

FLYING HORSE NORTH FILING NO. 1

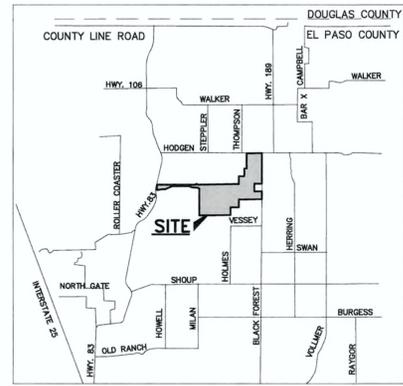
COUNTY OF EL PASO, STATE OF COLORADO

STORM SEWER CONSTRUCTION DRAWINGS

JUNE 2018

GENERAL CONSTRUCTION NOTES:

1. THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND MAY NOT INCLUDE ALL UTILITIES. THE EXCAVATION CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATED AND PRESERVE ANY AND ALL UTILITIES.
2. BEFORE COMMENCING ANY EXCAVATION, CALL 1-800-922-1987 FOR EXISTING UTILITY LOCATIONS.
3. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
4. ALL BACKFILL, SUB-BASE AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION.
5. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE INDICATED.
6. THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS AS SOON AS POSSIBLE AND EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
7. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K - 1.2C.
8. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
9. BUILDING CONTRACTORS WILL BE RESPONSIBLE FOR CONSTRUCTING POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
10. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY DEVELOPMENT SERVICES DEPARTMENT PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS WITHIN 21 DAYS OF SUBSTANTIAL GRADING COMPLETION. EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER IS RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
12. TYPE M RIP-RAP WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRAFI FW 700 OR EQUAL IS SPECIFIED.
13. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS.



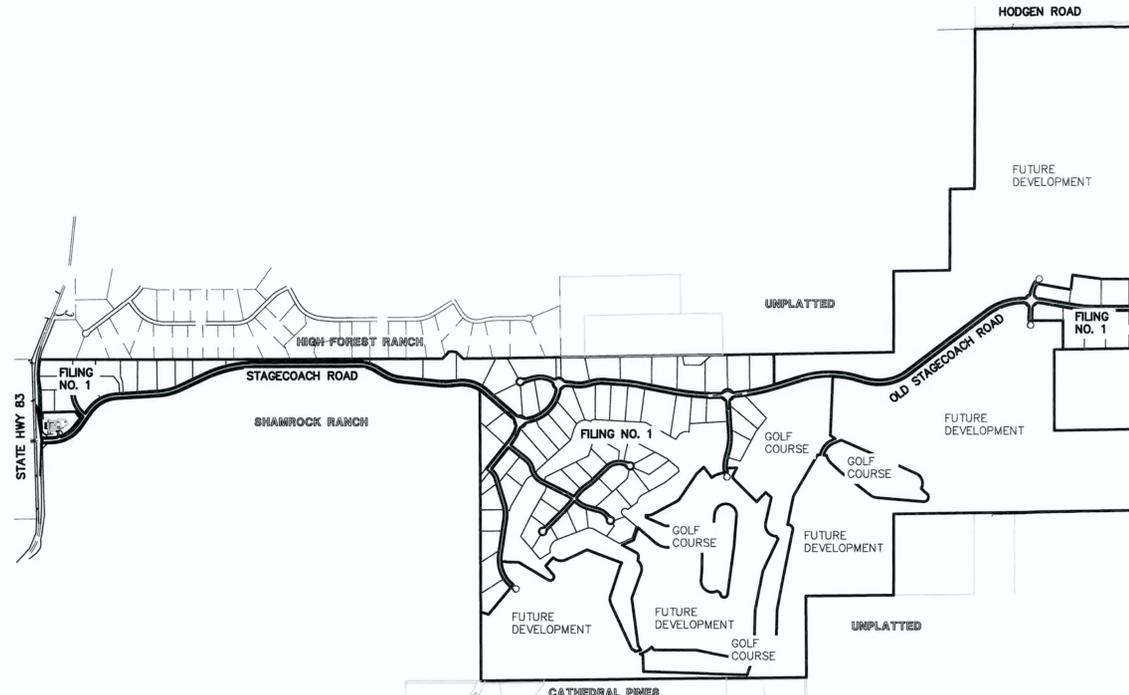
VICINITY MAP
N.T.S.

SHEET INDEX

SHEET 1 OF 22	TITLE SHEET
SHEET 2 OF 22	INDEX SHEET
SHEETS 3-9 OF 22	CULVERT PLAN AND PROFILES
SHEETS 10-21 OF 22	DETENTION FACILITY PLANS
SHEETS 22 OF 22	DETAIL SHEET

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
 - a. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
 - b. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
 - c. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
 - d. CDOT M & S STANDARDS
4. 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. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND DSD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY DSD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOT AND MUTCD CRITERIA.
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.



KEY MAP
SCALE: N.T.S.

AGENCIES:

OWNER/DEVELOPER:	PRI #2 6385 CORPORATE DRIVE, SUITE 200 COLORADO SPRINGS, CO 80919 MR. DREW BALSICK, (719) 592-9333
CIVIL ENGINEER:	CLASSIC CONSULTING ENGINEERS & SURVEYORS 619 N. CASCADE AVENUE, SUITE 200 COLORADO SPRINGS, COLORADO 80903 MR. MARC A. WHORTON, P.E. (719) 785-2802
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, COLORADO 80910 MR. GILBERT LAFORCE (719) 520-7945
GAS COMPANY:	BLACKHILLS ENERGY 37 WIDEFIELD BOULEVARD WIDEFIELD, COLORADO 80911 MR. GEORGE M. PETERSON, (719) 392-3491
ELECTRIC COMPANY:	MOUNTAIN VIEW ELECTRIC P.O. BOX 1600 LIMON, COLORADO 80828 MR. LES ULFERS, (719) 495-2283
FIRE DISTRICT:	DONALD WESCOTT FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80921 CHIEF VINNY BURNS, (719) 488-8680
FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 14445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK, (719) 495-4300
TELEPHONE COMPANY:	CENTURY LINK (LOCATORS) 811 AT & T (LOCATORS) 811

APPROVALS:

DESIGN ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION, SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY DIRECTLY CAUSED BY THE NEGLIGENT ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

MARC A WHORTON, COLORADO P.E. #37155
FOR AND ON THE BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS

6/15/18
DATE

OWNER/DEVELOPER'S STATEMENT:

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

MR. DREW BALSICK
PRI #2

6-15-18
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 MANUAL, VOLUMES 1 AND 2 AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH 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 DIRECTOR'S DISCRETION.

Approved

by Elizabeth Nijkamp
El Paso County Planning and Community Development
on behalf of Jennifer Irvine, County Engineer, ECM Administrator

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

09/25/2018 2:50:55 PM

PCD No. SF-18-001

BENCHMARKS

1. THE NORTHWESTERLY CORNER OF LOT 1, WESCOTT FIRE STATION NO. 3, RECORDED UNDER RECEPTION NO. 212713192 RECORDS OF EL PASO COUNTY COLORADO, BEING MONUMENTED BY A 1 1/2 INCH ALUMINUM SURVEYORS CAP STAMPED "CCES LLC PLS 30118" ELEVATION=7387.14
2. THE SOUTHEAST CORNER OF SECTION 30, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO, BEING A 3 1/4 INCH ALUMINUM SURVEYORS CAP STAMPED "JR ENG LTD RLS 10377" IN A RANGE BOX IN BLACK FOREST ROAD. ELEVATION=7554.01

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION OF COLORADO IT'S THE LAW THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.	NO. REVISION	DATE	REVIEW:
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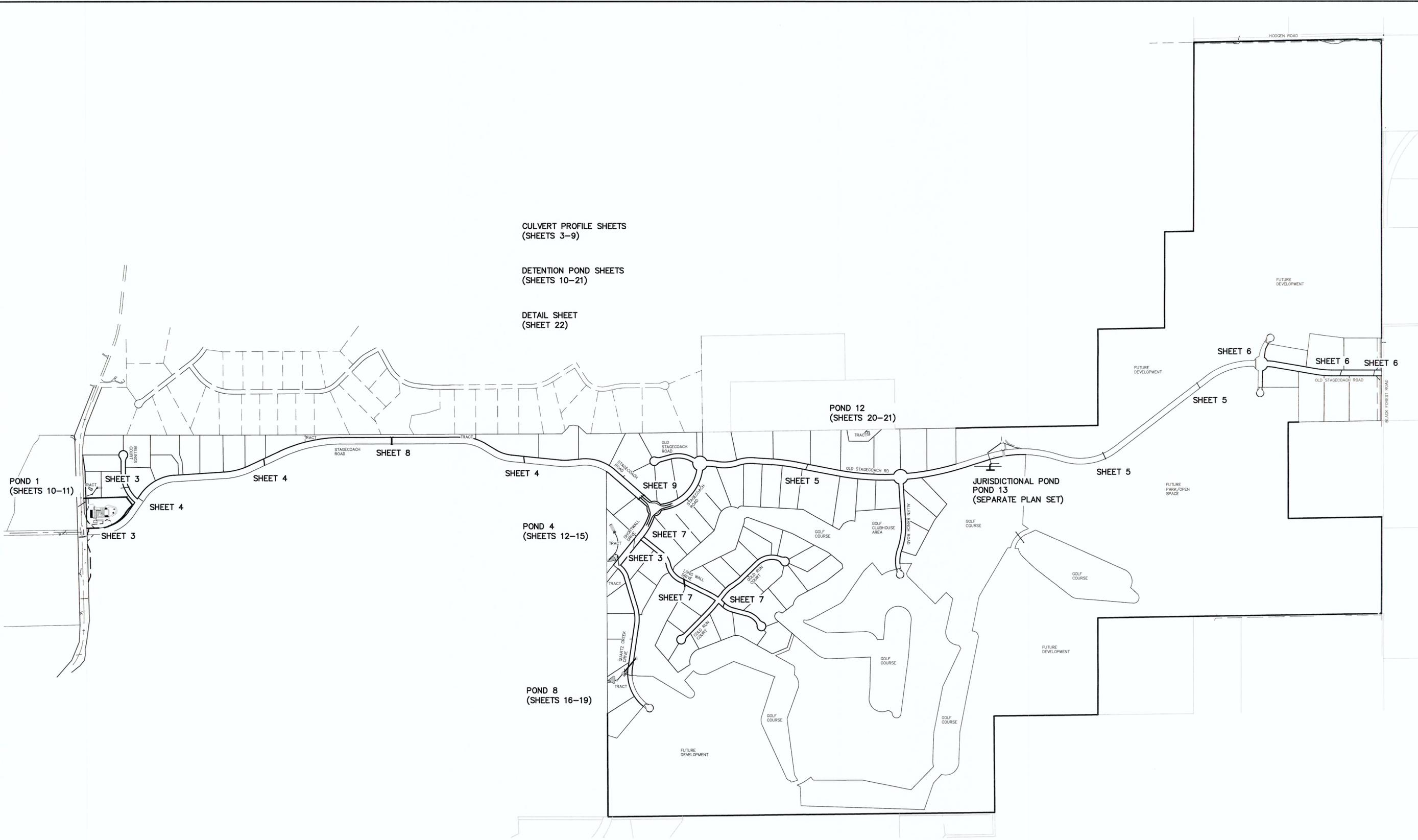
37155
MARC A. WHORTON, COLORADO P.E. #37155
DATE 6/15/18

CLASSIC
CONSULTING
ENGINEERS & SURVEYORS

619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

FLYING HORSE NORTH FILING NO. 1 STORM SEWER CONSTRUCTION DRAWINGS			
TITLE SHEET			
DESIGNED BY	MAW	SCALE	DATE 06-13-18
DRAWN BY	MAW	(H) 1"= N/A	SHEET 1 OF 22
CHECKED BY		(V) 1"= N/A	JOB NO. 1096.11

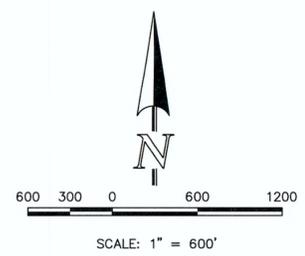




CULVERT PROFILE SHEETS
(SHEETS 3-9)

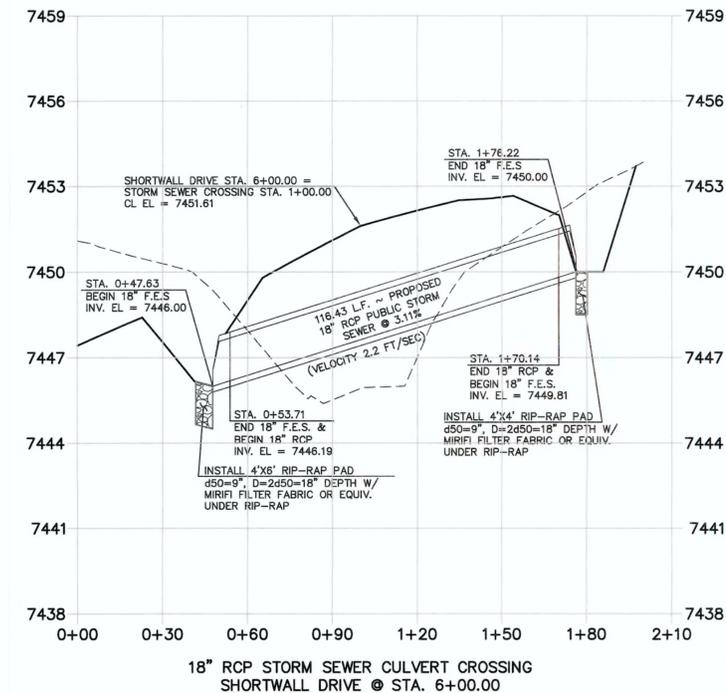
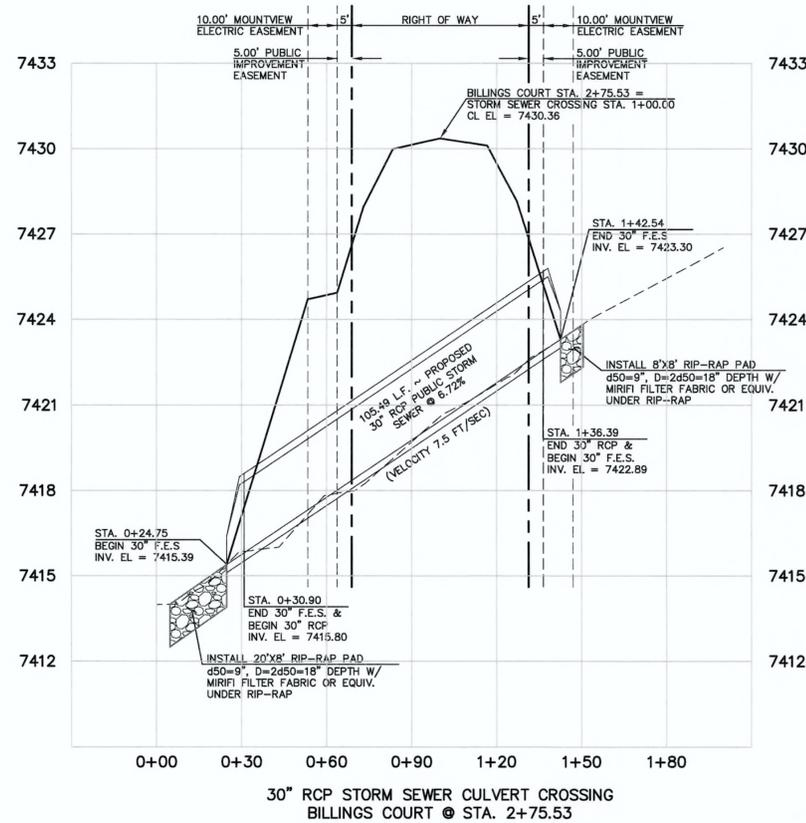
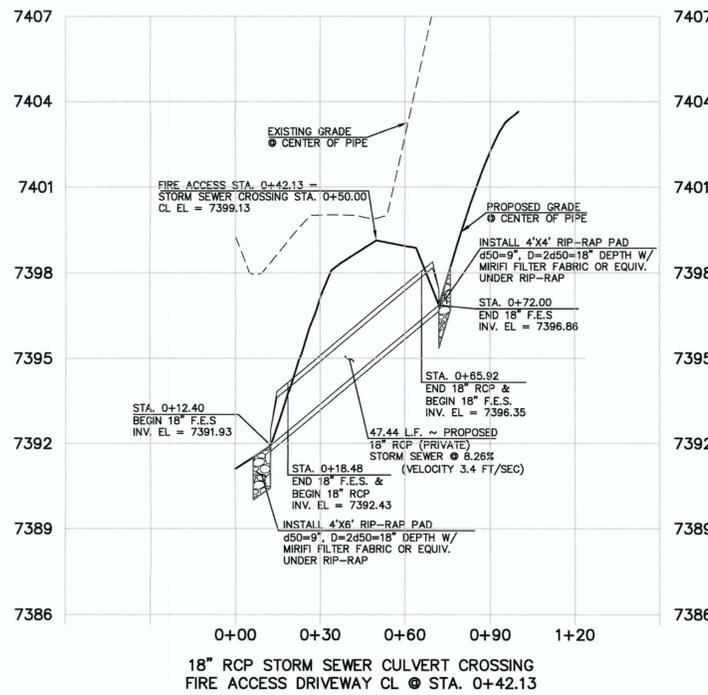
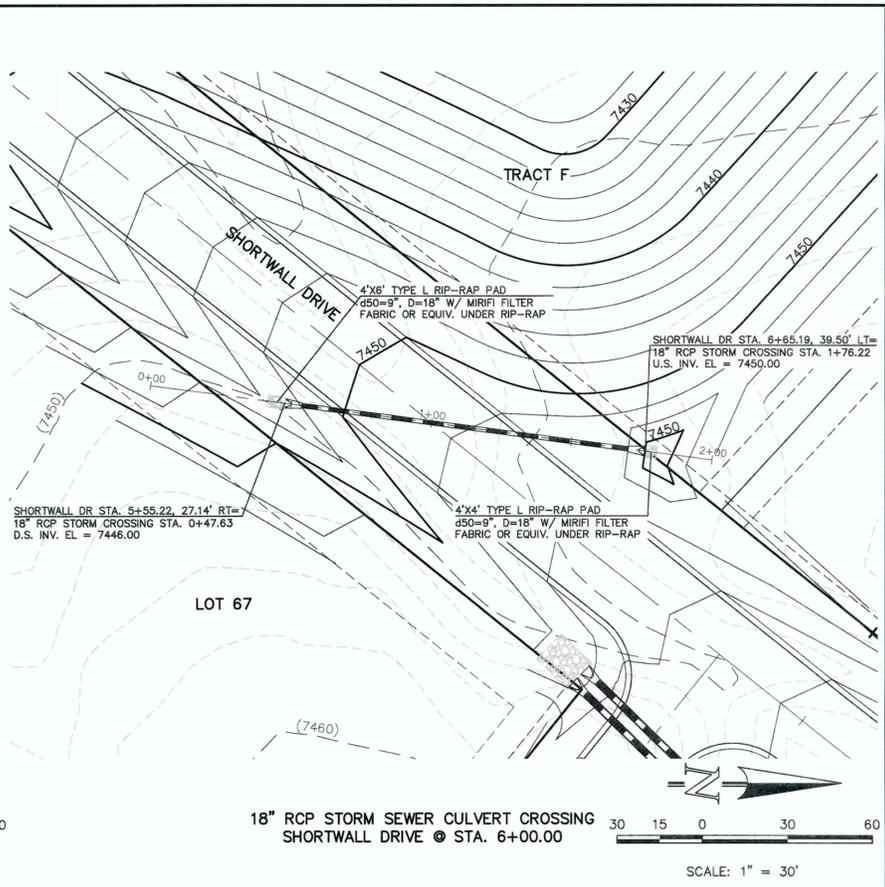
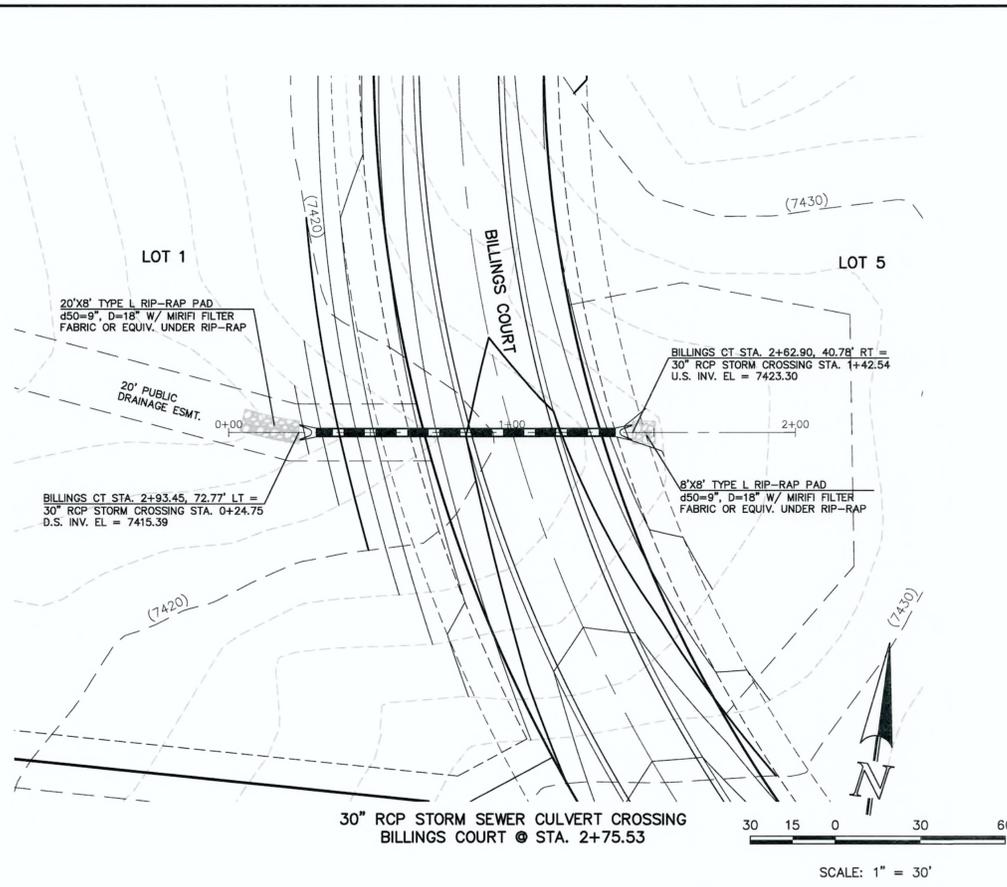
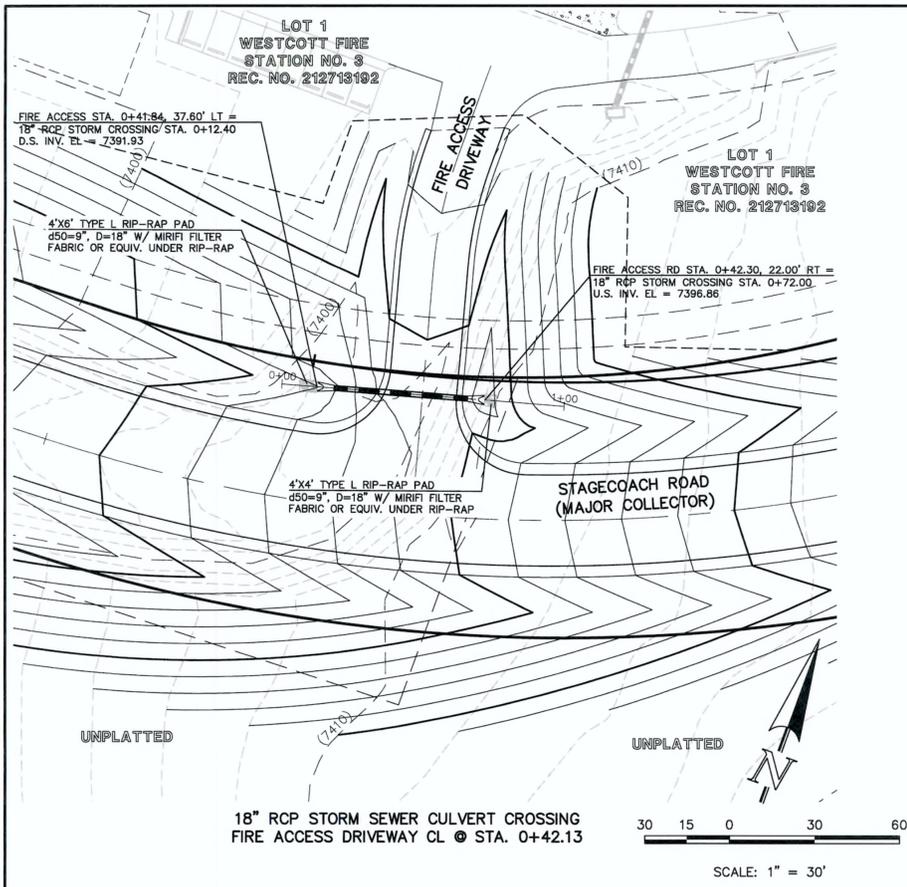
DETENTION POND SHEETS
(SHEETS 10-21)

DETAIL SHEET
(SHEET 22)



<p style="text-align: center;">48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811</p> <p style="text-align: center;">UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p><small>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</small></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">NO. REVISION</th> <th style="text-align: left;">DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> </tbody> </table>	NO. REVISION	DATE																			<p>REVIEW:</p> <p><small>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC</small></p> <div style="text-align: center;"> </div> <p>MARC A. WHORTON, COLORADO, P.E. #37155 DATE 6/15/18</p>	<div style="text-align: center;"> <p>CLASSIC CONSULTING ENGINEERS & SURVEYORS</p> </div>	<p>FLYING HORSE NORTH FILING NO. 1 STORM SEWER CONSTRUCTION DRAWINGS INDEX MAP</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED BY</td> <td>MAW</td> <td>SCALE</td> <td>DATE</td> </tr> <tr> <td>DRAWN BY</td> <td>MAW</td> <td>(H) 1" = 600'</td> <td>SHEET 2 OF 22</td> </tr> <tr> <td>CHECKED BY</td> <td>(V) 1" = N/A</td> <td></td> <td>JOB NO. 1096.11</td> </tr> </table>	DESIGNED BY	MAW	SCALE	DATE	DRAWN BY	MAW	(H) 1" = 600'	SHEET 2 OF 22	CHECKED BY	(V) 1" = N/A		JOB NO. 1096.11
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CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC



