

STANDARD CONSTRUCTION NOTES:

- 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.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD LOCATION 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).
- 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:
  - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - CDOT M & S STANDARDS
- 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.
- 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.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- 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.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- 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.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DPW, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- 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.

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

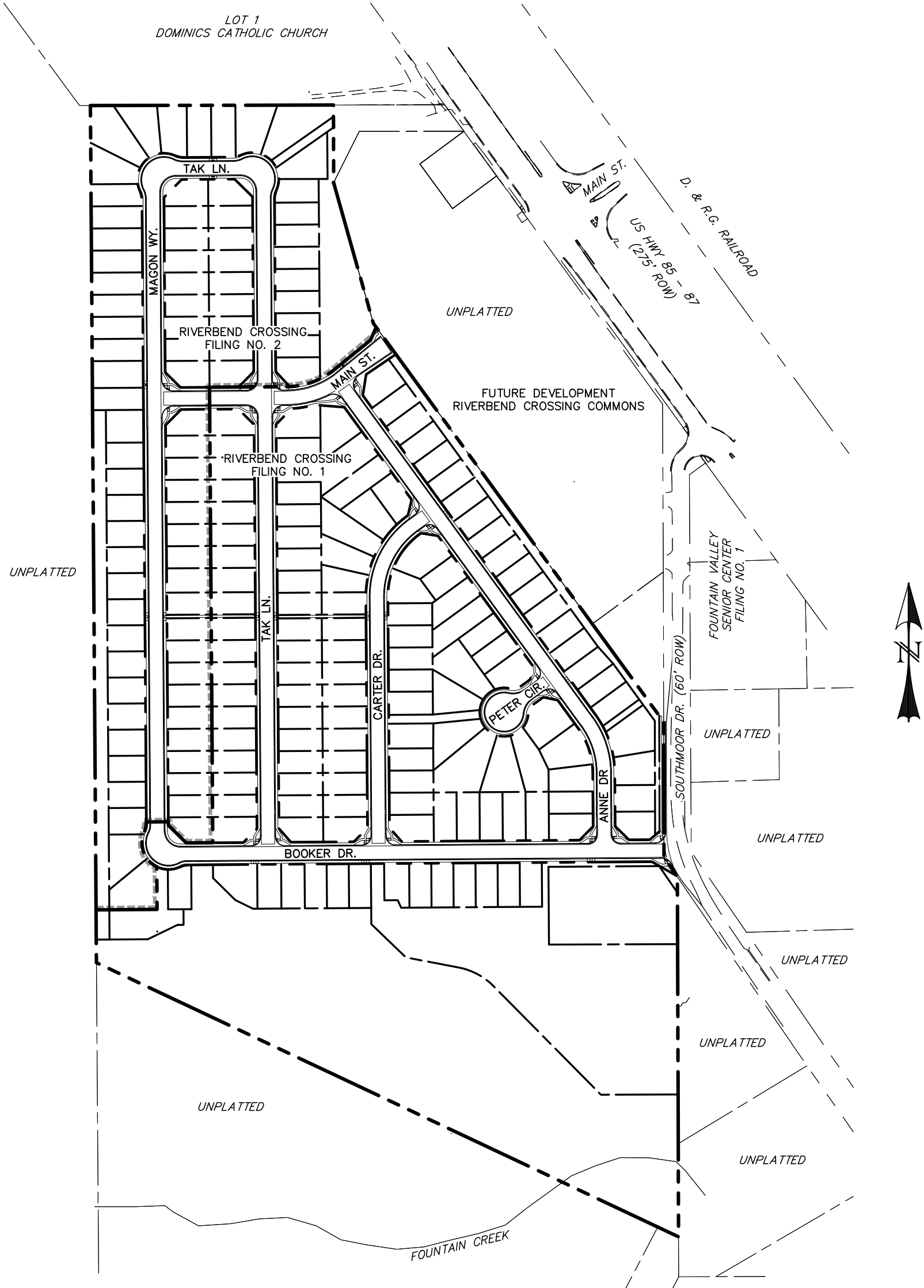
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED AND APPROVED, IN WRING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGED IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A 'NOTICE TO PROCEED' HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRE-CONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATION PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURES.
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATION. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATER, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DOE VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY **RWG ENGINEERS** AND DATED **APRIL 2, 2018** AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

