prepared by:



212 Wahsatch Ave., Ste. 305
Colorado Springs, CO 80903
(719) 955-5485

Project #44-037
PCD – PPR2111

**FINAL DRAINAGE LETTER FOR LOT 3 OF
CLAREMONT BUSINESS PARK 2 FILING NO. 1
EL PASO COUNTY COLORADO**

DRAINAGE PLAN STATEMENTS

ENGINEERS STATEMENT

The attached drainage plan and report was prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the County for drainage reports and said report is in conformity with the master plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this report.

Darin L. Moffett, P.E. #38923
For and on Behalf of M&S Civil Consultants, Inc



DEVELOPER'S STATEMENT

I, the developer have read and will comply with all the requirements specified in this drainage report and plan.

BY: _____

TITLE: _____

DATE: _____

ADDRESS: Hammers Construction, Inc.
1411 Woosley Heights
Colorado Springs, CO 80906

EL PASO COUNTY'S STATEMENT

Filed in accordance with the requirements of El Paso County Land Development Code, Drainage Criteria Manual Volumes 1 and 2, and the Engineering Manual, as amended.

BY: _____ DATE: _____
Jennifer Irvine, P.E.
County Engineer / ECM Administrator

APPROVED
Engineering Department

05/19/2021 9:59:27 AM

dsdnijkamp

**EPC Planning & Community
Development Department**

CONDITIONS:



April 12, 2021

El Paso County Planning & Community Development
2880 International Circle Suite 110
Colorado Springs, Colorado 80910
Attn: Jennifer Irvine P.E./County Engineer

RE: Drainage Letter for Lot 3 of Claremont Business Park 2 Filing No. 1

Dear Jennifer,

The following is the Drainage Letter for Lot 3 of Claremont Business Park 2 Filing No.1. The purpose of this letter is to show general conformance with the drainage patterns established by the **Final Drainage Report for Claremont Business Park 2, Filing No. 1 SF-20-014 (hence forth known as FDR)**. Lot 3 contains 0.958 acres and is located within the **Claremont Business Park 2 Filing No. 1 SF-20-014** subdivision in El Paso County, Colorado. Lot 3 is bound to the east by Lot 4, to the north by Gary Watson Point, to the west by Lot 2 and by Tract A (Sand Filter WQ Pond 2) and to the south by Lot 2 Claremont Business Park Filing 1C. Lot 3 is located SE of the Gary Watson Point (Private) and Meadowbrook Pkwy (Public) intersection. The subdivision is in the NE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 8, Township 14 South, and Range 65 West of the 6th Principal Meridian.

The **Final Drainage Report for Claremont Business Park 2, Filing No. 1** was prepared by M&S Civil Consultants, Inc. Per the report, Lot 3 lies be within Basins I and M. The flows, from the lot, are split north and south. Runoff generated by the northern portion of Lot 3, shall be conveyed to a 15' CDOT inlet in Gary Watson Point. Runoff generated by the southern portion of Lot 3, shall be conveyed via swale to the WQ Pond 2 (Basin N) planned within Tract A. Collected runoff was to utilize the riprap rundown to enter WQ Pond 2.

The site as proposed, will continue to follow the drainage patterns established by the **FDR**, however in final design, the rear and side lot drainage will make use of two separate rundowns to enter WQ Pond 2. As comparisons to design points within the **FDR** are not easily made. The areas and the final drainage coefficients were evaluated to determine the adequacy of the downstream facilities are not easily made. The areas and the final drainage coefficients were evaluated to determine the adequacy of the downstream facilities proposed by the previous report. The detailed calculations are as follows:

Design Point 1, the analyzed runoff from **Basin I6** which contains 0.19 acres of landscaping bushes/grasses, decorative ground cover and a portion of Gary Watson Point. **Basin I6** has proposed flows of 0.6 cfs for the minor storm event (5-year) and 1.2 cfs for the major storm event (100-year). The runoff will travel as sheet flow into Gary Watson Point and be routed to a proposed 15' CDOT type R inlet located adjacent to Lots 1 and 2, as identified in the **FDR**. Runoff coefficients from **Basin I6** are less than those calculated in the **FDR**, therefore no negative impacts are anticipated to the downstream facilities.

Design Point 2, the analyzed runoff from **Basin M1** which contains 0.28 acres of roof top, asphalt paving and landscaped areas. **Basin M1** has proposed flows of 1.2 cfs for the minor storm event (5-year) and 2.2 cfs for the major storm event (100-year). Runoff from **Basin M1** sheet flows to curb and gutter and will outfall into a 5.5' wide triangular type M riprap rundown at **Design Point 2** (Q5=1.2 cfs, Q100=2.2 cfs). The location of outfall from this basin differs from the **FDR**, but ultimately will outfall in WQ Pond 2, without impacting the adjacent lots. Runoff coefficients from **Basin M1** are at and/or less than those calculated in the **FDR**, therefore no negative impacts are anticipated to the downstream improvements.

Design Point 3, the analyzed runoff from **Basin M2** which contains 0.24 acres of roof top, landscaped areas and a grasslined swale. **Basin M2** has proposed flows of 0.8 cfs for the minor storm event (5-year) and 1.5 cfs for the major storm event (100-year). Runoff from **Basins M2** is released by roof drains from buildings in Lots 3 and 4 into a grasslined swale and will outfall onto a **Basin M3**, at **Design Point 3** (Q5=0.8 cfs, Q100=1.5 cfs). Runoff coefficients from **Basin M2** are less than those calculated in the **FDR**, therefore no negative impacts are anticipated to the downstream improvements.

Design Point 4, the analyzed runoff from **Basins M3** which contains 0.37 acres of reclaimed asphalt paving and landscaped areas. **Basin M3** has proposed flows of 1.5 cfs for the minor storm event (5-year) and 2.8 cfs for the major storm event (100-year). The combined flows from **Basins M2** and **M3** will flow to a 2' foot trapezoidal channel at the south end of the property, at **Design Point 4** (Q5=2.2 cfs, Q100=4.1 cfs). The cumulative flows (**Basins M2, M3, M** and **L**) will enter pond 2 via a 3' trapezoidal riprap rundown as described in the **FDR**. Runoff coefficients from **Basin M2** and **M3** are at and/or less than those calculated in the **FDR**, therefore no negative impacts are anticipated to the downstream improvements.

The Final Drainage report for the Claremont Business Park 2 Fil. No. 1 initially identified a 6" high x 3' wide concrete channel that would straddle the lot line between lots 3 and 4 based on the anticipated building sizes, placement, and orientation at the time. A 2-foot wide drainage and utility easement each side of the common sideline (total of 4-foot wide) was platted for the expected concrete channel. As identified within the approved final drainage report, each building's actual location and orientation could vary, and that a final on-site grading plan and a subsequent drainage letter shall be submitted for each lot.

Upon final design/development of lots 3 and 4, the proposed building sizes, location, and orientation for lots 3 and 4 will not require the concrete channel, as there is sufficient width (12' between the proposed buildings) for a typical side lot line swale. Therefore, an additional 3-foot wide easement has been recorded under Rec No. 221071977 on Lot 4 in addition to the platted 2-feet, thereby providing a 5-foot drainage and utility easement on Lot 4 along with the 2-foot wide easement on lot 3. The proposed swale shall adequately convey roof drainage via a grass-lined swale to the water quality pond in Tract A that was constructed for the Claremont Business Park subdivision. Please see the proposed grading plan of either lot 3 or 4 for the detailed cross-section of the swale proposed between the buildings.

All storm, street and WQ pond improvements were installed per the Gary Watson Point construction plans that were approved 2-11-2021 by El Paso County and shall be maintained by the Claremont Business Park Owners Association. This drainage letter includes the previously approved Proposed Drainage Map for **Final Drainage Report for Claremont Business Park 2, Filing No. 1**, for reference.

This final drainage letter for Lot 3 is in compliance with the drainage patterns and design proposed within the **FDR**; therefore no negative impacts are anticipated to the downstream improvements or facilities with the approval of this drainage letter.

This site is in the Sand Creek Drainage Basin. The site has been subdivided into 10 commercial lots. Drainage fees, for these lots, were paid at the time of the previous platting as Tract C of Claremont Business Park Filing No. 2 (Reception No. 207712506), therefore no additional Drainage fees are required. See Appendix of the "Final Drainage Report for Claremont Business Park Filing No. 2", Revised November 2006, by Matrix Design Group, Inc, for previously paid drainage and bridge fees.

Respectfully,



Eugene Tellez
Project Engineer
M&S Civil Consultants, Inc.

REFERENCES

- 1.) " City of Colorado Springs Drainage Criteria Manual Vol. 1 & 2", dated May 2014, Revised January 2021.
- 2.) "Engineering Criteria Manual County of El Paso, Colorado", adopted December 23, 2004, revised December 13, 2006.
- 3.) "Drainage Criteria Manual (DCM) Vol. 1 & 2 County of El Paso, Colorado", updated October 31, 2018
- 4.) "Drainage Criteria Manual (DCM) Vol. 1 Update County of El Paso, Colorado", updated October 31, 2018.
- 5.) "Final Drainage Report for Claremont Business Park 2 Filing No.1", dated December, 2020, by M&S Civil Consultants, Inc.
- 6.) Final Drainage Report for Claremont Business Park Filing No. 2", dated November 2006, by Matrix Design Group, Inc.

ATTACHMENTS:

Vicinity map

Claremont Business Park 2 Filing No. 1 - Lot 3 Site Grading Plan

Claremont Business Park 2 Filing No. 1 - Final Plat

Excerpt of "Final Drainage Report for Claremont Business Park Filing No. 2"

Final Drainage Report Claremont Business Park 2 Filing No. 1 - Proposed Drainage Map

