

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

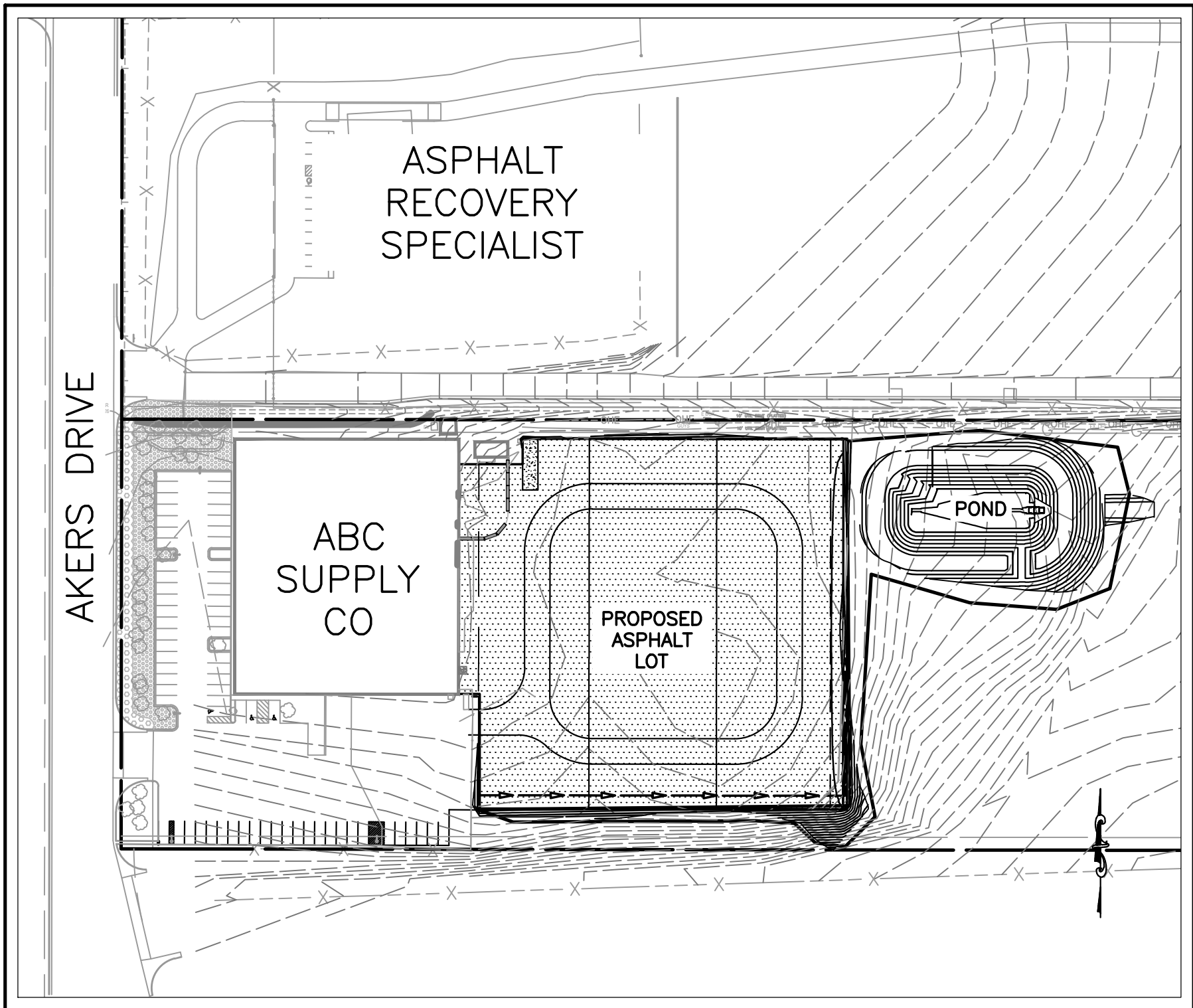
- CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS.
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED STORMWATER MANAGER, SHALL BE LOCATED ON SITE AT ALL TIMES AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMPs AS INDICATED ON THE GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY PCD INSPECTIONS STAFF.
- SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 21 CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMPs SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED.
- TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO STANDARDS AND SPECIFICATION PRESCRIBED IN THE DCM VOLUME II AND THE ENGINEERING CRITERIA MANUAL (ECM) APPENDIX I.
- ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPs IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE DRAINAGE CRITERIA MANUAL (DCM) VOLUME II AND IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN (SWMP), APPENDIX E CHECKLISTS AND PERMITS ADOPTED: 12/23/2004 REVISED: 12/13/2016 REVISION 6.
- ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMPs AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS, THE SWMP AND THE DCM VOLUME II AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION.
- ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON-EROSIVE VELOCITY.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
- BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMPs MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED 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 ONSITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURERS LABELS. APPENDIX E CHECKLISTS AND PERMITS ADOPTED: 12/23/2004 REVISED: 12/13/2016 REVISION 6.
- NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE ADEQUATE PROTECTION SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.
- INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE OWNER HAS HAD A PAVEMENT EVALUATION REPORT PREPARED BY PARTNER ASSESSMENT CORPORATION/AMERICAN GEOSERVICES LLC DATED 11-17-16 AND PERTINENT RECOMMENDATIONS CONTAINED THEREIN HAVE BEEN FOLLOWED IN THE PREPARATION OF THIS GEC PLAN. ADDITIONALLY, SOILS INFORMATION WAS DERIVED FROM THE NATURAL RESOURCES CONSERVATION SERVICE.
- AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT: COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION WQCD - PERMITS 4300 CHERRY CREEK DRIVE SOUTH DENVER, CO 80246-1530 ATTN: PERMITS UNIT.

LOT 8 AKERS ACRES
EL PASO COUNTY, COLORADO
GRADING & DRAINAGE IMPROVEMENTS
GRADING & EROSION CONTROL PLANS

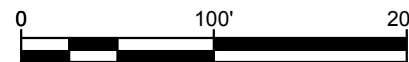


VICINITY MAP

NTS



LOCATION MAP



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

NAME _____ DATE _____

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

NAME _____ DATE _____

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

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

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

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

CONSULTANT/ENGINEER

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

SHEET INDEX

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PRE-EXCAVATION CHECKLIST

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

*STANDARD UTILITY MARKING COLOR CODE

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

IF YOU DAMAGE A GAS LINE, SMELL GAS OR HAVE A GAS EMERGENCY, CALL THE GAS DEPARTMENT.
CALL TWO (2) BUSINESS DAYS BEFORE YOU DIG, FOR LOCATIONS MONDAY-FRIDAY FROM 7 A.M.-5 P.M.
CALL 1-800-922-1987. FOR EMERGENCY LOCATIONS DURING NON-BUSINESS HOURS CALL 520-0022. (NO CHARGE FOR THIS SERVICE)

ISSUED FOR REVIEW
MONDAY, JANUARY 07, 2019

REVIEWED FOR CONSTRUCTION:

BY _____

DATE _____

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PCD FILE NO. PPR 1848



SHEET TITLE:
GRADING & EROSION CONTROL
COVER & NOTES

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

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

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

FIELD BOOK NO. N/A

SCALE: NOTED

DATE: _____

DESIGNED BY: CLD

CHECKED BY: RGO

DRAWN BY: CLD

PROJECT NO. 18022

SHEET NO. C1

OF 8 SHEETS

PROJECT NAME: STAGE 1 DRAINAGE IMPROVEMENTS
DRAWN BY: C. WURTH, M. WURTH & ASSOCIATES
PROJECT NO. 18020 - UPDATED VERSION: 1/7/2019 8:11 PM

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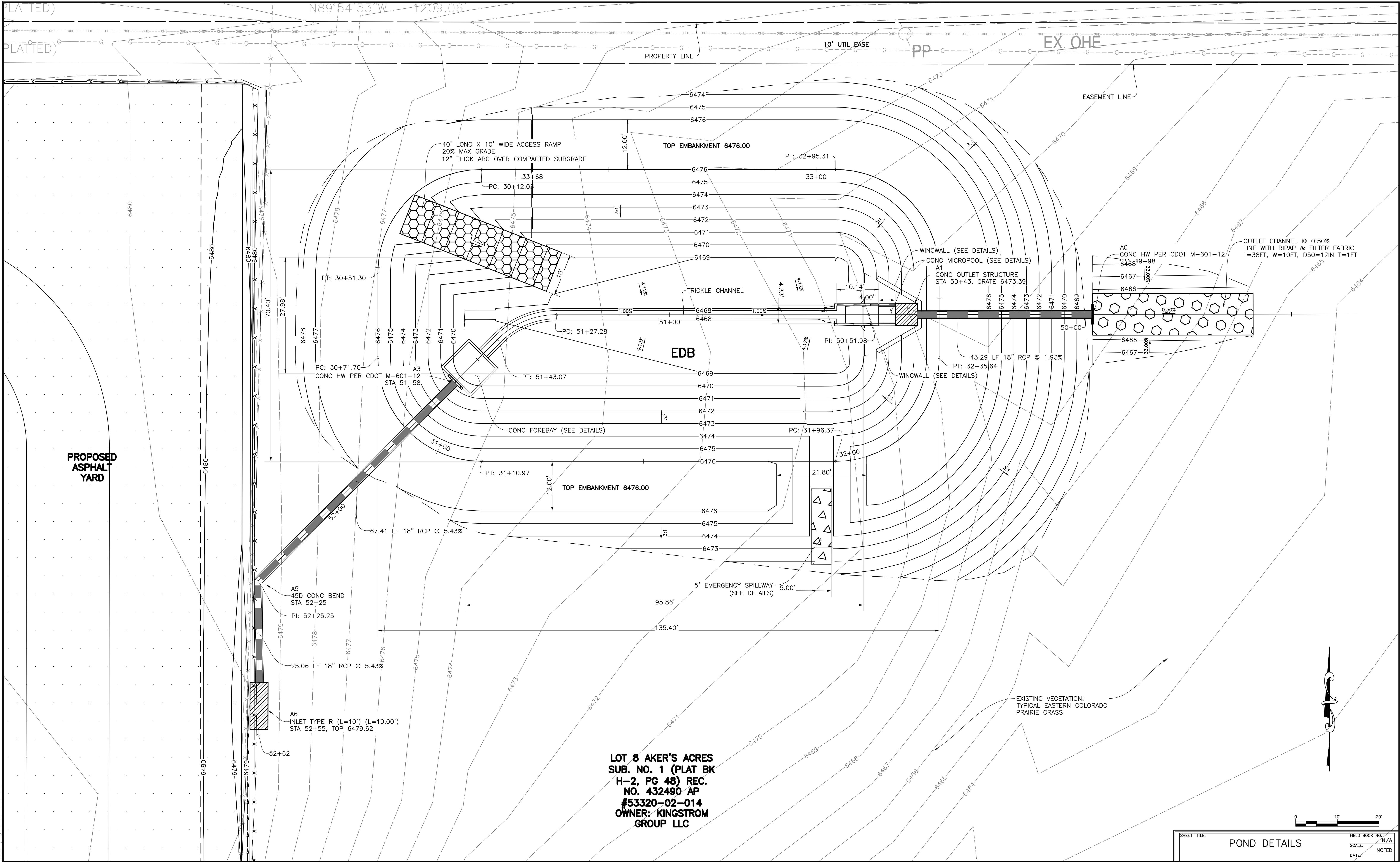
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PROJECT:		NOTED
LOT 8 AKERS ACRES		
COLORADO SPRINGS, COLORADO		
GRADING & DRAINAGE IMPROVEMENTS		
PREPARED BY:		DESIGNED BY: CLD
Obering, Wurth & Associates		CHECKED BY: RGO
Consulting Civil Engineers		DRAWN BY: CLD
Professional Land Surveyors		PROJECT NO. 18022
1042 Elkton Drive		SHEET NO. C2
Colorado Springs, Colorado		OF 8 SHEETS
Phone (719) 531-8200 - Fax (719) 531-6266		
E-mail Address: owacivil@mindspring.com		