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

# RIVERBEND CROSSING FILING NO. 1

## STREET IMPROVEMENT, STORM SEWER, AND SIGNAGE & STRIPING CONSTRUCTION DRAWINGS

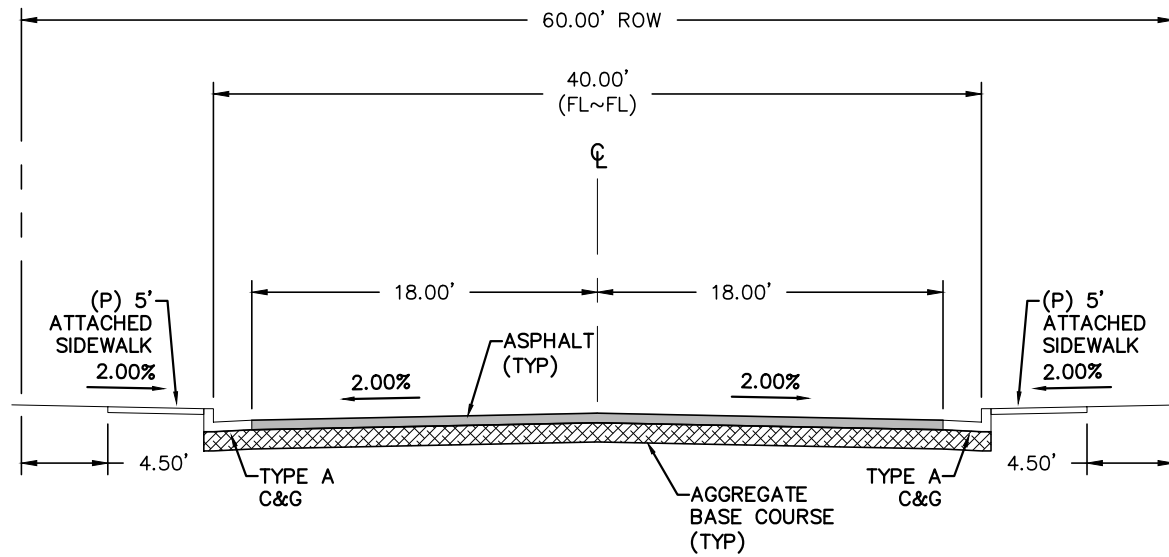
EL PASO COUNTY, COLORADO



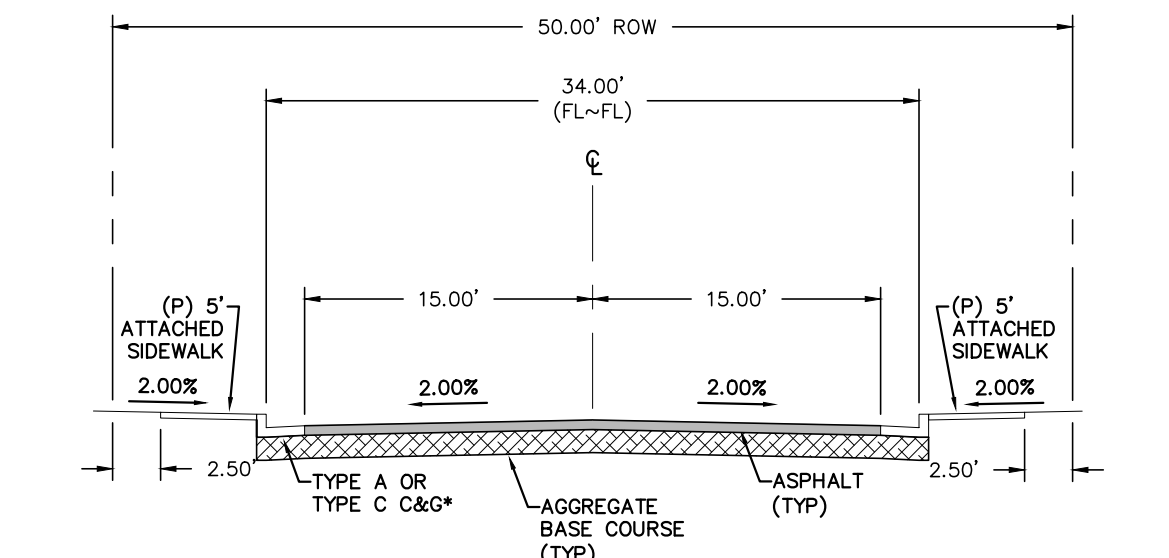
SITE MAP  
SCALE: N.T.S.

LEGEND

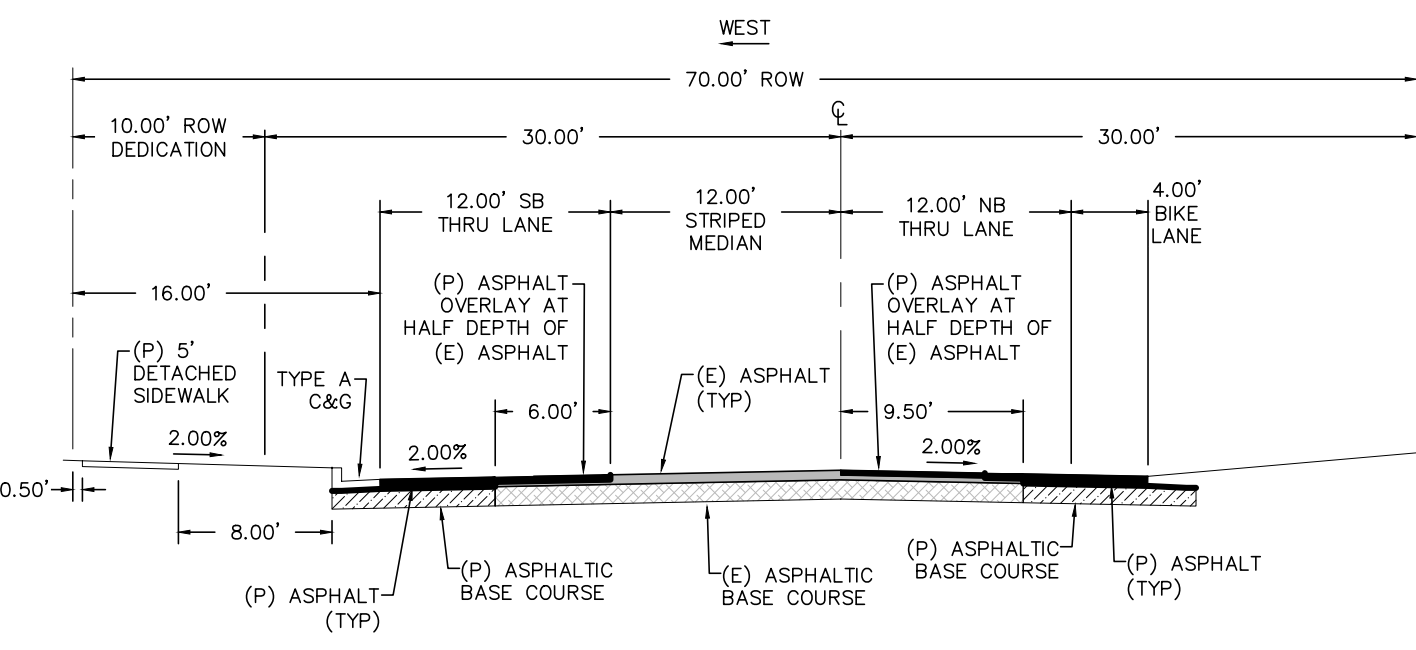
EXISTING	(E)	ALGEBRAIC DIFFERENCE	AD
PROPOSED	(P)	POINT OF VERTICAL INTERSECTION	PVI
CURB & GUTTER	C&G	STATION	STA
EASEMENT	ESMT	FLOWLINE	FL
PUBLIC	PUB	INTERSECTION-INTERSECTION	INT-INT
PUBLIC IMPROVEMENT	PI	BOUNDARY	---
BEGIN TRANSITION	BT	RIGHT-OF-WAY	---
EDGE OF ASPHALT	EOA	LOT LINE	---
GRADE BREAK	GB	EASEMENT	---
END TRANSITION	ET	(E) CONTOUR, INDEX	---
CURB RETURN	CR	(E) CONTOUR	---
POINT OF CURVATURE	PC	(E) STORM SEWER	---
POINT OF TANGENCY	PT	(P) CONTOUR, INDEX	---
POINT ON CURVE	POC	(P) CONTOUR	---
POINT OF COMPOUND CURVATURE	PCC	(P) STORM SEWER, INLET, MH	---
POINT OF REVERSE CURVATURE	PRC	INLET DETAIL CALL-OUT	---
RADIUS POINT	RP	CURB RETURN RADIUS CALL-OUT	---
TYPE 'A' CURB AND GUTTER	[A]	GRADE CALL-OUT	---
TYPE 'C' CURB AND GUTTER, OPTIONAL	[C]	SPOT ELEVATION	---