MARC A. WHORTON, COLORADO P.E. #37155 DATE 6/15/18

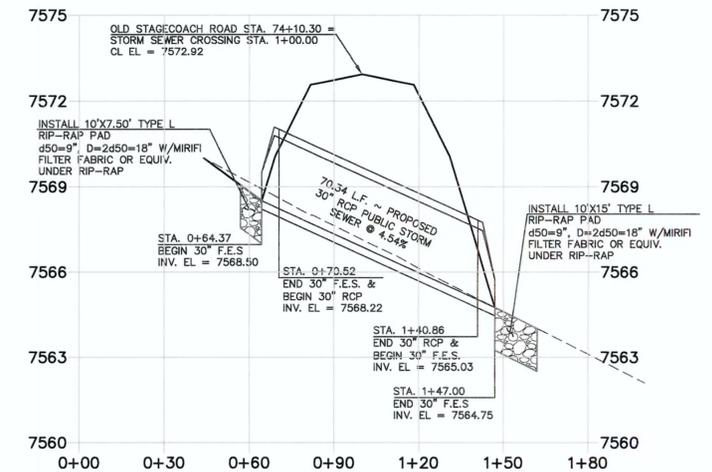
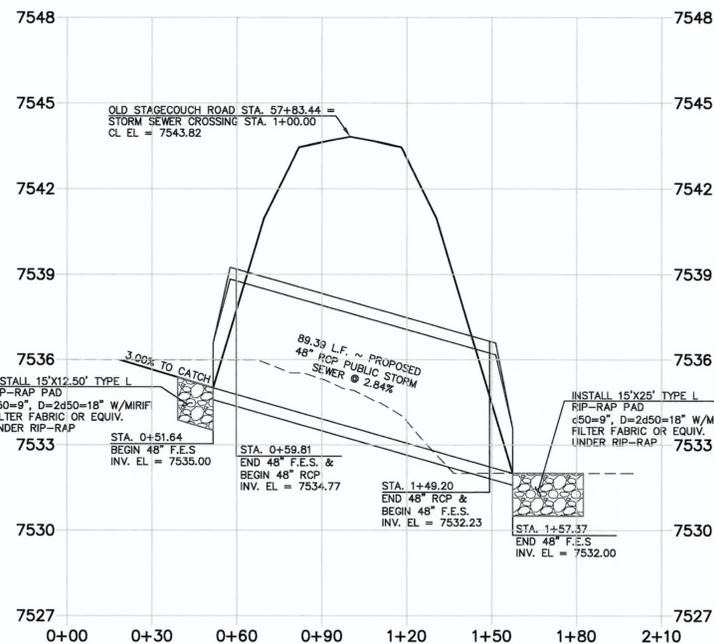
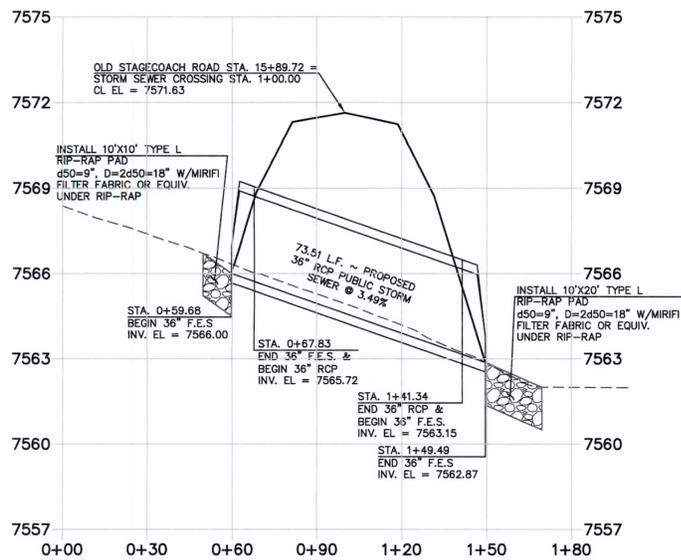
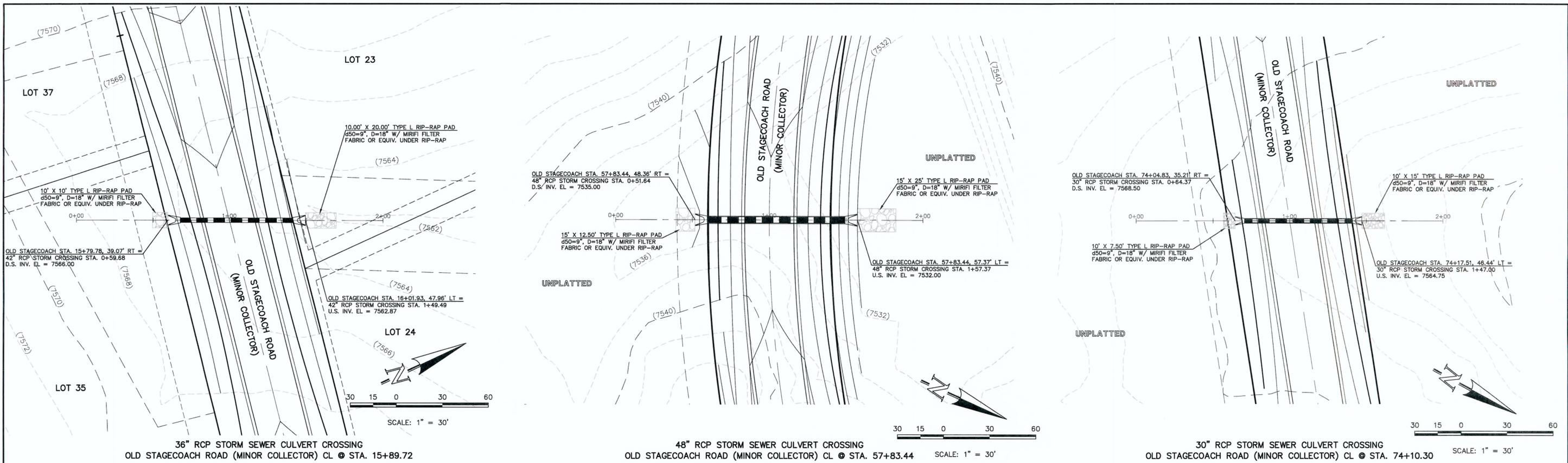


619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0790(Fax)

FLYING HORSE NORTH FILING NO. 1
STORM SEWER CONSTRUCTION PLANS
STORM SEWER RCP CULVERT CROSSINGS
PLAN & PROFILE

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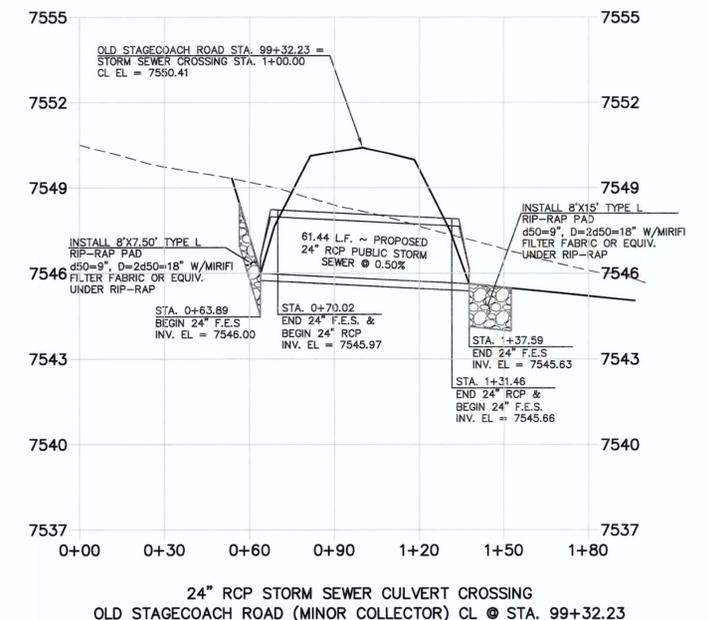
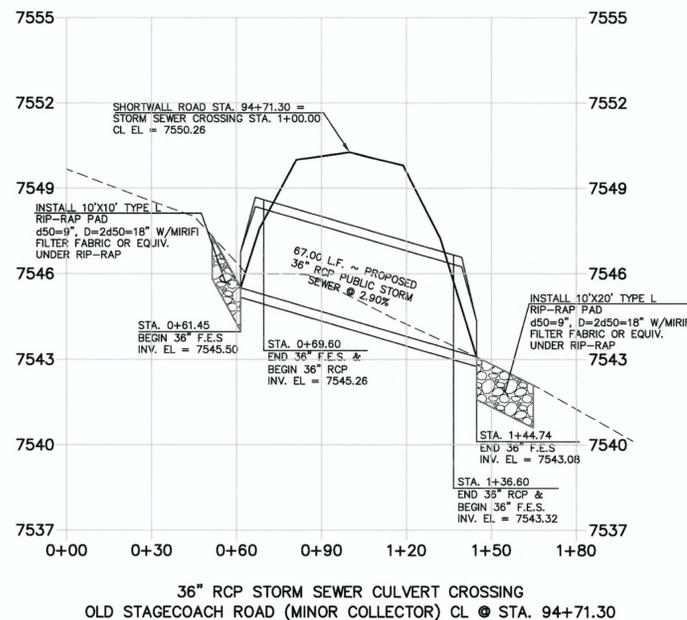
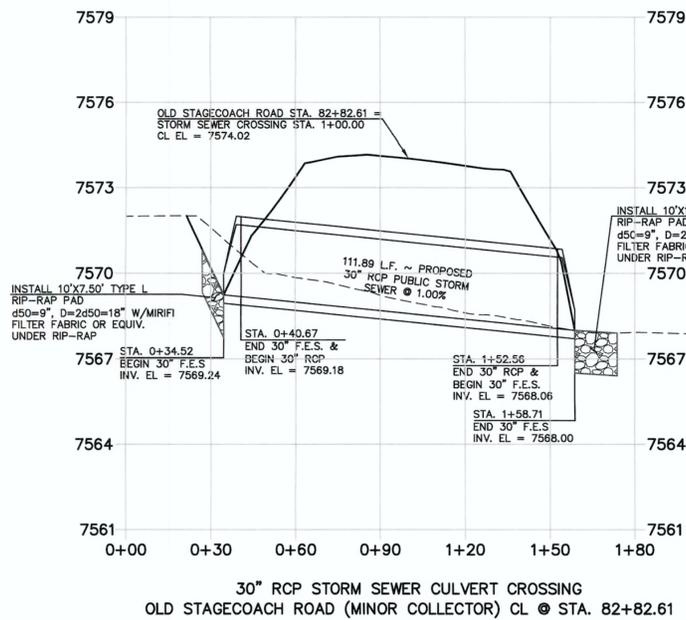
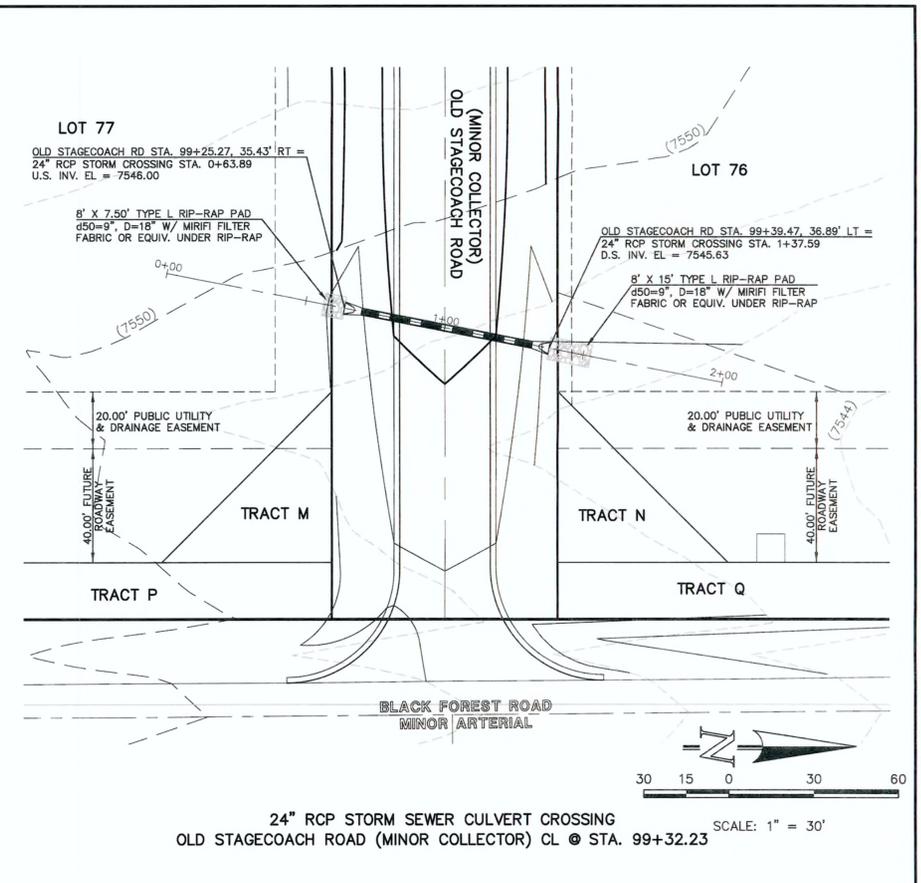
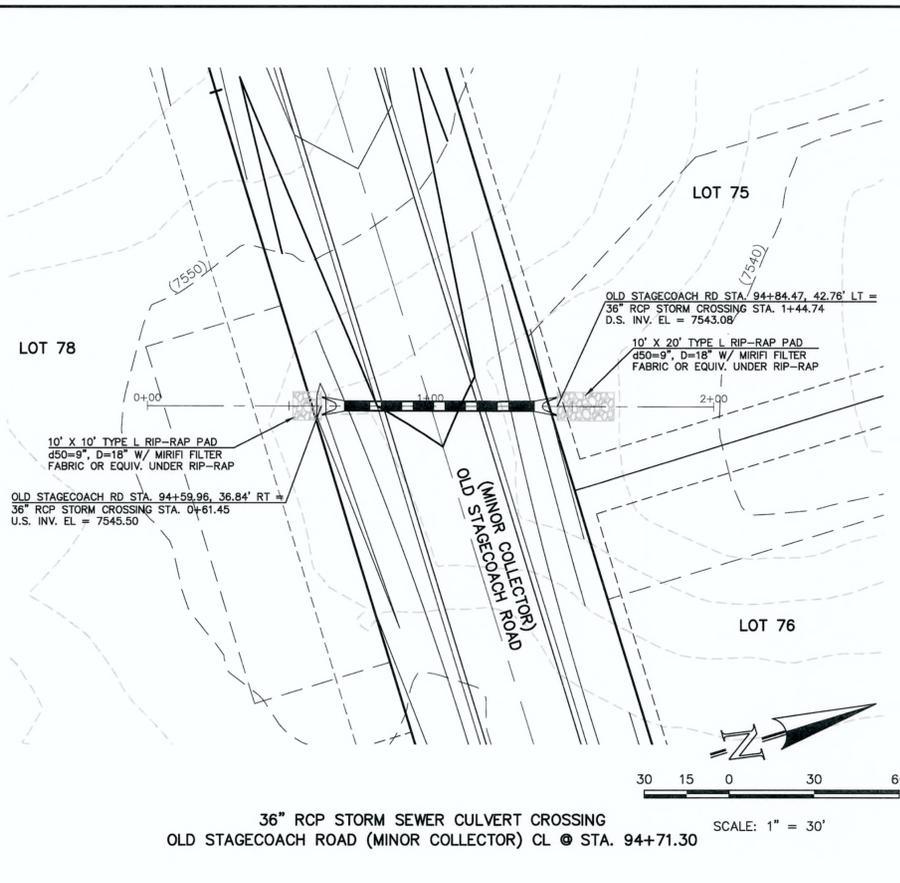
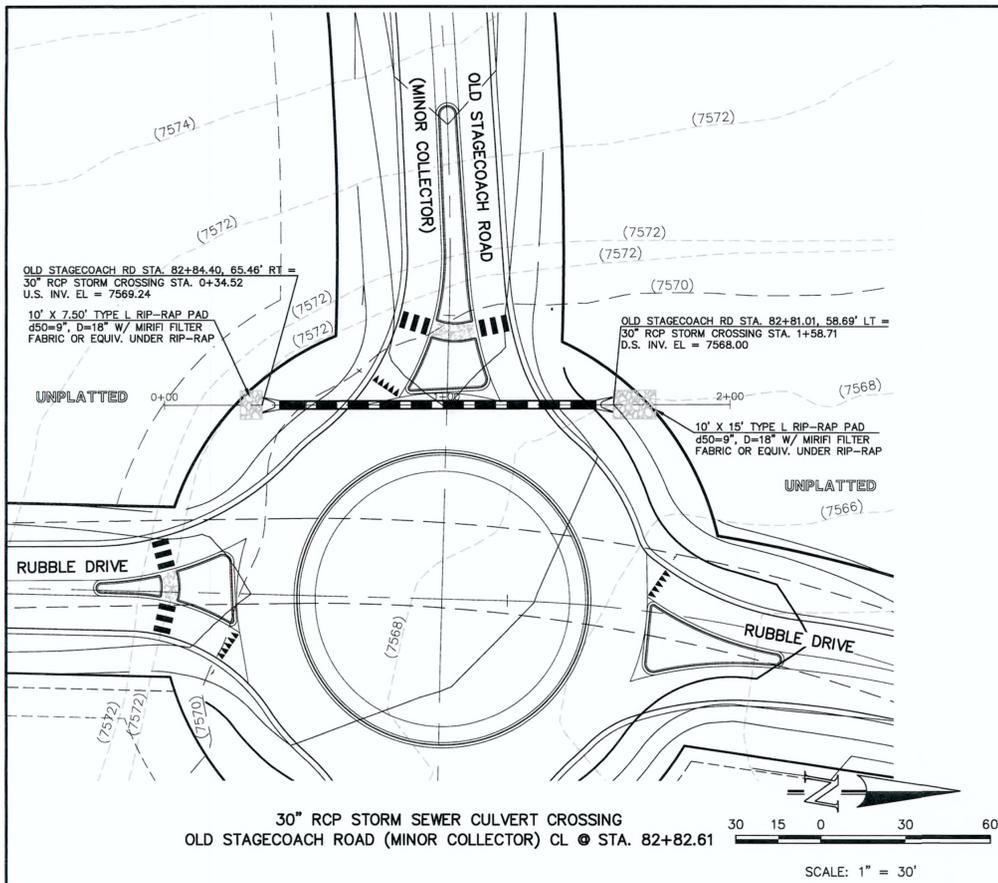
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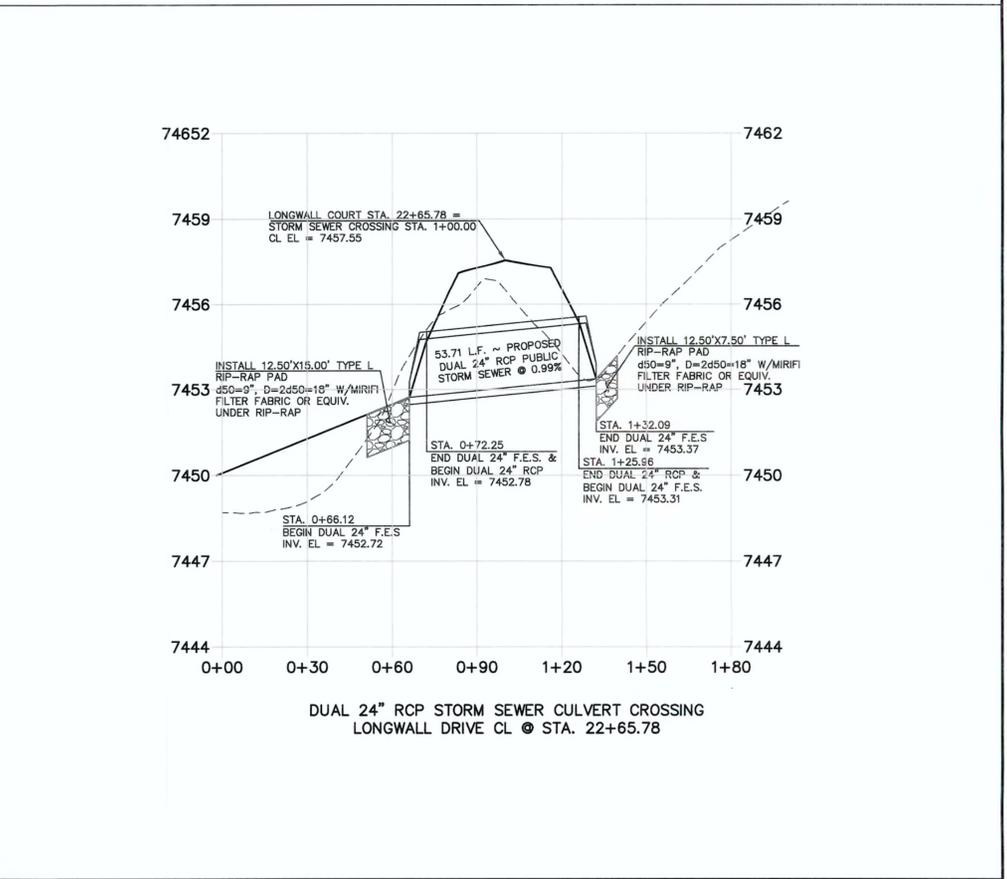
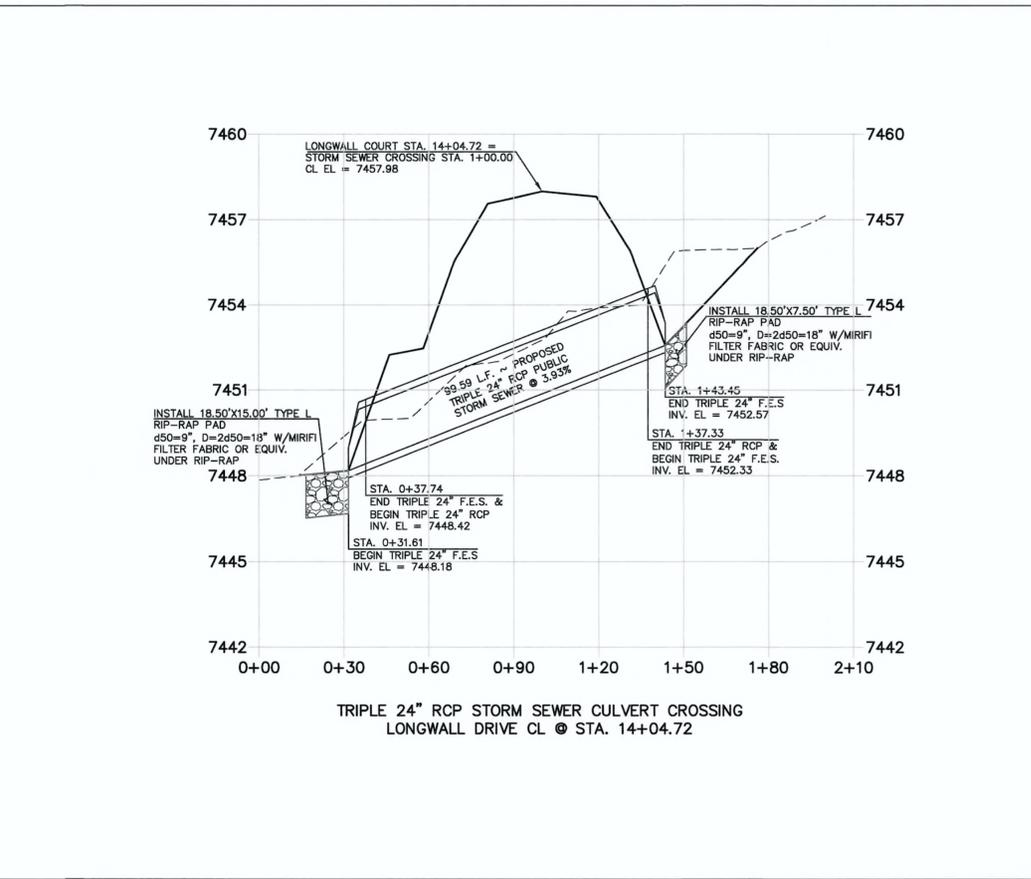
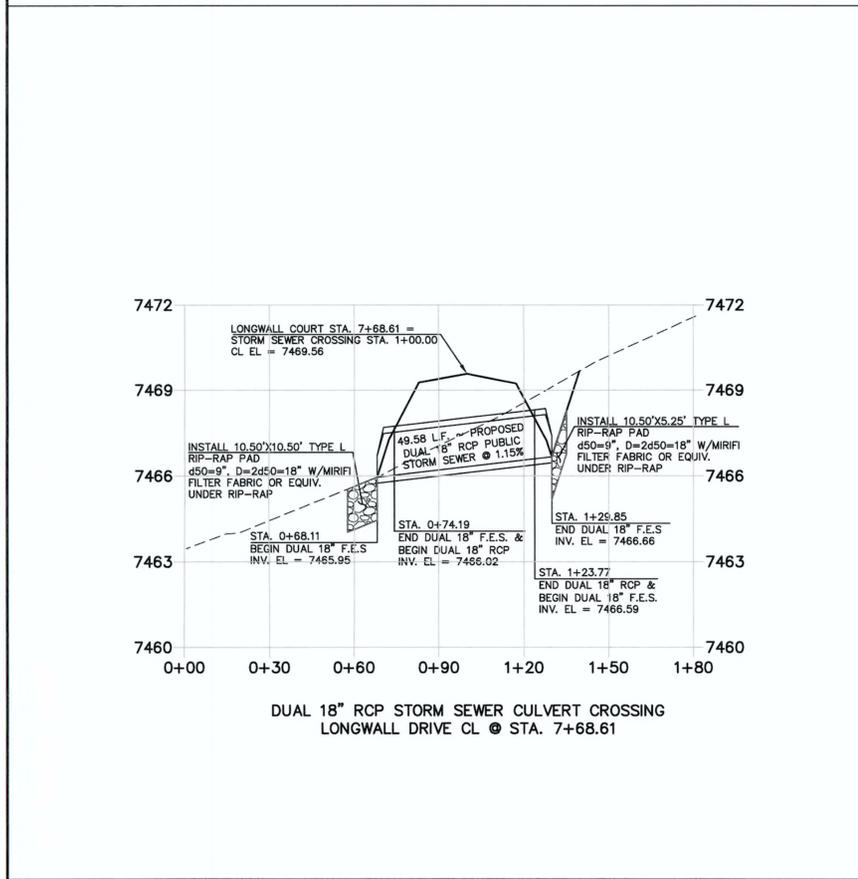
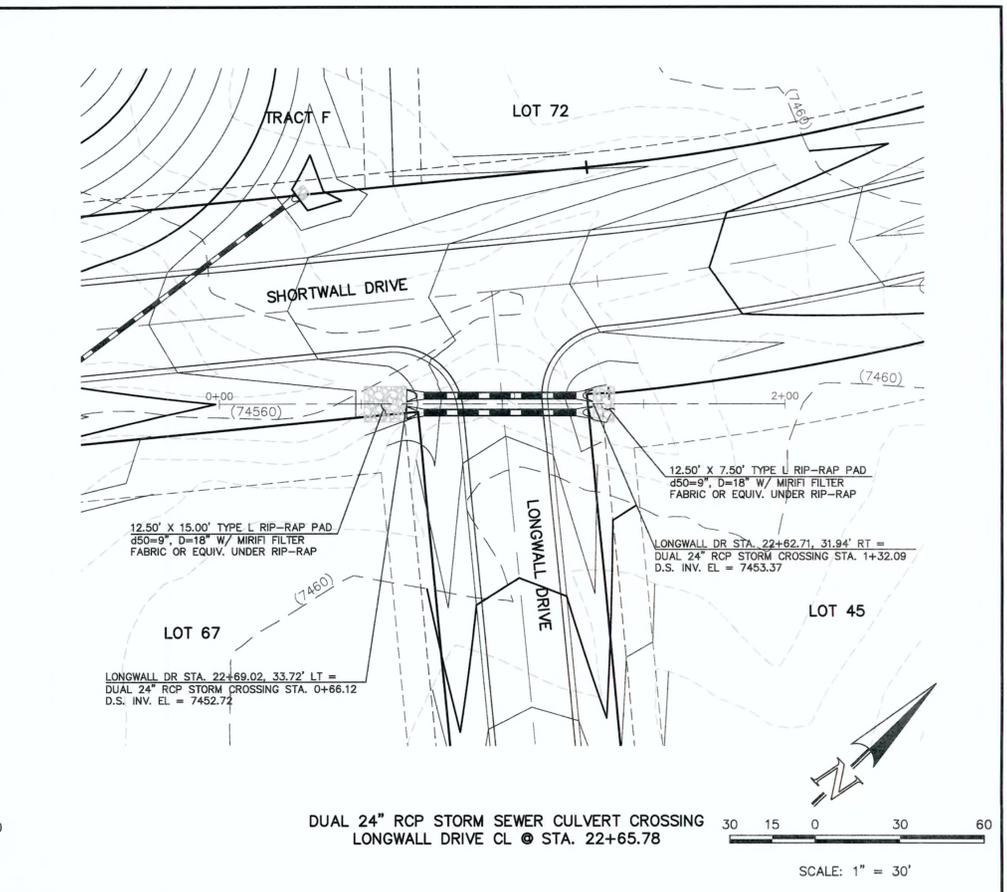
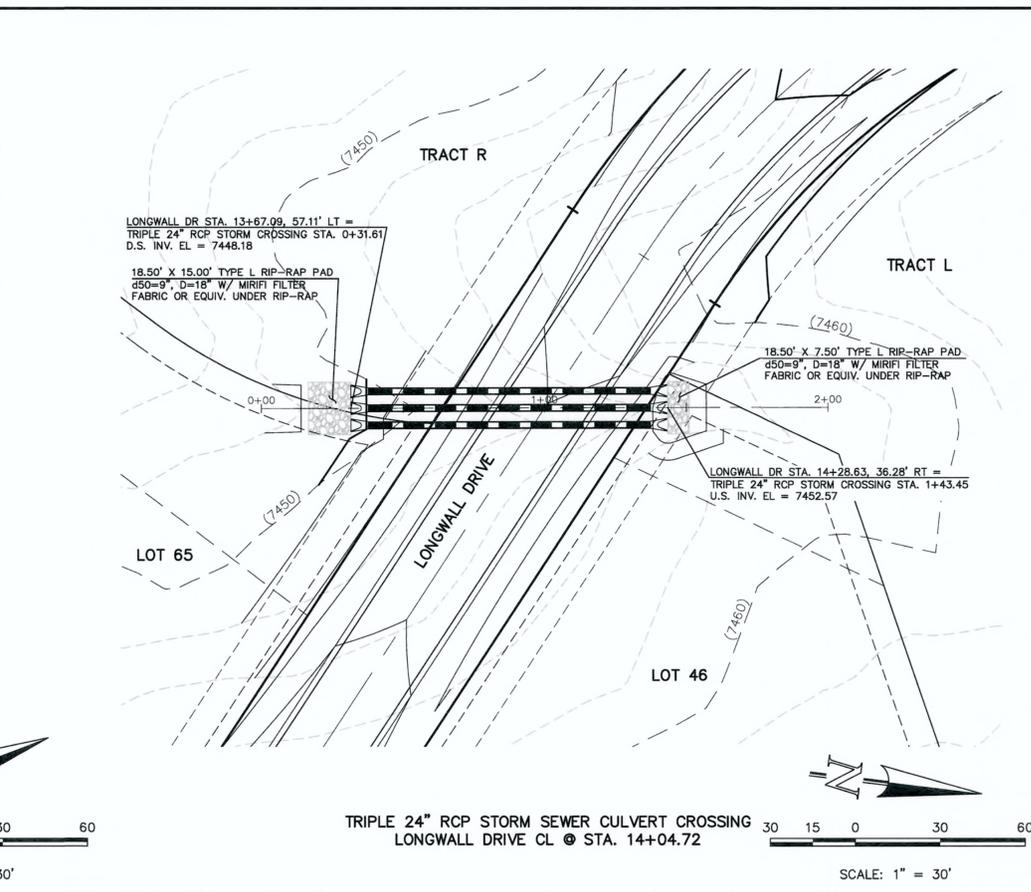
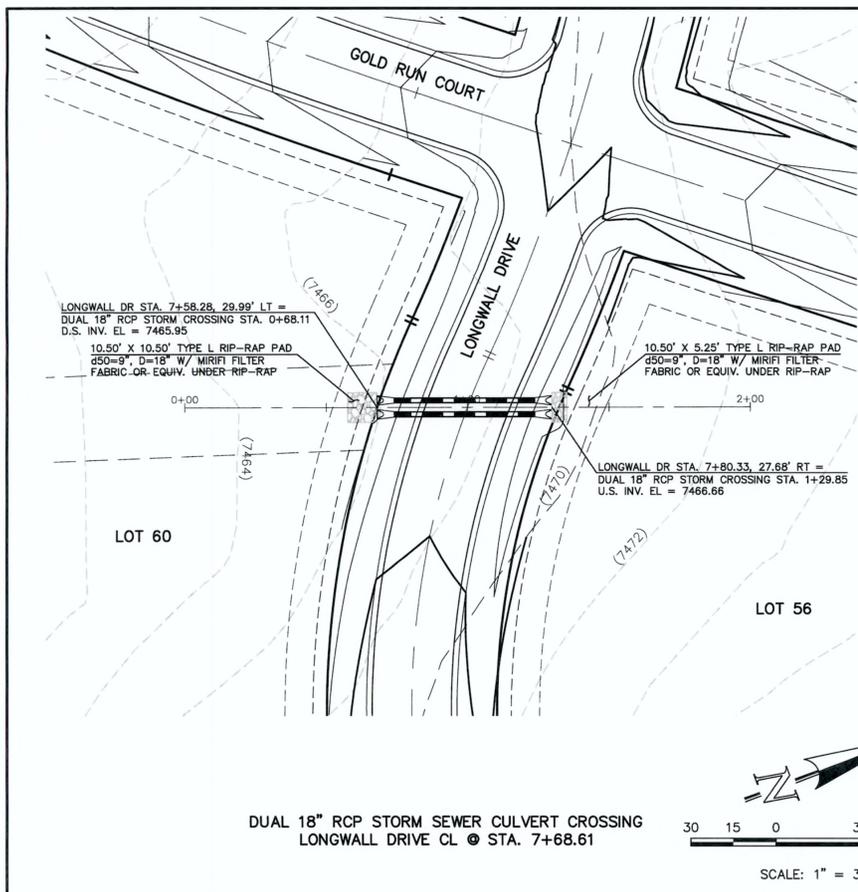
 MARC A. WHORTON, COLORADO, P.E. #37155
 DATE: 6/11/16