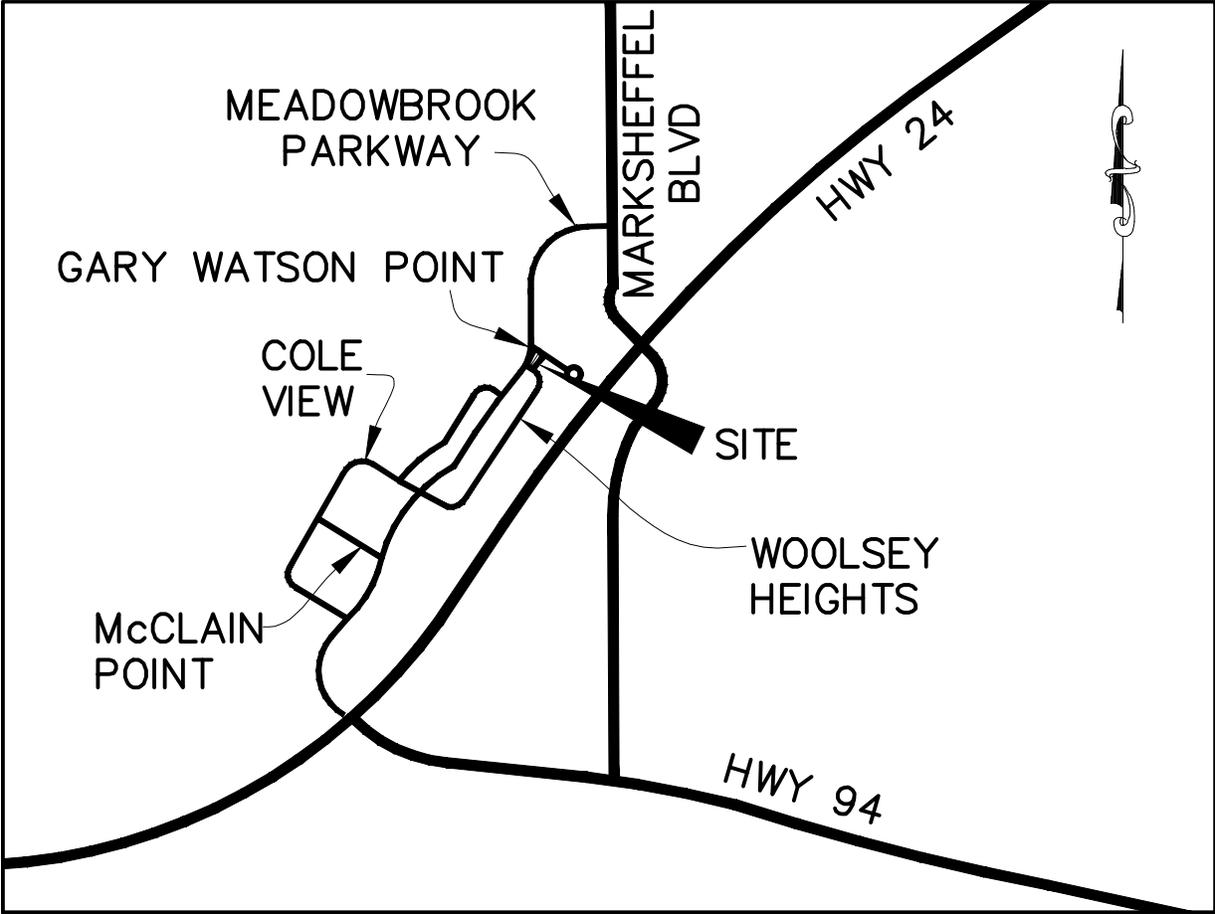
Hydrologic Calculations

Final Drainage Letter Claremont Business Park 2 Filing No. 1 Lot 3

– Proposed Drainage Map

ATTACHMENTS

VICINITY MAP



VICINITY MAP

N.T.S.

**CLAREMONT BUSINESS PARK 2 FIL. NO. 1
LOT 3 SITE GRADING PLAN**

CLAREMONT BUSINESS PARK 2 FIL. NO. 1 - LOT 3

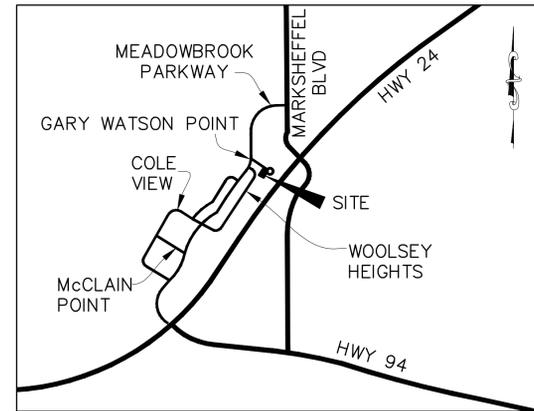
FOR REFERENCE ONLY

EL PASO COUNTY, STATE OF COLORADO GRADING & EROSION CONTROL PLAN

GRADING AND EROSION CONTROL NOTES:

- 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 FROM 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. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A 'NOTICE TO PROCEED' HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED 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 STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE EGM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE 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. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- 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.
- 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. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS 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 CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE EGM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE 'COLORADO WATER QUALITY CONTROL ACT' (TITLE 25, ARTICLE 8, CRS), AND THE 'CLEAN WATER ACT' (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE EGM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY TERRACON. #23055071 MAY 30, 2006 AND SHALL BE CONSIDERED A PART OF THESE PLANS WITH AN UPDATED LETTER JUNE 17, 2020.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (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
WOOD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT



VICINITY MAP
N.T.S.

DESIGN 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 NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

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

OWNER/DEVELOPER'S STATEMENT:

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

NAME: _____ DATE _____

DBA: HAMMERS CONSTRUCTION

ADDRESS: 1411 WOOLSEY HEIGHTS COLORADO SPRINGS, 80915

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 MANUAL VOLUMES 1 AND 2, 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 TWO (2) YEARS FROM THE DATE SIGNED BY EL PASO COUNTY ENGINEER. IF THE 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 DIRECTOR'S DISCRETION.

JENNIFER IRVINE, P.E. DATE _____
COUNTY ENGINEER / EGM ADMINISTRATOR



GRADING & EROSION CONTROL PLAN
CLAREMONT BUSINESS PARK 2 FIL. NO. 1 - LOT 3
JOB NO. 44-037
DATE PREPARED: FEBRUARY 15, 2021
DATE REVISED: APRIL 21, 2021

EL PASO COUNTY FILE NO. PPR 2111



212 N. WAHSCATH AVE. STE 305
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

ADDITIONAL NOTES:
 STAGING STORAGE AND STOCK PILES AREAS TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.

THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.

TEMPORARY SEDIMENT TRAP LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR IN THE FIELD.

EXISTING SITE TERRAIN GENERALLY SLOPES FROM NORTH TO SOUTHWEST AT GRADE RATES THAT VARY BETWEEN 2% TO 6%.

THERE ARE NO BATCH PLANTS ON SITE.

AREAS LEFT OPEN FOR 21 DAYS OR MORE, OTHER THAN FOR UTILITY AND DRAINAGE CONSTRUCTION SHALL BE SEEDED AND/OR MULCHED.

NO PORTION OF THIS PROPERTY IS LOCATED WITHIN A DESIGNATED FEMA FLOODPLAIN IN ACCORDANCE WITH FLOOD INSURANCE RATE MAPS (FIRM) 08041C0756G, EFFECTIVE DATE DECEMBER 7, 2018.

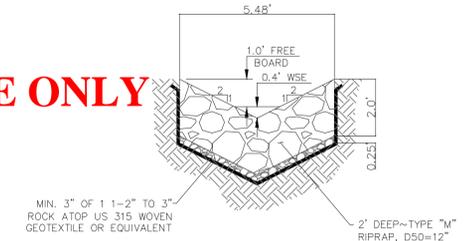
CUT/FILL ACTIVITIES WERE COMPLETED UNDER EGP204

EXISTING VEGETATION: THE SITE ORIGINALLY CONSISTED OF PRAIRIE GRASSES AND SHRUBS. NO OTHER NOTABLE VEGETATION EXISTED. THE SITE IS PROPOSED FOR AN INDUSTRIAL PARK SUBDIVISION. IF THE SUBDIVISION IS NOT COMPLETED, THE ENTIRE SITE SHOULD BE RESEED PER EPC SPECIFICATIONS. FOR AREAS OUTSIDE OF THE DEVELOPED LOTS, THE GROUND SHOULD BE RESEED PER EPC CRITERIA AS SHOWN ON THE GRADING AND EROSION CONTROL PLAN. THE VEGETATION SHOULD BE VISUALLY INSPECTED TO EXCEED THE AMOUNT OF VEGETATION THAT EXISTS IN NON-DISTURBED AREAS AROUND THE SITE.

CLAREMONT BUSINESS PARK 2 FIL. NO. 1 - LOT 3

EL PASO COUNTY, STATE OF COLORADO
 GRADING & EROSION CONTROL PLAN

FOR REFERENCE ONLY



TRIANGULAR RIPRAP RUNDOWN
 NTS

LEGEND

- 6309 EX MAJ CONT
- 6310 EX MIN CONT
- 6310 PROP MAJ CONT
- 6309 PROP MIN CONT
- LP LOW POINT
- HP HIGH POINT
- EX EXISTING
- FL FLOWLINE
- TC TOP OF CURB
- FG FINISH GRADE
- FF FINISH FLOOR
- TOF TOP OF FOOTING
- SF S SILT FENCE PRE-DEV STAGE
- VTC TEMPORARY SEDIMENT BASIN PRE-DEV STAGE
- CWA CONCRETE WASH-OUT BASIN PRE-DEV STAGE
- SSA STABILIZED STAGING AREA PRE-DEV STAGE
- LIMITS OF DISTURBANCE / CONSTRUCTION
- - - CUT/FILL
- FLOW ARROWS AND SLOPE

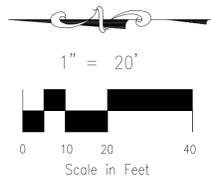
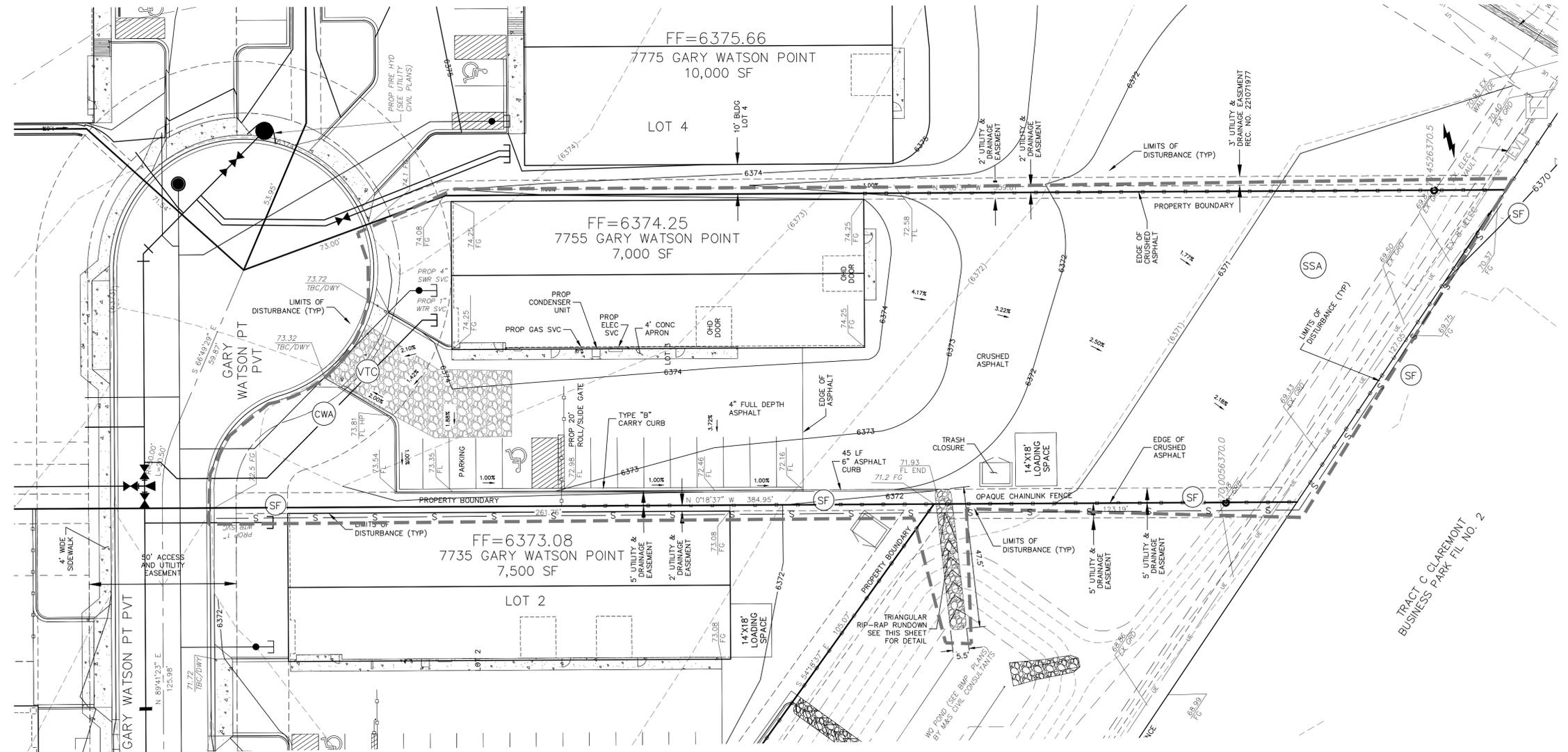
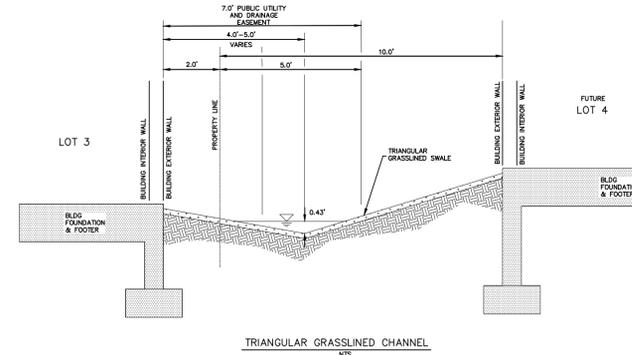


Table 17.1 Standard CDOT gradations for rock riprap.