TYPICAL SECTION - URBAN RESIDENTIAL COLLECTOR - MODIFIED\*  
(\* ATTACHED SIDEWALKS)  
SCALE: N.T.S.



TYPICAL SECTION - URBAN LOCAL  
(\*SEE PLANS FOR LOCATIONS)  
SCALE: N.T.S.



SOUTHMOOR DRIVE WIDENING DETAIL - URBAN NON-RESIDENTIAL COLLECTOR  
SCALE: N.T.S.

CONSTRUCTION PLANS AND SPECIFICATIONS ENGINEERS 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, SIGNAGE, 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 CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART OR THE PART OF ANY OTHER PERSONS IN THE PREPARED PLANS AND SPECIFICATIONS.



DAVID L. MUIJARES, COLORADO PE #40510

10/19/20  
DATE

OWNER/DEVELOPER STATEMENT:

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

OWNER SIGNATURE - AVATAR EQUITIES LLC  
6800 JERICHO TURNPIKE, SUITE 120W, #204  
SYOSSET, NY 11791

DATE

EL PASO COUNTY APPROVAL:

"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 THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT."

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

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

DATE

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PCD FILE #: SF1844

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20



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BENCHMARK:

NGS BENCHMARK U 404: LOCATED 0.35 MILES NORTH OF MAIN STREET IN FOUNTAIN, 128.0 FEET NORTHEAST OF THE CENTERLINE OF U.S. HIGHWAY 85, 44.6 FEET SOUTHWEST OF A POWER LINE CROSSING AND 20.7 FEET NORTH OF THE CENTER OF A SANITARY SEWER MANHOLE COVER.  
ELEVATION = 5737.76 (NAVD88)

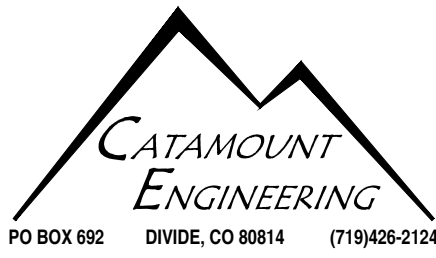
PREPARED FOR:

AVATAR EQUITIES, LLC

6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

BASIS OF BEARINGS:

THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 14, TOWNSHIP 15 SOUTH, RANGE 66 WEST OF THE 6TH P.M., MONUMENTED AT THE NORTH QUARTER (N 1/4) CORNER WITH A 3 1/4" ALUMINUM CAP, STAMPED 'BARRON LAND 2018 PLS 38141' AND AT THE CENTER QUARTER (C 1/4) CORNER WITH A 3 1/4" ALUMINUM CAP, STAMPED 'OLIVER E. WATTS 2000 PE-LS 9853' AND BEARS S 00°24'11" E, 2640.42 FEET.