CLASSIC
 CONSULTING
 ENGINEERS & SURVEYORS
 619 N. Cascade Avenue, Suite 200
 Colorado Springs, Colorado 80903
 (719)785-0790
 (719)785-0799(Fax)

FLYING HORSE NORTH FILING NO. 1
 STORM SEWER CONSTRUCTION PLANS
 STORM SEWER RCP CULVERT CROSSINGS
 PLAN & PROFILE

DESIGNED BY	PRA	SCALE	DATE
DRAWN BY	PRA	(H) 1" = 30'	06-13-18
CHECKED BY	(V) 1" = 3'	SHEET	6 OF 22
		JOB NO.	1096.11

CLASSIC
 ENGINEERS & SURVEYORS



48 HOURS BEFORE YOU DIG,
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811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

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NO. REVISION	DATE

REVIEW:
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF
CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

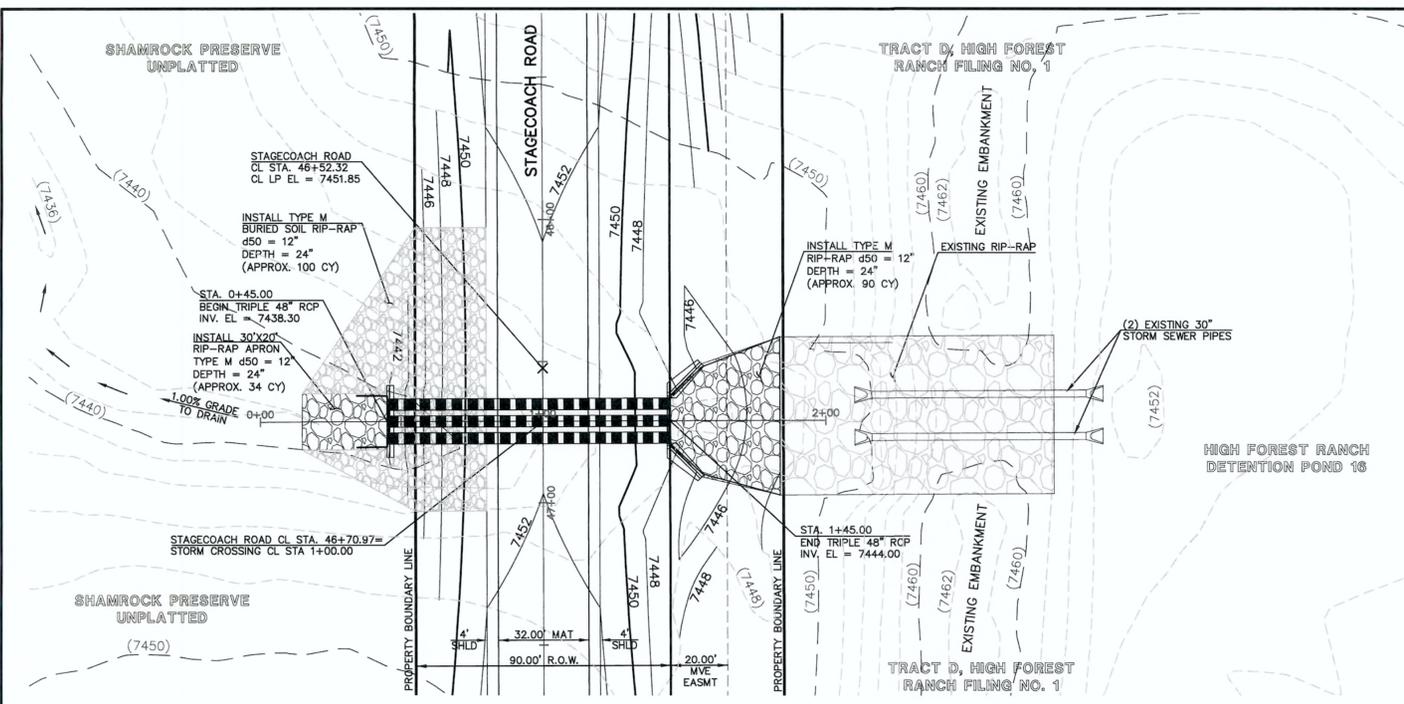
MARC A. WHORTON, COLORADO, P.E. #37155
DATE: 6/11/18

CLASSIC
CONSULTING
ENGINEERS & SURVEYORS

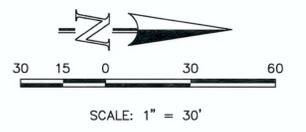
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0798(Fax)

FLYING HORSE NORTH FILING NO. 1
STORM SEWER CONSTRUCTION PLANS
STORM SEWER RCP CULVERT CROSSINGS
PLAN & PROFILE

DESIGNED BY	PRA	SCALE	(H) 1" = 30'	DATE	06-13-18
DRAWN BY	PRA	(V) 1" = 3'	SHEET	7	OF 22
CHECKED BY		JOB NO.	1096.11		

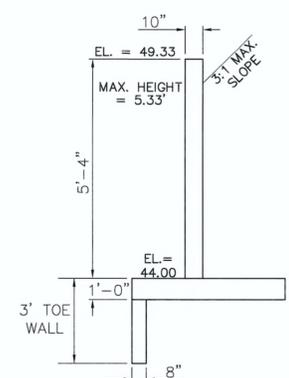


TRIPLE 48" RCP STORM SEWER CROSSING

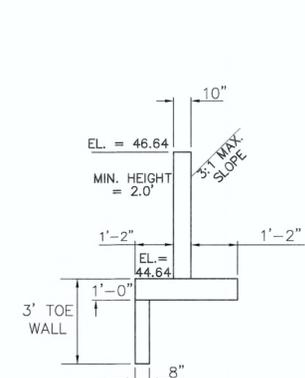


NORTHWEST HEADWALL/WINGWALLS

PER CDOT M-601-20
 SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
 INV. IN EL = 7444.00
 EL AT TOP OF HEADWALL = 7449.67
 EL AT TOP OF WINGWALL NW1 = 7449.33
 EL AT TOP OF WINGWALL NW2 = 7446.64
 EL AT TOP OF NW1 FOOTING = 7444.00
 EL AT TOP OF NW2 FOOTING = 7444.64



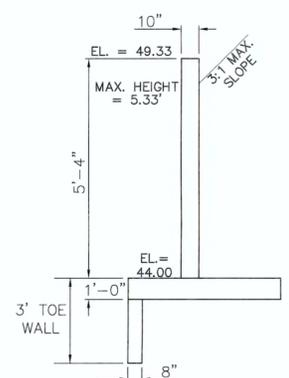
NORTHWEST WINGWALL TOP
 N.T.S.
 (WALL NW1)



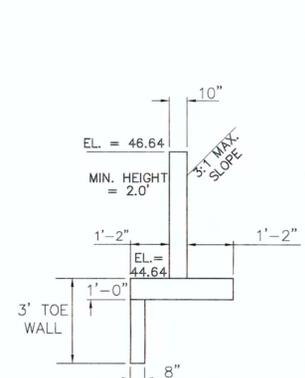
NORTHWEST WINGWALL BOTTOM
 N.T.S.
 (WALL NW2)

NORTHEAST HEADWALL/WINGWALLS

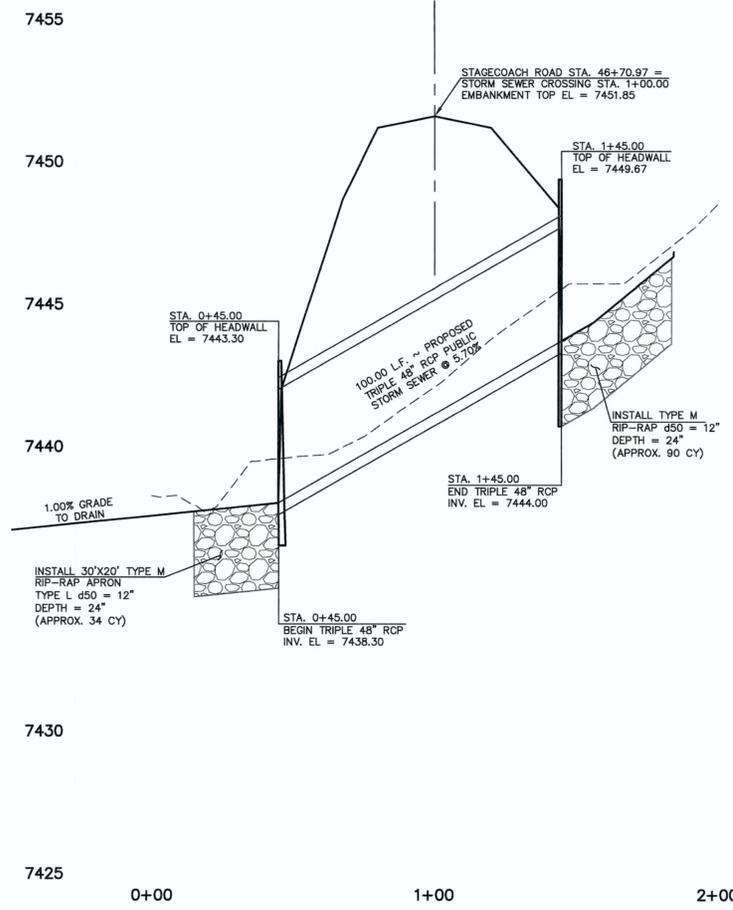
PER CDOT M-601-20
 SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
 INV. IN EL = 7444.00
 EL AT TOP OF HEADWALL = 7449.67
 EL AT TOP OF WINGWALL NE1 = 7449.33
 EL AT TOP OF WINGWALL NE2 = 7446.64
 EL AT TOP OF NE1 FOOTING = 7444.00
 EL AT TOP OF NE2 FOOTING = 7444.64



NORTHEAST WINGWALL TOP
 N.T.S.
 (WALL NE1)



NORTHEAST WINGWALL BOTTOM
 N.T.S.
 (WALL NE2)

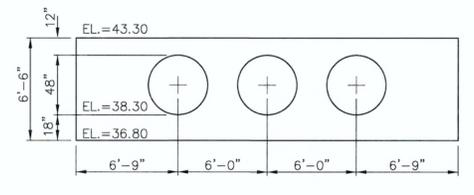


TRIPLE 48" RCP STORM SEWER CROSSING

HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 3'

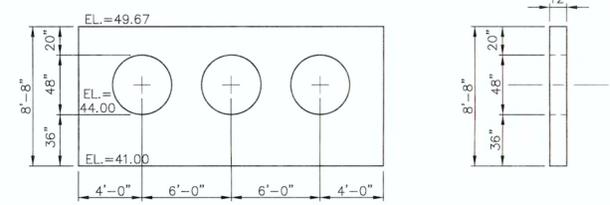
SOUTHERN OUTLET HEADWALL

PER CDOT M-601-12
 SEE CDOT M-601-12 FOR DESIGN REQUIREMENTS
 INV. OUT EL = 7438.30
 EL AT TOP OF HEADWALL = 7443.30
 FINISHED GRADE EL AT TOP OF HEADWALL = 7442.80
 EL AT BOTTOM HEADWALL = 7436.80

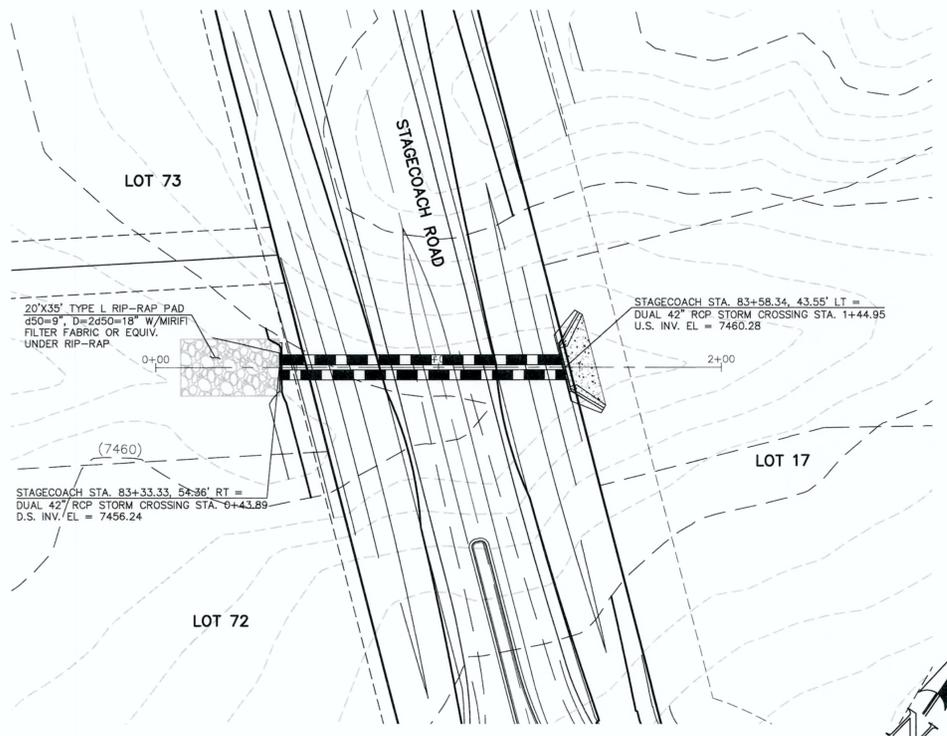


NORTHERN INLET HEADWALL

PER CDOT M-601-20
 SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
 INV. OUT EL = 7444.00
 EL AT TOP OF HEADWALL = 7449.67
 FINISHED GRADE EL AT TOP OF HEADWALL = 7449.17
 EL AT BOTTOM HEADWALL = 7441.00



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	1	REVISED PER COUNTY COMMENTS	3-16-18				
<p>HORIZONTAL SCALE: 1" = 30' VERTICAL SCALE: 1" = 3'</p>	<p>DATE: 6/15/18</p>						

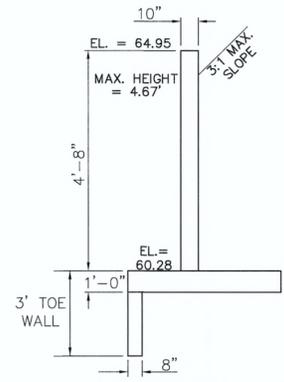


DUAL 42" RCP STORM SEWER CULVERT CROSSING
STAGECOACH ROAD @ STA. 83+47.22

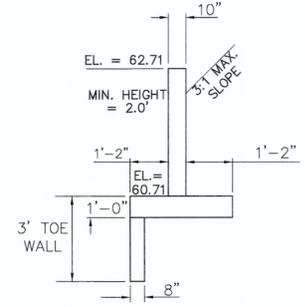


NORTHWEST HEADWALL/WINGWALLS

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. IN EL = 7460.28
EL AT TOP OF HEADWALL = 7465.45
EL AT TOP OF WINGWALL NW1 = 7464.95
EL AT TOP OF WINGWALL NW2 = 7462.71
EL AT TOP OF NW1 FOOTING = 7460.28
EL AT TOP OF NW2 FOOTING = 7460.71



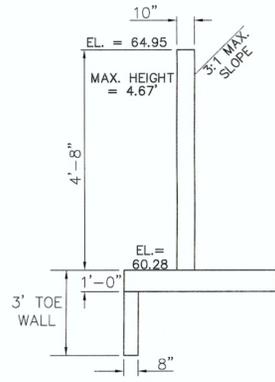
NORTHWEST WINGWALL TOP
N.T.S.
(WALL NW1)



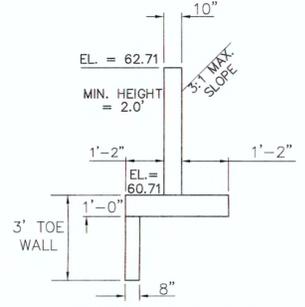
NORTHWEST WINGWALL BOTTOM
N.T.S.
(WALL NW2)

NORTHEAST HEADWALL/WINGWALLS

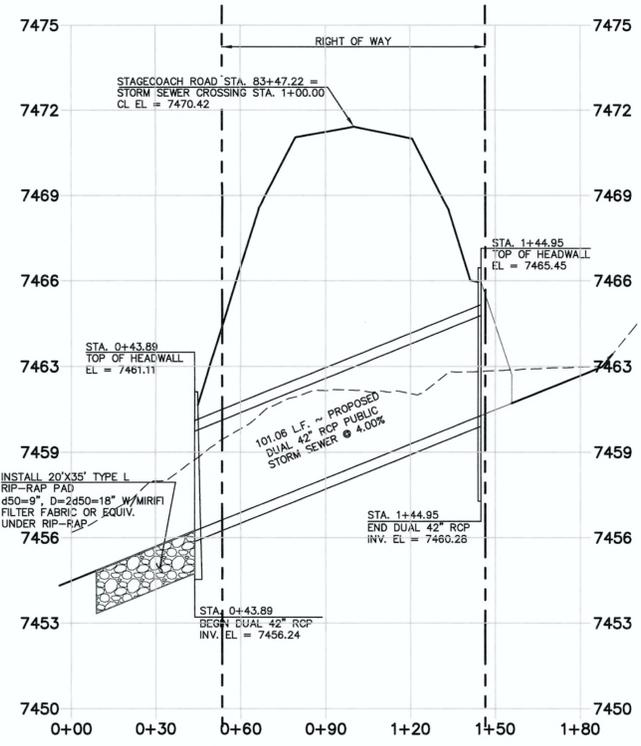
PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. IN EL = 7460.28
EL AT TOP OF HEADWALL = 7465.45
EL AT TOP OF WINGWALL NE1 = 7464.95
EL AT TOP OF WINGWALL NE2 = 7462.71
EL AT TOP OF NE1 FOOTING = 7460.28
EL AT TOP OF NE2 FOOTING = 7460.71