Pay Item	Stone Size (Inches)	Percent of Material Smaller Than Typical Stone ¹	Typical Stone Dimensions ² (Inches)	Typical Stone Weight ³ (Pounds)
Riprap 6	6	70-100	12	85
		50-70	9	35
		35-50	2	10
Riprap 9	9	70-100	15	160
		50-70	12	85
		35-50	9	35
Riprap 12	12	70-100	21	440
		50-70	18	275
		35-50	12	85
Riprap 18	18	100	30	1280
		50-70	24	650
		35-50	18	275
Riprap 24	24	100	42	3500
		50-70	33	1700
		35-50	24	650
		2-10	9	35

¹50 - nominal stone size
²based on typical rock mass
³equivalent spherical diameter
⁴based on a specific gravity = 2.5



NOTES:
 APPLY CDOT SECTION 506 REQUIREMENTS.

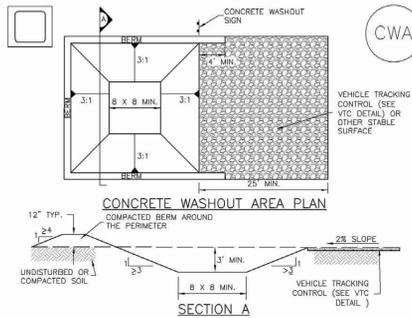
GRADING & EROSION CONTROL PLAN
 CLAREMONT BUSINESS PARK 2 FIL. NO. 1 - LOT 3
 JOB NO. 44-037
 DATE PREPARED: FEBRUARY 15, 2021
 DATE REVISED: APRIL 21, 2021

EL PASO COUNTY FILE NO. PPR 2111



212 N. WAHSATCH AVE., STE 305
 COLORADO SPRINGS, CO 80903
 PHONE: 719.955.5485

Concrete Washout Area (CWA) MM-1



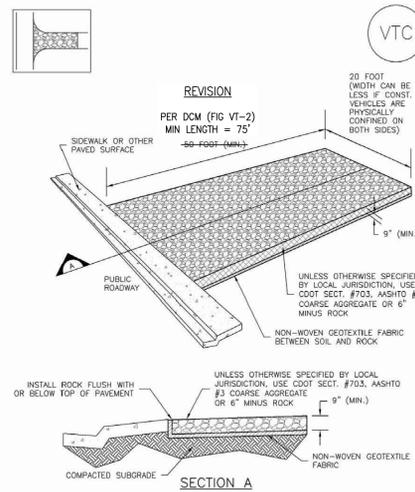
CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

- SEE PLAN VIEW FOR: -CWA INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1000' OF ANY WELLS OR DRINKING WATER SOURCES IF SITE CONSTRAINTS MAKE THIS INFESIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE. THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (18 MIL THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP TRIS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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

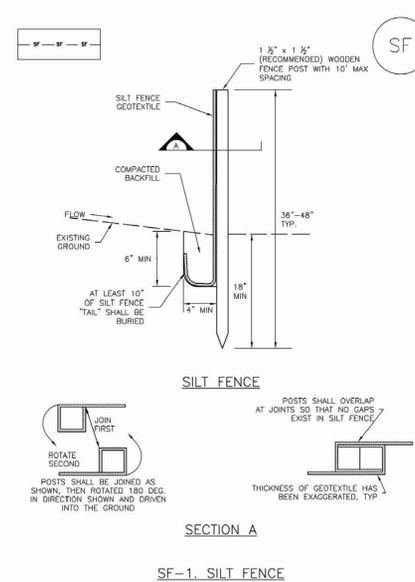
Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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

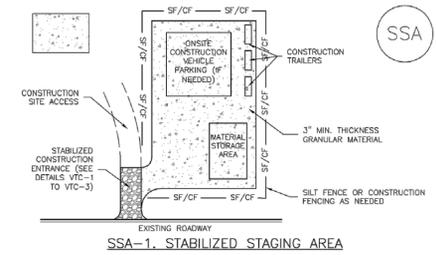
Silt Fence (SF) SC-1



SF-1. SILT FENCE

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

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR: -LOCATION OF STAGING AREA(S). -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, #400 #3 COARSE AGGREGATE OR 4" (MIN.) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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

EC-2 Temporary and Permanent Seeding (TS/PS)

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

Common Name	Botanical Name	Growth Season ¹	Growth Form	Seeds/Pound	Pounds of PLS/acre
Alkali Soil Seed Mix					
Alkali sacaton	<i>Sporobolus airoides</i>	Cool	Bunch	1,750,000	0.25
Basin wildrye	<i>Elymus cinereus</i>	Cool	Bunch	165,000	2.5
Sodar streambank wheatgrass	<i>Agropyron spicatum Sodar'</i>	Cool	Sod	170,000	2.5
Tose tall wheatgrass	<i>Agropyron elongatum Tose'</i>	Cool	Bunch	79,000	7.0
Amba western wheatgrass	<i>Agropyron amabilis 'arriba'</i>	Cool	Sod	110,000	5.5
Total					17.75
Fertile Loamy Soil Seed Mix					
Ephraim crested wheatgrass	<i>Agropyron cristatum 'Ephraim'</i>	Cool	Sod	175,000	2.0
Dural hard fescue	<i>Festuca ovina 'duracauda'</i>	Cool	Bunch	565,000	1.0
Lincoln smooth brome	<i>Bromus inermis leys 'Lincoln'</i>	Cool	Sod	130,000	3.0
Sodar streambank wheatgrass	<i>Agropyron spicatum Sodar'</i>	Cool	Sod	170,000	2.5
Amba western wheatgrass	<i>Agropyron amabilis 'arriba'</i>	Cool	Sod	110,000	7.0
Total					15.5
High Water Table Soil Seed Mix					
Meadow foxtail	<i>Alopecurus pratensis</i>	Cool	Sod	900,000	0.5
Redtop	<i>Agrostis alba</i>	Warm	Open sod	5,000,000	0.25
Reed canygrass	<i>Phalaris arundinacea</i>	Cool	Sod	68,000	0.5
Lincoln smooth brome	<i>Bromus inermis leys 'Lincoln'</i>	Cool	Sod	130,000	3.0
Pathfinder switchgrass	<i>Panicum virgatum 'Pathfinder'</i>	Warm	Sod	389,000	1.0
Albar tall wheatgrass	<i>Agropyron elongatum 'Albar'</i>	Cool	Bunch	79,000	5.5
Total					10.75
Transition Turf Seed Mix²					
Ruebens Canadian blugrass	<i>Poa compressa 'Ruebens'</i>	Cool	Sod	2,500,000	0.5
Dural hard fescue	<i>Festuca ovina 'duracauda'</i>	Cool	Bunch	565,000	1.0
Citation perennial ryegrass	<i>Lolium perenne 'Citation'</i>	Cool	Sod	247,000	3.0
Lincoln smooth brome	<i>Bromus inermis leys 'Lincoln'</i>	Cool	Sod	130,000	3.0
Total					7.5

TS/PS-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 June 2012

Temporary and Permanent Seeding (TS/PS) EC-2

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

Common Name	Botanical Name	Growth Season ¹	Growth Form	Seeds/Pound	Pounds of PLS/acre
Sandy Soil Seed Mix					
Blue grama	<i>Bouteloua gracilis</i>	Warm	Sod-forming bunchgrass	825,000	0.5
Camper little bluestem	<i>Setchellium scoparium 'Camper'</i>	Warm	Bunch	240,000	1.0
Prairie sandreed	<i>Calamagrostis longifolia</i>	Warm	Open sod	274,000	1.0
Sand dropseed	<i>Sporobolus vaginatus</i>	Cool	Bunch	5,298,000	0.25
Vaughn sideoats grama	<i>Bouteloua curtipendula 'Vaughn'</i>	Warm	Sod	191,000	2.0
Amba western wheatgrass	<i>Agropyron amabilis 'arriba'</i>	Cool	Sod	110,000	5.5
Total					10.25
Heavy Clay, Rocky Foothill Seed Mix					
Ephraim crested wheatgrass ³	<i>Agropyron cristatum 'Ephraim'</i>	Cool	Sod	175,000	1.5
Oshe intermediate wheatgrass	<i>Agropyron intermedium 'Oshe'</i>	Cool	Sod	115,000	5.5
Vaughn sideoats grama ⁴	<i>Bouteloua curtipendula 'Vaughn'</i>	Warm	Sod	191,000	2.0
Lincoln smooth brome	<i>Bromus inermis leys 'Lincoln'</i>	Cool	Sod	130,000	3.0
Amba western wheatgrass	<i>Agropyron amabilis 'arriba'</i>	Cool	Sod	110,000	5.5
Total					17.5

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

² See Table TS/PS-3 for seeding dates.

³ If site is to be irrigated, the transition turf seed rates should be doubled.

⁴ Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

⁵ Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sideoats grama.

June 2012 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 TS/PS-5

SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
- A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
- COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTOR SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
- SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
- AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK". THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
 - REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
 - SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
 - WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM IUDFCO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SF-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 - THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM IUDFCO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

**CLAREMONT BUSINESS PARK 2 FIL. NO. 1
FINAL PLAT**

CLAREMONT BUSINESS PARK 2 FILING NO. 1

A REPLAT OF TRACT A "CLAREMONT BUSINESS PARK FILING NO. 1C", AND A PORTION OF TRACT C "CLAREMONT BUSINESS PARK FILING NO. 2", BEING A TRACT OF LAND IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER (SE 1/4, SE 1/4) OF SECTION 5 AND NORTHEAST QUARTER OF THE NORTHEAST QUARTER (NE 1/4, NE 1/4) OF SECTION 8, T14S, R65W, OF THE 6TH P.M., EL PASO COUNTY, COLORADO

FOR REFERENCE ONLY

BE IT KNOWN BY THESE PRESENTS:

THAT L. G. CASE (A.K.A. LENA GAIL CASE), NANCY BARBER STARR AND JON STARR, AND HAMMERS CONSTRUCTION INC., A COLORADO COMPANY, BEING THE OWNERS OF THE FOLLOWING DESCRIBED TRACT OF LAND:

LEGAL DESCRIPTION:

A PARCEL OF LAND IN THE SOUTHEAST QUARTER OF SECTION 5 AND THE NORTHEAST QUARTER OF SECTION 8, T14S, R65W OF THE 6th P.M., EL PASO COUNTY, COLORADO CONSISTING OF TRACT A "CLAREMONT BUSINESS PARK FILING NO. 1C" AS RECORDED UNDER RECEPTION NO. 220714531 AND THAT PORTION OF TRACT C "CLAREMONT BUSINESS PARK FILING NO. 2" AS RECORDED UNDER RECEPTION NO. 207712506, AMENDED BY SPECIAL WARRANTY DEED RECORDED UNDER RECEPTION NO. 218046726, SPECIAL WARRANTY DEED RECORDED UNDER RECEPTION NO. 219078479, AND SPECIAL WARRANTY DEED RECORDED UNDER RECEPTION NO. 219160747, ALL MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF AFORESAID TRACT A "CLAREMONT BUSINESS PARK FILING NO. 1C"; THENCE ALONG THE EASTERLY RIGHT-OF-WAY LINE OF 80 FOOT MEADOWBROOK PARKWAY THE FOLLOWING FOUR (4) COURSES;