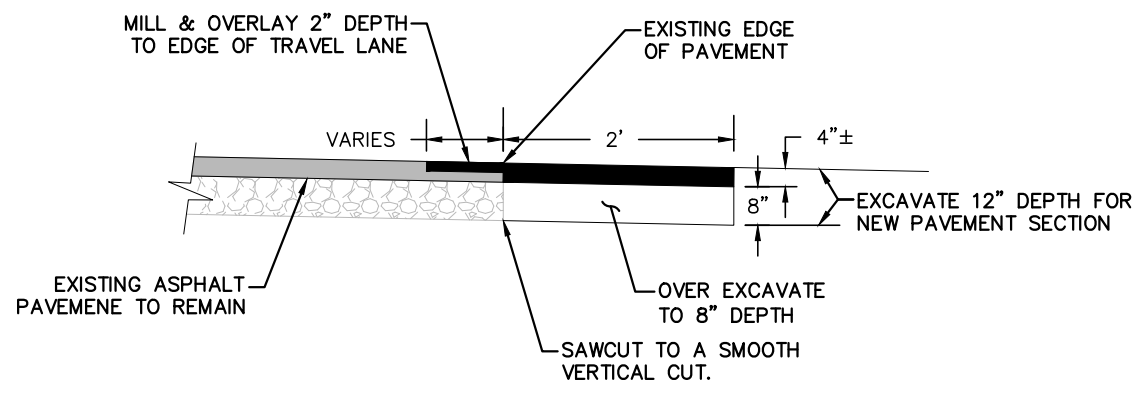


### RIVERBEND CROSSING FILING NO. 1

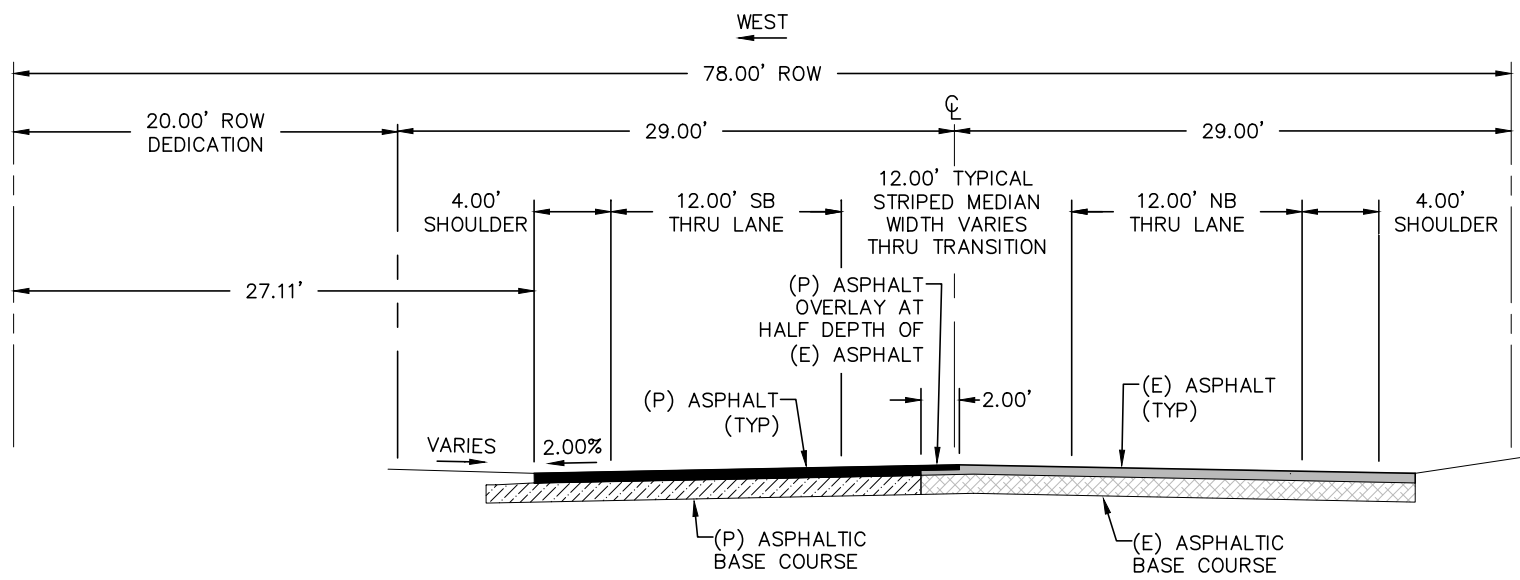
### STREET, STORM, & STRIPING CONSTRUCTION DRAWINGS

DESIGNED BY:	MGP	DRAWN BY:	MGP
SCALE:	N/A	DATE:	03/30/21
JOB NUMBER	17-114	SHEET	1 OF 27





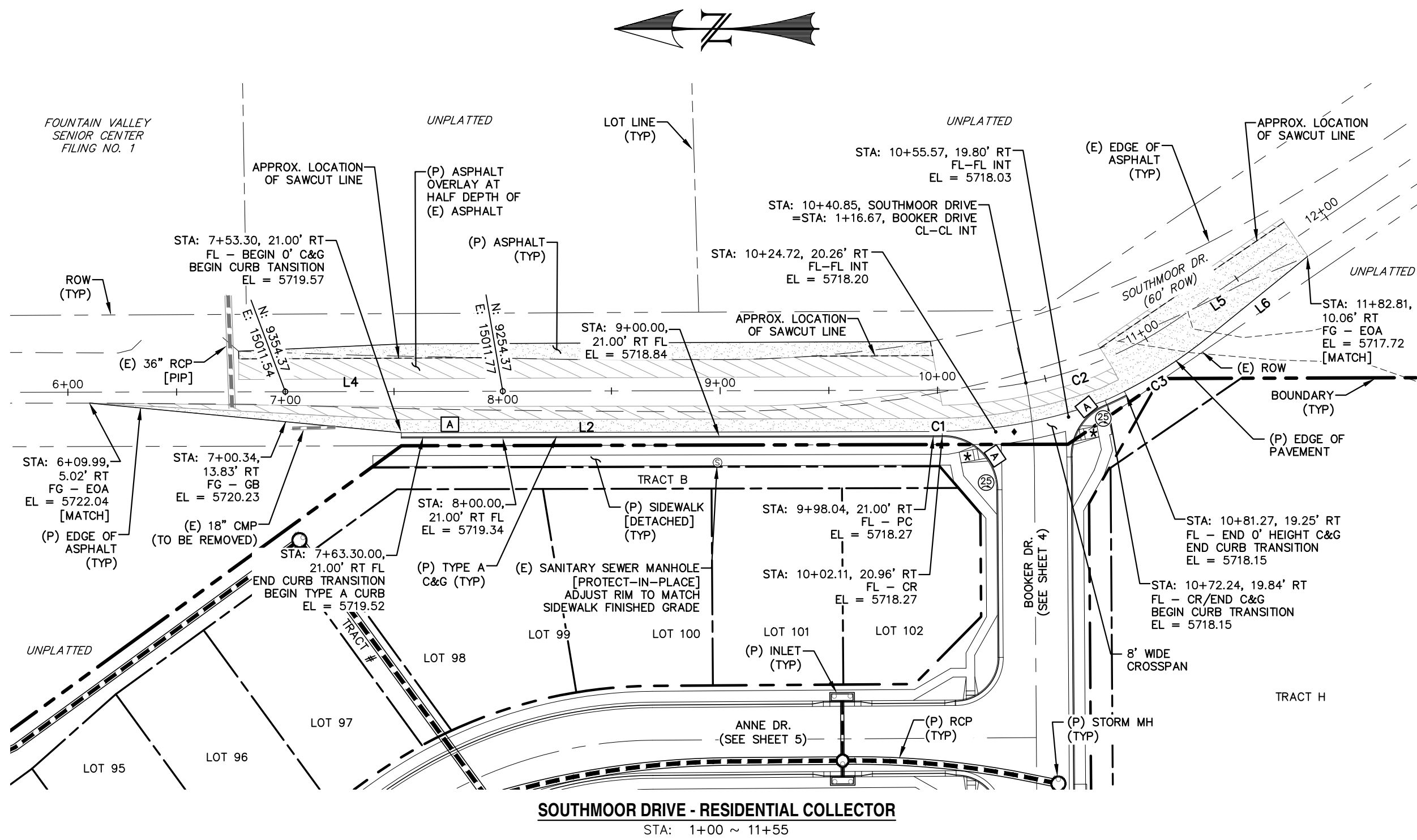
MILL & OVERLAY W/ T-PATCH JOINT DETAIL  
SCALE: N.T.S.