NORTHEAST WINGWALL TOP
N.T.S.
(WALL NE1)



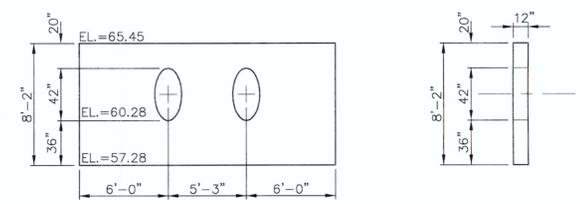
NORTHEAST WINGWALL BOTTOM
N.T.S.
(WALL NE2)



DUAL 42" RCP STORM SEWER CULVERT CROSSING
STAGECOACH ROAD @ STA. 83+47.22
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

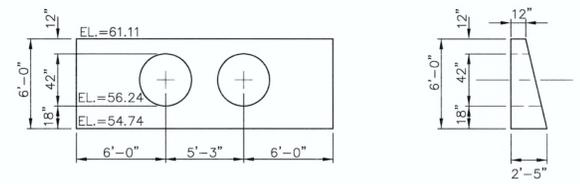
NORTHERN INLET HEADWALL

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. IN EL = 7460.28
EL AT TOP OF HEADWALL = 7465.45
FINISHED GRADE EL AT TOP OF HEADWALL = 7464.95
EL AT BOTTOM HEADWALL = 7457.28



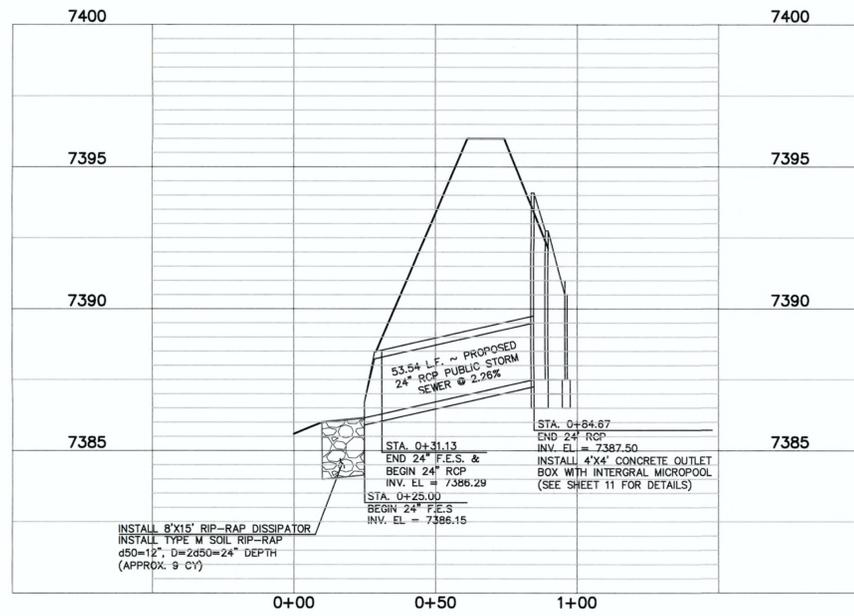
SOUTHERN OUTLET HEADWALL

PER CDOT M-601-12
SEE CDOT M-601-12 FOR DESIGN REQUIREMENTS
INV. OUT EL = 7456.24
EL AT TOP OF HEADWALL = 7461.11
FINISHED GRADE EL AT TOP OF HEADWALL = 7460.61
EL AT BOTTOM HEADWALL = 7454.74

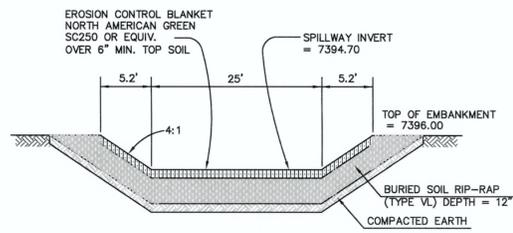


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DESIGNED BY	PRA	SCALE	DATE																										
DRAWN BY	PRA	(H) 1" = 30'	6-13-18																										
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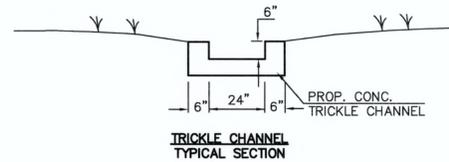
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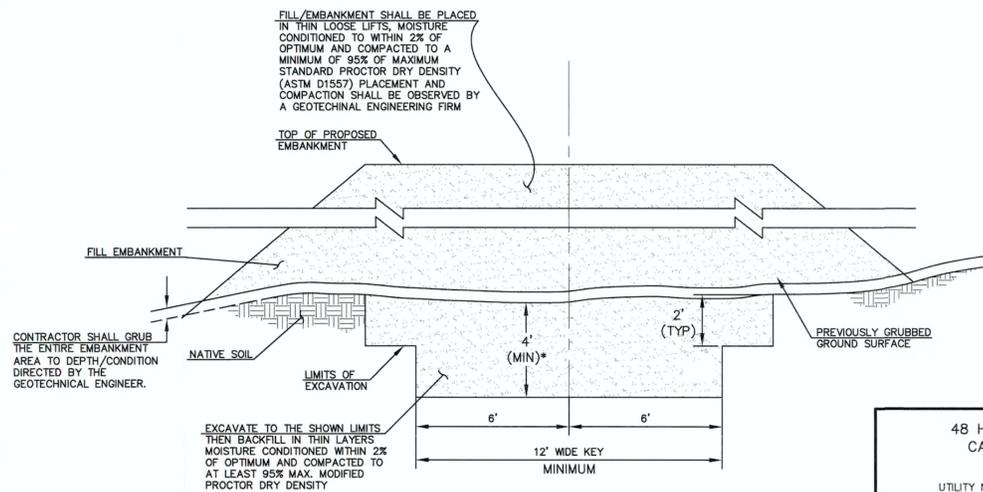
**DETENTION FACILITY NO. 1
POND OUTLET PROFILE**
SCALE: HORIZONTAL 1"=30'
VERTICAL 1"=3'



**EMERGENCY SPILLWAY
CROSS SECTION**
SCALE: N.T.S.



**TRICKLE CHANNEL
TYPICAL SECTION**



**SECTION A
TYPICAL EMBANKMENT
WITH SOIL KEYWAY**
SCALE: N.T.S.

* UPON GRUBBING EXISTING SOILS IN EMBANKMENT AREA, ENGINEER SHALL BE CONTACTED TO DETERMINE SOIL QUALITY. IF POOR PERMEABILITY IS FOUND (I.E. SANDY-SILT) ONLY TOP 2' X 14' PORTION OF EMBANKMENT KEY IS REQUIRED FOR CONSTRUCTION.

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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	4-4-18
2	UPDATED DESIGN BASED ON HWY 83 DESIGN	4-26-18

REVIEW:
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF
CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

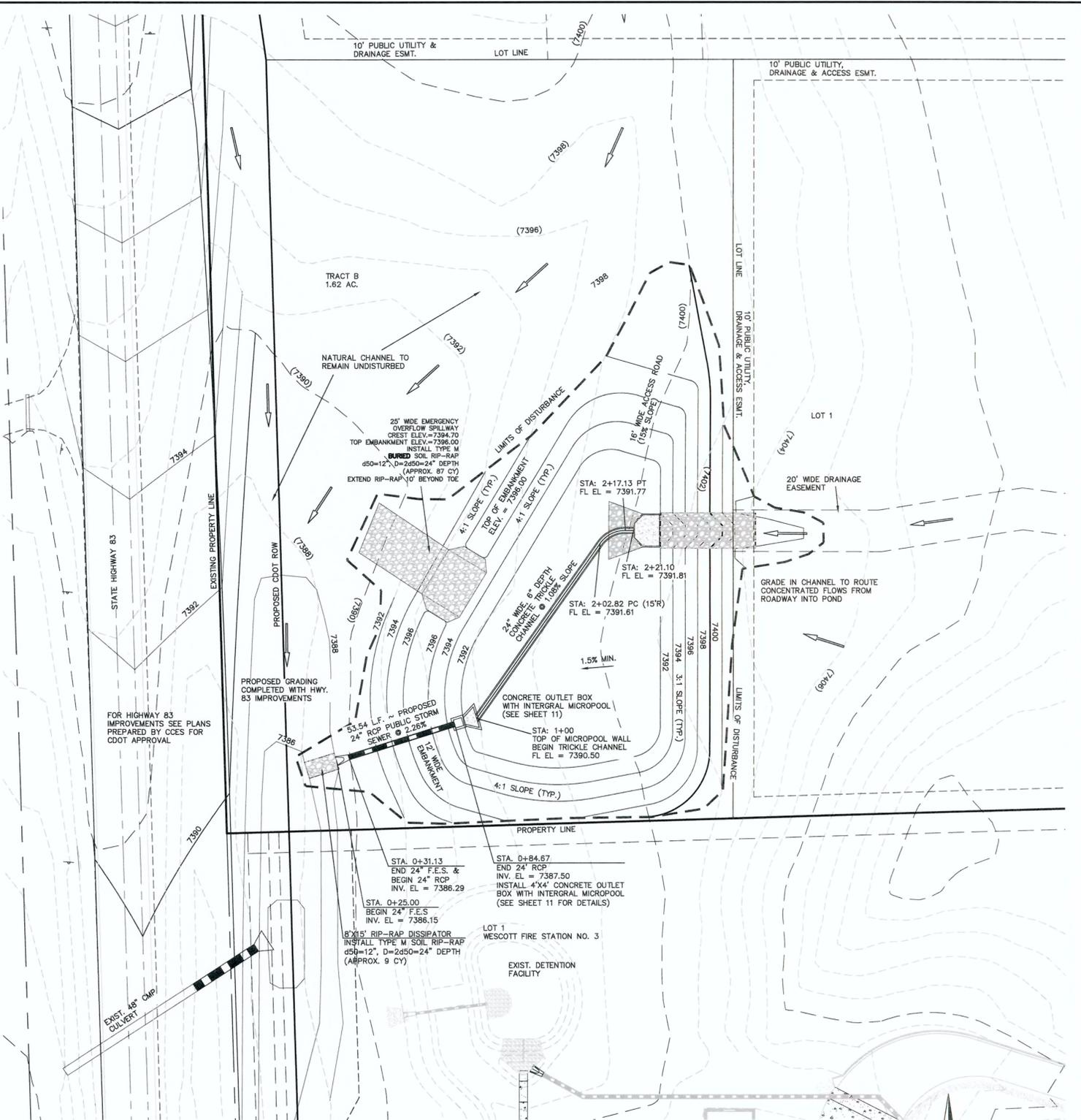
MARC A. WHORTON, COLORADO P.E. #37155
DATE: 7/17/18

CLASSIC
CONSULTING
ENGINEERS & SURVEYORS

619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(fax)

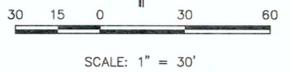
FLYING HORSE NORTH FILING NO. 1
DRAINAGE IMPROVEMENT PLANS
DETENTION FACILITY NO. 1
POND PLAN

DESIGNED BY	MAW	SCALE	DATE
DRAWN BY	MAW	(H) 1"= 30'	SHEET 10 OF 22
CHECKED BY	(V) 1"= 3'		JOB NO. 1096.11

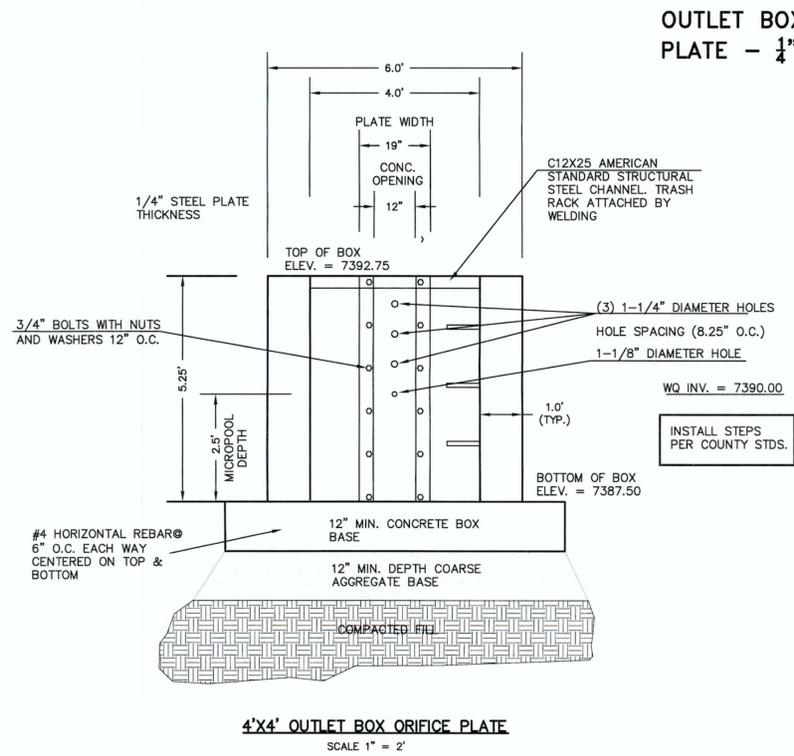
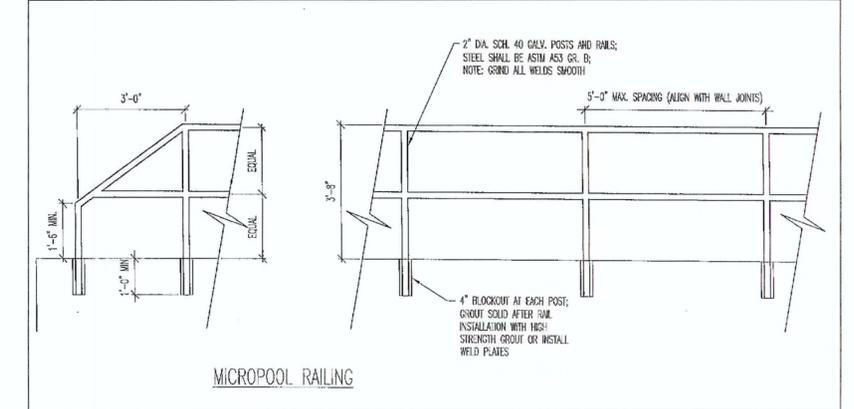
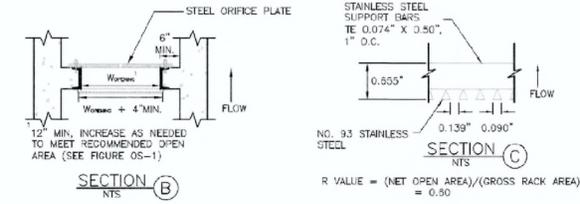
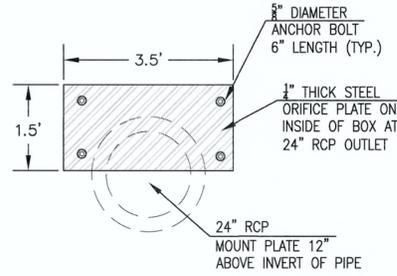
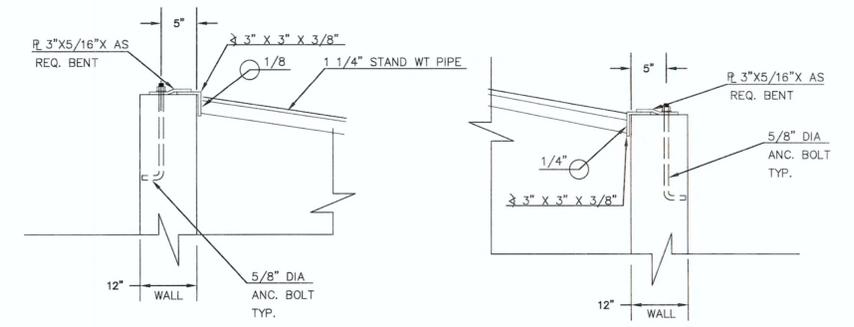
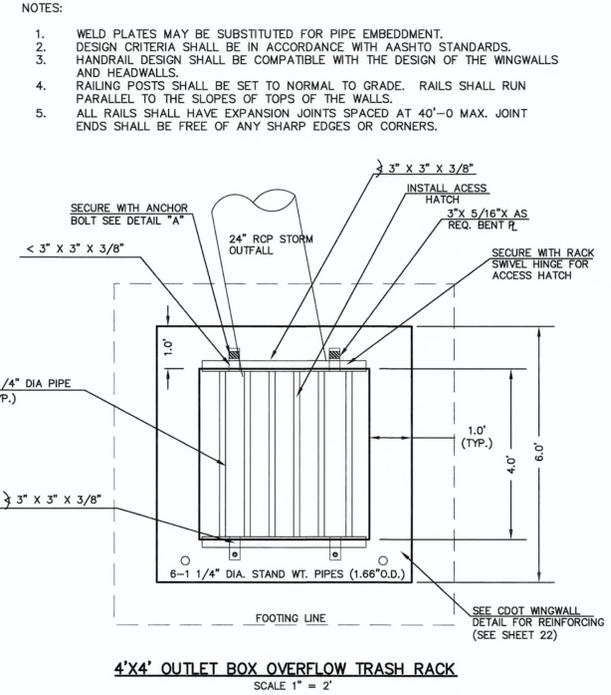
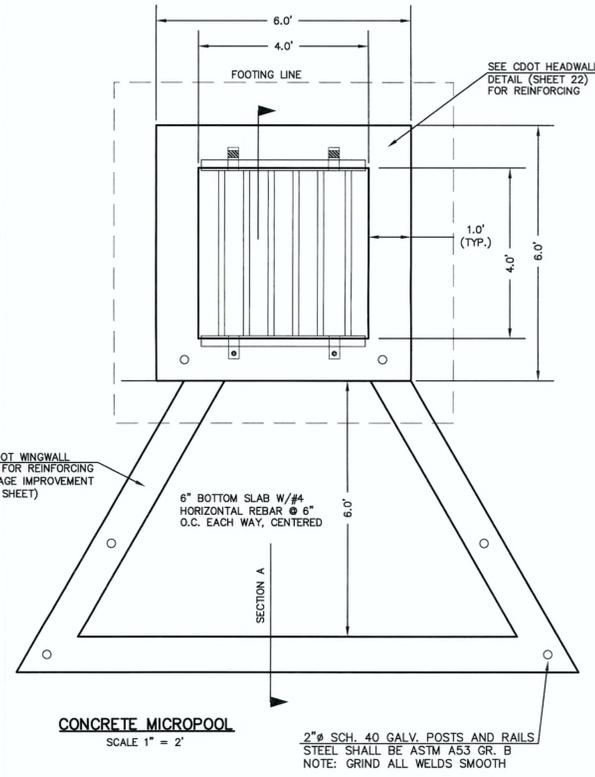


DETENTION FACILITY NO. 1

SEE FLYING HORSE NORTH EARLY
GRADING AND EROSION CONTROL PLAN
(GOLF COURSE AND PRIVATE ACCESS
ROADS ONLY) FOR EROSION CONTROL
DETAILS. APPROVED OCTOBER 2016



N:\2018\11\Drawings\CONSTRUCTION\Plan\Plan_10-10000_1_Plan.dwg, 7/17/2018 9:35:03 AM, 1:1



(ALL MATERIALS PER EL PASO COUNTY SPECIFICATIONS)

ORIFICE PLATE NOTES:

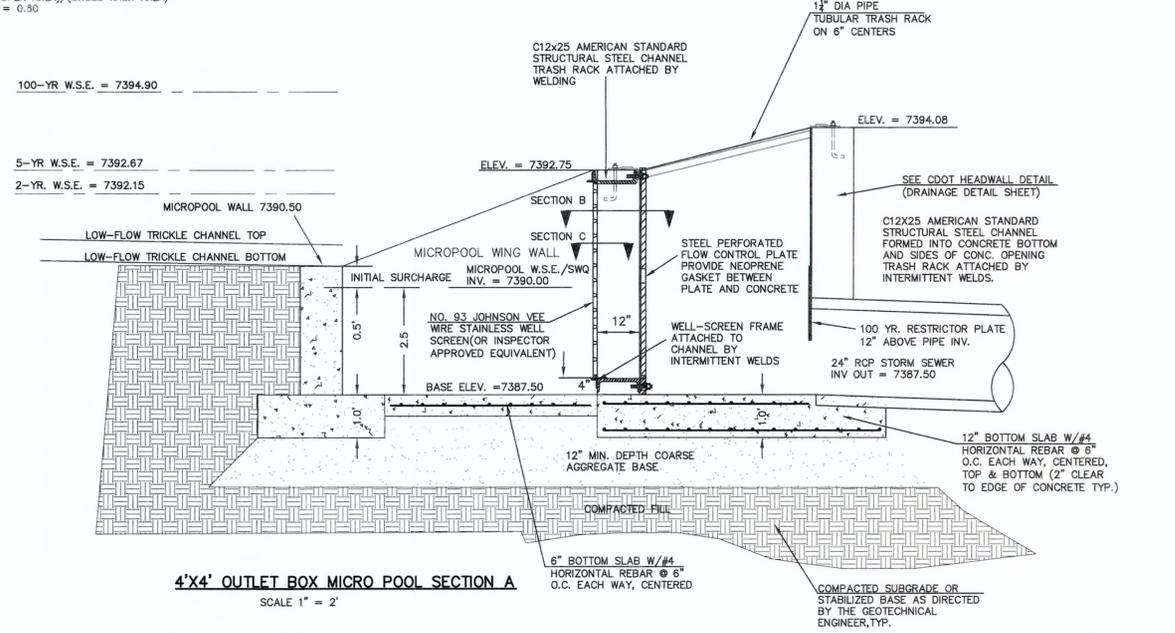
- INSTALL HOLES AS SHOWN ON DETAIL TO LEFT.
- PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE

EURV AND WQCV TRASH RACKS:

- WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
- BAR GRATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
- STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF RACK

OVERFLOW TRASH RACKS:

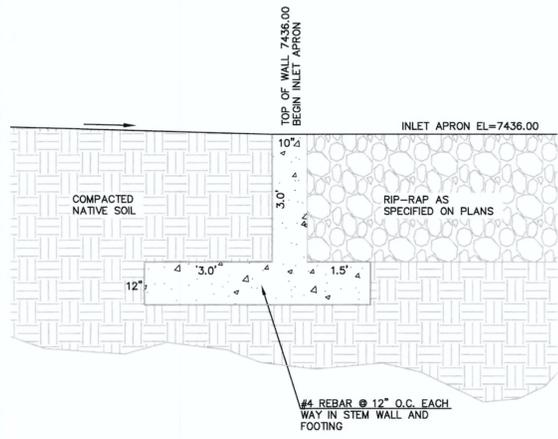
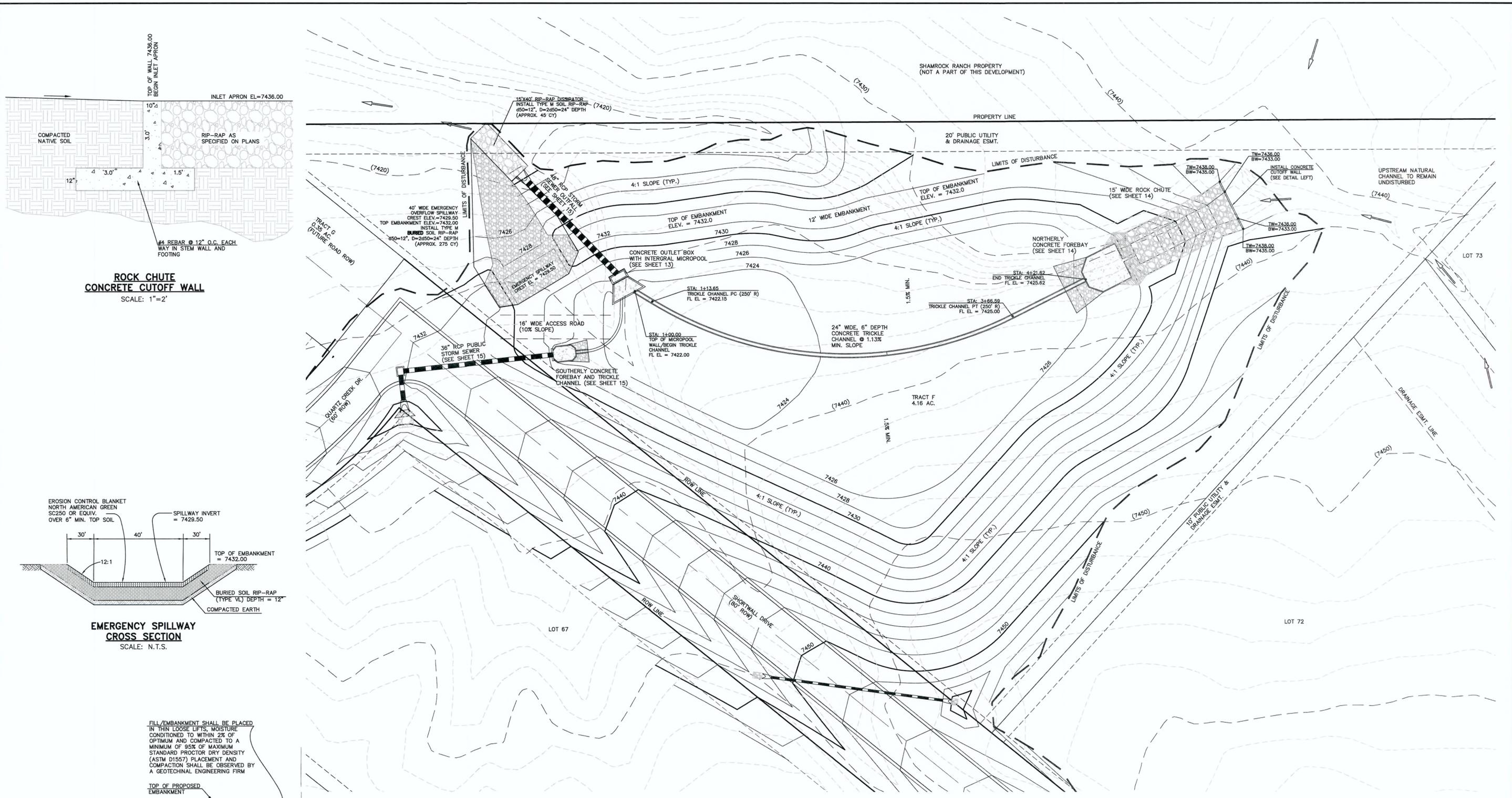
- ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
- TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
- TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
- STRUCTURAL DESIGN OF THE TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.