- 1) THENCE 207.94 FEET ALONG THE ARC OF A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 605.00 FEET, A CENTRAL ANGLE OF 19°41'35", AND A CHORD OF 206.92 FEET WHICH BEARS N02°19'03"W TO A POINT OF TANGENT;
- 2) THENCE N12°09'05"W ALONG SAID TANGENT 118.69 FEET TO A POINT OF CURVE;
- 3) THENCE 932.82 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 525.00 FEET, A CENTRAL ANGLE OF 101°48'12", AND A CHORD OF 814.87 FEET WHICH BEARS N38°45'53"E TO A POINT OF TANGENT;
- 4) THENCE N89°40'01"E ALONG SAID TANGENT 58.32 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF MARKSHEFFEL ROAD/U.S. HIGHWAY 24, CDOT PROJECT NO. NH 0243-058 UNIT 2;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE THE FOLLOWING FIVE (5) COURSES;

- 1) THENCE S00°10'49"W A DISTANCE OF 550.15 FEET TO A POINT OF CURVE;
- 2) THENCE 264.51 FEET ALONG THE ARC OF A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 605.00 FEET, A CENTRAL ANGLE OF 25°02'59", AND A CHORD OF 262.40 FEET WHICH BEARS S12°21'26"E;
- 3) THENCE S06°46'53"E NON-TANGENT TO THE PREVIOUS COURSE 142.31 FEET;
- 4) THENCE S14°56'24"W A DISTANCE OF 164.34 FEET;
- 5) THENCE S33°35'01"W A DISTANCE OF 192.22 FEET TO THE NORTHEAST CORNER OF LOT 2 "CLAREMONT BUSINESS PARK FILING NO. 1C";

THENCE N56°02'38"W ALONG THE NORTH LINES OF LOT 1 AND LOT 2, A DISTANCE OF 551.81 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS A CALCULATED AREA OF 595,013 S.F. (13.660 ACRES MORE OR LESS).

DEDICATION:

THE UNDERSIGNED OWNER HAS CAUSED SAID PARCEL TO BE PLATTED INTO LOTS, A TRACT, AND EASEMENTS, AS SHOWN ON THE PLAT. THE UNDERSIGNED DOES HEREBY DEDICATE, GRANT AND CONVEY TO EL PASO COUNTY COLORADO THOSE PUBLIC EASEMENTS AS SHOWN ON THE PLAT; AND FURTHER RESTRICTS THE USE OF ALL PUBLIC EASEMENTS TO EL PASO COUNTY AND/OR ITS ASSIGNS, PROVIDED HOWEVER, THAT THE SOLE RIGHT AND AUTHORITY TO RELEASE OR QUITCLAIM ALL OR ANY SUCH PUBLIC EASEMENTS SHALL REMAIN EXCLUSIVELY VESTED IN EL PASO COUNTY. THIS PARCEL OF LAND AS PLATTED HEREIN SHALL BE KNOWN AS "CLAREMONT BUSINESS PARK 2 FILING NO. 1", IN EL PASO COUNTY, COLORADO.

OWNER: HAMMERS CONSTRUCTION INC.
1411 WOOLSEY HEIGHTS
COLORADO SPRINGS, COLORADO 80915

BY: _____
STEVE HAMMERS, PRESIDENT

NOTARIAL:

STATE OF COLORADO }
COUNTY OF EL PASO } SS

THE ABOVE AND AFOREGMENTIONED INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 2020, A.D. BY STEVE HAMMERS, PRESIDENT, HAMMERS CONSTRUCTION, INC.

WITNESS MY HAND AND OFFICIAL SEAL:
MY COMMISSION EXPIRES: _____

NOTARY PUBLIC: _____

OWNER: L. G. CASE
2432 PARKVIEW LANE
COLORADO SPRINGS, COLORADO 80906

BY: _____
L. G. CASE, A.K.A. LENA GAIL CASE

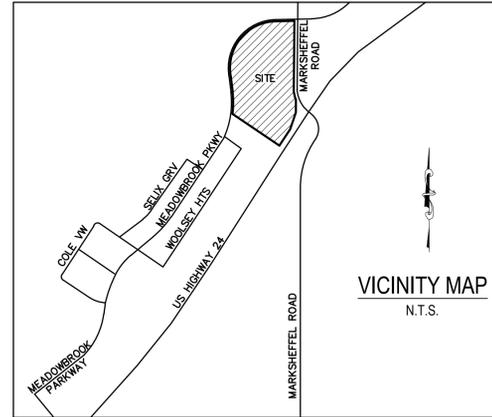
NOTARIAL:

STATE OF COLORADO }
COUNTY OF EL PASO } SS

THE ABOVE AND AFOREGMENTIONED INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 2020, A.D. BY L. G. CASE, A.K.A. LENA GAIL CASE

WITNESS MY HAND AND OFFICIAL SEAL:
MY COMMISSION EXPIRES: _____

NOTARY PUBLIC: _____



VICINITY MAP
N.T.S.

TRACT TABLE				
TRACT	SIZE (ACRES)	USE	MAINTENANCE	OWNERSHIP
A	0.489	PUBLIC AND PRIVATE UTILITIES, PUBLIC AND PRIVATE DRAINAGE, LANDSCAPING, WQ POND	OWNERS G1	OWNERS G1
B	0.425	PUBLIC AND PRIVATE UTILITIES, PUBLIC AND PRIVATE DRAINAGE, LANDSCAPING, WQ POND	OWNERS G2	OWNERS G2
C	0.202	RIGHT-OF-WAY RESERVATION, PRIVATE DRAINAGE	OWNERS G2	OWNERS G2
TOTAL	1.116	(TOTAL ACREAGE OF ALL TRACTS)		
OWNERS G1: EQUAL SHARES OF INDIVIDUAL LOT OWNERS OF LOTS 1-7				
OWNERS G2: EQUAL SHARES OF INDIVIDUAL LOT OWNERS OF LOTS 8-10				

OWNER: NANCY BARBER STARR
JON STARR
5001 S. CLINTON STREET
GREENWOOD VILLAGE, COLORADO 80111

BY: _____
NANCY BARBER STARR

BY: _____
JON STARR

NOTARIAL:

STATE OF COLORADO }
COUNTY OF EL PASO } SS

THE ABOVE AND AFOREGMENTIONED INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 2020, A.D. BY NANCY BARBER STARR AND JON STARR

WITNESS MY HAND AND OFFICIAL SEAL:
MY COMMISSION EXPIRES: _____

NOTARY PUBLIC: _____

EASEMENTS:

UNLESS OTHERWISE INDICATED, ALL SIDE, FRONT, AND REAR LOT LINES ARE HEREBY PLATTED ON EITHER SIDE WITH A 5 FOOT PUBLIC UTILITY AND DRAINAGE EASEMENT UNLESS OTHERWISE INDICATED. ALL EXTERIOR SUBDIVISION BOUNDARIES ARE HEREBY PLATTED WITH A 7 FOOT PUBLIC UTILITY AND DRAINAGE EASEMENT. THE SOLE RESPONSIBILITY FOR MAINTENANCE OF THESE EASEMENTS IS HEREBY VESTED WITH THE INDIVIDUAL PROPERTY OWNERS.

EASEMENTS ARE AS SHOWN ON SHEET 4 OF THIS PLAT.

SURVEYORS CERTIFICATE

I, VERNON P. TAYLOR, A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS PLAT TRULY AND CORRECTLY REPRESENTS THE RESULTS OF A SURVEY MADE ON DATE OF SURVEY, BY ME OR UNDER MY DIRECT SUPERVISION AND THAT ALL MONUMENTS EXIST AS SHOWN HEREON; THAT MATHEMATICAL CLOSURE ERRORS ARE LESS THAN 1:10,000; AND THAT SAID PLAT HAS BEEN PREPARED IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS OF THE STATE OF COLORADO DEALING WITH MONUMENTS, SUBDIVISION, OR SURVEYING OF LAND AND ALL APPLICABLE PROVISIONS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE.

I ATTEST THE ABOVE ON THIS _____ DAY OF _____, 2020.

VERNON P. TAYLOR DATE
COLORADO PLS NO. 25966, FOR AND
ON BEHALF OF M&S CIVIL CONSULTANTS, INC
20 BOULDER CRESCENT, SUITE 110
COLORADO SPRINGS, COLORADO 80903

NOTICE:

ACCORDING TO COLORADO LAW, YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT EXECUTIVE DIRECTOR CERTIFICATE:

THIS PLAT FOR "CLAREMONT BUSINESS PARK 2 FILING NO. 1" WAS APPROVED FOR FILING BY THE EXECUTIVE DIRECTOR OF THE EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT DIRECTOR ON THIS _____ DAY OF _____, 2020, SUBJECT TO ANY NOTES SPECIFIED HEREON AND ANY CONDITIONS INCLUDED IN THE RECORD OF ADMINISTRATIVE ACTION. THE DEDICATIONS OF LAND TO THE PUBLIC (STREETS AND EASEMENTS) ARE ACCEPTED, BUT PUBLIC IMPROVEMENTS THEREON WILL NOT BECOME MAINTENANCE RESPONSIBILITY OF EL PASO COUNTY UNTIL PRELIMINARY ACCEPTANCE OF THE PUBLIC IMPROVEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE AND ENGINEERING CRITERIA MANUAL AND THE SUBDIVISION IMPROVEMENTS AGREEMENT.

EXECUTIVE DIRECTOR, PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT DATE

CLERK AND RECORDER:

STATE OF COLORADO }
COUNTY OF EL PASO } SS

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD IN MY OFFICE AT _____ O'CLOCK _____, THIS _____ DAY OF _____, 2020, A.D., AND DULY RECORDED UNDER RECEPTION NO. _____ OF THE RECORDS OF EL PASO COUNTY, COLORADO.