WIDENING DETAIL URBAN NON-RESIDENTIAL COLLECTOR  
SOUTHMOOR DRIVE W/O CURB & GUTTER  
STA: 10+72± TO STA: 11+82±  
SCALE: N.T.S.

SAWCUT & PAVEMENT NOTES:

- EXISTING PAVEMENT MAY BE ROUGH CUT INITIALLY.
- A SQUARE VERTICAL CUT SHALL BE MADE IN THE EXISTING A.C. PAVEMENT AFTER PLACEMENT OF BACKFILL PRIOR TO PAVEMENT REPLACEMENT.
- THICKNESS OF NEW A.C. PAVEMENT AND BASE COURSE REPLACEMENT SHALL BE:
  - 4" A.C. WITH 12" BASE,
  - OR
  - 8" A.C. FULL DEPTH,
  - OR
  - MATCH EXISTING,
  - OR
  - PER GEOTECHNICAL ENGINEERS RECOMMENDATION, WHICHEVER IS GREATER.

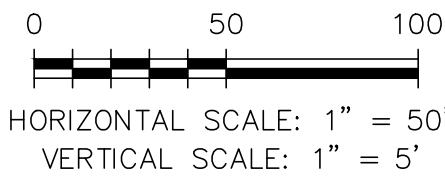


NOTE: SEE SHEETS 19 & 20 FOR PEDESTRIAN RAMP DETAILS

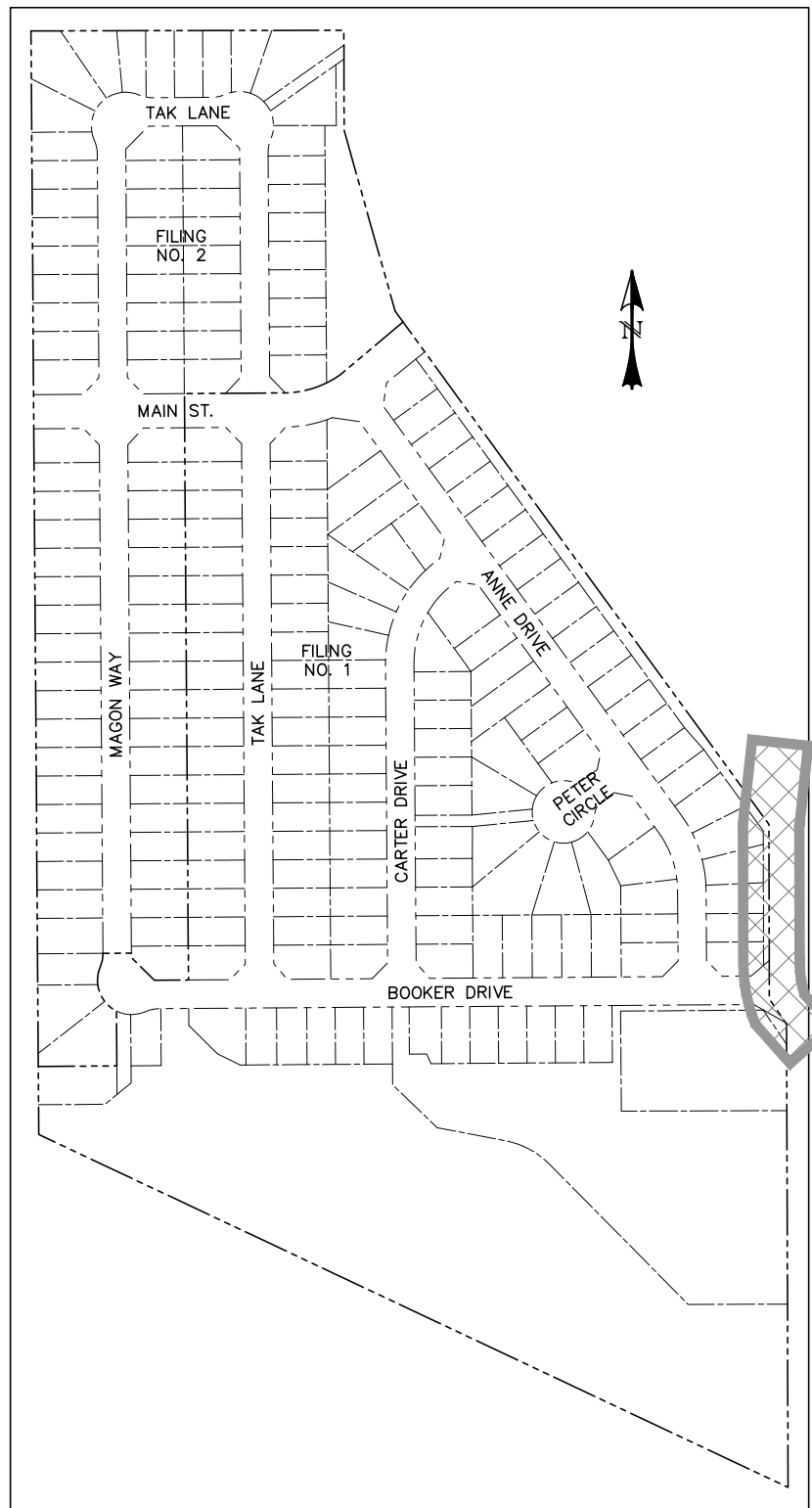
- ★ PED INTERSECTION RAMP  
(REF: SD 2-41 & SD 2-42)
- ◆ STANDARD CROSSSPAN  
(REF: SD 2-26)