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

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MONDAY, JANUARY 07, 2019

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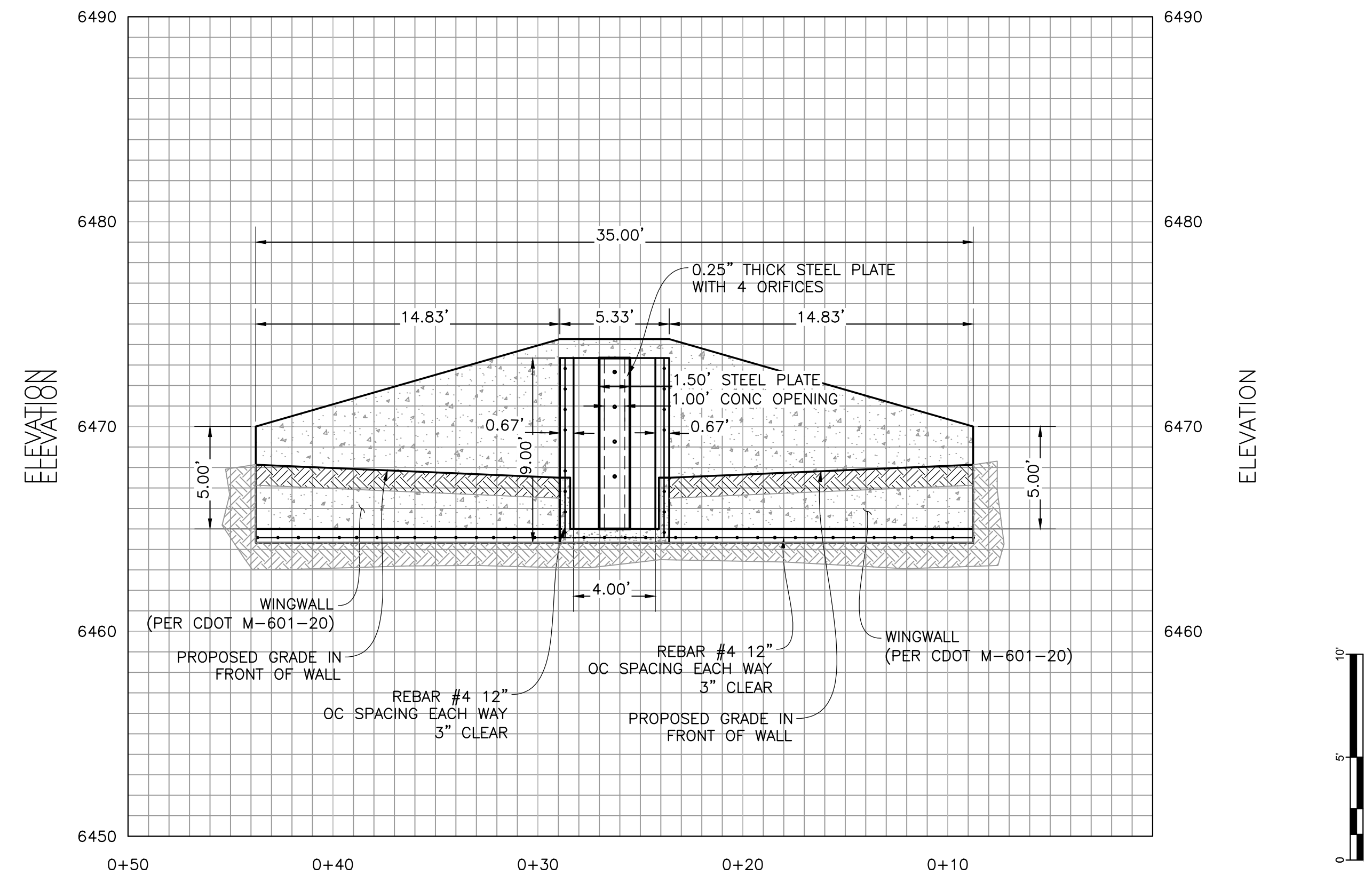
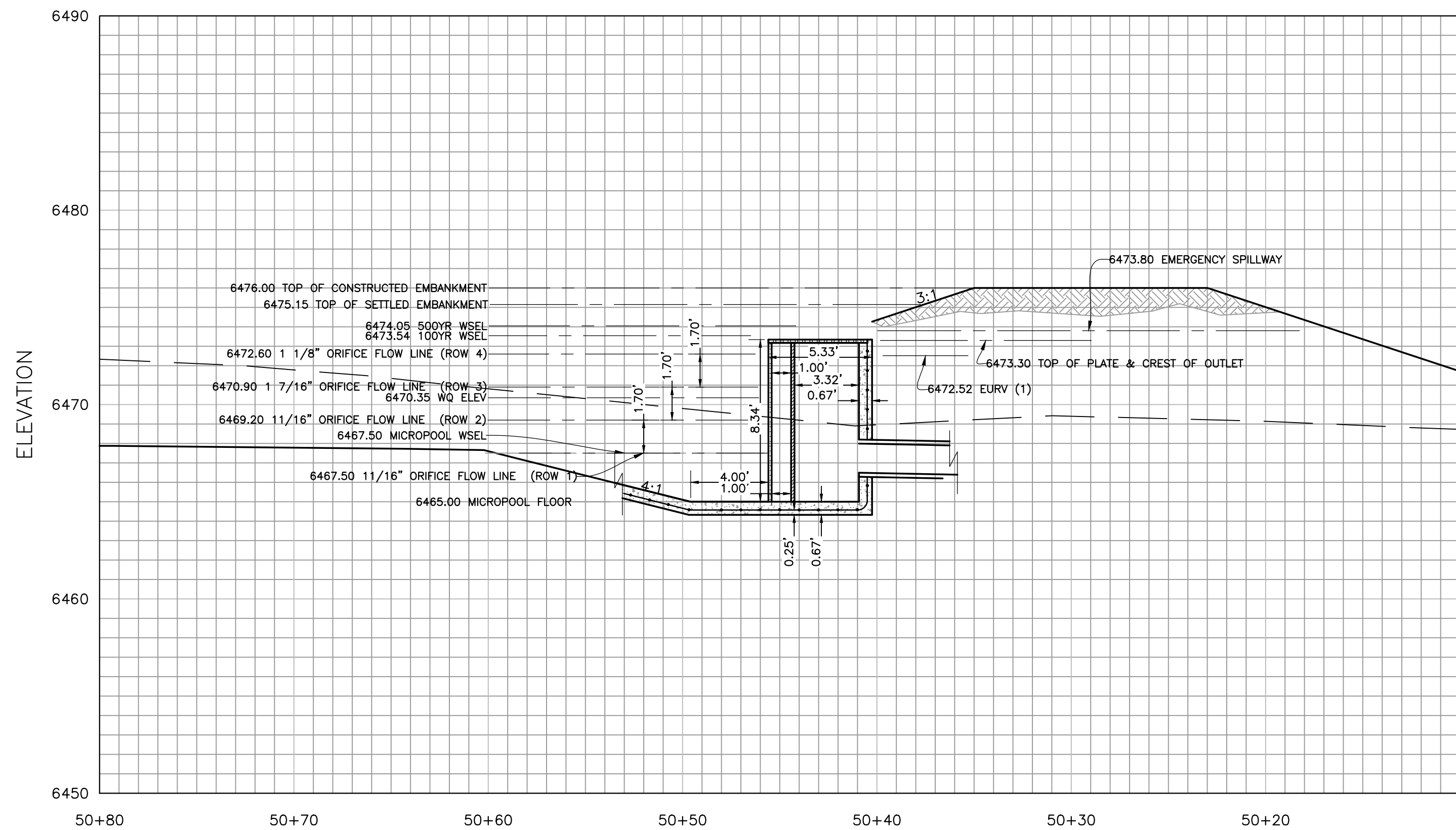
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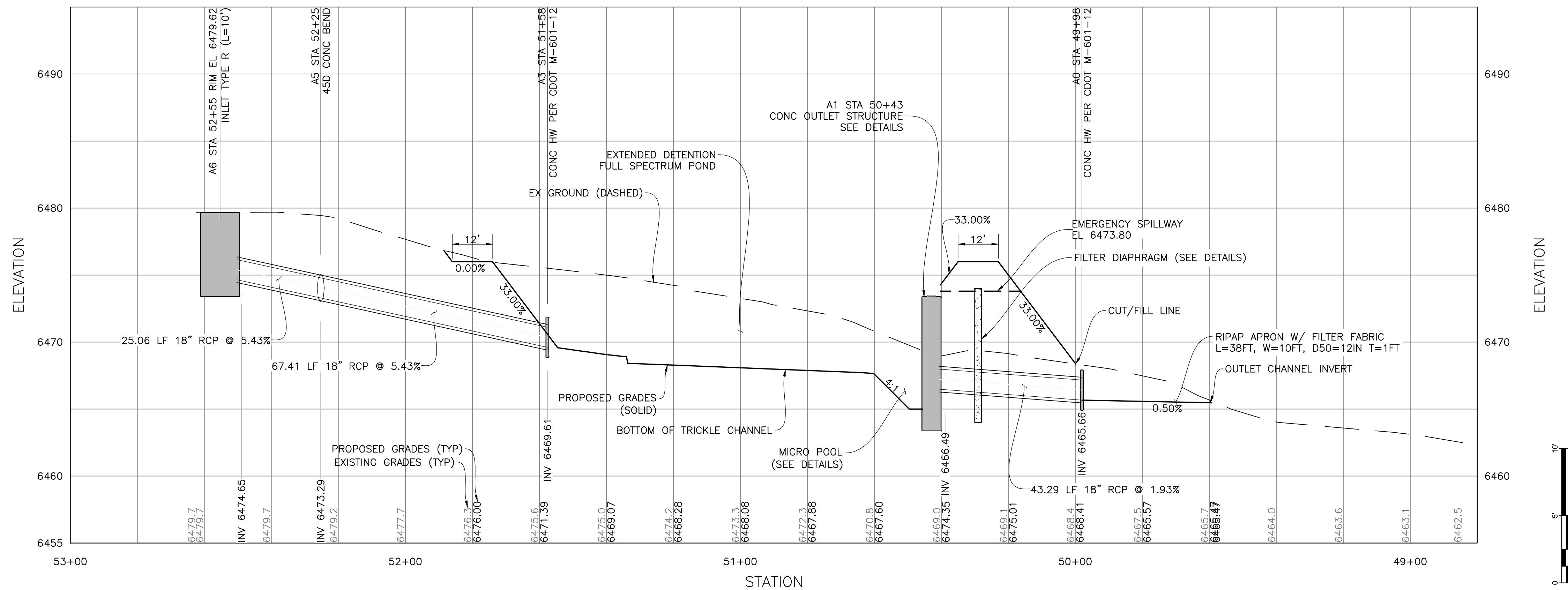
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DESIGNED BY: CLD		CHECKED BY: RGO
DRAWN BY: CLD		PROJECT NO.: 18022
PREPARED BY: Obering, Wurth & Associates Consulting Civil Engineers Professional Land Surveyors 1042 Elkton Drive Colorado Springs, Colorado Phone (719) 531-6200 - Fax (719) 531-6266 E-mail Address: owacivil@mindspring.com		SHEET NO.: C3
OF 8 SHEETS		