FEE: _____ CHUCK BROERMAN, RECORDER

SURCHARGE: _____ BY: _____ DEPUTY

FEES:

DRAINAGE FEE: _____
BRIDGE FEE: _____
SCHOOL FEE: _____
PARK FEE: _____

SUMMARY:

10 LOTS	12.404 ACRES	90.81%
3 TRACTS	1.116 ACRES	8.17%
RIGHT-OF-WAY	0.140 ACRES	1.02%
TOTAL	13.660 ACRES	100.00%

FINAL PLAT
CLAREMONT BUSINESS PARK 2
FILING NO. 1
JOB NO. 44-037
DATE PREPARED: 04/28/2020
DATE REVISED: 10/21/2020

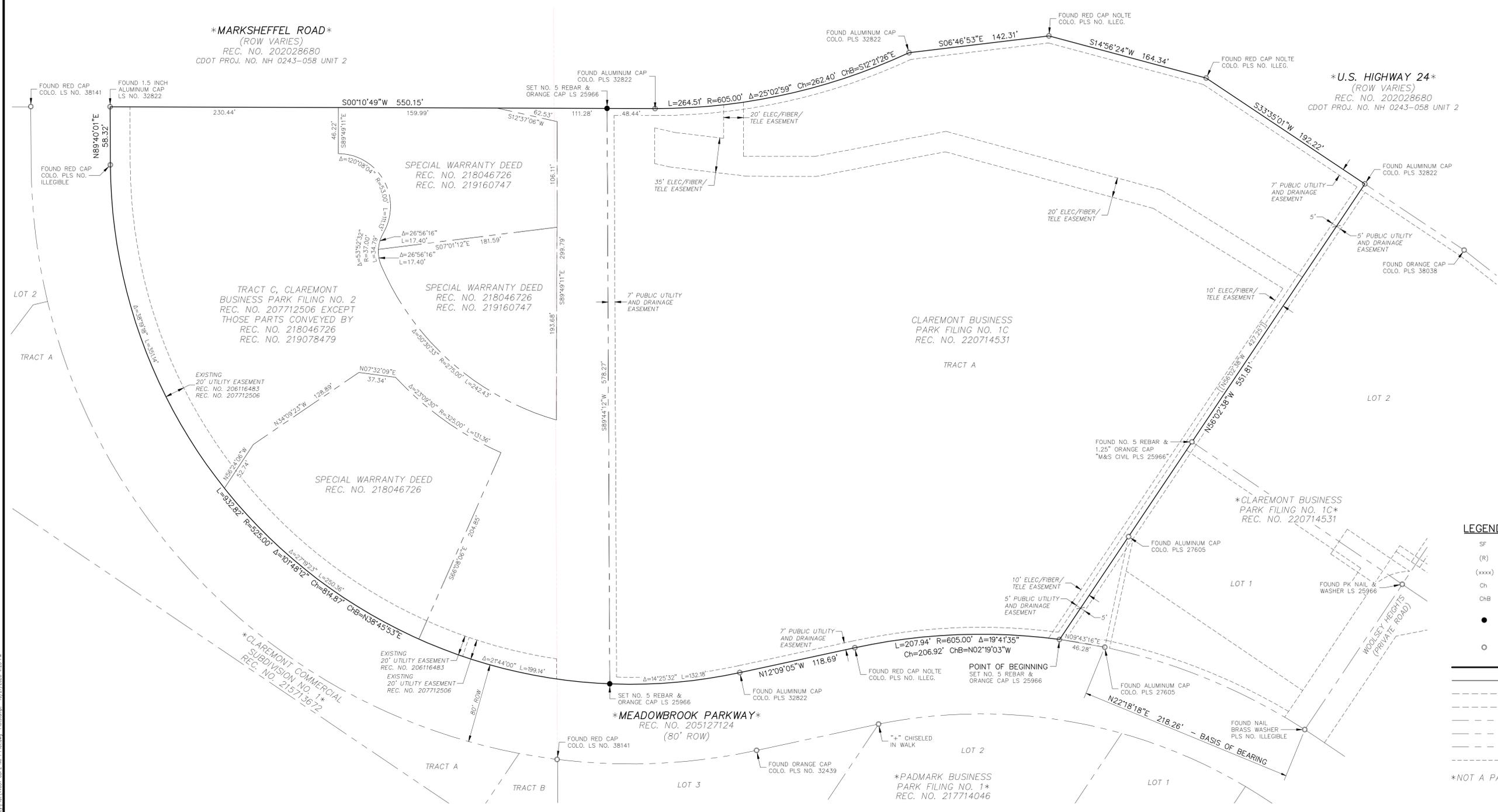


102 E. PIKES PEAK AVE., 5TH FLOOR
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

CLAREMONT BUSINESS PARK 2 FILING NO. 1

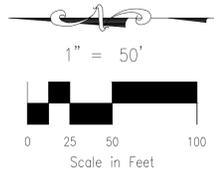
FOR REFERENCE ONLY

A REPLAT OF TRACT A "CLAREMONT BUSINESS PARK FILING NO. 1C", AND A PORTION OF TRACT C "CLAREMONT BUSINESS PARK FILING NO. 2", BEING A TRACT OF LAND IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER (SE 1/4, SE 1/4) OF SECTION 5 AND NORTHEAST QUARTER OF THE NORTHEAST QUARTER (NE 1/4, NE 1/4) OF SECTION 8, T14S, R65W, OF THE 6TH P.M., EL PASO COUNTY, COLORADO



- LEGEND:**
- SF SQUARE FEET
 - (R) RADIAL BEARING
 - (xxxx) ADDRESS
 - Ch CHORD LENGTH
 - ChB CHORD BEARING
 - SET NO 5 REBAR AND 1.25" ORANGE CAP STAMPED "M&S CIVIL PLS 25966" FLUSH W/ EXISTING GRADE UNLESS NOTED OTHERWISE
 - FOUND NO 5 REBAR AND CAP AS NOTED, FLUSH W/ EXISTING GRADE UNLESS NOTED OTHERWISE
 - BOUNDARY LINE
 - PROPERTY LINE
 - - - ACCESS EASEMENT
 - - - OTHER EASEMENTS
 - - - ADJACENT SUBDIVISION LINE
 - - - ADJACENT PROPERTY LINE
 - - - EXISTING RIGHT OF WAY LINE
 - - - EXISTING EASEMENT
 - *NOT A PART* PARCELS INDICATED WITH ASTERISK "*" ARE NOT A PART OF THIS SUBDIVISION

AS PLATTED



FINAL PLAT
CLAREMONT BUSINESS PARK 2
FILING NO. 1
JOB NO. 44-037
DATE PREPARED: 04/28/2020
DATE REVISED: 10/21/2020

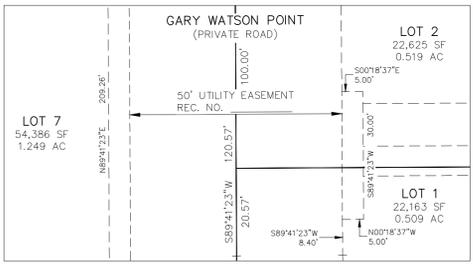
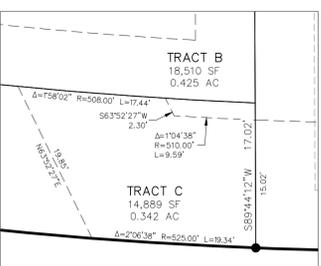
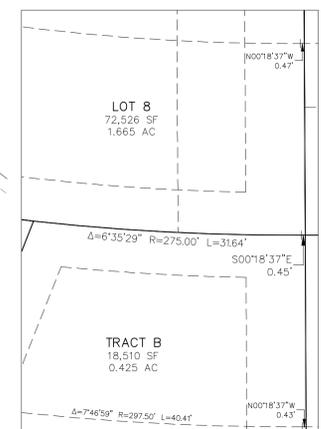
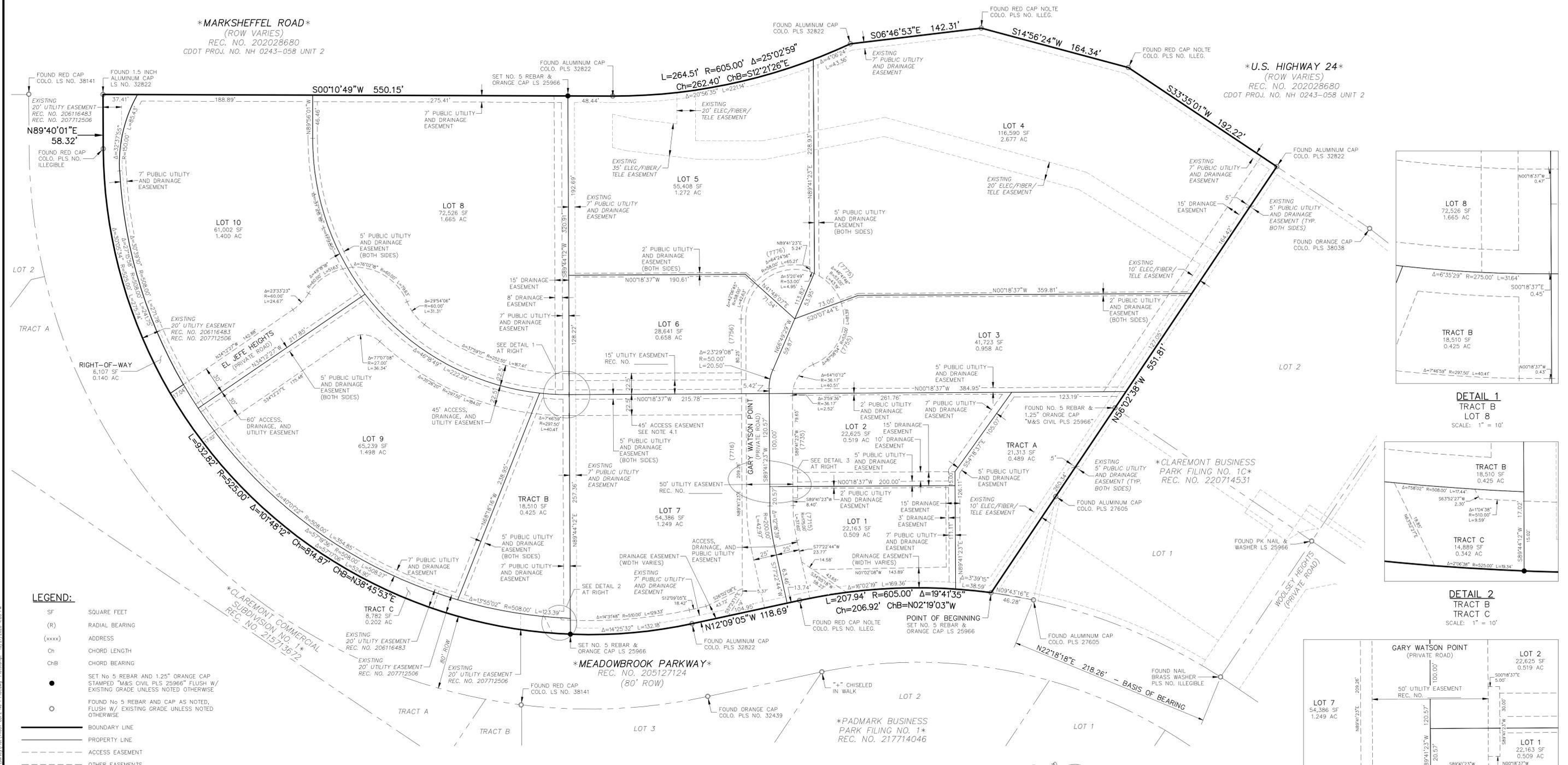
102 E. PIKES PEAK AVE., 5TH FLOOR
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

File: G:\14037A-CBF-F2-105-1-8\Map\Survey\14037-CBF-F2-105-1-8\Plat.dwg PlotDate: 10/27/2020 4:25 PM

CLAREMONT BUSINESS PARK 2 FILING NO. 1

FOR REFERENCE ONLY

A REPLAT OF TRACT A "CLAREMONT BUSINESS PARK FILING NO. 1C", AND A PORTION OF TRACT C "CLAREMONT BUSINESS PARK FILING NO. 2", BEING A TRACT OF LAND IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER (SE 1/4, SE 1/4) OF SECTION 5 AND NORTHEAST QUARTER OF THE NORTHEAST QUARTER (NE 1/4, NE 1/4) OF SECTION 8, T14S, R65W, OF THE 6TH P.M., EL PASO COUNTY, COLORADO



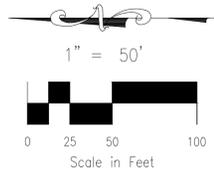
- LEGEND:**
- SF SQUARE FEET
 - (R) RADIAL BEARING
 - (xxxx) ADDRESS
 - Ch CHORD LENGTH
 - ChB CHORD BEARING
 - SET No. 5 REBAR AND 1.25" ORANGE CAP STAMPED "M&S CIVIL PLS 25966" FLUSH W/ EXISTING GRADE UNLESS NOTED OTHERWISE
 - FOUND No. 5 REBAR AND CAP AS NOTED, FLUSH W/ EXISTING GRADE UNLESS NOTED OTHERWISE
 - BOUNDARY LINE
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 - - - OTHER EASEMENTS
 - - - ADJACENT SUBDIVISION LINE
 - - - ADJACENT PROPERTY LINE
 - - - EXISTING RIGHT OF WAY LINE
 - - - EXISTING EASEMENT

NOT A PART PARCELS INDICATED WITH ASTERISK "*" ARE NOT A PART OF THIS SUBDIVISION

SHEET NOTES:

4.1 45' ACCESS EASEMENT. ONLY LANDSCAPING WILL BE PERMITTED IN THE EASEMENT BETWEEN LOTS 6 AND 7 UNTIL SUCH TIME A ROAD CONNECTION IS REQUESTED BY EL PASO COUNTY.