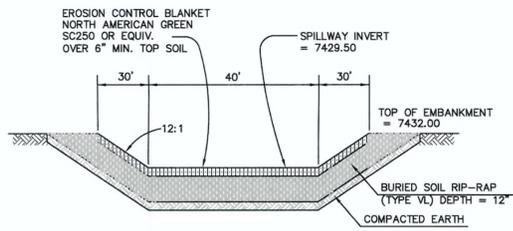
<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS</p> <p>811</p> <p>UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p>	<p>NO. REVISION</p> <p>DATE</p>	<p>REVIEW:</p> <p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC</p>	<p>FLYING HORSE NORTH FILING NO. 1</p> <p>DRAINAGE IMPROVEMENT PLANS</p> <p>DETENTION FACILITY NO. 1</p> <p>OUTLET BOX DETAILS</p>					
	<table border="1"> <tr> <td>1</td> <td>REVISED PER COUNTY COMMENTS</td> <td>4-4-18</td> </tr> <tr> <td>2</td> <td>UPDATED PER HWY. 83 IMPROVEMENTS</td> <td>4-26-18</td> </tr> </table>	1		REVISED PER COUNTY COMMENTS	4-4-18	2	UPDATED PER HWY. 83 IMPROVEMENTS	4-26-18
1	REVISED PER COUNTY COMMENTS	4-4-18						
2	UPDATED PER HWY. 83 IMPROVEMENTS	4-26-18						



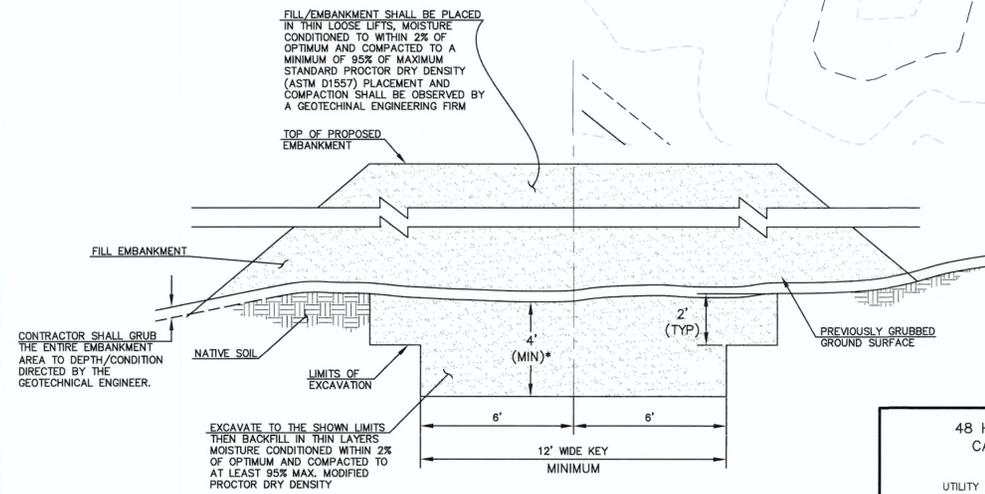
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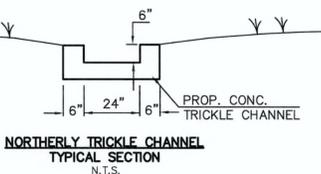
**ROCK CHUTE
CONCRETE CUTOFF WALL**
SCALE: 1"=2'



**EMERGENCY SPILLWAY
CROSS SECTION**
SCALE: N.T.S.



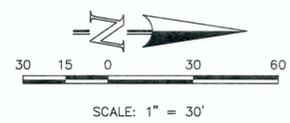
**SECTION A
TYPICAL EMBANKMENT
WITH SOIL KEYWAY**
SCALE: N.T.S.



**NORTHERLY TRICKLE CHANNEL
TYPICAL SECTION**
N.T.S.

DETENTION FACILITY NO. 4

SEE FLYING HORSE NORTH EARLY GRADING AND EROSION CONTROL PLAN (GOLF COURSE AND PRIVATE ACCESS ROADS ONLY) FOR EROSION CONTROL DETAILS. APPROVED OCTOBER 2016



<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p>		<table border="1"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>REVISED PER COUNTY COMMENTS</td> <td>4-4-18</td> </tr> </tbody> </table>	NO.	REVISION	DATE	1	REVISED PER COUNTY COMMENTS	4-4-18
NO.	REVISION	DATE						
1	REVISED PER COUNTY COMMENTS	4-4-18						
<p>REVIEW: PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC</p> <p>MARC A. WHORTON, COLORADO P.E. #37155</p>		<p>DATE</p>						

CLASSIC CONSULTING ENGINEERS & SURVEYORS

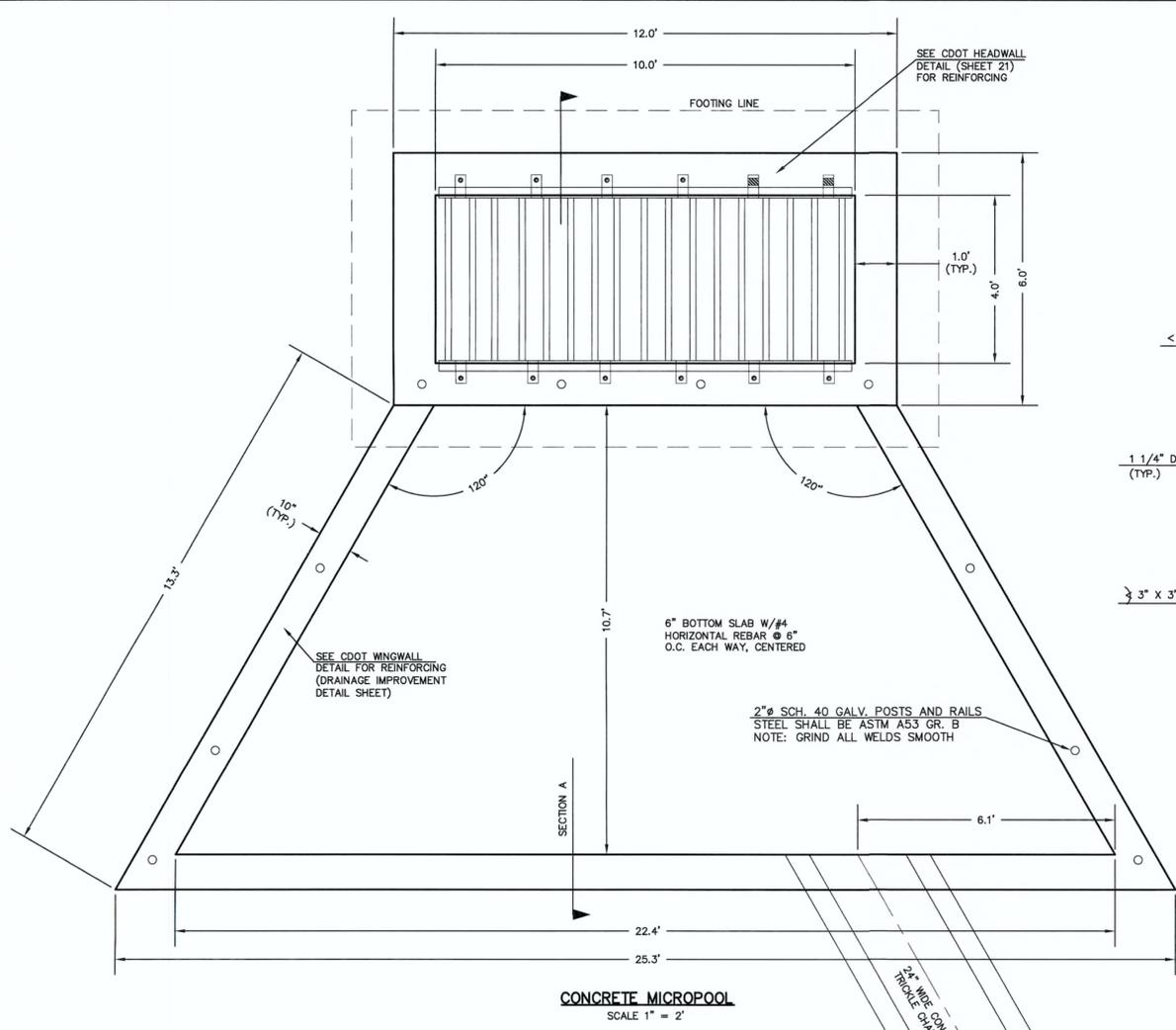
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903

(719)785-0790
(719)785-0799(Fax)

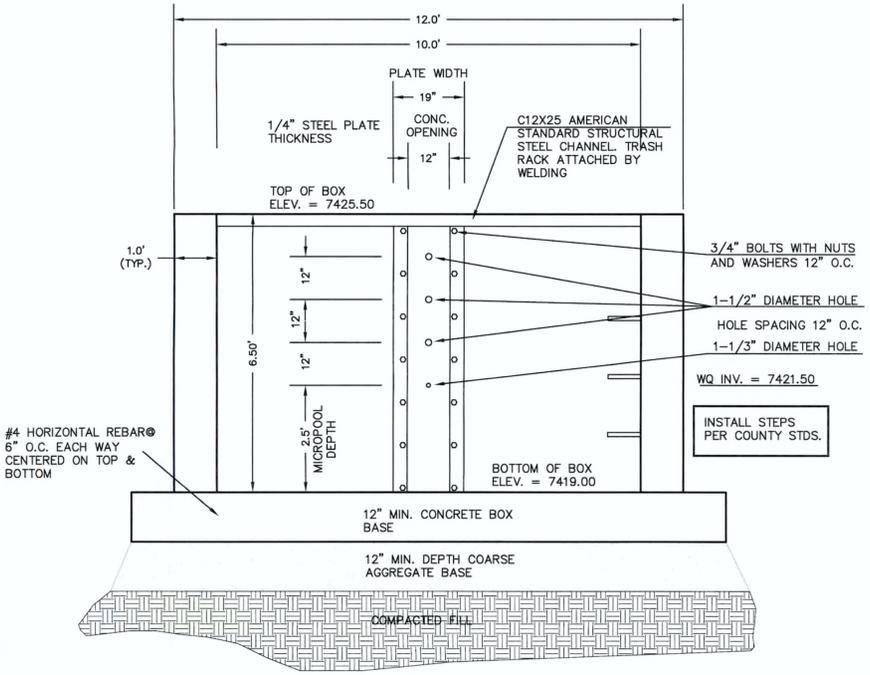
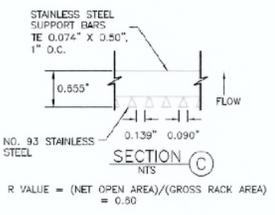
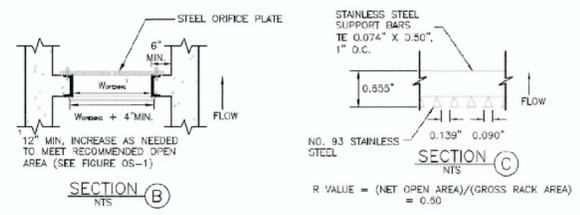
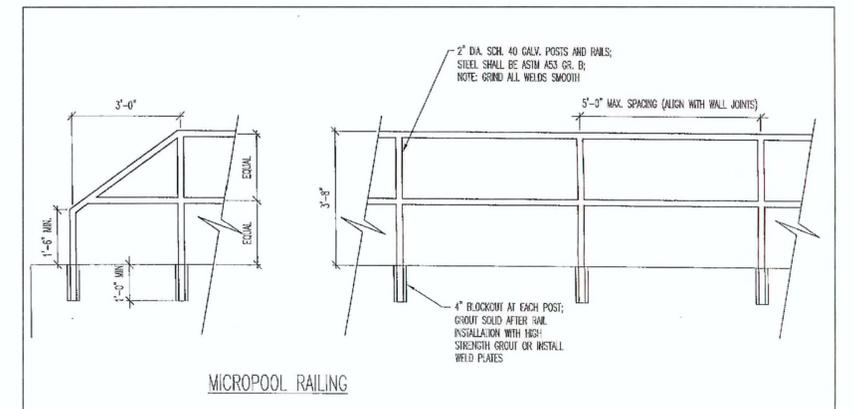
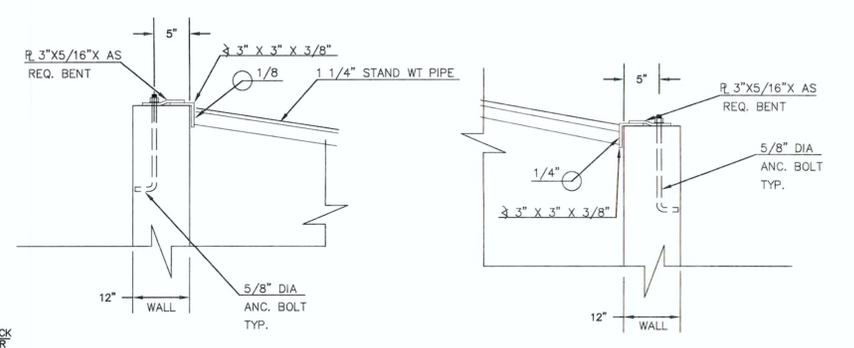
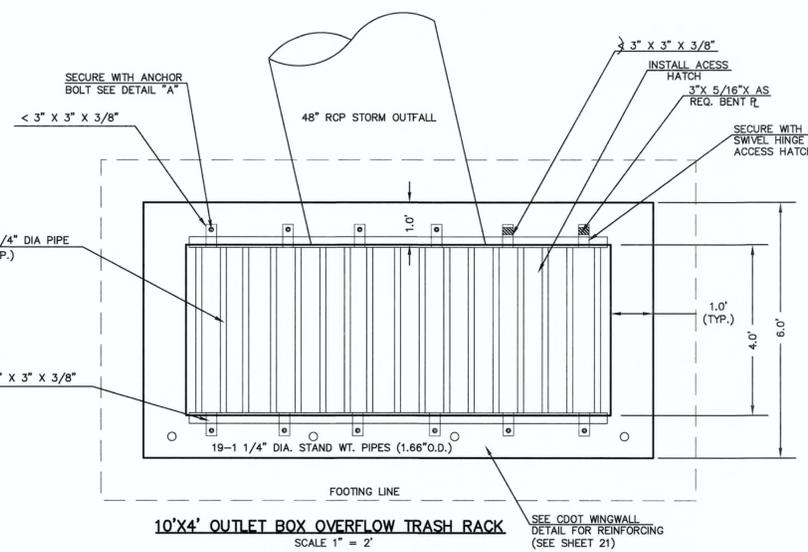
<p>FLYING HORSE NORTH FILING NO. 1 DRAINAGE IMPROVEMENT PLANS DETENTION FACILITY NO. 4 POND PLAN</p>			
DESIGNED BY	MAW	SCALE	DATE 06-13-18
DRAWN BY	MAW	(H) 1"= 30'	SHEET 12 OF 22
CHECKED BY	(V) 1"= N/A	JOB NO.	1096.11



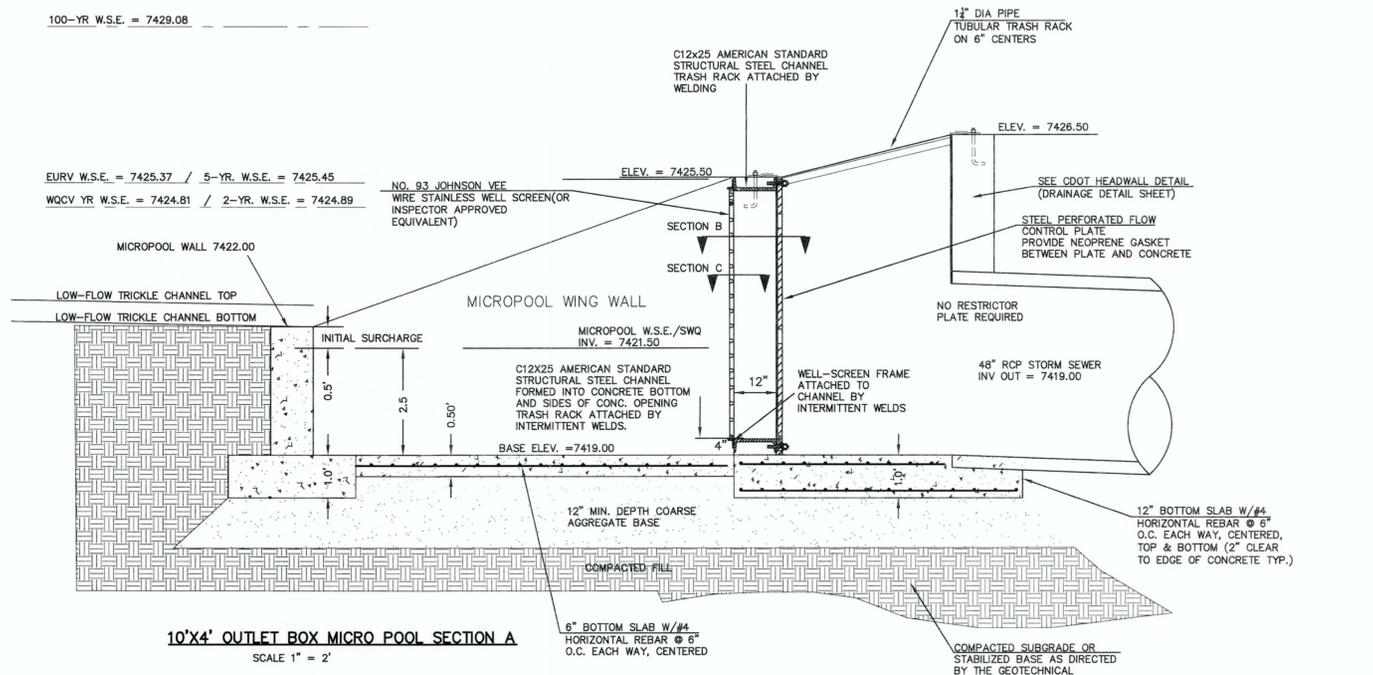
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- NOTES:
1. WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDMENT. DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH AASHTO STANDARDS.
 2. HANDRAIL DESIGN SHALL BE COMPATIBLE WITH THE DESIGN OF THE WINGWALLS AND HEADWALLS.
 3. RAILING POSTS SHALL BE SET TO NORMAL TO GRADE. RAILS SHALL RUN PARALLEL TO THE SLOPES OF TOPS OF THE WALLS.
 4. ALL RAILS SHALL HAVE EXPANSION JOINTS SPACED AT 40'-0" MAX. JOINT ENDS SHALL BE FREE OF ANY SHARP EDGES OR CORNERS.



- (ALL MATERIALS PER EL PASO COUNTY SPECIFICATIONS)
- ORIFICE PLATE NOTES:
1. INSTALL HOLES AS SHOWN ON DETAIL TO LEFT.
 2. PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
- EURV AND WOCV TRASH RACKS:
3. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
 4. BAR GRATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
 5. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF RACK.
- OVERFLOW TRASH RACKS:
1. ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
 2. TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
 3. TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
 4. STRUCTURAL DESIGN OF THE TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.



10'X4' OUTLET BOX ORIFICE PLATE
SCALE 1" = 2'

10'X4' OUTLET BOX MICRO POOL SECTION A
SCALE 1" = 2'

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REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155
DATE 6/15/18

CLASSIC
CONSULTING
ENGINEERS & SURVEYORS

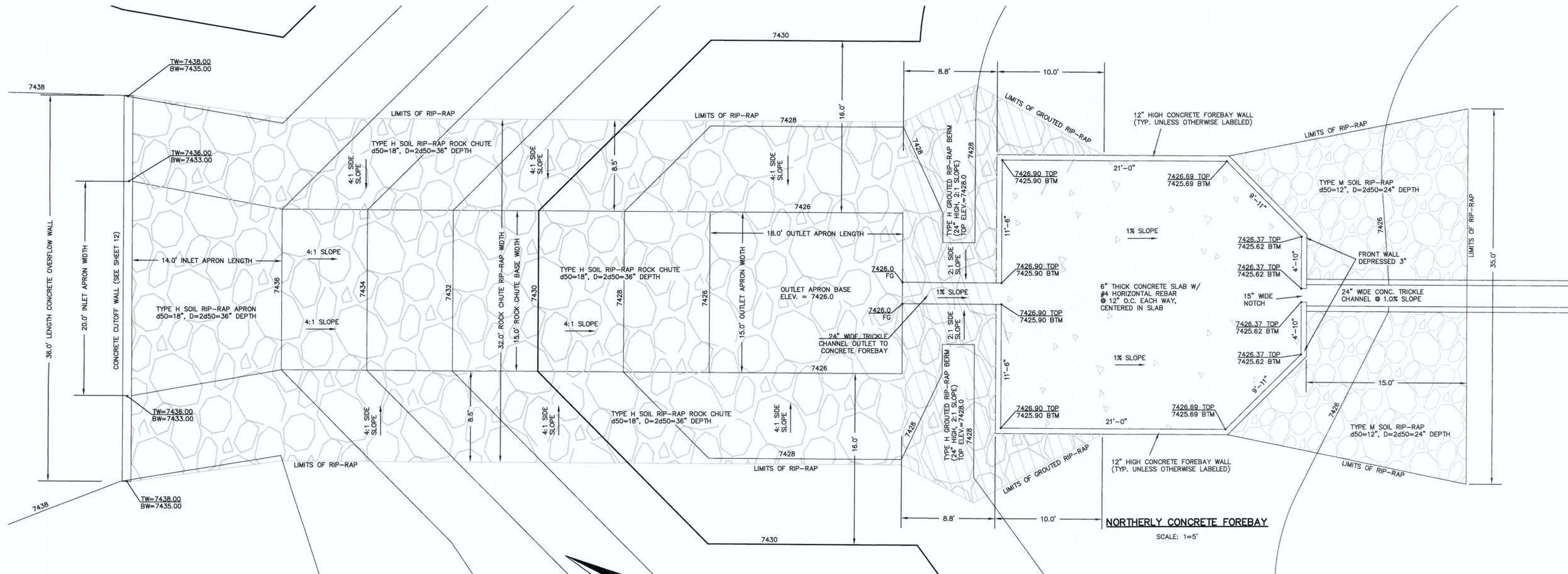
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

FLYING HORSE NORTH FILING NO. 1
DRAINAGE IMPROVEMENT PLANS
DETENTION FACILITY NO. 4
OUTLET BOX DETAILS

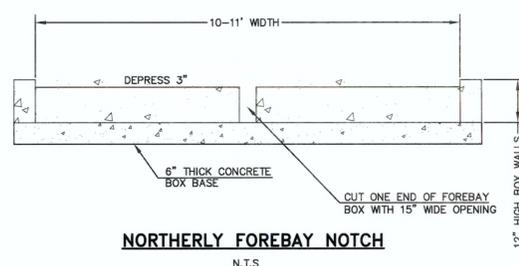
DESIGNED BY	MAW	SCALE	DATE	06-13-18
DRAWN BY	MAW	(H) 1" = N/A	SHEET	13 OF 22
CHECKED BY	(V) 1" = N/A	JOB NO.	1096.11	



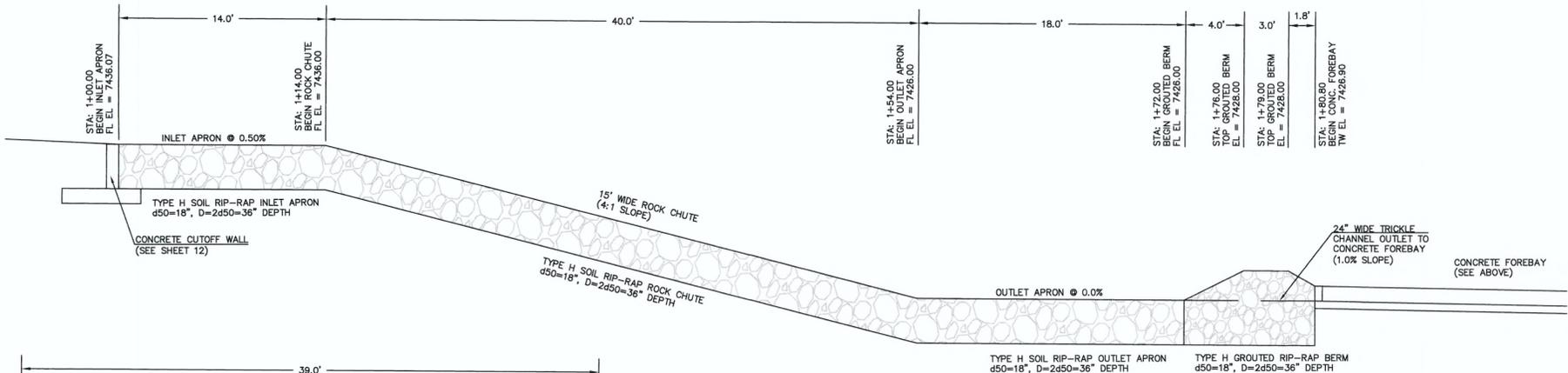
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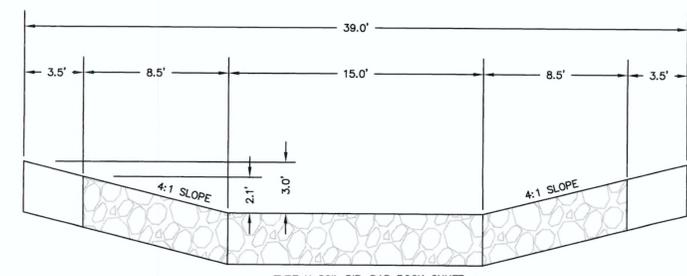
15' WIDE ROCK CHUTE PLAN
SCALE: 1=5'



NORTHERLY FOREBAY NOTCH
N.T.S.