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



OUTLET STRUCTURE ELEVATION
SEE UDFCD DETAILS NEXT SHEET



PROFILE STORM DRAIN THROUGH POND



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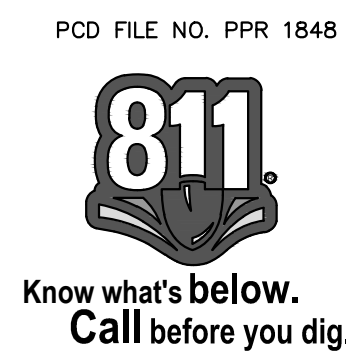
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PREPARED BY: Obering, Wurth & Associates Consulting Civil Engineers Colorado Springs, Colorado Phone (719) 531-6200 - Fax (719) 531-6266 E-mail Address: owacivil@mindspring.com		DATE:
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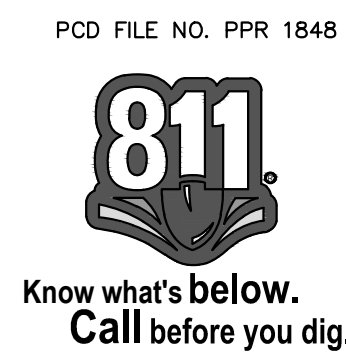
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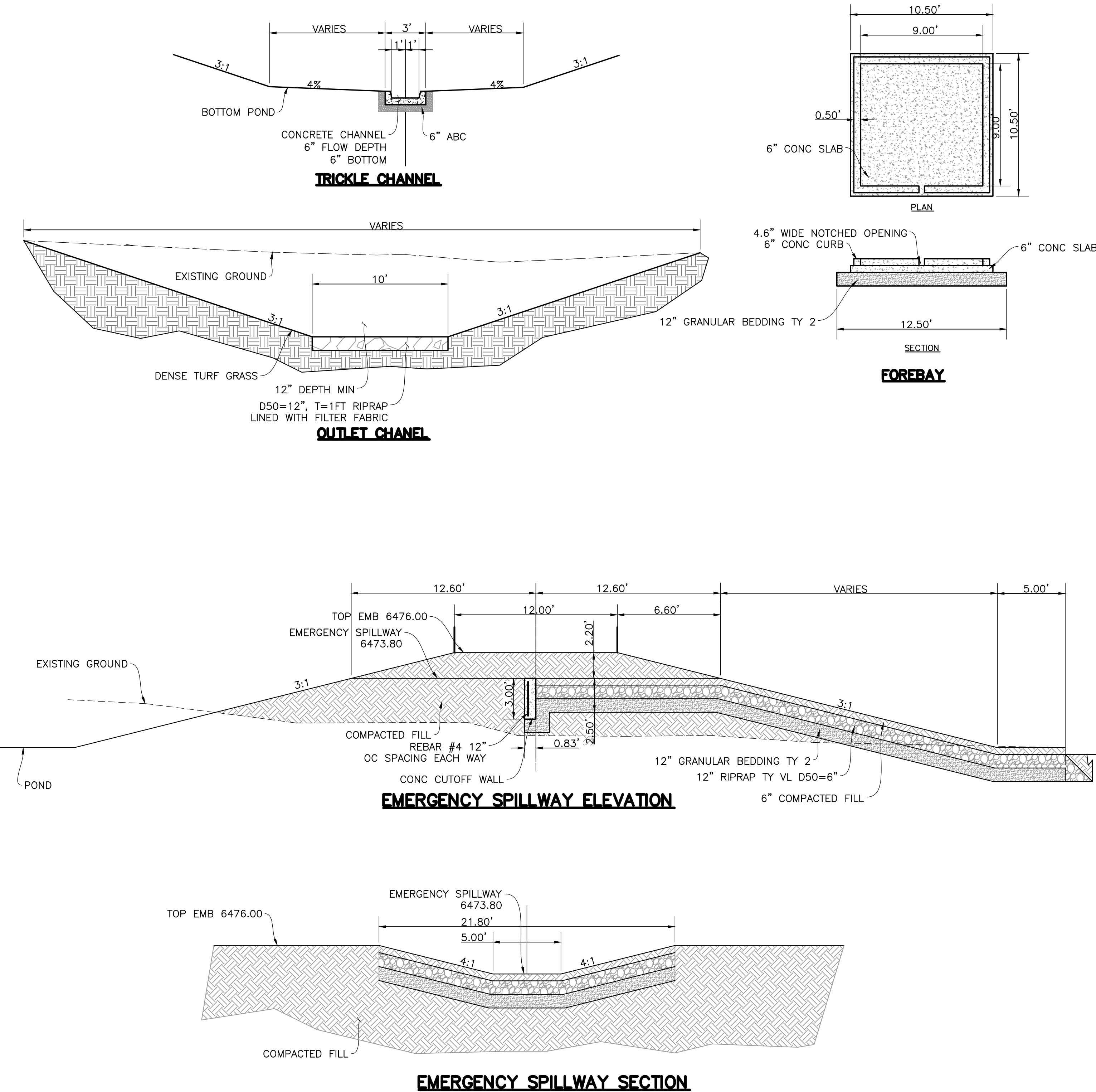
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DRAWN BY: CLD	PROJECT NO. 18022	SHEET NO. C5
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T-12