AS REPLATTED



FINAL PLAT
CLAREMONT BUSINESS PARK 2
FILING NO. 1
JOB NO. 44-037
DATE PREPARED: 04/28/2020
DATE REVISED: 10/21/2020



102 E. PIKES PEAK AVE., 5TH FLOOR
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

**EXCERPT OF “FINAL DRAINAGE REPORT FOR
CLAREMONT BUSINESS PARK FIL NO. 2 “, BY
MATRIX DESIGN DATED NOVEMBER 2006
&
EXISTING DRAINAGE MAP**

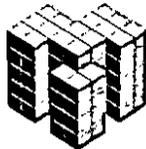


FINAL DRAINAGE REPORT
For
“Claremont Business Park Filing No. 2”

Prepared for:
El Paso County
Department of Public Works
Engineering Division

On Behalf of:
Claremont Development, Inc.

Prepared by:



Matrix Design Group, Inc.
Integrated Design Solutions *Infrastructure Engineering*
Community Development
Program Management

2435 Research Parkway, Suite 300
Colorado Springs, CO 80920
(719) 575-0100
fax (719) 572-0208

Revised November 2006

Engineer's Statement:

The *revisions* (changes made to the base Final Drainage Report since July, 2006) to the attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. The revisions encompassed adding additional right of way to the study area at the County's request, the handling of offsite drainage due to the additional right of way, a breakdown of private drainage within lot numbers 10 through 25 of Filing No. 2 due to cross-lot drainage (contrary to note # 25 on the recorded plat), profiling additional inlets along the channel edge, and rip-rap sizing for outlet structures along the channel. The Final Drainage Report dated July, 2006 was prepared under the direct supervision of Richard G. Gallegos, Jr. in July, 2006 and stamped (see next sheet).

The Final Drainage Report was prepared according to the criteria established by the County for drainage reports and said report is in conformity with the master plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing the *revisions* to this report.

Brady A. Shyrock
Registered Professional Engineer
State of Colorado
No. 38164

SEAL

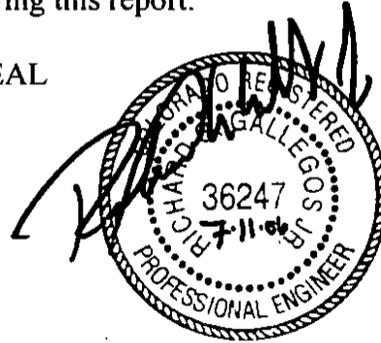


Engineer's Statement:

The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the County for drainage reports and said report is in conformity with the master plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this report.

SEAL

Richard G. Gallegos, Jr.
Registered Professional Engineer
State of Colorado
No. 36247



Developer's Statement:

I, the developer have read and will comply with all of the requirements specified in this drainage report and plan.

Claremont Development, Inc.

Business Name

By: _____

Title: _____

Address: 3460 Capital Drive

Colorado Springs, CO 80915

El Paso County:

Filed in accordance with Section 51.1 of the El Paso Land Development Code, as amended.

John Hamacher
Mr. John McCarty, County Engineer/Director

4/23/07
Date

Conditions:

D. Drainage and Bridge Fees

Claremont Business Park Filing No. 2 has not been previously platted. The drainage basin and bridge fees have been determined per the El Paso County Drainage Basin Fees Sheet, dated February 3, 2006, Resolution No. 06-31. The site is located entirely within the Sand Creek Drainage Basin. The fees are based upon the percent impervious of the development, which have been included within the appendix of this report. The fees due have been calculated as follows.

Claremont Business Park Filing No. 2
Final Drainage Report
Drainage and Bridge Fees

	Area (ac.)	Fee/Imp. Acre	% Imp.	Fee Due	Reimbursable Const. Costs	Fee Credit	Fee Due at Platting	Fee Credit Remaining
Drainage Fee	62.967	\$15,000.00	80%	\$755,604.00	\$0.00	\$1,225,355.45	\$0.00	\$469,751.45
Bridge Fee	62.967	\$1,503.00	80%	\$75,711.52	\$75,711.52	\$0.00	\$0.00	\$0.00
Total Fee Due at Platting							\$0.00	

The developer of Claremont Business Park is completing the construction of the channel improvements on behalf of the Central Marksheffel Metropolitan District. The construction costs for both Filing 1 and Filing 2 combined exceed the drainage fees due for the site. No drainage fees will be required at the time of platting.

It should be noted that the Central Marksheffel Business District is reimbursing the developer of Claremont Business Park Filing 2 for the construction costs of the channel minus the drainage fees due for the site. The District has \$1,225,355.45 of drainage credits available within the Sand Creek Basin. This credit amount is based upon the construction cost estimate for the channel minus the drainage fees assessed for Claremont Business Park Filing No. 1. The District will use an additional \$755,604.00 of the drainage credits for the platting of Claremont Business Park Filing No. 2. The District will have \$469,751.45 of drainage credits left within the Sand Creek Fee basin.

The Central Marksheffel Business District has also constructed the Marksheffel Road Bridge over East Fork Sand Creek. This structure has been identified as a needed public improvement within the Drainage Basin Planning Study for Sand Creek and is eligible for reimbursement. Since the construction of the Marksheffel Bridge is in excess of the \$75,711.52 in bridge fees due for this site, no bridge fees are required at the time of platting. The fee will be deducted from the eligible reimbursable construction costs of the bridge and the remaining credits will be utilized or reimbursement applied for by the Central Marksheffel Business District.

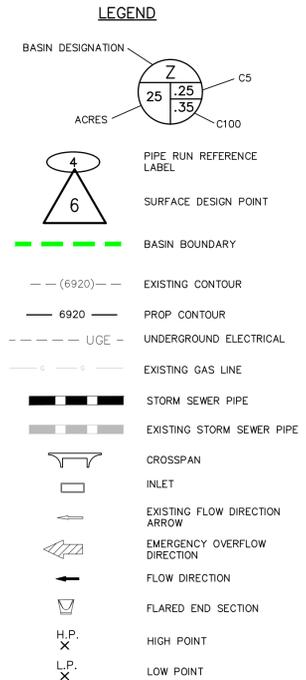
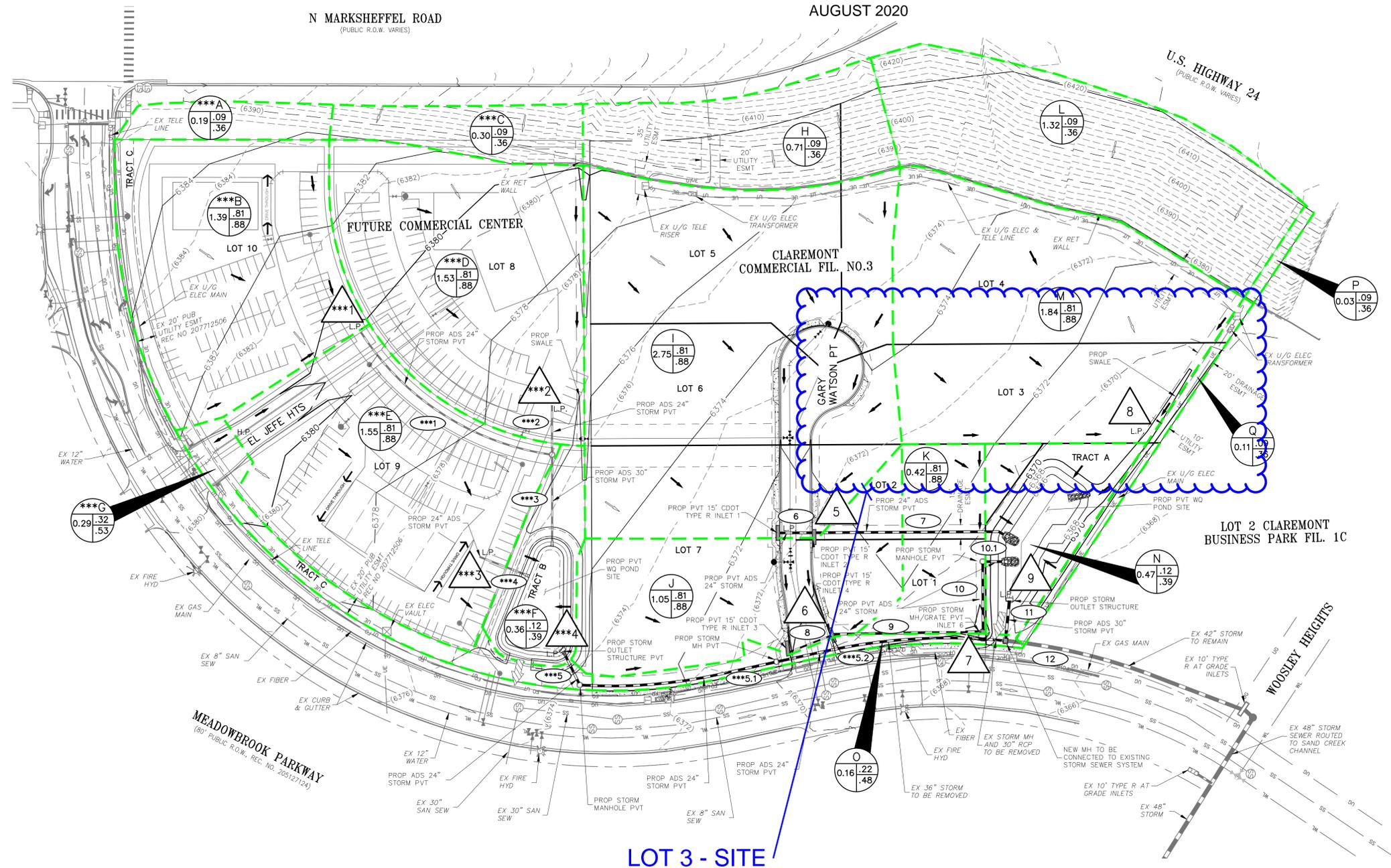
**FINAL DRAINAGE REPORT
CLAREMONT BUSINESS PARK 2 FIL. NO. 1
PROPOSED DRAINAGE MAP**

FINAL DRAINAGE REPORT FOR CLAREMONT BUSINESS PARK 2 FILING NO.1

COUNTY OF EL PASO, STATE OF COLORADO

PROPOSED DRAINAGE MAP

AUGUST 2020



1	A	B	C	D
1	BASIN SUMMARY			
2	BASIN	AREA (ACRES)	Q ₅	Q ₁₀₀
3	***A	0.19	0.1	0.6
4	***B	1.39	5.5	10.1
5	***C	0.3	0.1	1.0
6	***D	1.53	6.3	11.5
7	***E	1.55	6.5	11.8
8	***F	0.36	0.2	1.0
9	***G	0.29	0.5	1.3
10	H	0.71	0.3	2.0
11	I	2.75	9.8	17.9
12	J	1.05	4.4	8.0
13	K	0.42	1.8	3.2
14	L	1.32	0.5	3.7
15	M	1.84	6.7	12.2
16	N	0.47	0.2	1.3
17	O	0.16	0.2	0.6
18	P	0.03	0.0	0.1
19	Q	0.11	0.0	0.3

DESIGN POINT SUMMARY				
DESIGN POINT	Q ₅	Q ₁₀₀	BASIN	STRUCTURE
***1	5.6	10.6	***A, ***B	24" PP
***2	6.4	12.4	***C, ***D	24" PP
***3	6.5	11.8	***E	24" PP
***4	18.2	35.0	***F, ***G, ***H	POND 1
5	10.1	19.8	H, I	2-15" INLETS
6	4.4	9.8	J, FB05	2-15" INLETS
7	1.8	3.2	K	MH W/GRATE
8	7.2	15.7	L, M	24" PP OR SWALE
9	23.1	46.9	DP8, 7, 10, 1, N	POND 2

SF WQCV POND 1 SUMMARY

EPC/URBAN DRAINAGE SAND FILTER BASIN—SEE STD. DET.