LINE TABLE		
LINE	BEARING	DISTANCE
L2	S0° 07' 59"E	244.74
L4	S0° 07' 59"E	396.04
L5	S34° 27' 20"E	66.49
L6	N39° 05' 39"W	58.54

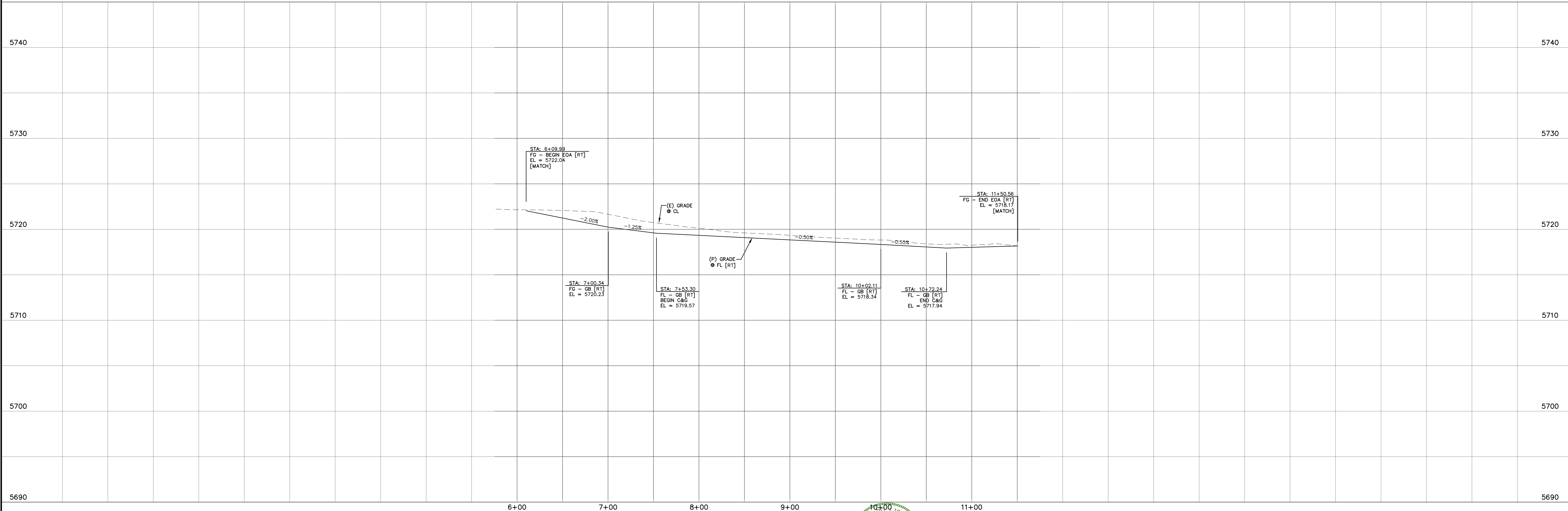
CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	1°00'30"	231.00	4.06
C2	34°19'20"	184.10	110.28
C3	12°16'06"	217.00	46.47



HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



LOCATION MAP  
SCALE: N.T.S.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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STREET NAME ABBREVIATIONS:  
MAIN STREET = S11  
BOOKER DRIVE = S12  
ANNE DRIVE = S13  
CARTER DRIVE = S14  
PETER CIRCLE = S15  
TAK LANE = S16  
MAGON WAY = S17  
CUL-DE-SAC = FL

PREPARED FOR:  
AVATAR EQUITIES, LLC  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