Outlet Structures

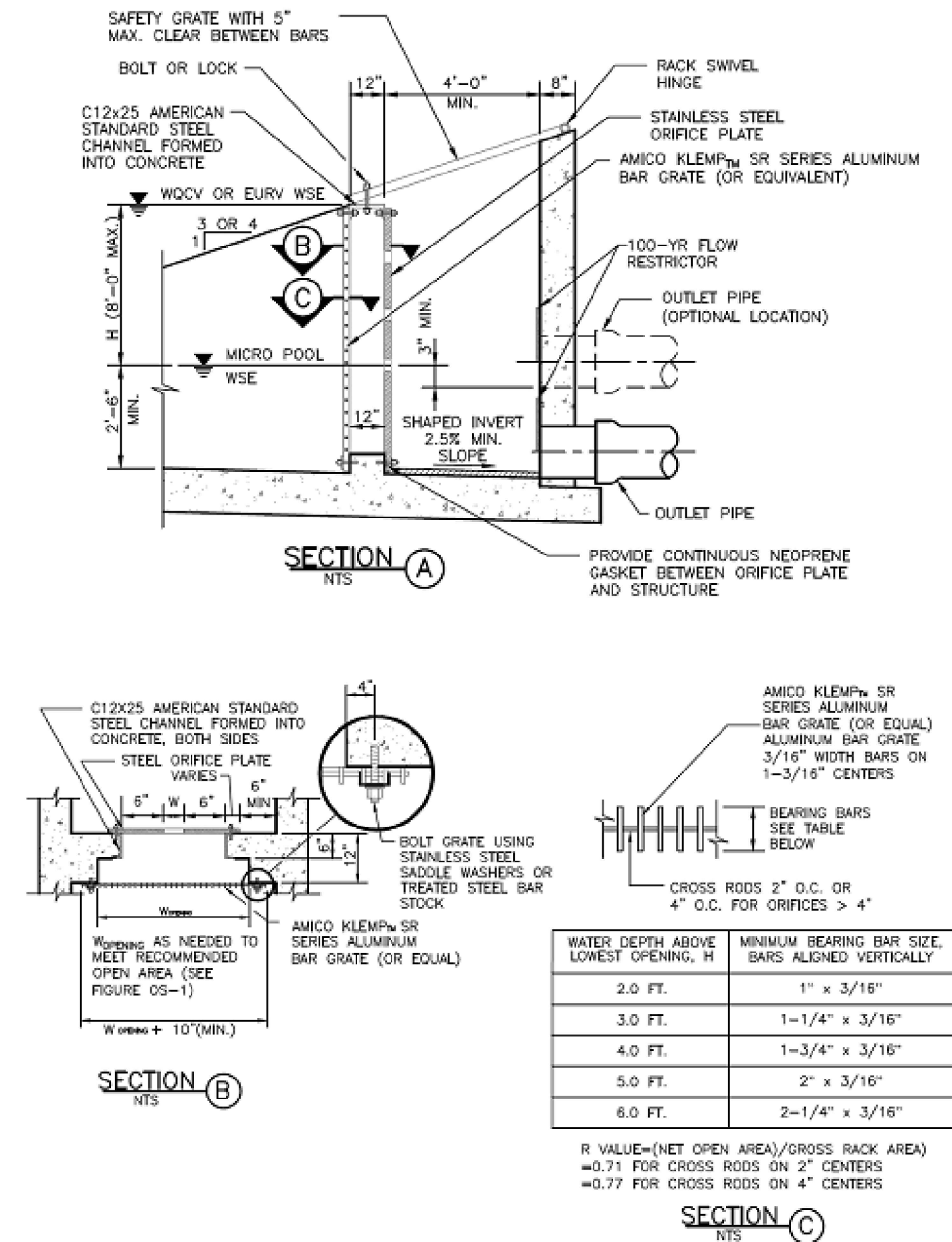
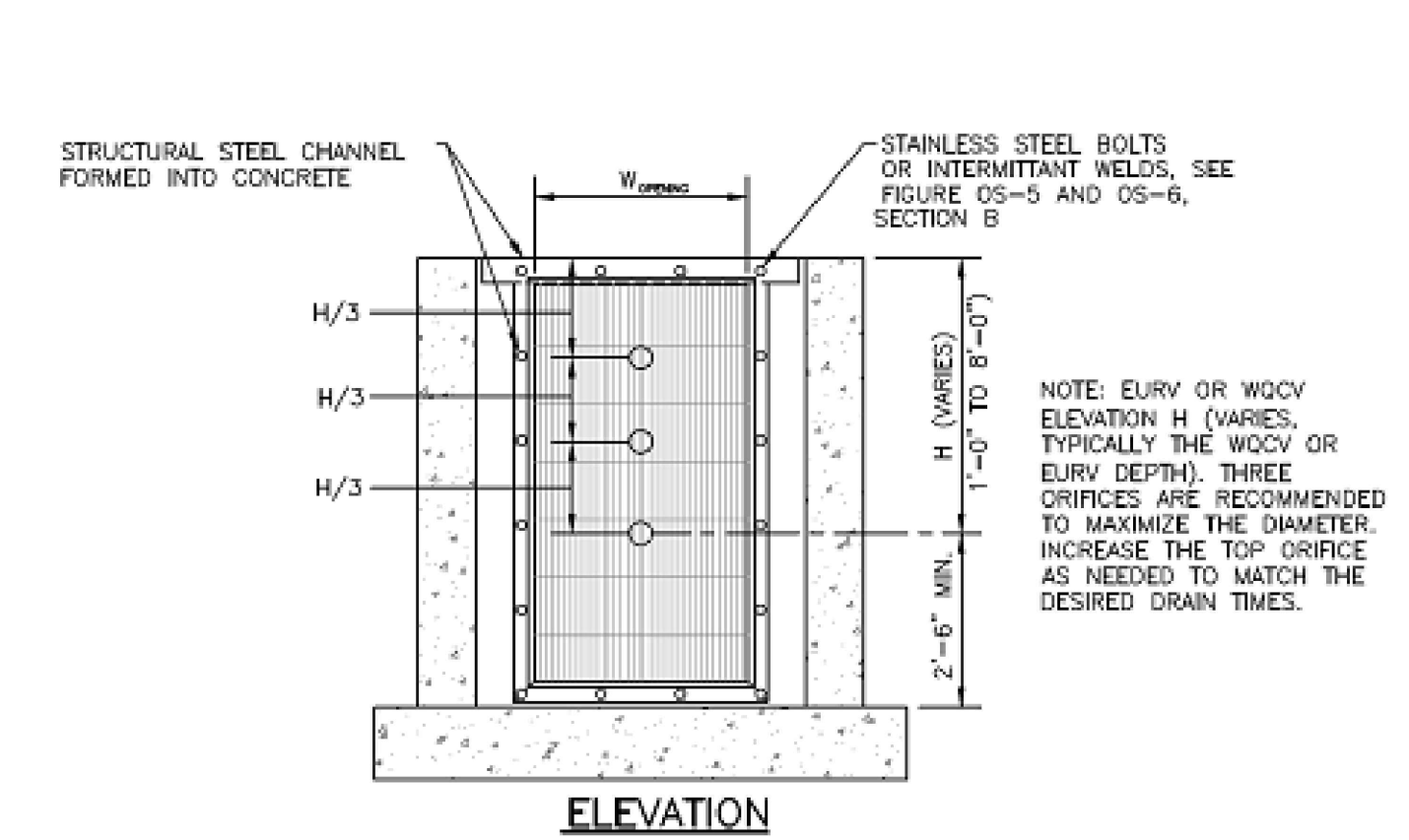