AREA REQUIRED	2,335 SF
AREA PROVIDED	3,690 SF

SF ELEV = 6373.00
WQCV WSE = 6374.26
100 YR SPILLWAY ELEV = 6375.00
100 YR WSE = 6375.00

SF WQCV POND 2 SUMMARY

EPC/URBAN DRAINAGE SAND FILTER BASIN—SEE STD. DET.

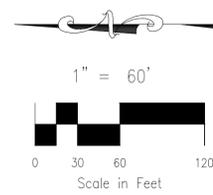
AREA REQUIRED	2,962 SF
AREA PROVIDED	2,450 SF

SF ELEV = 6364.45
WQCV WSE = 6366.17
100 YR SPILLWAY ELEV = 6367.74
100 YR WSE = 6367.38

STORM SEWER SUMMARY				
PIPE RUN	Q ₅	Q ₁₀₀	PIPE SIZE	CONTRIBUTING DP/BASIN/PIPES
***1	5.6	10.6	24"	***DP1
***2	6.4	12.4	24"	***DP2
***3	11.8	22.6	30"	***PR1, ***PR2
***4	6.5	11.8	24"	***DP3
***5	7.2	15.5	24"	POND 1 OUTFALL
***5.1	7.2	15.5	24"	***PR5
***5.2	7.2	15.5	24"	***PR5.1
6	6.4	9.1	24"	INLET 1
7	10.1	18.3	30"	PR6, INLET 2
8	3.0	4.9	18"	INLET 3
9	4.5	9.8	24"	PR8, INLET 4
10	6.3	13.0	24"	PR9, DP7
10.1	6.3	13.0	24"	PIPE 10
11	13.2	23.8	30"	POND 2 OUTFALL
12	20.4	39.3	EX42"	***PR5.2, PR11

***ULTIMATE BUILD OUT, DEVELOPED. DESIGNED TO SIZE FUTURE POND 1 AND STORM SEWER.

LOT 3 - SITE



102 E. PIKES PEAK AVE., 5TH FLOOR
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

CLAREMONT BUSINESS PARK 2 FIL. NO.1
PROP. DRAINAGE OFFSITE DEVELOPED

PROJECT NO. 44-037A FILE: \dwg\Eng Exhibits\44037-FDRM-2.dwg

DESIGNED BY: ET	SCALE: DATE: 08-04-2020
DRAWN BY: CLP	HORIZ: 1"=60'
CHECKED BY: VAS	VERT: N/A

SHEET 2 OF 2 FDM02

File: 0:44037A-CBP-F2-Lots 1-8.dwg; Eng Exhibits (DR MAP, 3--20-20) 44037-FDRM-2.dwg; Plotstamp: 8/4/2020 10:55 AM

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

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

HYDROLOGIC CALCULATIONS

FINAL DRAINAGE LETTER FOR CLAREMONT BUSINESS PARK 2 FILING NO.1 - Lot 3
PROPOSED DRAINAGE CALCULATIONS
(Area Runoff Coefficient Summary)

			<i>ASPHALT DRIVES 0.90-0.96 COMMERCIAL AREAS 0.81-0.88</i>			<i>ROOFS 0.73-0.81 LIGHT INDUST AREAS 0.59-0.70</i>			<i>LANDSCAPED AREAS 0.16-0.41 GREENBELTS/AGRI. 0.09-0.36 PARKS 0.12-0.39</i>			<i>WEIGHTED</i>	
BASIN	TOTAL AREA (SF)	TOTAL AREA (Acres)	AREA (Acres)	C₅	C₁₀₀	AREA (Acres)	C₅	C₁₀₀	AREA (Acres)	C₅	C₁₀₀	C₅	C₁₀₀
<i>Portion 16</i>	<i>8153.0</i>	<i>0.19</i>	<i>0.12</i>	<i>0.90</i>	<i>0.96</i>	<i>0.00</i>	<i>0.73</i>	<i>0.81</i>	<i>0.07</i>	<i>0.16</i>	<i>0.41</i>	<i>0.62</i>	<i>0.75</i>
<i>Portion M1</i>	<i>12383.0</i>	<i>0.28</i>	<i>0.18</i>	<i>0.90</i>	<i>0.96</i>	<i>0.08</i>	<i>0.73</i>	<i>0.81</i>	<i>0.02</i>	<i>0.16</i>	<i>0.41</i>	<i>0.80</i>	<i>0.88</i>
<i>Portion M2</i>	<i>10575.0</i>	<i>0.24</i>	<i>0.00</i>	<i>0.90</i>	<i>0.96</i>	<i>0.19</i>	<i>0.73</i>	<i>0.81</i>	<i>0.05</i>	<i>0.16</i>	<i>0.41</i>	<i>0.61</i>	<i>0.73</i>
<i>Portion M3</i>	<i>15984.0</i>	<i>0.37</i>	<i>0.31</i>	<i>0.90</i>	<i>0.96</i>	<i>0.00</i>	<i>0.73</i>	<i>0.81</i>	<i>0.05</i>	<i>0.16</i>	<i>0.41</i>	<i>0.80</i>	<i>0.88</i>

Calculated by: GT
Date: 2/10/2021
Checked by: VAS

FINAL DRAINAGE LETTER FOR CLAREMONT BUSINESS PARK 2 FILING NO.1 - Lot 3
PROPOSED DRAINAGE CALCULATIONS
(Area Drainage Summary)

<i>From Area Runoff Coefficient Summary</i>				OVERLAND				STREET / CHANNEL FLOW				Time of Travel (T_t)		INTENSITY *		TOTAL FLOWS	
BASIN	AREA TOTAL (Acres)	C ₅	C ₁₀₀	C ₅	Length (ft)	Height (ft)	T _c (min)	Length (ft)	Slope (%)	Velocity (fps)	T _t (min)	*TOTAL (min)	CHECK (min)	I ₅ (in/hr)	I ₁₀₀ (in/hr)	Q ₅ (c.f.s.)	Q ₁₀₀ (c.f.s.)
		<i>From DCM Table S-1</i>															
Portion I6	0.19	0.62	0.75	0.62	31	0.3	4.8	120	1.3%	2.3	0.9	5.7	10.8	5.0	8.4	0.6	1.2
Portion M1	0.28	0.80	0.88	0.80	25	0.5	2.2	203	1.0%	2.0	1.5	5.0	11.3	5.2	8.7	1.2	2.2
Portion M2	0.24	0.61	0.73	0.61	25	0.5	3.5	148	1.0%	1.5	1.6	5.1	11.0	5.1	8.6	0.8	1.5
Portion M3	0.37	0.80	0.88	0.80	50	2.0	2.5	112	2.5%	3.2	0.6	5.0	10.9	5.2	8.7	1.5	2.8

* Intensity equations assume a minimum travel time of 5 minutes.

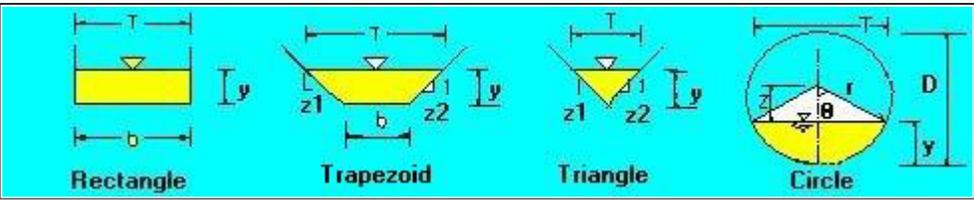
Calculated by: GT
Date: 2/10/2021
Checked by: VAS

FINAL DRAINAGE LETTER FOR CLAREMONT BUSINESS PARK 2 FILING NO.1 - Lot 3
PROPOSED DRAINAGE CALCULATIONS
(Basin Routing Summary)

<i>From Area Runoff Coefficient Summary</i>				OVERLAND				PIPE / CHANNEL FLOW				Time of Travel (T_t)	INTENSITY *		TOTAL FLOWS		COMMENTS
DESIGN POINT	CONTRIBUTING BASINS <i>DPS AND/OR PIPES</i>	CA ₅	CA ₁₀₀	C _s	Length (ft)	Height (ft)	T _c (min)	Length (ft)	Slope (%)	Velocity (fps)	T _t (min)	*TOTAL (min)	I ₅ (in/hr)	I ₁₀₀ (in/hr)	Q ₅ (c.f.s.)	Q ₁₀₀ (c.f.s.)	
Lot 3 - DP 1	16	0.12	0.14	Basin 16 Tc used								5.7	5.0	8.4	0.6	1.2	
Lot 3 - DP 2	M1	0.23	0.25	Basin M1 Tc used								5.0	5.2	8.7	1.2	2.2	
Lot 3 - DP 3	M2	0.15	0.18	Basin M2 Tc used								5.1	5.1	8.6	0.8	1.5	
Lot 3 - DP 4	M2, M3	0.44	0.50	Basin M2 Tc used + Routing over Basin M3								6.0	4.9	8.2	2.2	4.1	
								162	2.5%	3.2	0.8						

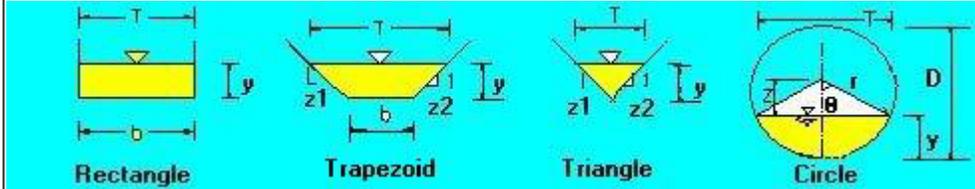
* Intensity equations assume a minimum travel time of 5 minutes.