15' WIDE ROCK CHUTE PROFILE
SCALE: 1=5'

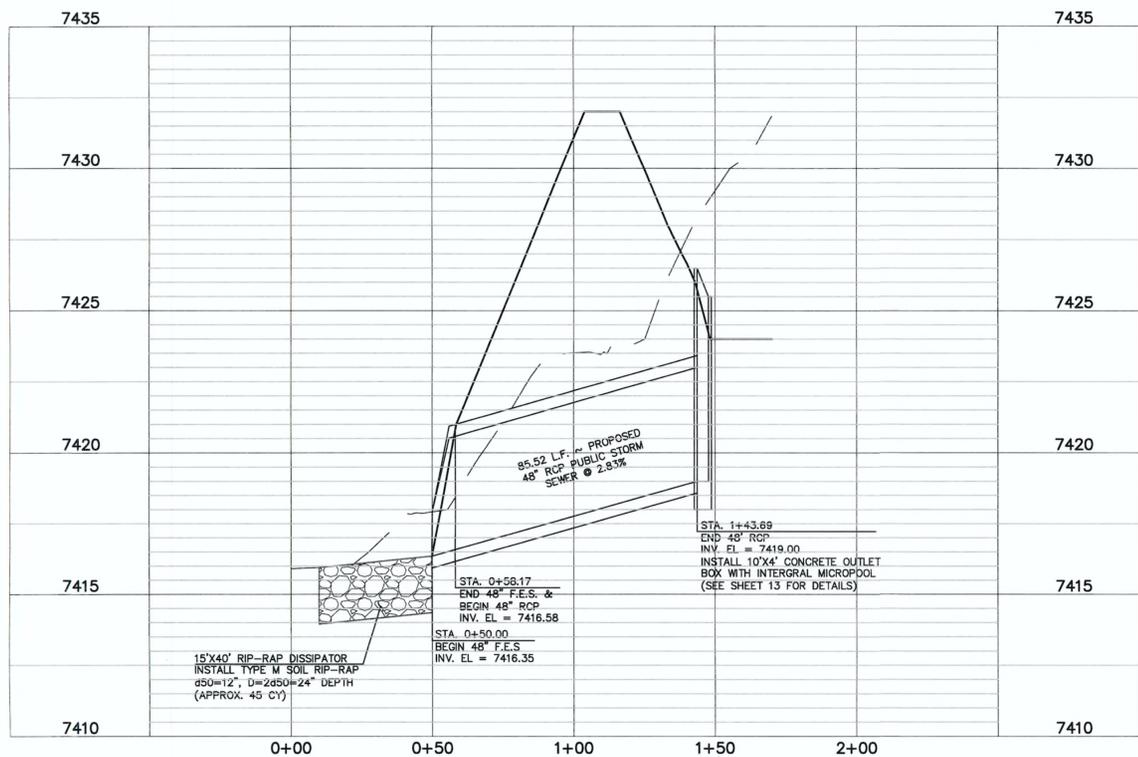


15' WIDE ROCK CHUTE SECTION
SCALE: 1=5'

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	<p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC</p> <p>MARC A. WHORTON, COLORADO, P.E. #37155</p>	<p>DATE 6/15/18</p>	<p>DESIGNED BY MAW SCALE DATE 06-13-18</p> <p>DRAWN BY MAW (H) 1"= 2' SHEET 14 OF 22</p> <p>CHECKED BY (V) 1"= N/A JOB NO. 1096.11</p>		

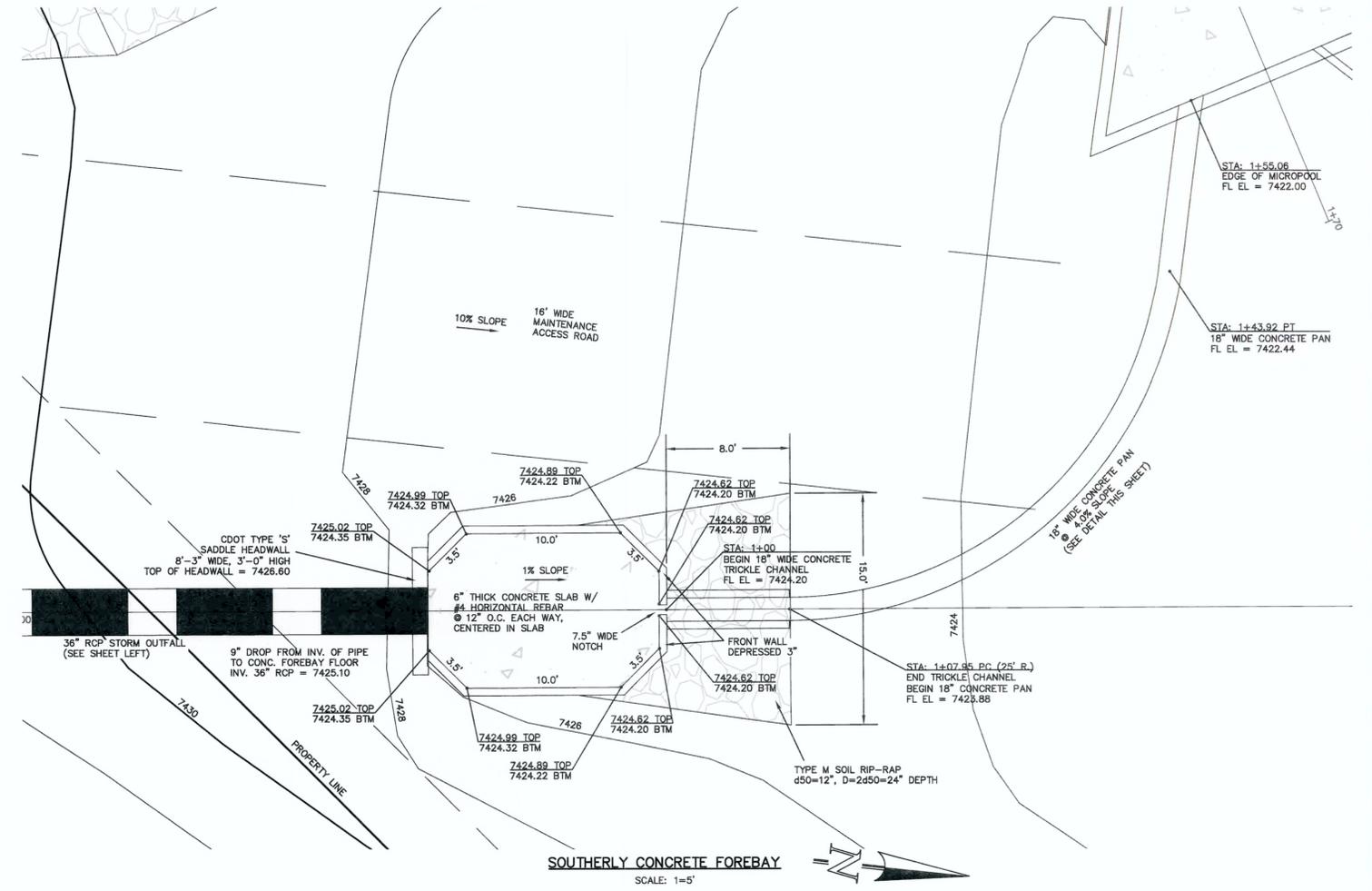


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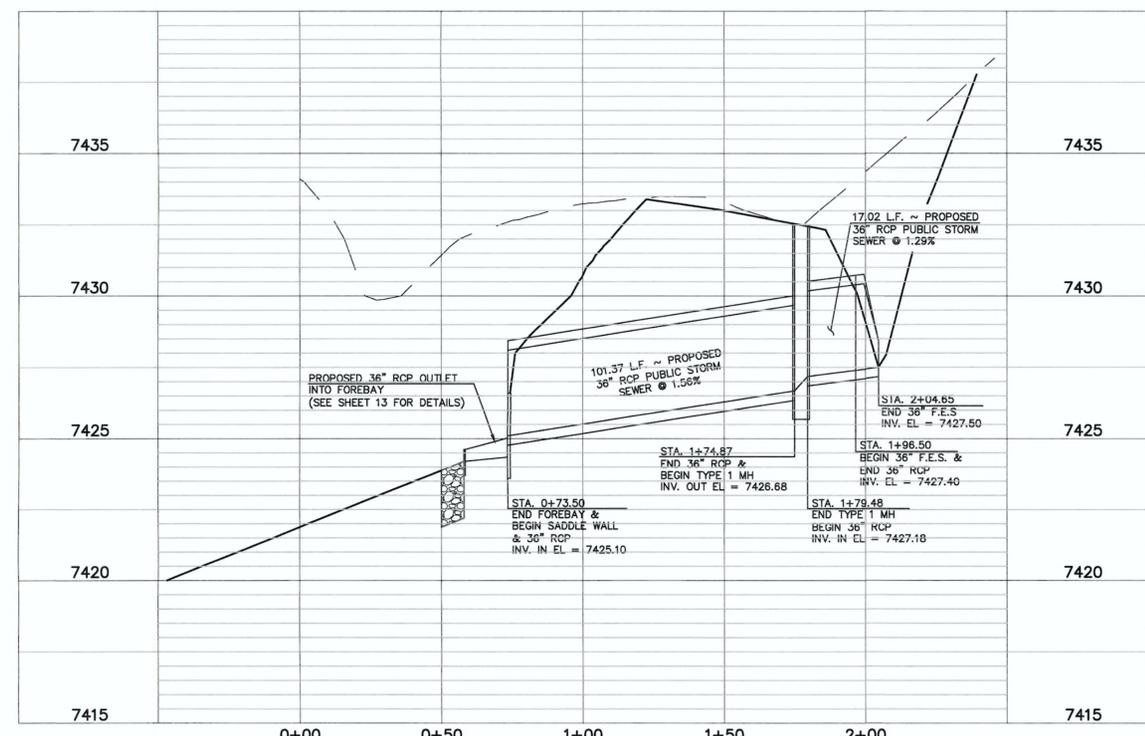
DETENTION FACILITY NO. 4 ~ 48" RCP POND OUTLET PROFILE

SCALE: HORIZONTAL: 1=30'
VERTICAL: 1=3'



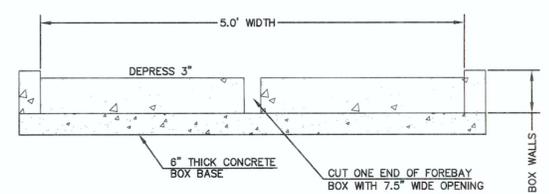
SOUTHERLY CONCRETE FOREBAY

SCALE: 1=5'



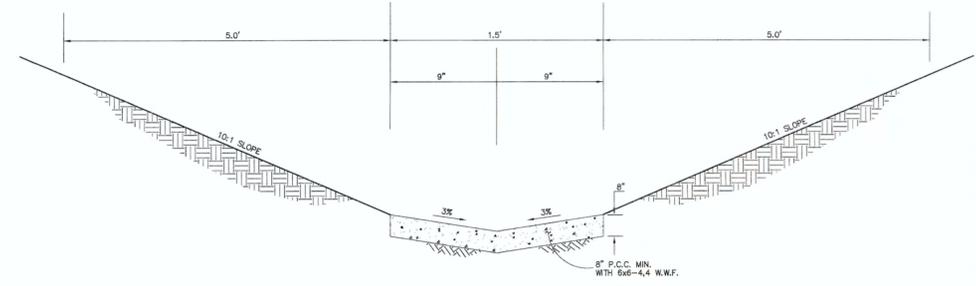
DETENTION FACILITY NO. 4 ~ 36" RCP POND INLET PROFILE

SCALE: HORIZONTAL: 1=30'
VERTICAL: 1=3'



SOUTHERLY FOREBAY NOTCH

N.T.S.



18" WIDE CONCRETE PAN

N.T.S.

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MARC A. WHORTON, COLORADO T.P.E. #37155
DATE: 6/15/18

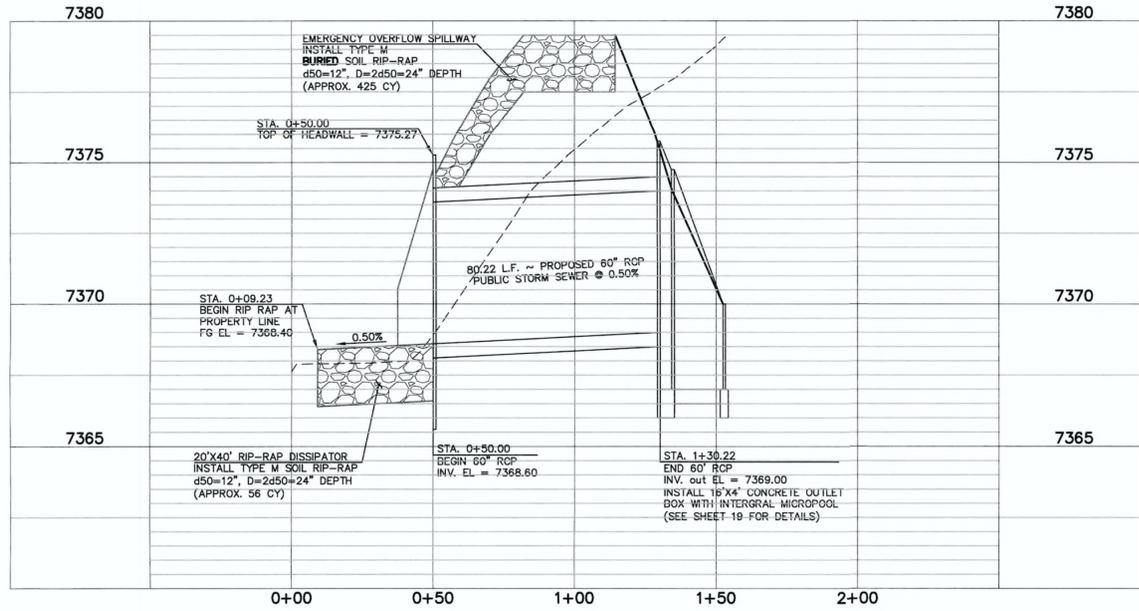
CLASSIC
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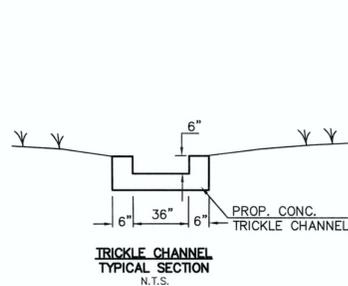
FLYING HORSE NORTH FILING NO. 1
DRAINAGE IMPROVEMENT PLANS
DETENTION FACILITY NO. 4
OUTLET PROFILE / SOUTHERLY FOREBAY

DESIGNED BY	MAW	SCALE	DATE	06-13-18
DRAWN BY	MAW	(H) 1"=VARIES	SHEET	15 OF 22
CHECKED BY	(V) 1"=VARIES	JOB NO.	1096.11	

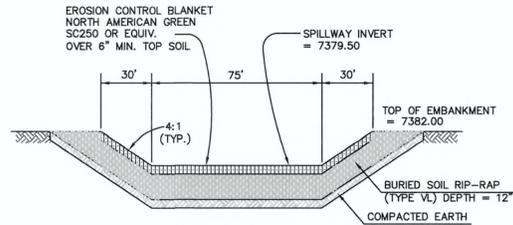




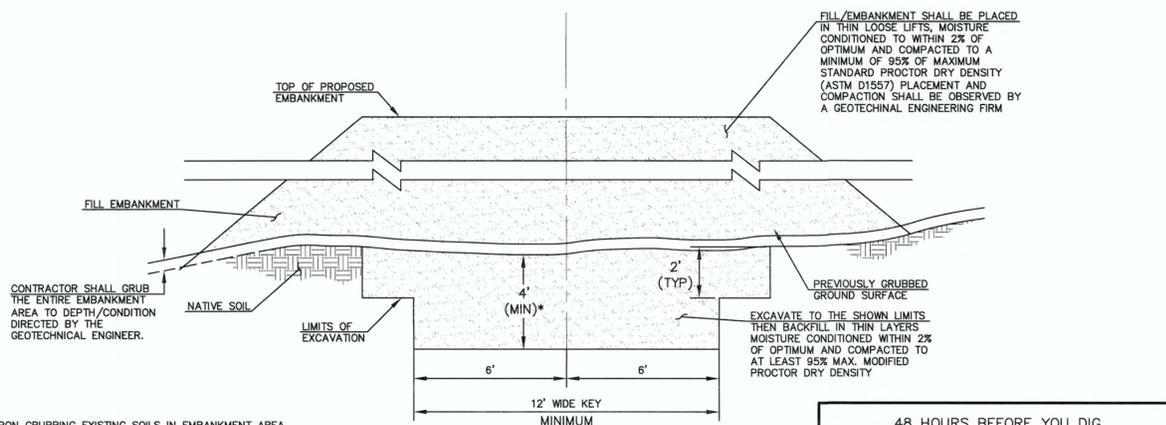
**DETENTION FACILITY NO. 8
POND OUTLET PROFILE**
SCALE: HORIZONTAL 1"=30'
VERTICAL 1"=3'



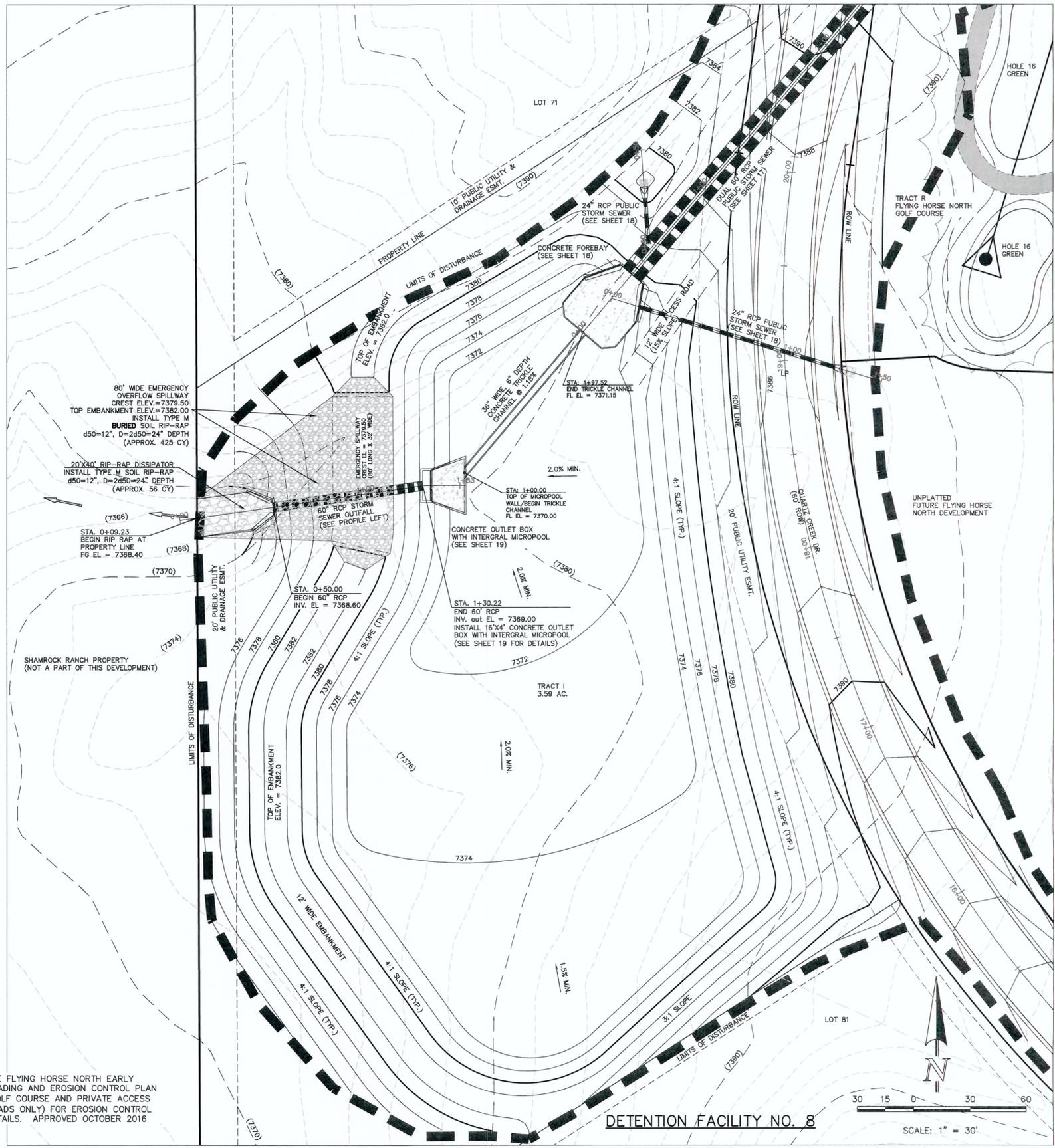
**TRICKLE CHANNEL
TYPICAL SECTION**
N.T.S.



**EMERGENCY SPILLWAY
CROSS SECTION**
SCALE: N.T.S.



**SECTION A
TYPICAL EMBANKMENT
WITH SOIL KEYWAY**
SCALE: N.T.S.



DETENTION FACILITY NO. 8
SCALE: 1" = 30'

SEE FLYING HORSE NORTH EARLY GRADING AND EROSION CONTROL PLAN (GOLF COURSE AND PRIVATE ACCESS ROADS ONLY) FOR EROSION CONTROL DETAILS. APPROVED OCTOBER 2016

* UPON GRUBBING EXISTING SOILS IN EMBANKMENT AREA, ENGINEER SHALL BE CONTACTED TO DETERMINE SOIL QUALITY. IF POOR PERMEABILITY IS FOUND (I.E. SANDY-SILT) ONLY TOP 2' X 14' PORTION OF EMBANKMENT KEY IS REQUIRED FOR CONSTRUCTION.

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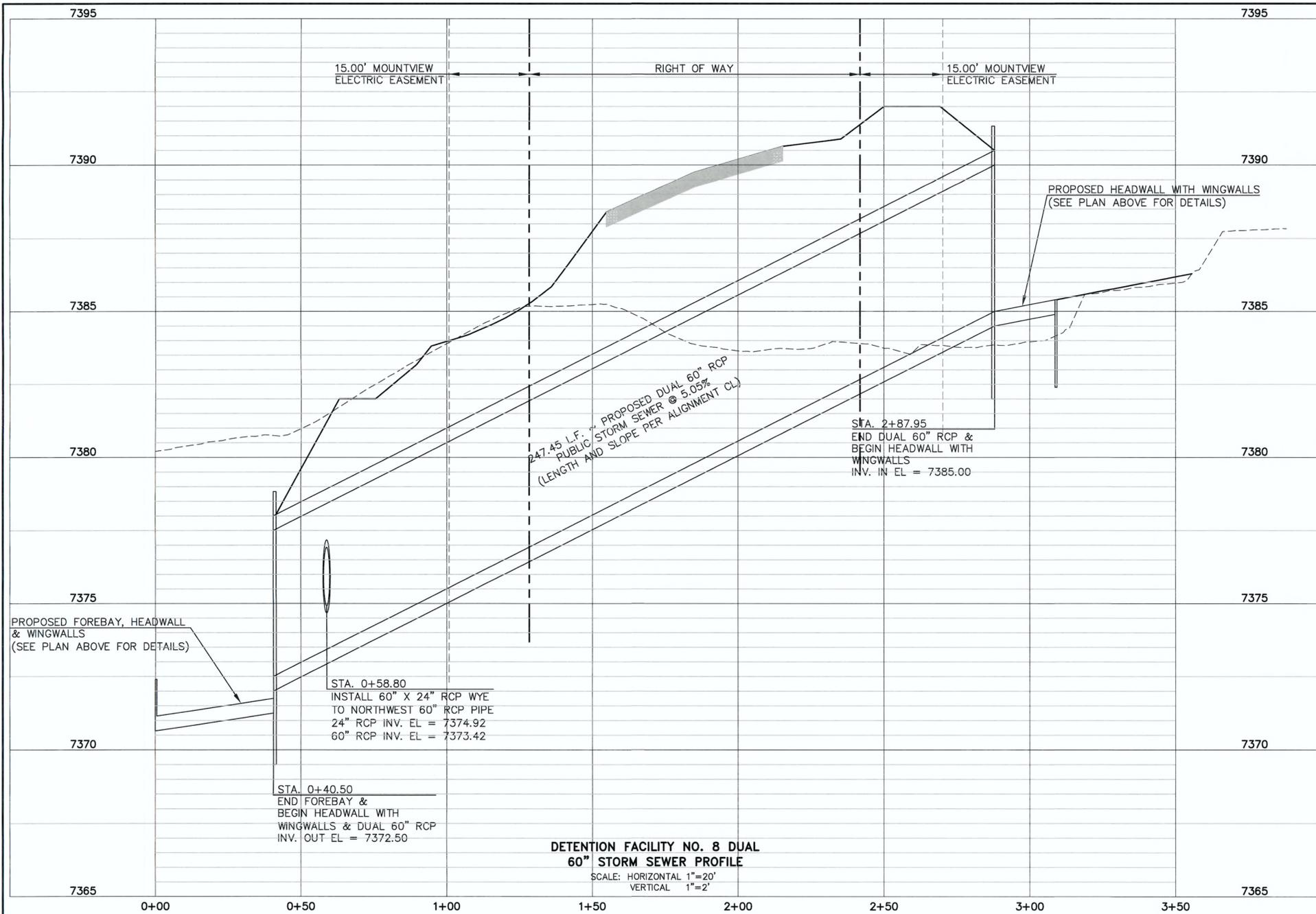
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CLASSIC
CONSULTING ENGINEERS & SURVEYORS

619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
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(719)785-0799(Fax)

FLYING HORSE NORTH FILING NO. 1
DRAINAGE IMPROVEMENT PLANS
DETENTION FACILITY NO. 8
POND PLAN

DESIGNED BY	MAW	SCALE	DATE	06-13-18
DRAWN BY	MAW	(H) 1"= 30'	SHEET	16 OF 22
CHECKED BY	(V) 1"= N/A	JOB NO.	1096.11	

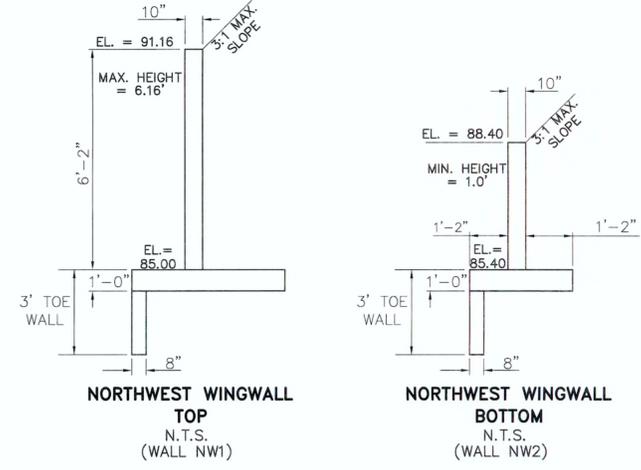


DETENTION FACILITY NO. 8 DUAL 60" STORM SEWER PROFILE

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=2'