Figure OS-6. Typical outlet structure with bar grate trash rack

OS-10 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2015

Outlet Structures

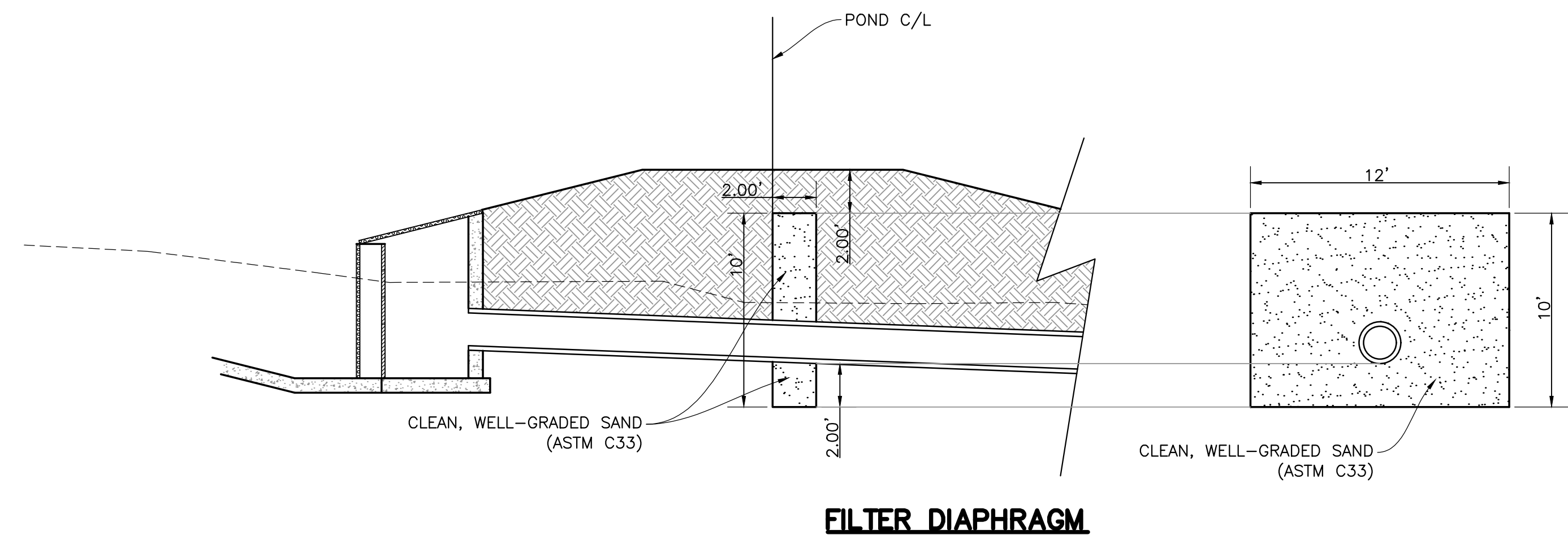
T-12



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

Figure OS-4. Orifice plate and trash rack detail and notes