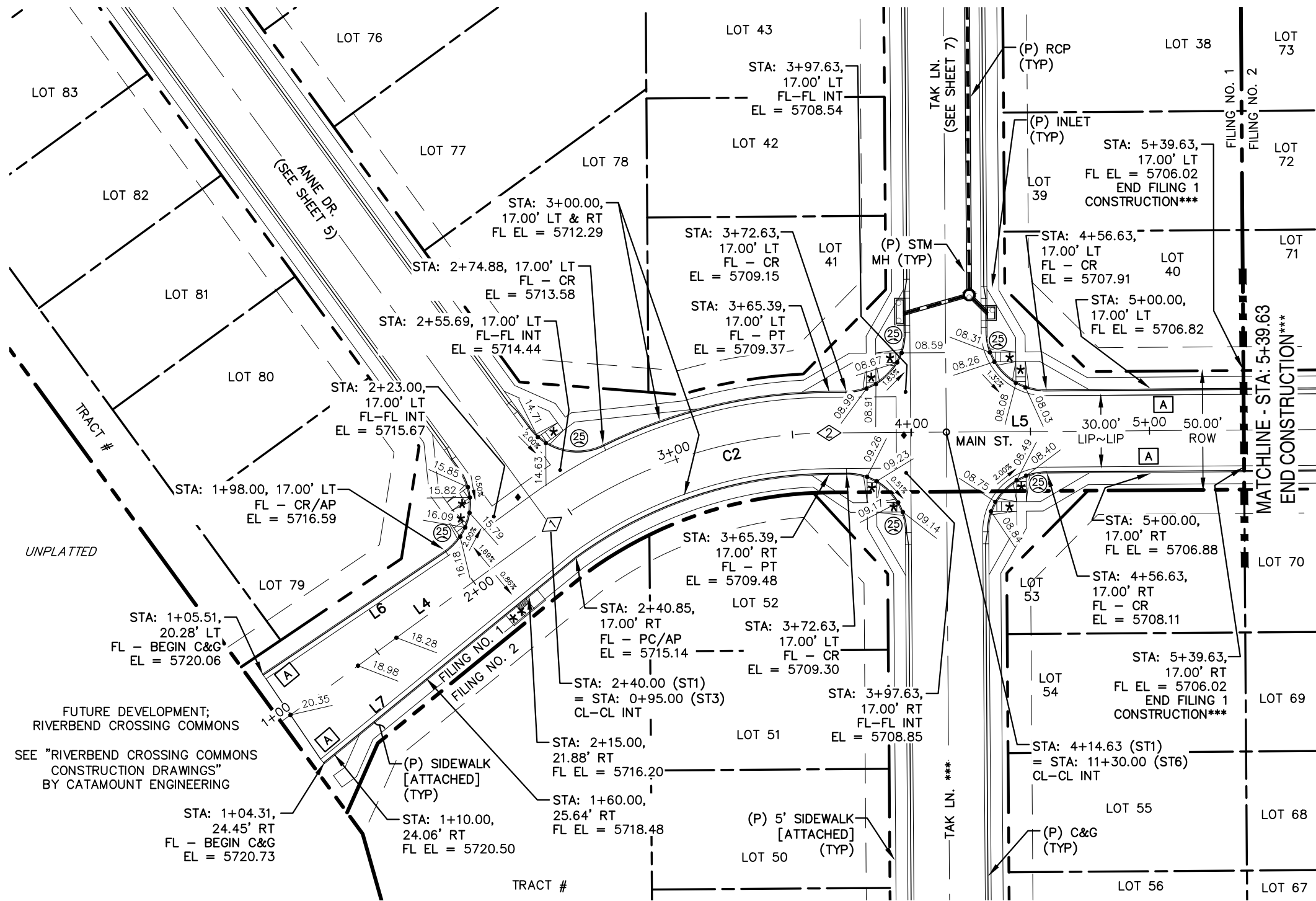
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER #40510  
10/19/20  
DATE



RIVERBEND CROSSING  
FILING NO. 1  
SOUTHMOOR DRIVE  
STREET IMPROVEMENT PLAN

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 03/30/21
JOB NUMBER: 17-114	SHEET: 2 OF 27





- \* PED INTERSECTION RAMP  
(REF: SD 2-41 & SD 2-42)
- \*\* PARALLEL PED RAMP  
(REF: SD 2-50)
- ♦ STANDARD CROSSSPAN  
(REF: SD 2-26)

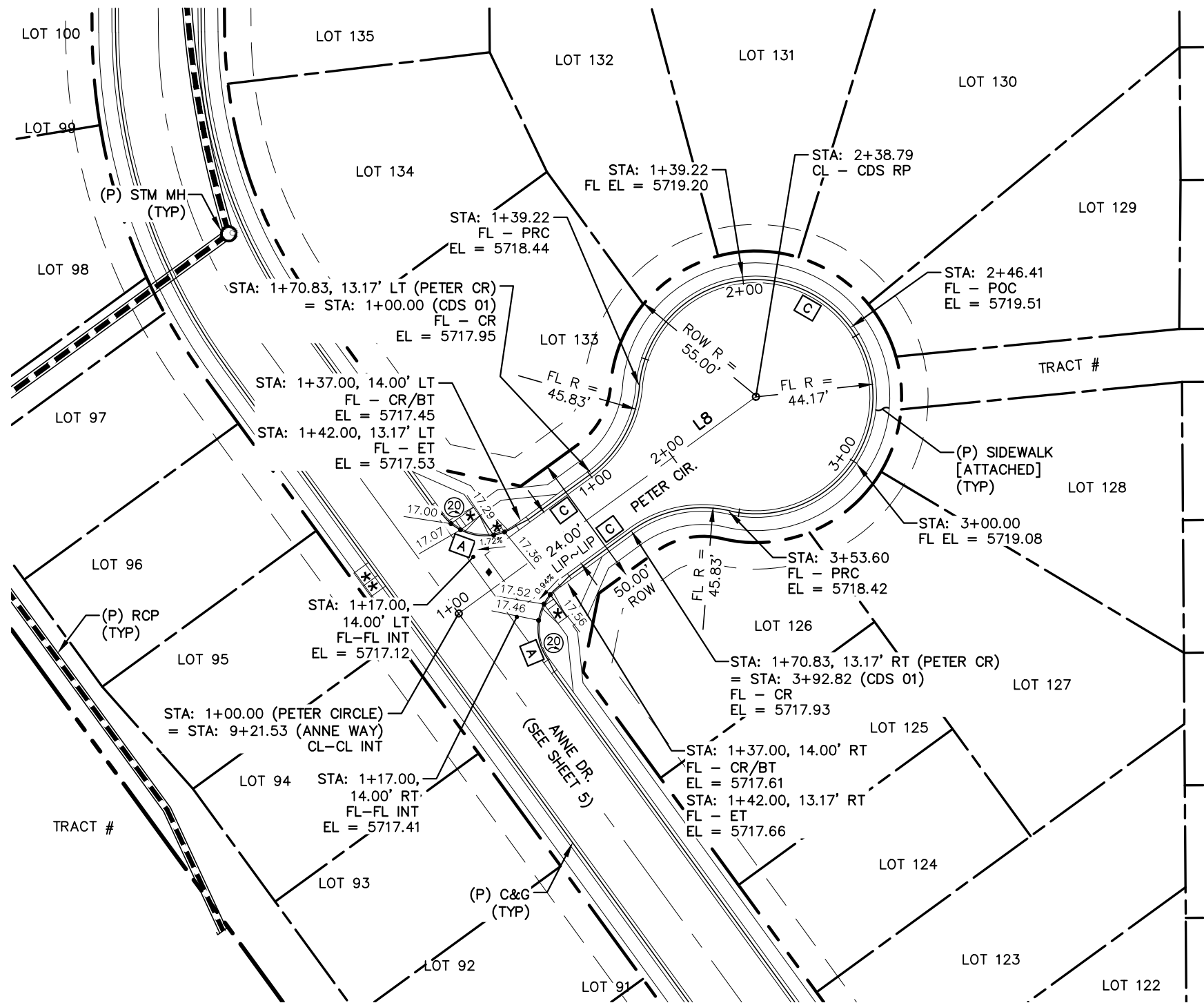
\*\*\* FILING CONSTRUCTION NOTE:  
SEE "RIVERBEND COMMONS FILING NO. 2 STREETS,  
STORM SEWER, AND SIGNAGE AND STRIPING"  
CONSTRUCTION PLANS BY CATAMOUNT ENGINEERING.