Calculated by: GT
Date: 2/10/2021
Checked by: VAS

The open channel flow calculator		
Select Channel Type: Triangle ▼		
Velocity(V)&Discharge(Q) ▼	Select unit system: Feet(ft) ▼	
Channel slope: <input type="text" value="0.25"/> <input type="text" value="ft/ft"/>	Water depth(y): <input type="text" value="0.4"/> <input type="text" value="ft"/>	Bottom W(b) <input type="text" value="0"/> <input type="text" value="ft"/>
Flow velocity <input type="text" value="6.7397"/> <input type="text" value="ft/s"/>	LeftSlope (Z1): <input type="text" value="2"/> to 1 (H:V)	RightSlope (Z2): <input type="text" value="2"/> <input type="text" value="to 1 (H:V)"/>
Flow discharge <input type="text" value="2.1567"/> <input type="text" value="ft^3/s"/>	Input n value <input type="text" value="0.035"/> or select n	
<input type="button" value="Calculate!"/>	Status: <input type="text" value="Calculation finished"/>	<input type="button" value="Reset"/>
Wetted perimeter <input type="text" value="1.79"/> <input type="text" value="ft"/>	Flow area <input type="text" value="0.32"/> <input type="text" value="ft^2"/>	Top width(T) <input type="text" value="1.6"/> <input type="text" value="ft"/>
Specific energy <input type="text" value="1.11"/> <input type="text" value="ft"/>	Froude number <input type="text" value="2.66"/>	Flow status <input type="text" value="Supercritical flow"/>
Critical depth <input type="text" value="0.59"/> <input type="text" value="ft"/>	Critical slope <input type="text" value="0.0305"/> <input type="text" value="ft/ft"/>	Velocity head <input type="text" value="0.71"/> <input type="text" value="ft"/>

Copyright 2000 Dr. Xing Fang, Department of Civil Engineering, Lamar University.

DP2 TRIANGULAR RIPRAP CHANNEL $Q_{100}=2.2$ cfs

The open channel flow calculator		
Select Channel Type: Triangle ▾		
Velocity(V)&Discharge(Q) ▾	Select unit system: Feet(ft) ▾	
Channel slope: <input type="text" value=".01"/> <small>ft/ft</small>	Water depth(y): <input type="text" value=".43"/> <small>ft</small>	Bottom W(b) <input type="text" value="0"/> <small>ft</small>
Flow velocity <input type="text" value="2.0906"/> <small>ft/s</small>	LeftSlope (Z1): <input type="text" value="4"/> to 1 (H:V)	RightSlope (Z2): <input type="text" value="4"/> <small>to 1 (H:V)</small>
Flow discharge <input type="text" value="1.5462"/> <small>ft^3/s</small>	Input n value <input type="text" value="0.025"/> or select n	
<input type="button" value="Calculate!"/>	Status: Calculation finished	<input type="button" value="Reset"/>
Wetted perimeter <input type="text" value="3.55"/> <small>ft</small>	Flow area <input type="text" value="0.74"/> <small>ft^2</small>	Top width(T) <input type="text" value="3.44"/> <small>ft</small>
Specific energy <input type="text" value="0.5"/> <small>ft</small>	Froude number <input type="text" value="0.79"/>	Flow status <input type="text" value="Subcritical flow"/>
Critical depth <input type="text" value="0.39"/> <small>ft</small>	Critical slope <input type="text" value="0.0161"/> <small>ft/ft</small>	Velocity head <input type="text" value="0.07"/> <small>ft</small>

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LOT 3 & 4 GRASSLINED SWALE $Q_{100}=1.5$ cfs

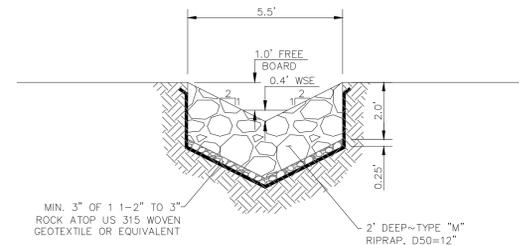
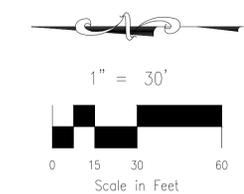
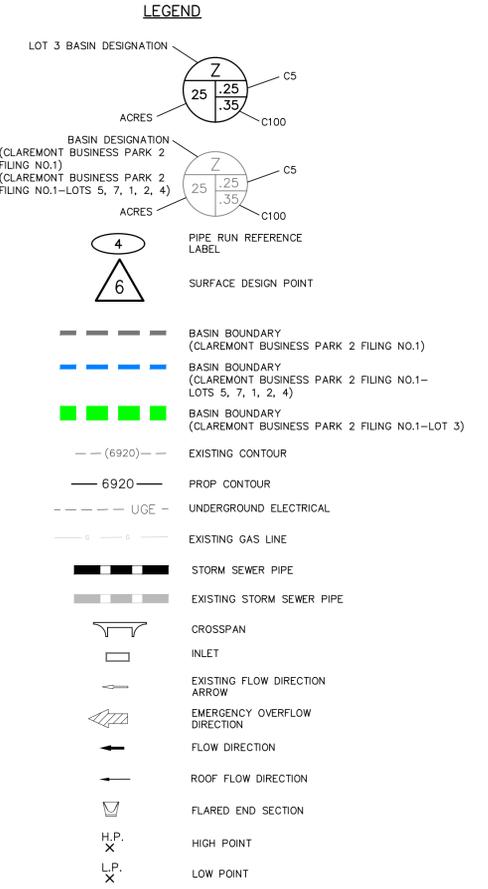
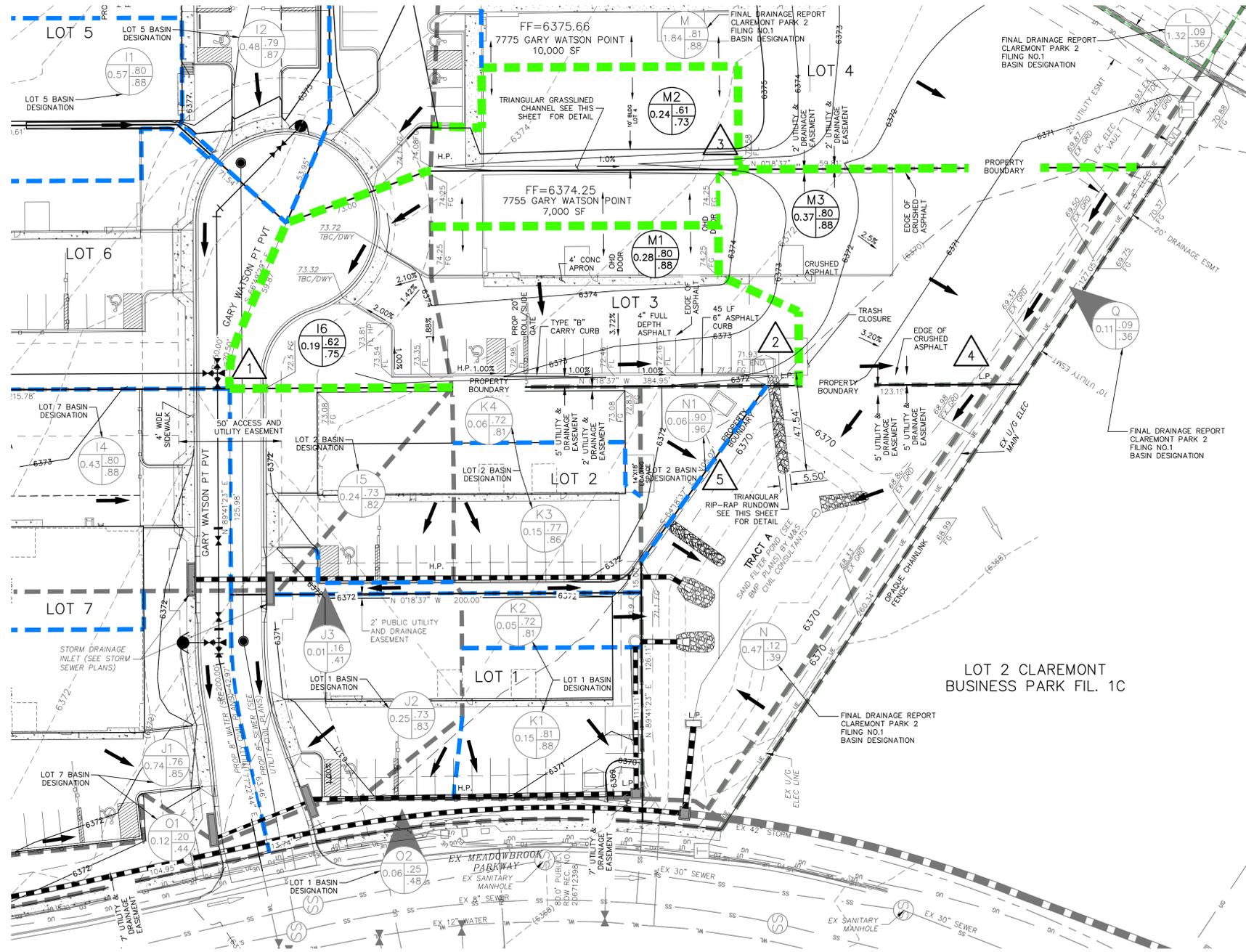
**FINAL DRAINAGE REPORT
CLAREMONT BUSINESS PARK 2 FIL. NO. 1 – LOT 3
PROPOSED DRAINAGE MAP**

FINAL DRAINAGE LETTER FOR CLAREMONT BUSINESS PARK 2 FILING NO. 1

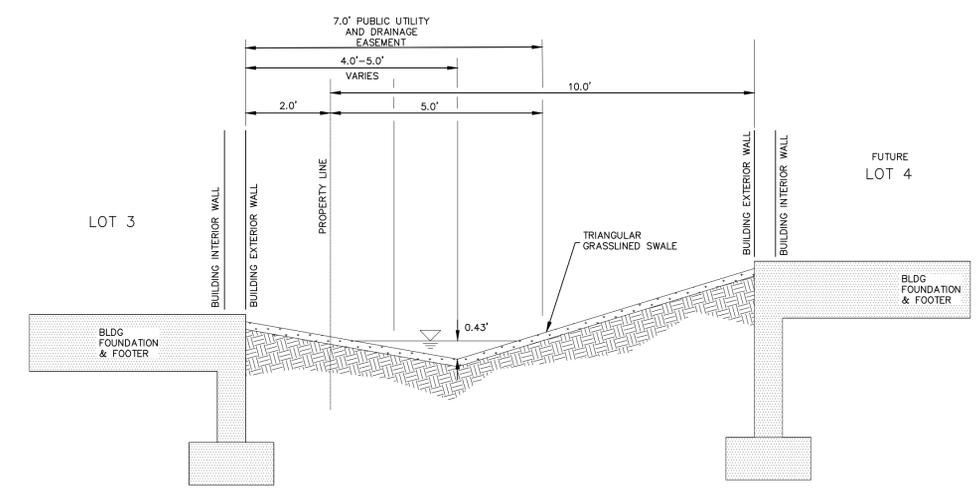
COUNTY OF EL PASO, STATE OF COLORADO

PROPOSED DRAINAGE MAP - LOT 3

APRIL 2021



TRIANGULAR RIPRAP RUNDOWN
NTS



TRIANGULAR GRASSLINED CHANNEL
NTS

BASIN SUMMARY

BASIN	AREA (ACRES)	Q ₅	Q ₁₀₀
I6	0.19	0.6	1.2
M1	0.28	1.2	2.2
M2	0.22	0.8	1.5
M3	0.37	1.5	2.8

DESIGN POINT SUMMARY

DESIGN PT	BASIN	Q ₅	Q ₁₀₀
1	I6	0.6	1.2
2	M1	1.2	2.2
3	M2	0.8	1.5
4	M2, M3	2.2	4.1

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

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

102 E. PIKES PEAK AVE., 5TH FLOOR
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

CLAREMONT BUSINESS PARK 2 FIL. NO.1			
LOT 3			
PROJECT NO. 44-037A	FILE: \\dwg\Eng Exhibits\44037-FDRM-Lot 3.dwg		
DESIGNED BY: ET	SCALE: HORIZ: 1"=30'	DATE: 04-13-2021	
DRAWN BY: GW	VERT: N/A		
CHECKED BY: VAS		SHEET 1 OF 1	FDM01

File: \\dwg\Eng Exhibits\44037-FDRM-Lot 3.dwg Plotstamp: 4/13/2021 2:30 PM