November 2015 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 OS-7



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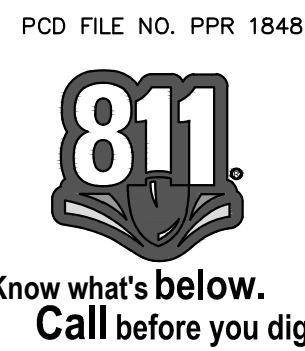
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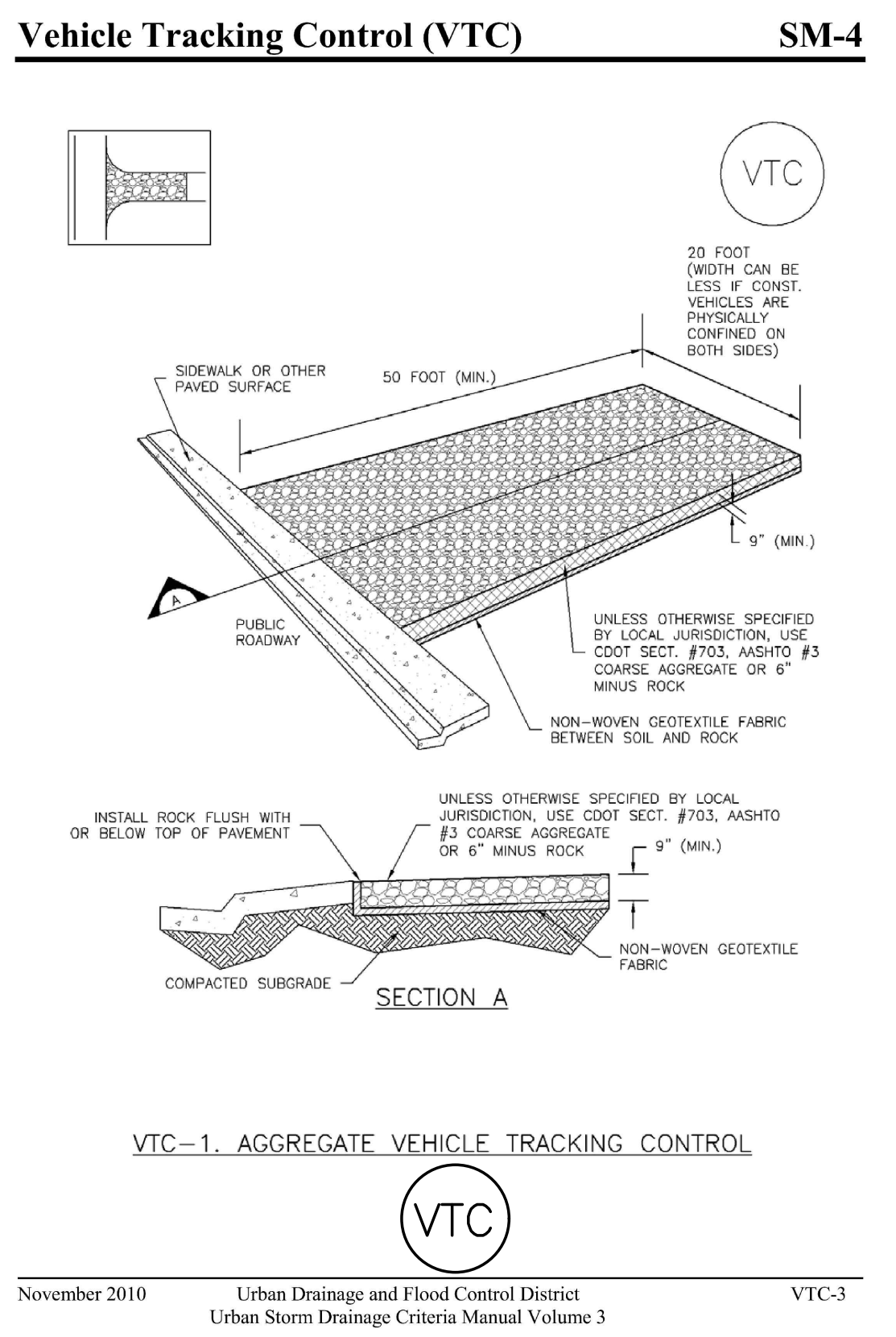