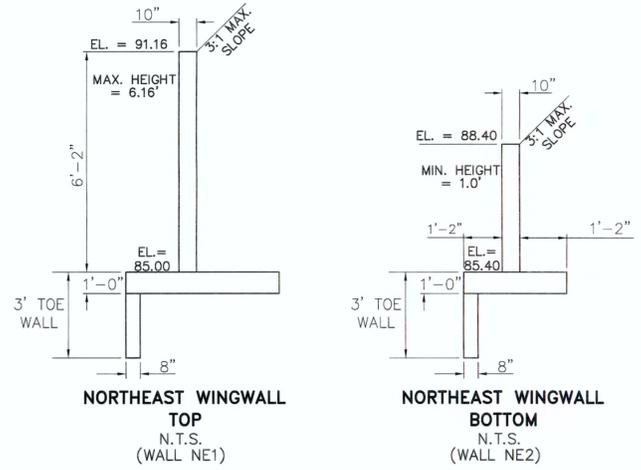
NORTHWEST HEADWALL/WINGWALLS

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. IN EL = 7385.00
EL AT TOP OF HEADWALL = 7391.66
EL AT TOP OF WINGWALL NW1 = 7391.16
EL AT TOP OF WINGWALL NW2 = 7391.16
EL AT TOP OF NW1 FOOTING = 7385.00
EL AT TOP OF NW2 FOOTING = 7385.40



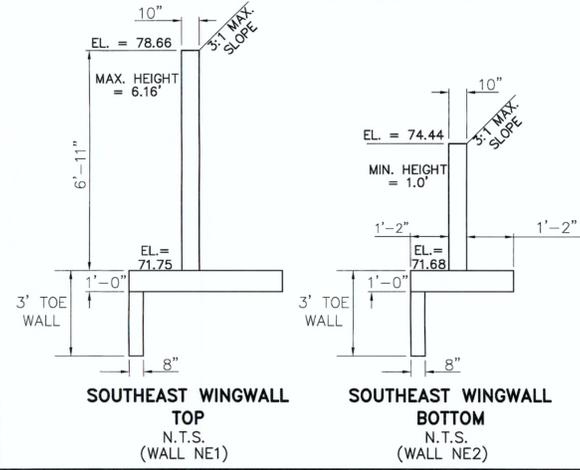
NORTHEAST HEADWALL/WINGWALLS

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. IN EL = 7385.00
EL AT TOP OF HEADWALL = 7391.66
EL AT TOP OF WINGWALL NE1 = 7391.16
EL AT TOP OF WINGWALL NE2 = 7391.16
EL AT TOP OF NE1 FOOTING = 7385.00
EL AT TOP OF NE2 FOOTING = 7385.40



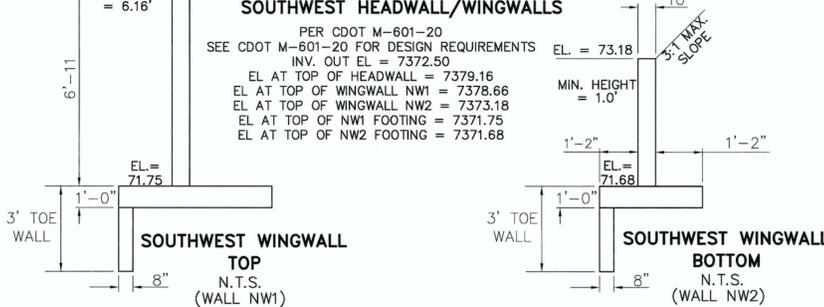
SOUTHEAST HEADWALL/WINGWALLS

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. OUT EL = 7372.50
EL AT TOP OF HEADWALL = 7379.16
EL AT TOP OF WINGWALL NE1 = 7378.66
EL AT TOP OF WINGWALL NE2 = 7374.44
EL AT TOP OF NE1 FOOTING = 7371.75
EL AT TOP OF NE2 FOOTING = 7371.68



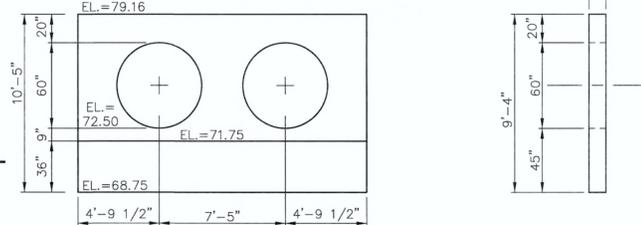
SOUTHWEST HEADWALL/WINGWALLS

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. OUT EL = 7372.50
EL AT TOP OF HEADWALL = 7379.16
EL AT TOP OF WINGWALL NW1 = 7378.66
EL AT TOP OF WINGWALL NW2 = 7373.18
EL AT TOP OF NW1 FOOTING = 7371.75
EL AT TOP OF NW2 FOOTING = 7371.68



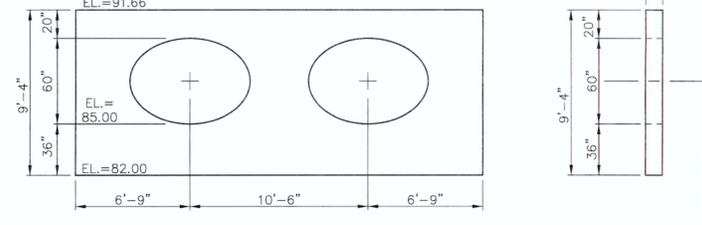
SOUTHERN OUTLET HEADWALL

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. OUT EL = 7372.50
EL AT TOP OF HEADWALL = 7379.16
FINISHED GRADE EL AT TOP OF HEADWALL = 7378.66
EL AT BOTTOM HEADWALL = 7368.75



NORTHERN INLET HEADWALL

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. IN EL = 7385.00
EL AT TOP OF HEADWALL = 7391.66
FINISHED GRADE EL AT TOP OF HEADWALL = 7390.83
EL AT BOTTOM HEADWALL = 7382.00



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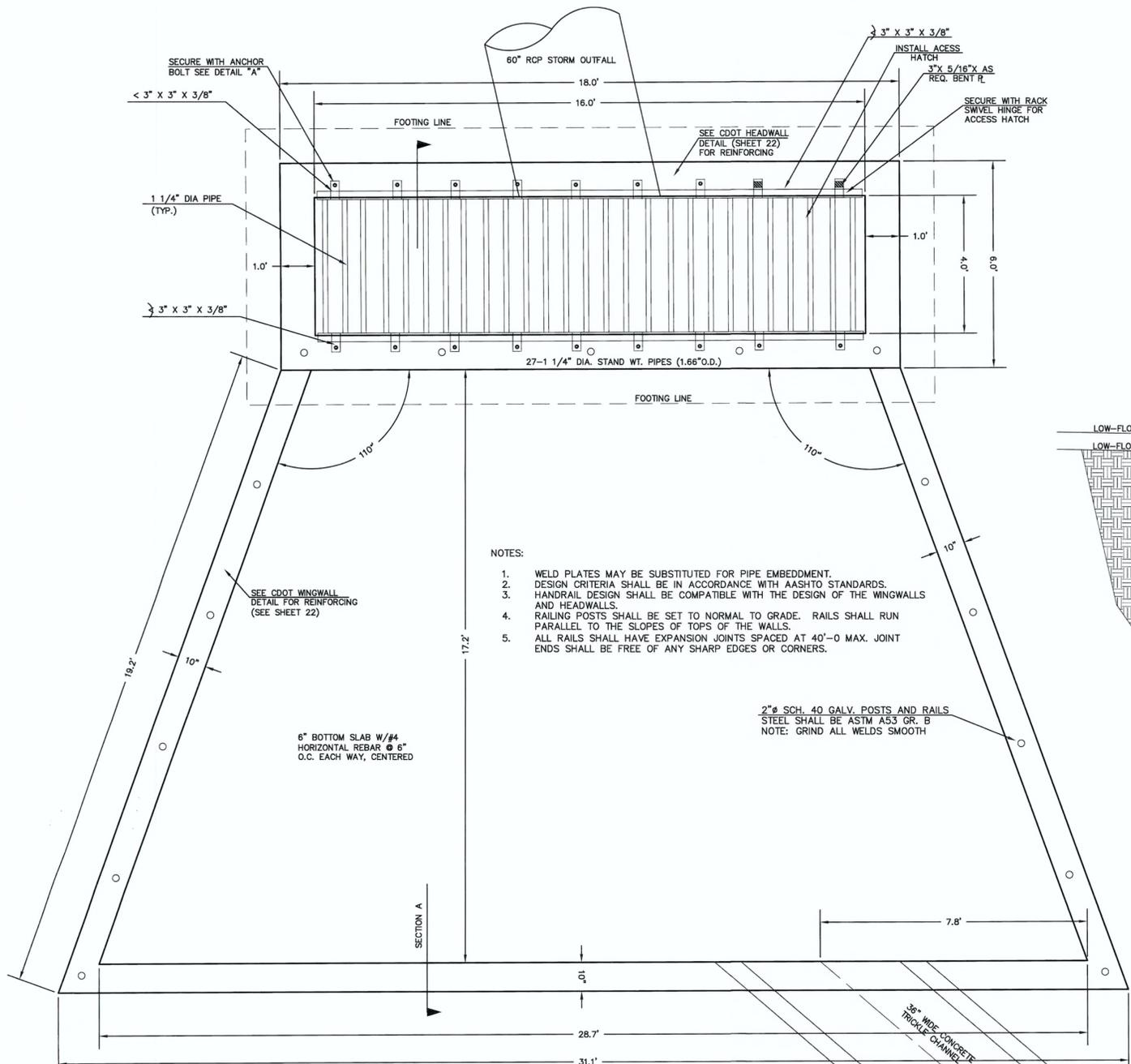
FLYING HORSE NORTH FILING NO. 1
DRAINAGE IMPROVEMENT PLANS

DETENTION FACILITY NO. 8
DUAL 60" RCP STORM SEWER PROFILE

DESIGNED BY	MAW	SCALE	DATE
			06-13-18

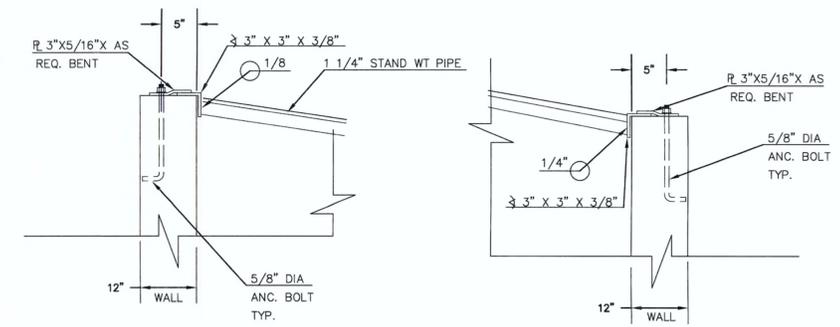
DRAWN BY	MAW	(H) 1"= 20'	SHEET 17 OF 22

CHECKED BY	(V) 1"= 2'	JOB NO.
		1096.11



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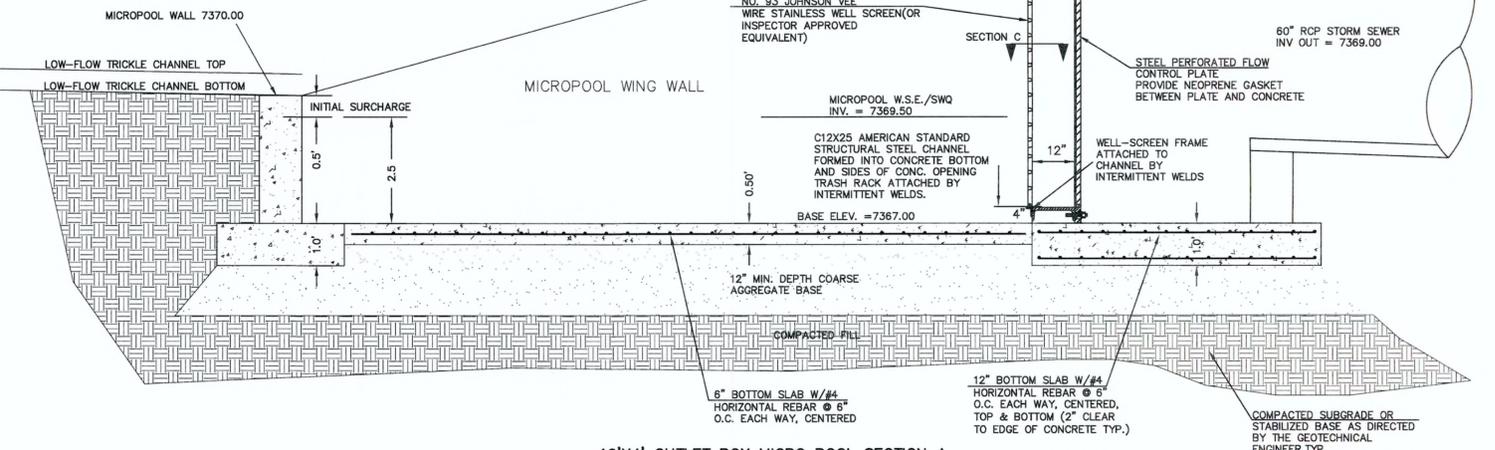
16'X4' OUTLET BOX MICROPOOL & OVERFLOW TRASH RACK
SCALE 1" = 2'



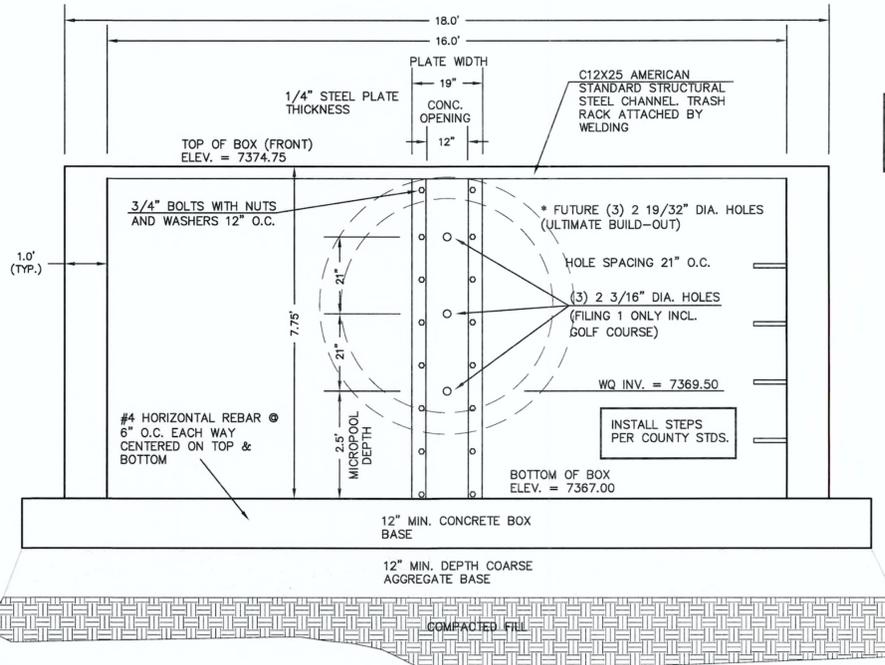
OUTLET BOX ORIFICE PLATE - 1/4" STEEL
MOUNT PLATE 48" ABOVE PIPE INV. (FILING 1 ONLY)
MOUNT PLATE 54" ABOVE PIPE INV. (FULL BUILD-OUT)

(FILING 1 ONLY INCL. GOLF COURSE)
100-YR W.S.E. = 7378.42

(FILING 1 ONLY INCL. GOLF COURSE)
EURV W.S.E. = 7373.11 / 5-YR. W.S.E. = 7373.20
WQCV YR W.S.E. = 7372.55 / 2-YR. W.S.E. = 7372.48



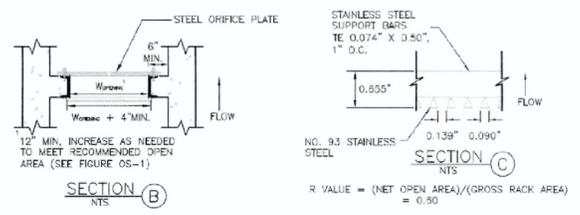
16'X4' OUTLET BOX MICRO POOL SECTION A
SCALE 1" = 2'



16'X4' OUTLET BOX ORIFICE PLATE
SCALE 1" = 2'

* STEEL ORIFICE PLATE AND 100 YR. RESTRICTOR PLATE TO BE REPLACED WITH FULL BUILD-OUT DESIGN UPON FILING 2 DEVELOPMENT.

- (ALL MATERIALS PER EL PASO COUNTY SPECIFICATIONS)
- ORIFICE PLATE NOTES:
1. INSTALL HOLES AS SHOWN ON DETAIL TO LEFT.
 2. PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE
- EURV AND WQCV TRASH RACKS:
3. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
 4. BAR GRATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
- OVERFLOW TRASH RACKS:
1. ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS
 2. TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
 3. TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
 4. STRUCTURAL DESIGN OF THE TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.



48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO. REVISION	DATE	REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF
CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155

DATE: 6/15/16

CLASSIC
CONSULTING ENGINEERS & SURVEYORS

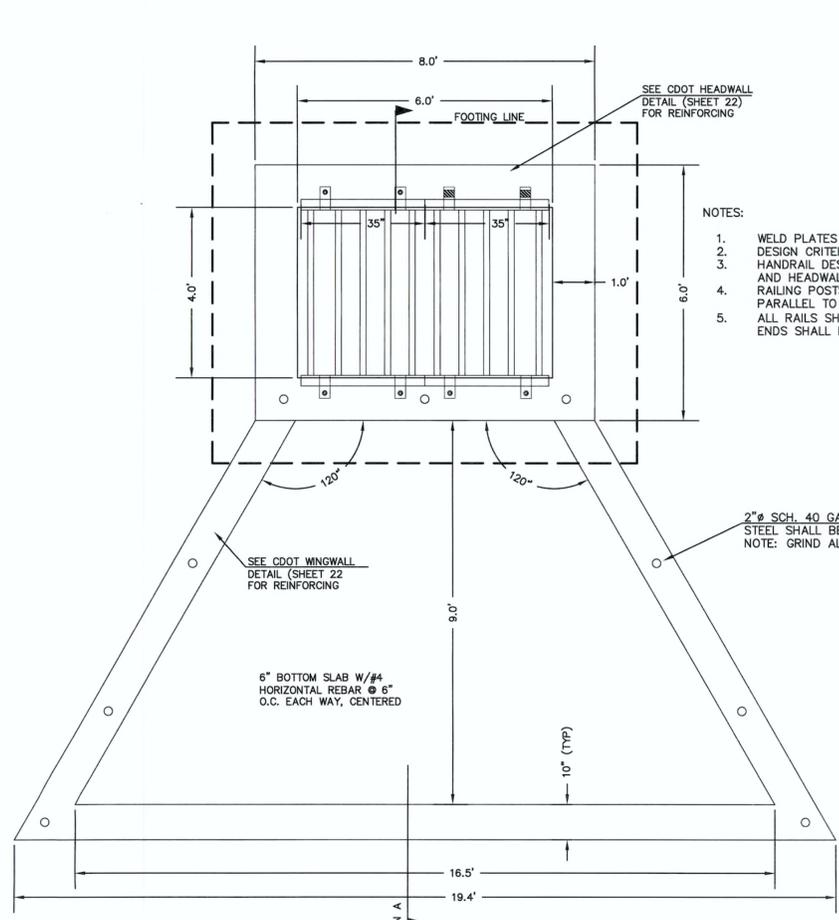
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

FLYING HORSE NORTH FILING NO. 1
DRAINAGE IMPROVEMENT PLANS

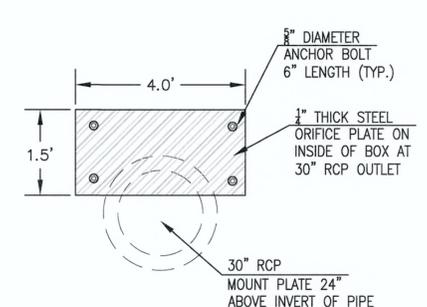
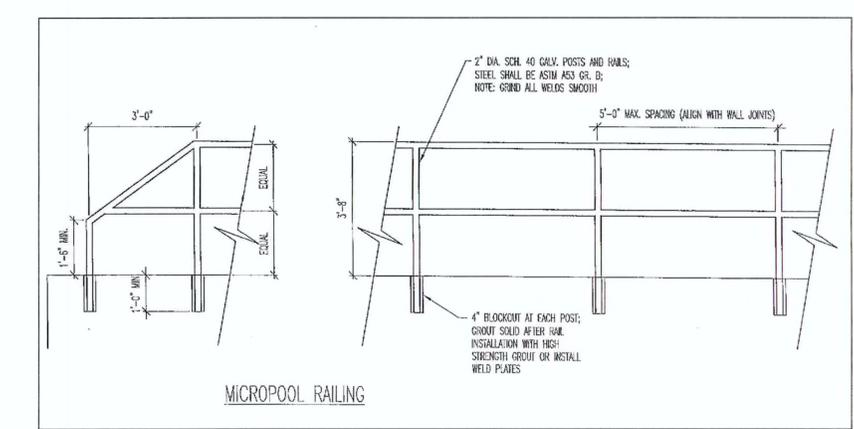
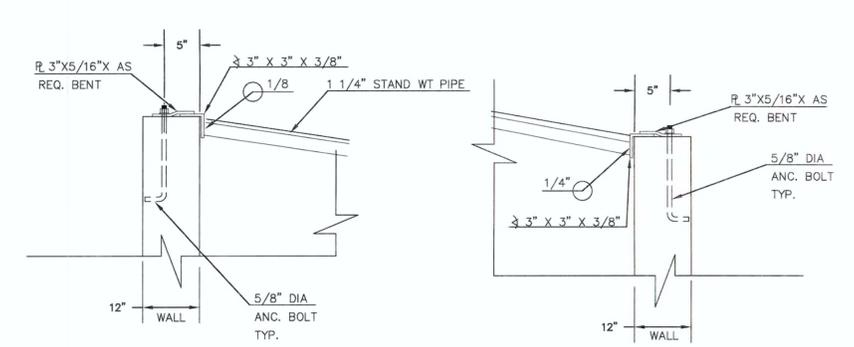
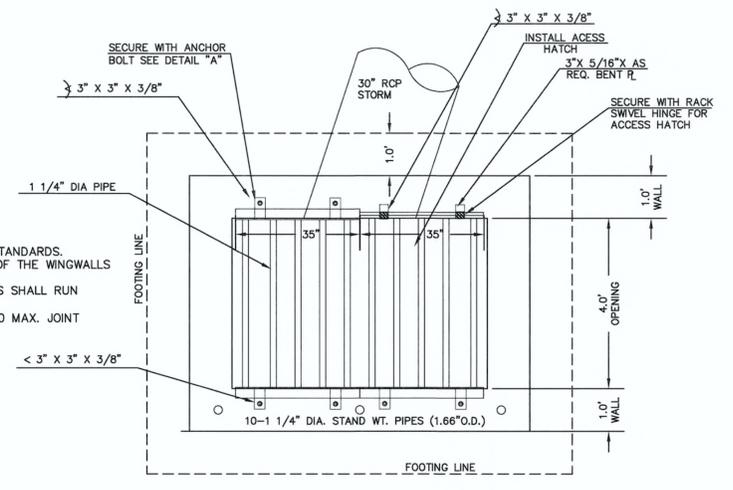
DETENTION FACILITY NO. 8
OUTLET BOX DETAILS

DESIGNED BY	MAW	SCALE	DATE	06-13-18
DRAWN BY	MAW	(H) 1" = N/A	SHEET	19 OF 22
CHECKED BY	(V) 1" = N/A	JOB NO.	1096.11	

N:\1\0811\0811\CONSTRUCTION\FOND 8 OUTLET DETAILS.dwg, 6/14/2018 5:05:01 PM, 1:1



- NOTES:
1. WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDMENT. DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH AASHTO STANDARDS.
 2. HANDRAIL DESIGN SHALL BE COMPATIBLE WITH THE DESIGN OF THE WINGWALLS AND HEADWALLS.
 3. RAILING POSTS SHALL BE SET TO NORMAL TO GRADE. RAILS SHALL RUN PARALLEL TO THE SLOPES OF TOPS OF THE WALLS.
 4. ALL RAILS SHALL HAVE EXPANSION JOINTS SPACED AT 40'-0\"/>

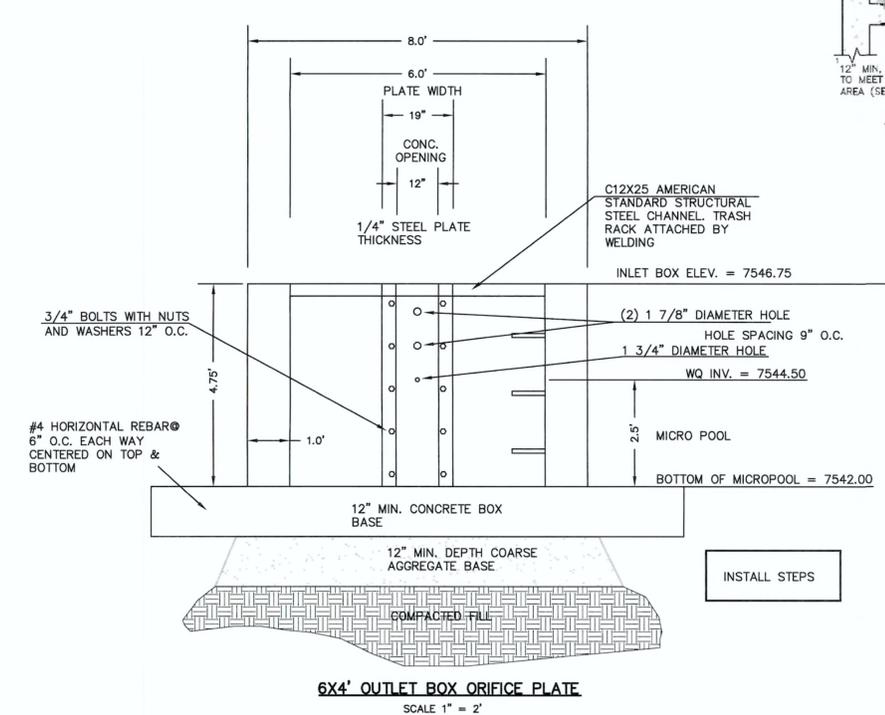
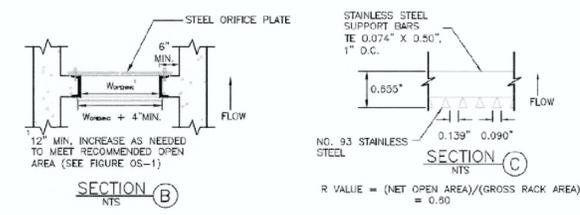


CONCRETE MICROPOOL
SCALE 1" = 2"

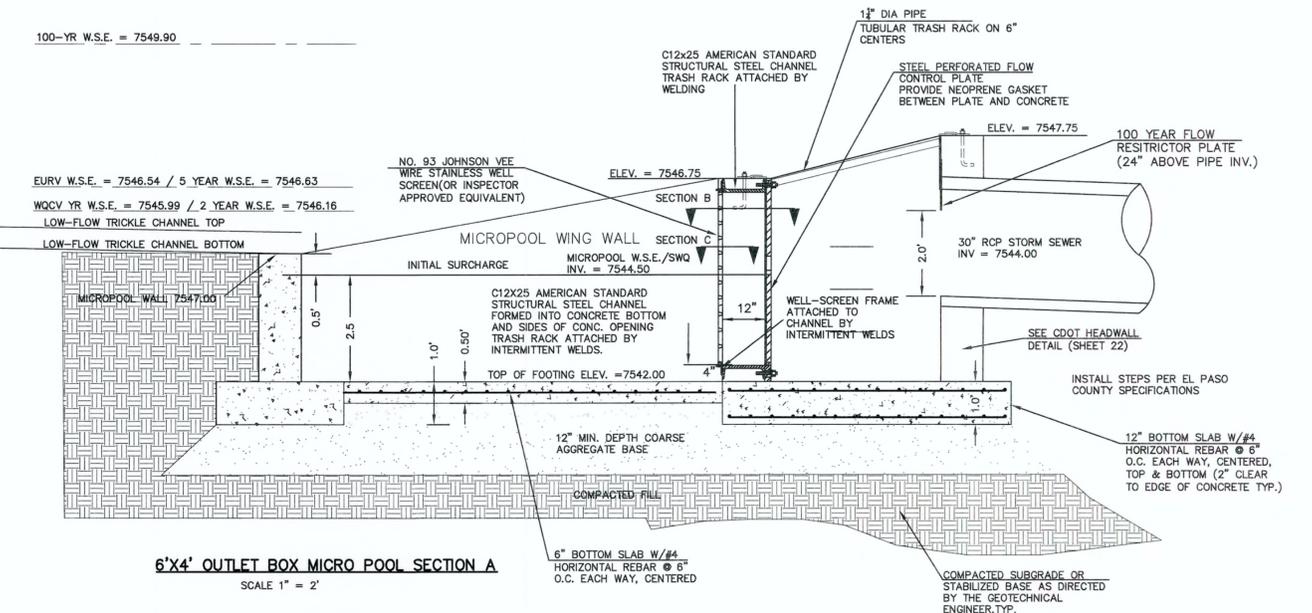
6'X4' OUTLET BOX OVERFLOW TRASH RACK
SCALE 1" = 2"

OUTLET BOX ORIFICE PLATE - 1/4" STEEL

OUTLET BOX RAILING
N.T.S.