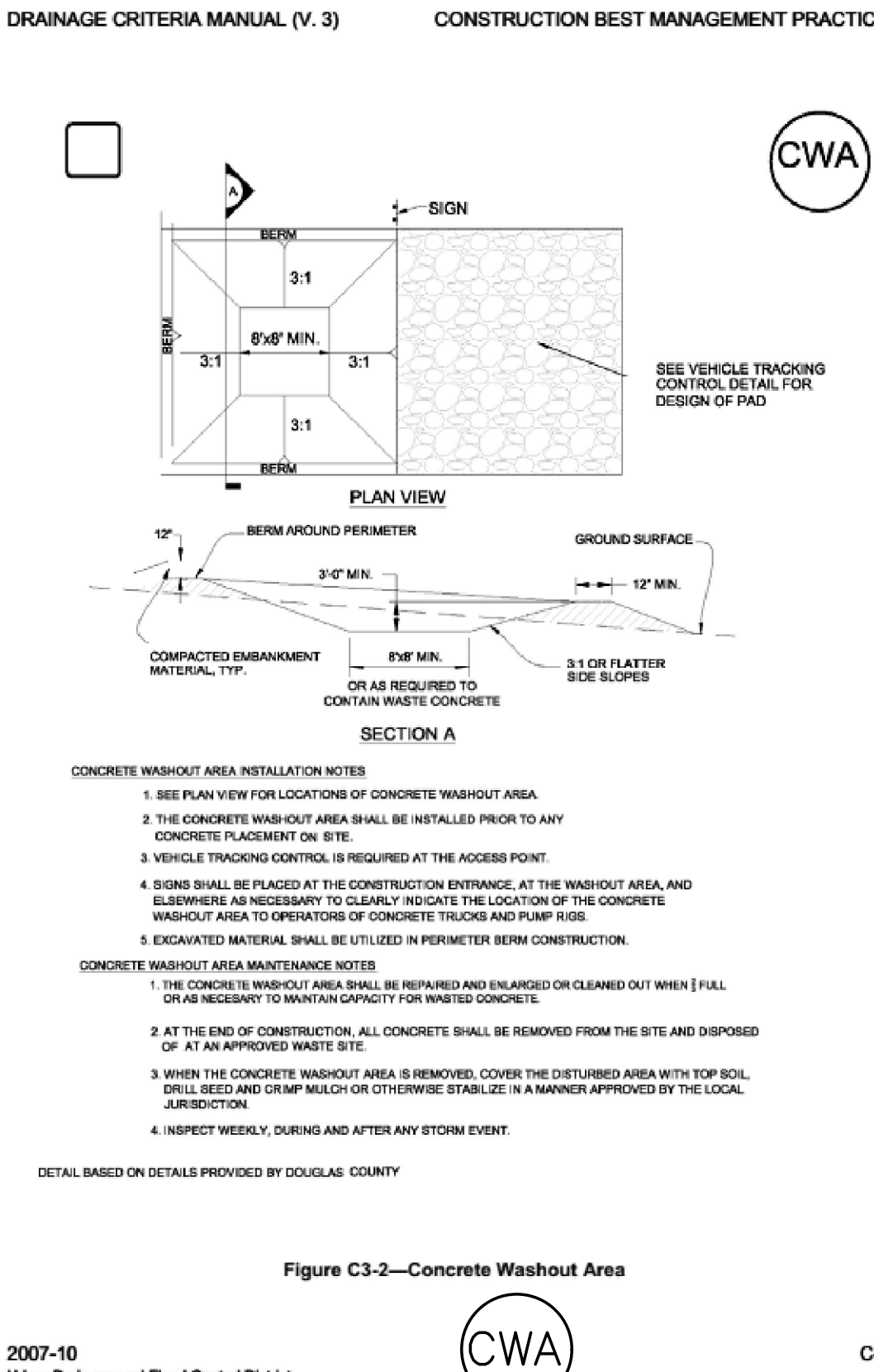
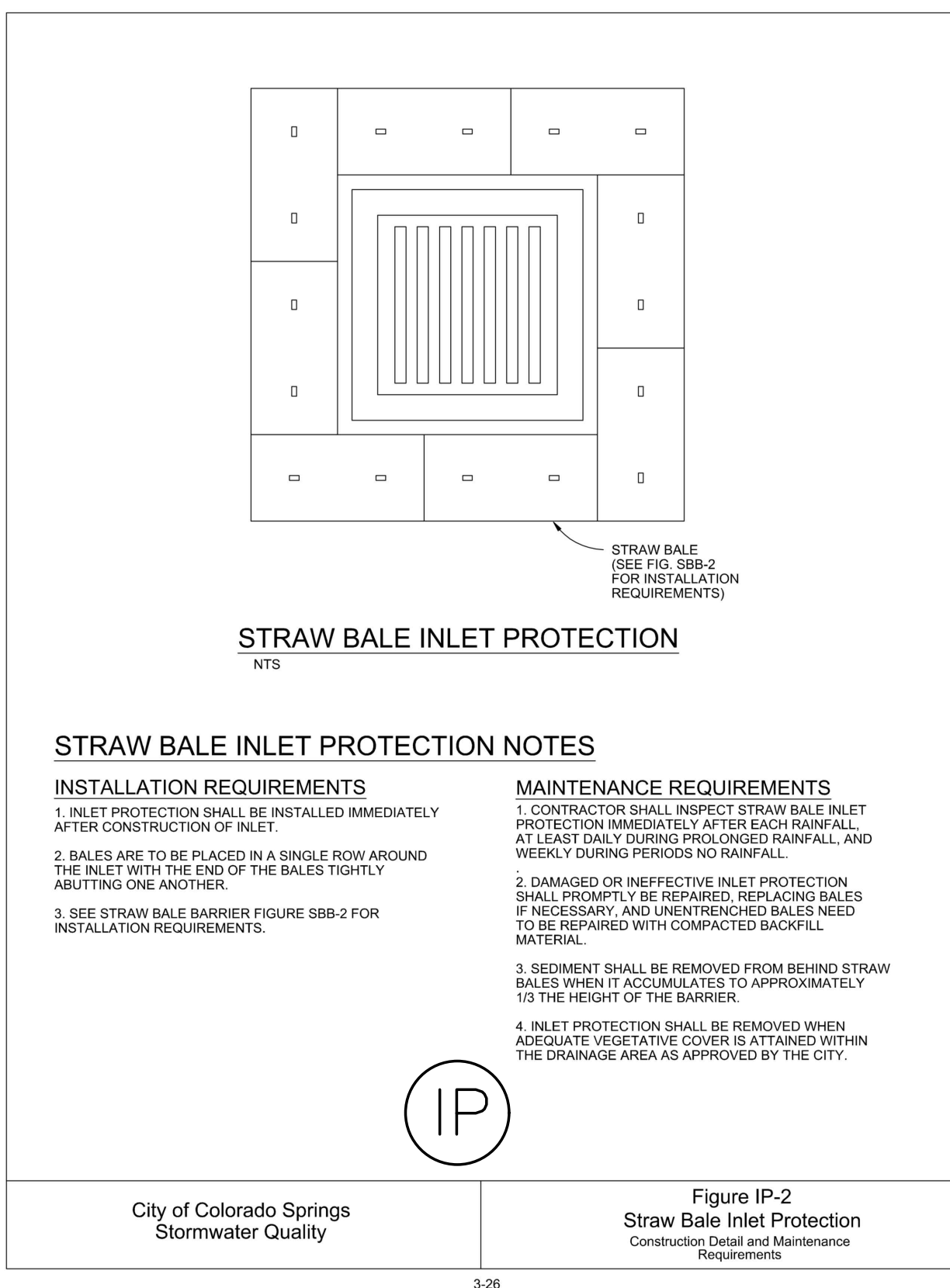
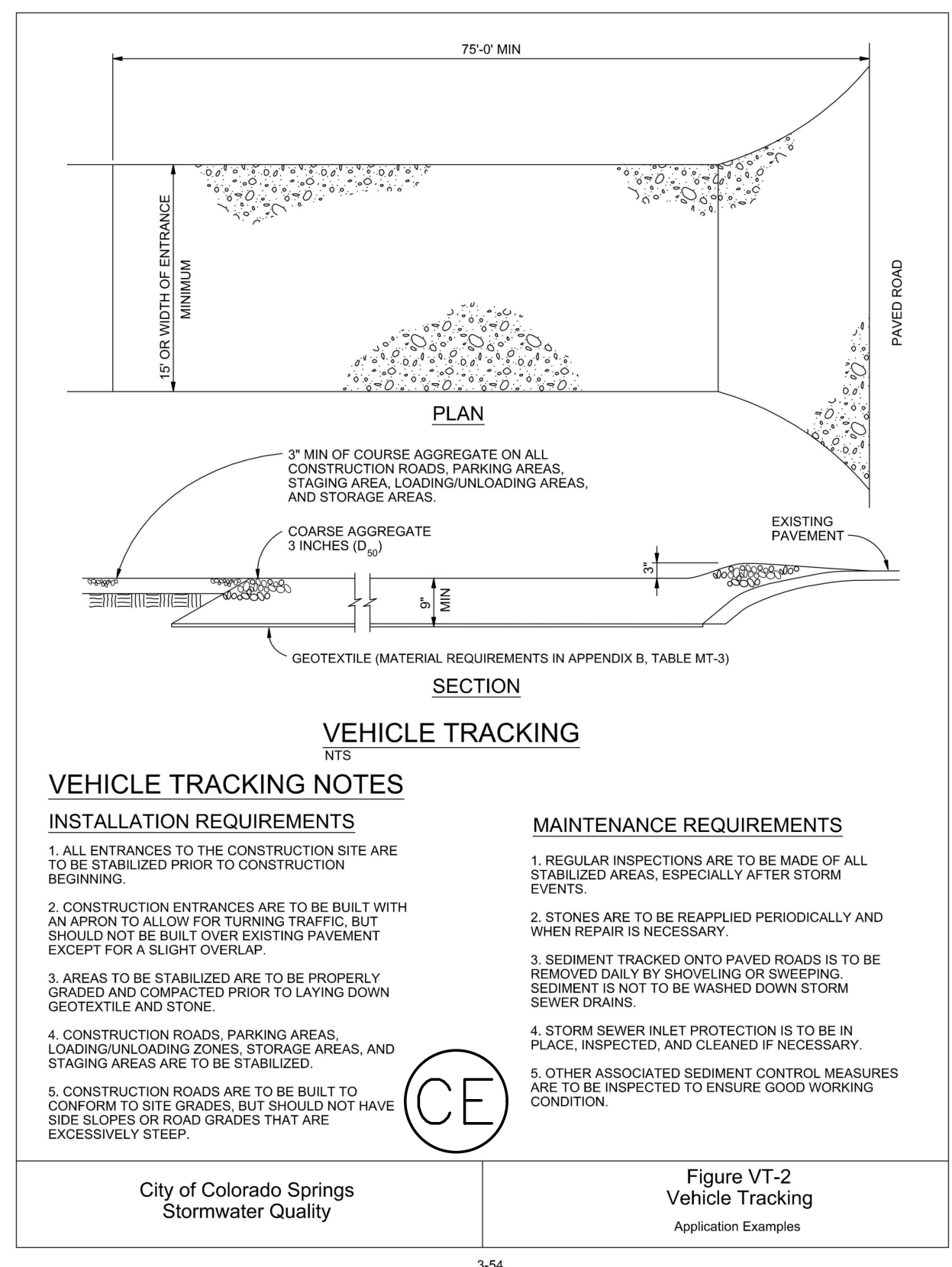
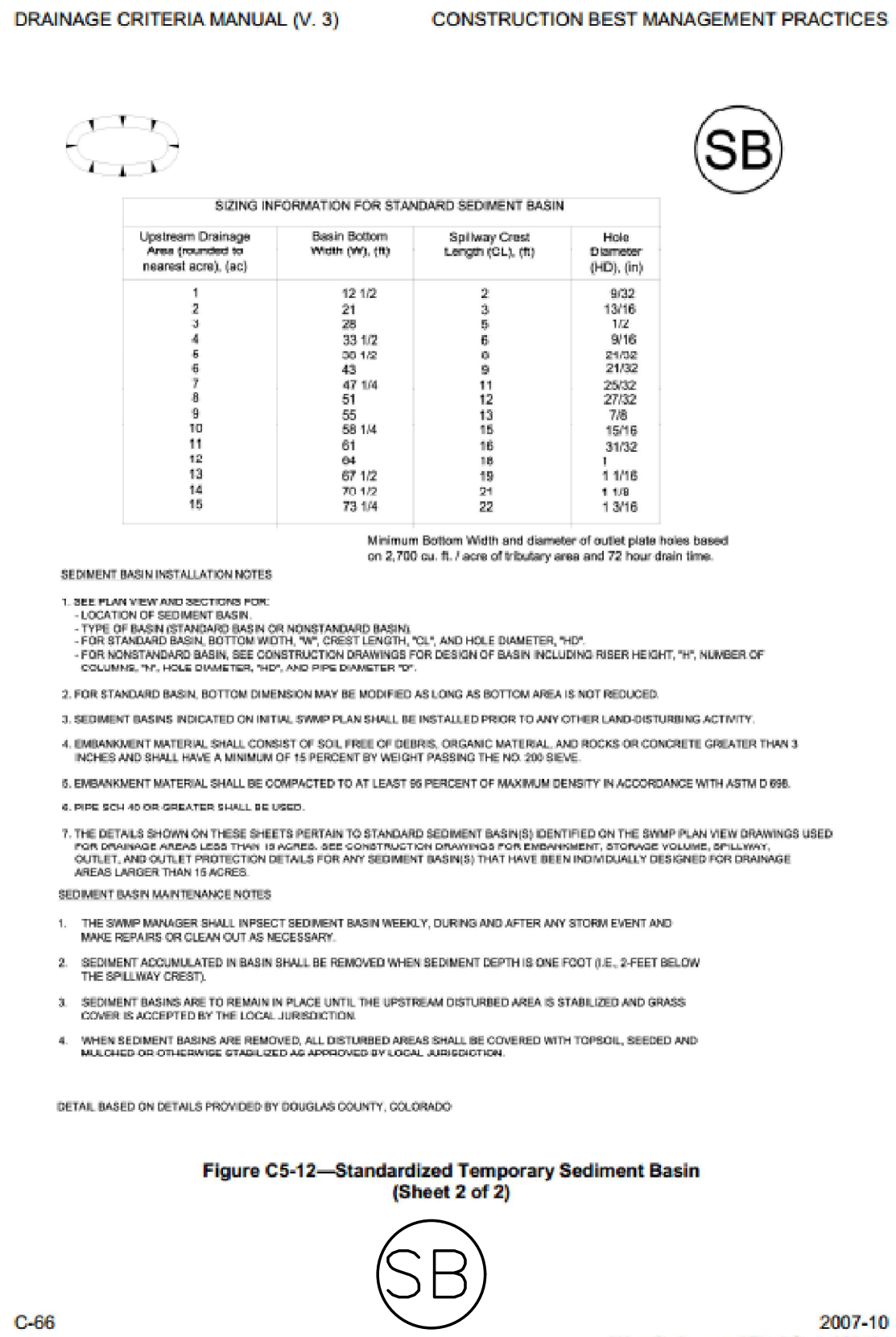
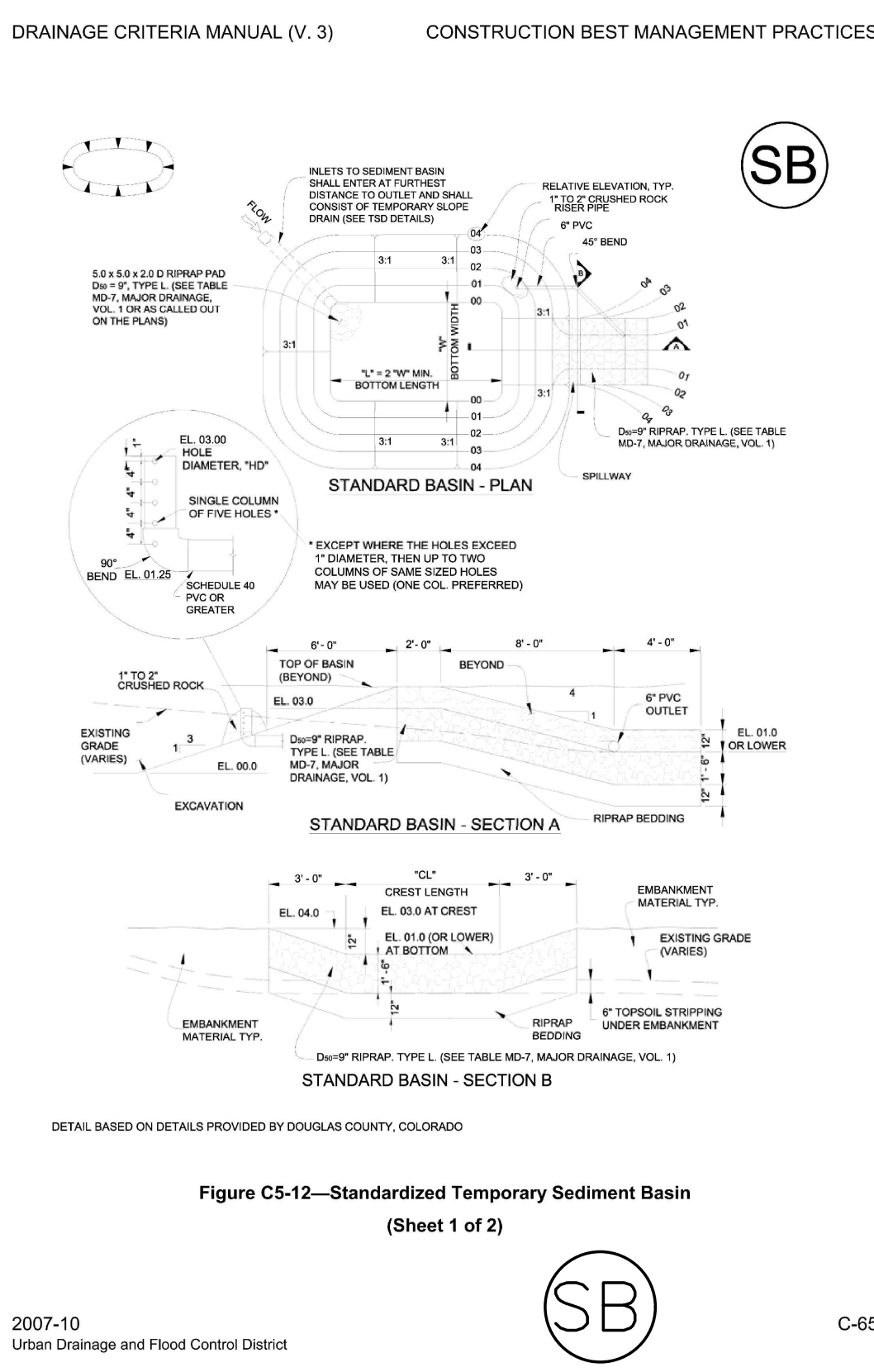
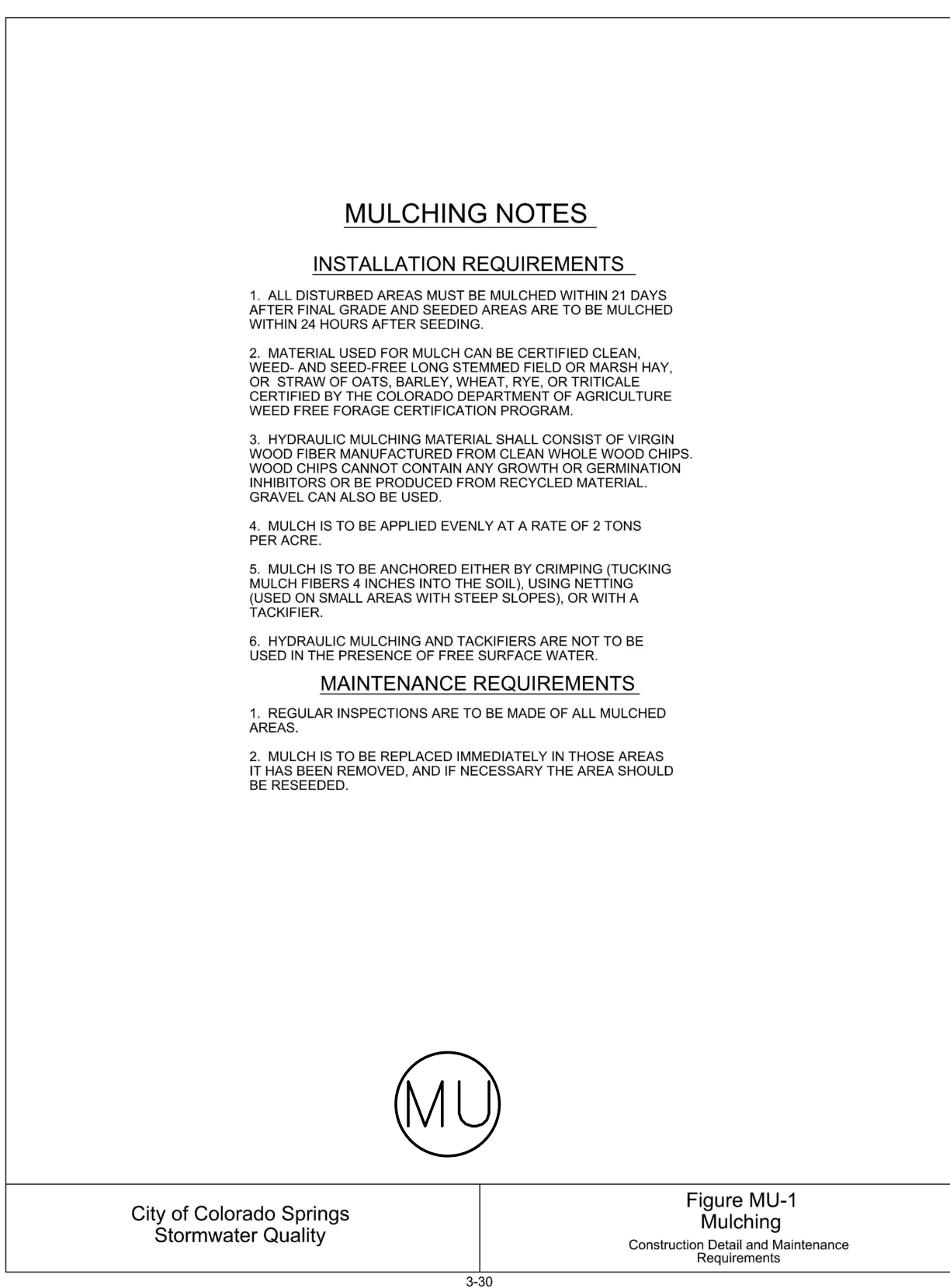
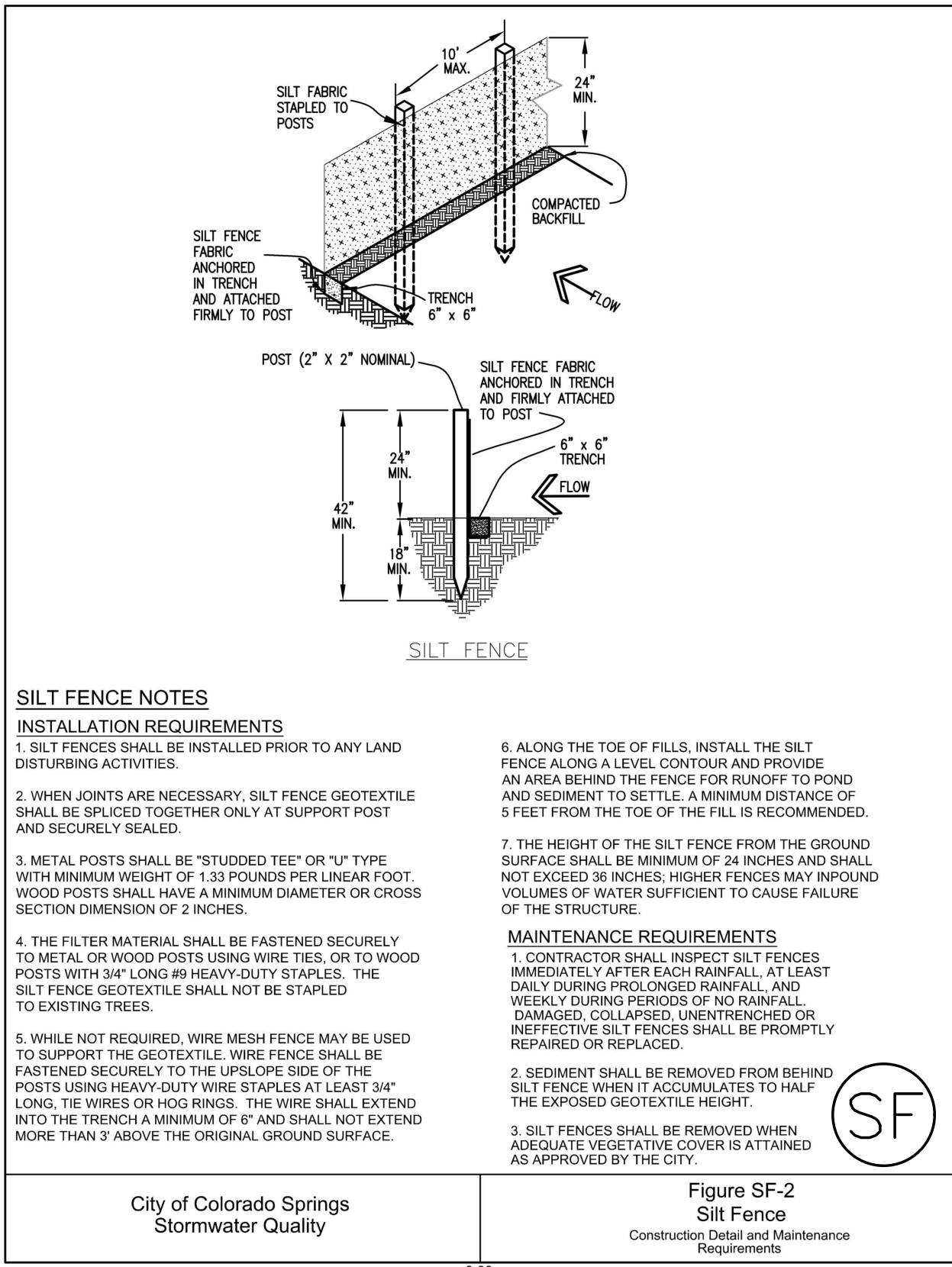
REVISIONS:

NO.	DATE	DESCRIPTION	BY

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SHEET TITLE: STORMWATER MANAGEMENT DETAILS		FIELD BOOK NO. N/A
PROJECT: LOT 8 AKERS ACRES COLORADO SPRINGS, COLORADO GRADING & DRAINAGE IMPROVEMENTS		SCALE: NOTED
PREPARED BY: Obering, Wurth & Associates Consulting Civil Engineers Professional Land Surveyors		DATE:
10482 Elkton Drive Colorado Springs, Colorado Phone (719) 531-8200 - Fax (719) 531-6266 E-mail Address: owacivil@midmaping.com		DESIGNED BY: CLD
		CHECKED BY: RGO
		DRAWN BY: CLD
		PROJECT NO. 18022
		SHEET NO. C7
		OF 8 SHEETS



2007-10
Urban Drainage and Flood Control District

C-29

November 2010

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

VTC-3

PROJECT NAME: STAGECO DRAINAGE IMPROVEMENTS
DRAWN BY: C. WELLS, MURTH & ASSOCIATES
DATE: 1/7/2019
PROJECT NO. 18020
UPDATED VERSION: 1/7/2019 6:12 PM

ISSUED FOR REVIEW
MONDAY, JANUARY 07, 2019

REVIEWED FOR CONSTRUCTION:

BY _____

DATE _____

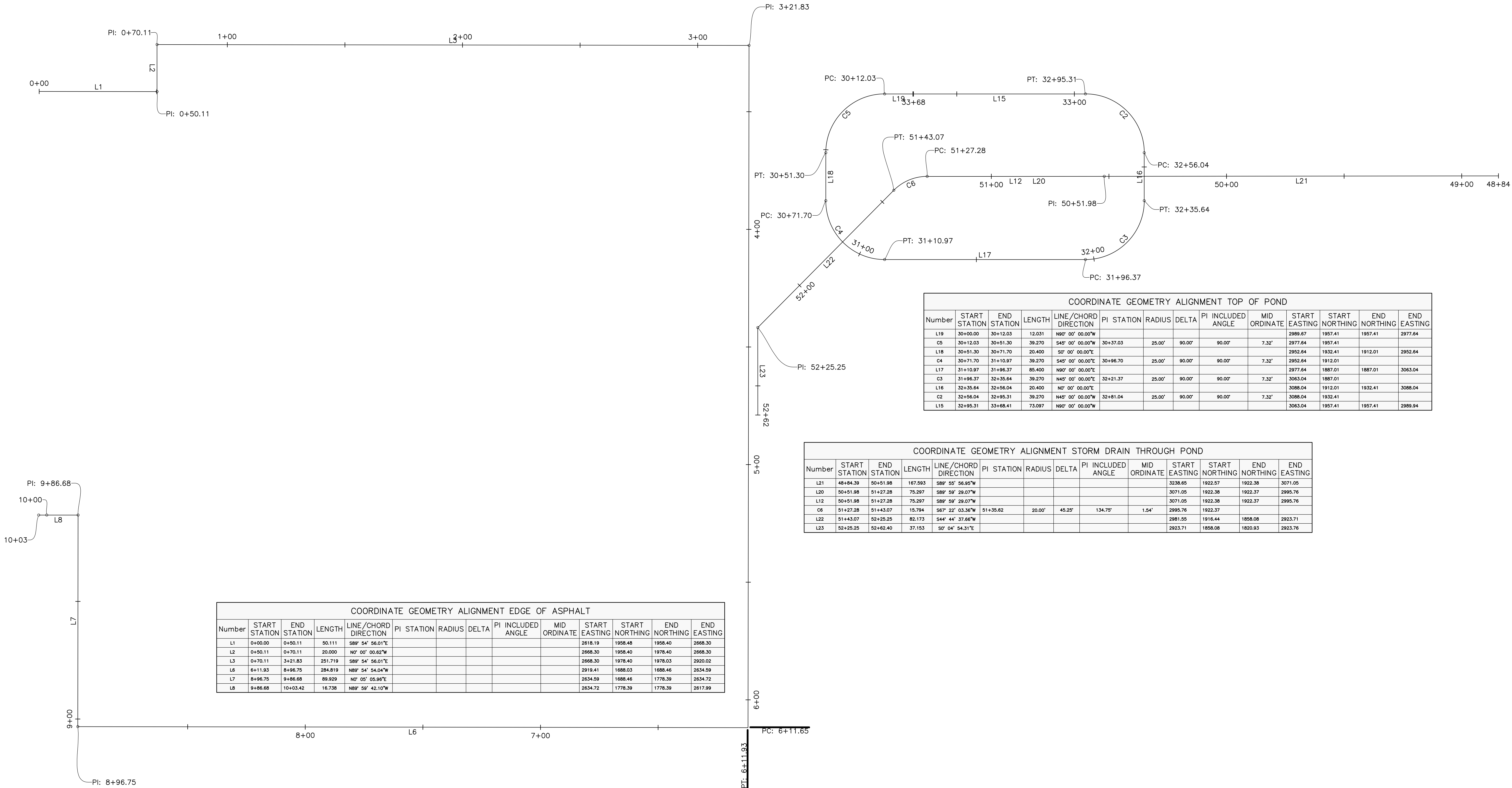
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SHEET TITLE: COORDINATE GEOMETRY		FIELD BOOK NO. N/A
PROJECT: LOT 8 AKERS ACRES COLORADO SPRINGS, COLORADO GRADING & DRAINAGE IMPROVEMENTS		SCALE: NOTED
DESIGNED BY: CLD		DATE:
CHECKED BY: RGO		PROJECT NO. 18022
DRAWN BY: CLD		SHEET NO. C8
PREPARED BY: Obering, Wurth & Associates Consulting Civil Engineers Professional Land Surveyors 1042 Elktion Drive Colorado Springs, Colorado Phone (719) 531-6200 ~ Fax (719) 531-6266 E-mail Address: owacivil@mindspring.com		OF 8 SHEETS



COORDINATE GEOMETRY ALIGNMENT TOP OF POND													
Number	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L19	30+00.00	30+12.03	12.031	N80° 00' 00.00"W						2989.67	1957.41	1957.41	2977.64
C5	30+12.03	30+51.30	39.270	S45° 00' 00.00"W	30+37.03	25.00'	90.00°	90.00°	7.32'	2977.64	1957.41	1912.01	2952.64
L18	30+51.30	30+71.70	20.400	S0° 00' 00.00"E						2952.64	1932.41	1912.01	2952.64
C4	30+71.70	31+10.97	39.270	S45° 00' 00.00"E	30+96.70	25.00'	90.00°	90.00°	7.32'	2952.64	1912.01	1887.01	3063.04
L17	31+10.97	31+96.37	85.400	N80° 00' 00.00"E						2977.64	1887.01	1887.01	3063.04
C3	31+96.37	32+56.04	39.270	N45° 00' 00.00"E	32+21.37	25.00'	90.00°	90.00°	7.32'	3063.04	1887.01	1932.41	3088.04
L16	32+56.04	32+95.31	20.400	N0° 00' 00.00"E						3088.04	1912.01	1932.41	3088.04
C2	32+95.31	33+68.41	73.097	N80° 00' 00.00"W	32+81.04	25.00'	90.00°	90.00°	7.32'	3088.04	1932.41	1957.41	2989.94
L15	33+68.41	33+95.31	26.900	N80° 00' 00.00"W						2989.94	1957.41	1957.41	2989.94

COORDINATE GEOMETRY ALIGNMENT STORM DRAIN THROUGH POND													
Number	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L21	48+84.39	50+51.98	167.593	S89° 55' 56.95"W						3238.65	1922.57	1922.38	3071.05
L20	50+51.98	51+27.28	75.297	S89° 59' 29.07"W						3071.05	1922.38	1922.37	2995.76
L12	50+51.98	51+27.28	75.297	S89° 59' 29.07"W						3071.05	1922.38	1922.37	2995.76
C6	51+27.28	51+43.07	15.794	S67° 22' 03.36"W	51+35.62	20.00'	45.25°	134.75°	1.54'	2995.76	1922.37	1922.37	2995.76
L22	51+43.07	52+25.25	82.173	S44° 44' 37.66"W						2981.55	1916.44	1856.08	2923.71
L23	52+25.25	52+62.40	37.153	S0° 04' 54.31"E						2923.71	1856.08	1820.93	2923.76

COORDINATE GEOMETRY ALIGNMENT EDGE OF ASPHALT													
Number	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L1	0+00.00	0+50.11	50.111	S89° 54' 56.01"E						2618.19	1958.48	1958.40	2668.30
L2	0+50.11	0+70.11	20.000	N0° 00' 00.62"W						2668.30	1958.40	1978.40	2668.30
L3	0+70.11	3+21.83	251.719	S89° 54' 56.01"E						2668.30	1978.40	1978.03	2920.02
L6	8+11.93	8+96.75	284.819	N89° 54' 54.04"W						2919.41	1688.03	1688.46	2634.59
L7	8+96.75	9+86.68	89.929	N0° 05' 05.94"E						2634.59	1688.46	1778.39	2634.72
L8	9+86.68	10+03.42	16.738	N89° 59' 42.10"W						2634.72	1778.39	1778.39	2617.99