- (ALL MATERIALS PER EL PASO COUNTY SPECIFICATIONS)
- ORIFICE PLATE NOTES:
1. INSTALL HOLES AS SHOWN ON DETAIL TO RIGHT.
 2. PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE
- EURV AND QOCV TRASH RACKS:
3. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
 4. BAR GRATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
 5. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF RACK
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6'X4' OUTLET BOX MICRO POOL SECTION A
SCALE 1" = 2"

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NO. REVISION	DATE
1 REVISED PER COUNTY COMMENTS	4-4-18

REVIEW:
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155

CLASSIC
CONSULTING ENGINEERS & SURVEYORS

619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903

(719)785-0790
(719)785-0799(Fax)

FLYING HORSE NORTH FILING NO. 1
DRAINAGE IMPROVEMENT PLANS

DETENTION FACILITY NO. 12
OUTLET BOX DETAILS

DESIGNED BY	MAW	SCALE	DATE	06-13-18
DRAWN BY	MAW	(H) 1" = N/A	SHEET	21 OF 22
CHECKED BY	(V) 1" = N/A	JOB NO.	1096.11	

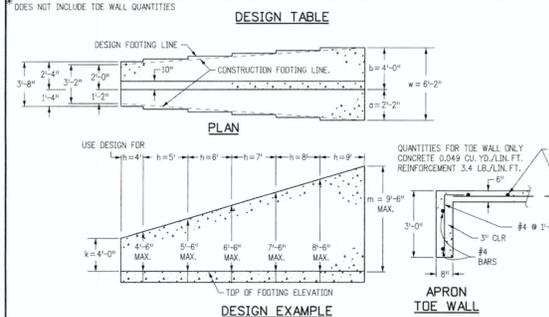
CLASSIC CONSULTING ENGINEERS & SURVEYORS

GENERAL NOTES

1. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 1/4 IN.
2. WINGWALL FOOTINGS AND FLOOR OF BOX CULVERT SHALL BE PLACED MONOLITHICALLY.
3. DIMENSIONS IN "BARS", "REIN", "C", "L", "T", "M" AND ANGLES FOR WINGWALLS SHALL BE AS SHOWN ON THE PLANS.
4. REINFORCING STEEL SHALL BE GRADE 60.
5. THE MINIMUM SPLICE LENGTH FOR COMMON BAR SIZES SHALL BE:

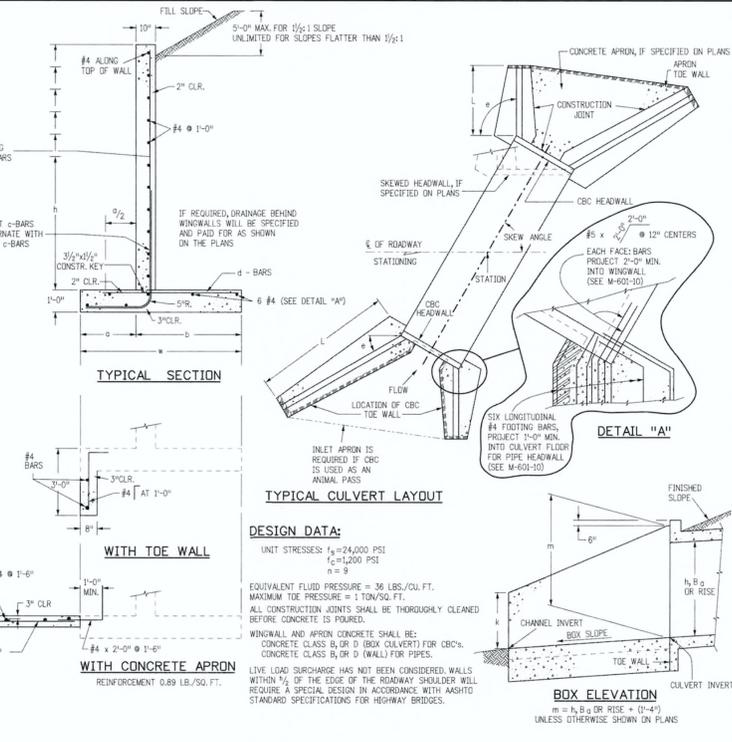
BAR	#4	#5	#6
SPLICE LENGTH	1'-3"	1'-7"	2'-0"

DESIGN FOOTING LINE	CONSTRUCTION FOOTING LINE	b=4'-0"
1'-0"	1'-2"	1'-4"
1'-2"	1'-4"	1'-6"
1'-4"	1'-6"	1'-8"
1'-6"	1'-8"	2'-0"
1'-8"	2'-0"	2'-4"
2'-0"	2'-4"	2'-8"
2'-4"	2'-8"	3'-2"
2'-8"	3'-2"	3'-6"
3'-2"	3'-6"	4'-0"
3'-6"	4'-0"	4'-4"
4'-0"	4'-4"	4'-8"
4'-4"	4'-8"	5'-2"
4'-8"	5'-2"	5'-6"
5'-2"	5'-6"	6'-0"
5'-6"	6'-0"	6'-4"
6'-0"	6'-4"	6'-8"
6'-4"	6'-8"	7'-2"
6'-8"	7'-2"	7'-6"
7'-2"	7'-6"	8'-0"
7'-6"	8'-0"	8'-4"
8'-0"	8'-4"	8'-8"
8'-4"	8'-8"	9'-2"
8'-8"	9'-2"	9'-6"
9'-2"	9'-6"	10'-0"



DESIGN TABLE

DESIGN FOOTING LINE	CONSTRUCTION FOOTING LINE	b=4'-0"
1'-0"	1'-2"	1'-4"
1'-2"	1'-4"	1'-6"
1'-4"	1'-6"	1'-8"
1'-6"	1'-8"	2'-0"
1'-8"	2'-0"	2'-4"
2'-0"	2'-4"	2'-8"
2'-4"	2'-8"	3'-2"
2'-8"	3'-2"	3'-6"
3'-2"	3'-6"	4'-0"
3'-6"	4'-0"	4'-4"
4'-0"	4'-4"	4'-8"
4'-4"	4'-8"	5'-2"
4'-8"	5'-2"	5'-6"
5'-2"	5'-6"	6'-0"
5'-6"	6'-0"	6'-4"
6'-0"	6'-4"	6'-8"
6'-4"	6'-8"	7'-2"
6'-8"	7'-2"	7'-6"
7'-2"	7'-6"	8'-0"
7'-6"	8'-0"	8'-4"
8'-0"	8'-4"	8'-8"
8'-4"	8'-8"	9'-2"
8'-8"	9'-2"	9'-6"
9'-2"	9'-6"	10'-0"



DESIGN DATA:

UNIT STRESSES: $f_c = 4,000$ PSI
 $f_s = 2,000$ PSI
 $n = 9$

EQUIVALENT FLUID PRESSURE = 36 LBS./CU. FT.
 MAXIMUM TOE PRESSURE = 1 TON/SQ. FT.

ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE CONCRETE IS POURED.

WINGWALL AND APRON CONCRETE SHALL BE: CONCRETE CLASS B (OR D (BOX CULVERT) FOR CBC'S). CONCRETE CLASS B₁ (OR D (WALL) FOR PIPES).

LIVE LOAD SURCHARGE HAS NOT BEEN CONSIDERED. WALLS WITHIN 1/2 OF THE EDGE OF THE ROADWAY SHOULDER WILL REQUIRE A SPECIAL DESIGN IN ACCORDANCE WITH APPLICABLE STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

Computer File Information

Creation Date: 07/04/12 Initials: DD
 Last Modification Date: 07/04/12 Initials: LTA
 Full Path: www.coloradodot.info/business/designsupport
 Drawing File Name: 6010200101.dgn
 CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions

Date	Comments

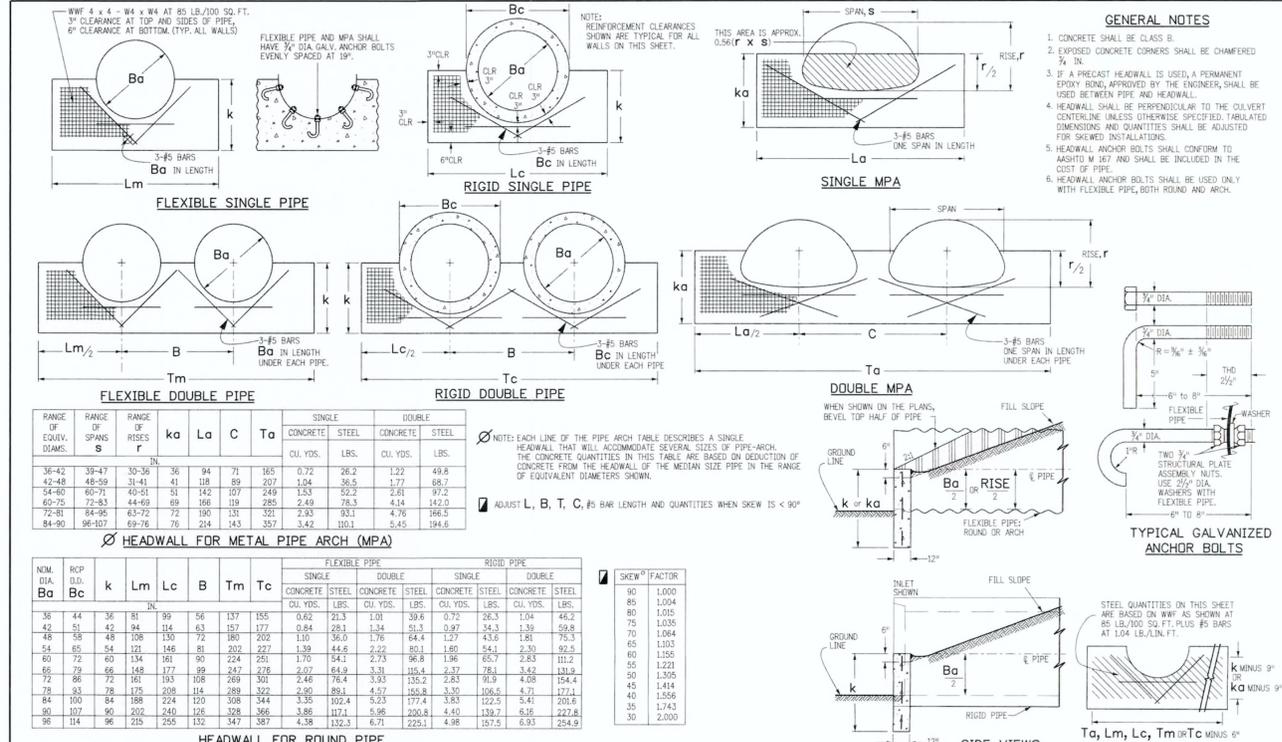
Colorado Department of Transportation
 4201 East Arkansas Avenue
 Denver, Colorado 80222
 Phone: (303) 757-9083
 Fax: (303) 757-9820

Project Development Branch DD/LTA

WINGWALLS FOR PIPE OR BOX CULVERTS

STANDARD PLAN NO. M-601-20

Sheet No. 1 of 1



HEADWALL FOR METAL PIPE ARCH (MPA)

RANGE OF EQUIV. DIAM.	RANGE OF SPANS S	RANGE OF RISES R	ka	La	C	Ta	SINGLE		DOUBLE	
							CONCRETE	STEEL	CONCRETE	STEEL
36-42	38-47	39-38	36	84	71	95	0.72	26.2	7.22	48.8
42-48	48-59	31-41	41	118	89	107	1.04	36.5	7.77	68.7
54-60	60-71	40-51	51	142	107	249	1.53	52.2	2.61	97.2
60-70	72-83	44-59	69	166	139	285	2.49	78.3	4.14	142.0
72-81	84-96	63-72	72	190	151	321	2.85	93.1	4.76	166.5
84-90	96-107	69-76	76	214	143	357	3.42	110.1	5.45	194.6

HEADWALL FOR ROUND PIPE

RANGE OF DIA.	RCP	RCP	k	Lm	Lc	B	Tm	Tc	SINGLE		DOUBLE				
									CONCRETE	STEEL	CONCRETE	STEEL			
36	44	36	81	99	56	137	155	0.62	21.3	1.01	39.4	0.72	26.3	1.04	48.2
42	54	44	114	144	63	167	177	0.84	28.1	1.34	51.3	0.87	34.5	1.39	59.8
48	58	48	108	130	72	180	202	1.10	36.0	1.76	64.4	1.27	43.6	1.81	75.3
54	65	54	121	146	81	202	227	1.39	44.6	2.22	80.1	1.60	54.1	2.30	92.5
60	72	60	134	161	90	224	251	1.70	54.1	2.75	94.1	1.96	65.7	2.83	112.2
66	79	66	148	177	99	247	276	2.07	64.9	3.31	115.4	2.37	78.1	3.42	131.9
72	86	72	161	193	108	269	301	2.46	76.4	3.93	135.2	2.83	91.9	4.08	154.4
78	93	78	175	208	114	289	322	2.90	89.1	4.57	155.8	3.30	98.5	4.71	172.1
84	100	84	188	224	120	308	344	3.35	102.4	5.23	177.4	3.83	122.5	5.41	201.6
90	107	90	202	240	126	328	366	3.86	117.1	5.96	200.8	4.40	139.7	6.16	227.8
96	114	96	215	255	132	347	387	4.38	132.3	6.71	229.1	4.98	157.5	6.93	254.9

Computer File Information

Creation Date: 07/04/12 Initials: DD
 Last Modification Date: 07/04/12 Initials: LTA
 Full Path: www.coloradodot.info/business/designsupport
 Drawing File Name: 601010101.dgn
 CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions

Date	Comments

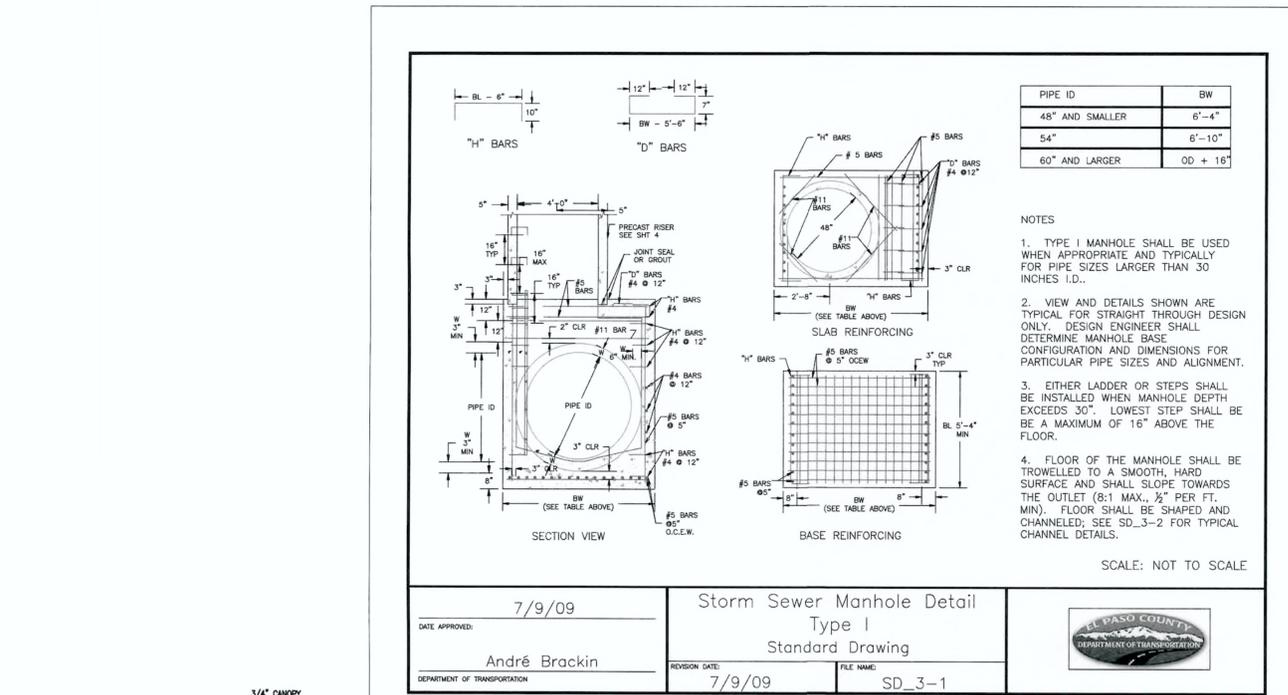
Colorado Department of Transportation
 4201 East Arkansas Avenue
 Denver, Colorado 80222
 Phone: (303) 757-9083
 Fax: (303) 757-9820

Project Development Branch DD/LTA

TYPE "S" SADDLE HEADWALLS FOR PIPE

STANDARD PLAN NO. M-601-11

Sheet No. 1 of 1



PIPE ID

PIPE ID	BW
48" AND SMALLER	6"-4"
54"	6"-10"
60" AND LARGER	OD + 16"

NOTES

1. TYPE I MANHOLE SHALL BE USED WHEN APPROPRIATE AND TYPICALLY FOR PIPE SIZES LARGER THAN 30 INCHES I.D..
2. VIEW AND DETAILS SHOWN ARE TYPICAL FOR STRAIGHT THROUGH DESIGN ONLY. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.
3. EITHER LADDER OR STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". LOWEST STEP SHALL BE AT A MAXIMUM OF 16" ABOVE THE FLOOR.
4. FLOOR OF THE MANHOLE SHALL BE TROWELED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1 MAX. 1/2" PER FT. MIN). FLOOR SHALL BE SHAPED AND CHANNELLED; SEE SD-3-2 FOR TYPICAL CHANNEL DETAILS.

SCALE: NOT TO SCALE

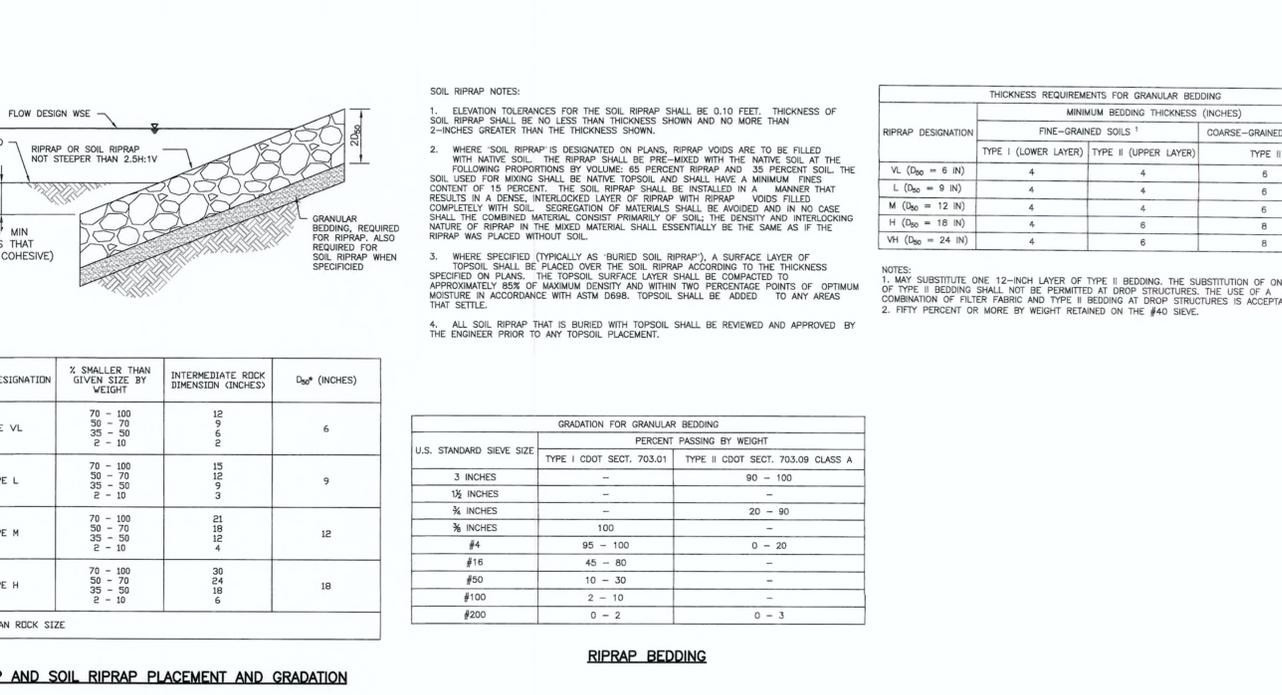
7/9/09

André Brackin

Storm Sewer Manhole Detail Type I Standard Drawing

7/9/09 SD-3-1

EL PASO COUNTY
 REPORT MEAN OF TRANSCENDING



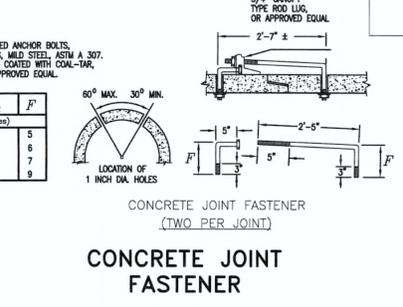
RIPRAP AND SOIL RIPRAP PLACEMENT AND GRADATION

RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	D ₅₀ (INCHES)
TYPE VL	70 - 100	12	6
	30 - 70	9	
	35 - 30	2	
TYPE L	70 - 100	15	9
	50 - 70	12	
	35 - 30	3	
TYPE M	70 - 100	21	12
	50 - 70	18	
	35 - 30	4	
TYPE H	70 - 100	30	18
	50 - 70	24	
	35 - 30	6	

D₅₀ = MEAN ROCK SIZE

GRADATION FOR GRANULAR BEDDING

U.S. STANDARD SIEVE SIZE	PERCENT PASSING BY WEIGHT	
	TYPE I CDOT SECT. 703.01	TYPE II CDOT SECT. 703.09 CLASS A
3 INCHES	-	90 - 100
1 1/2 INCHES	-	-
3/4 INCHES	-	20 - 90
3/8 INCHES	100	-
#4	95 - 100	0 - 20
#16	45 - 80	-
#50	10 - 30	-
#100	2 - 10	-
#200	0 - 2	0 - 3



CONCRETE JOINT FASTENER

(TWO PER JOINT)

CONCRETE JOINT FASTENER

DESIGNED BY: MAW SCALE: DATE: 06-13-18

DRAWN BY: MAW (H) 1" = N/A SHEET: 22 OF 22

CHECKED BY: (V) 1" = N/A JOB NO.: 1096.11

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DATE: 6/15/18

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 Colorado Springs, Colorado 80903 (719)785-0799(fax)

FLYING HORSE NORTH FILING NO. 1 DRAINAGE IMPROVEMENT PLANS

DRAINAGE DETAIL SHEET

CLASSIC CONSULTING ENGINEERS & SURVEYORS