LINE TABLE - CL		
LINE	BEARING	DISTANCE
L4	S53° 55' 10"W	140.85
L5	S89° 35' 49"W	174.24
L8	S53° 55' 25"W	138.79

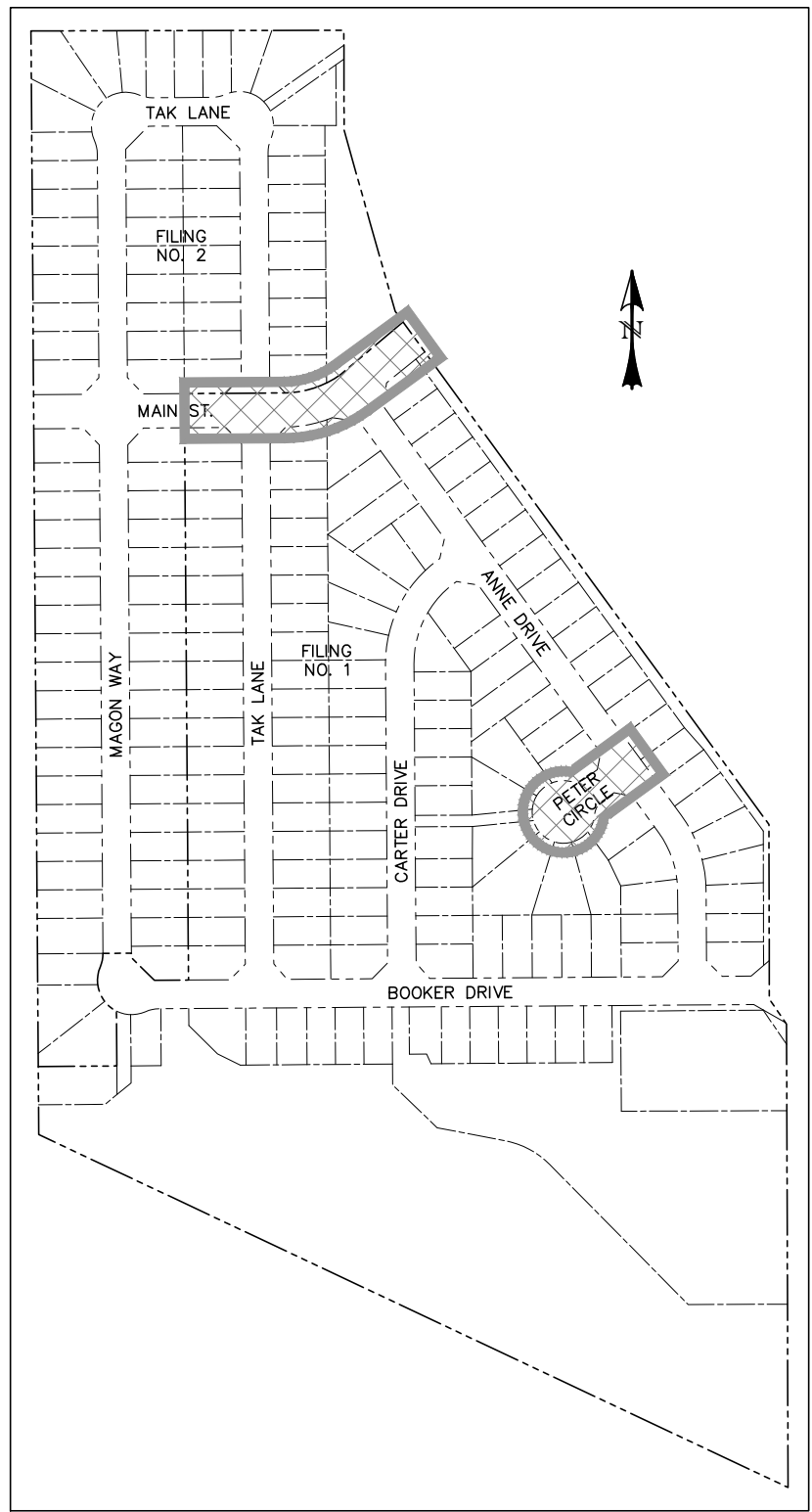
CURVE TABLE - CL			
CURVE	DELTA	RADIUS	LENGTH
C2	35°40'40"	200.00	124.54

LINE TABLE - FL		
LINE	BEARING	DISTANCE
L6	S55° 57' 05"W	92.55
L7	S50° 47' 48"W	136.74

POINT TABLE - CL		
NUMBER	STATION	TYPE
1	2+40.85	PC
2	3+65.39	PT

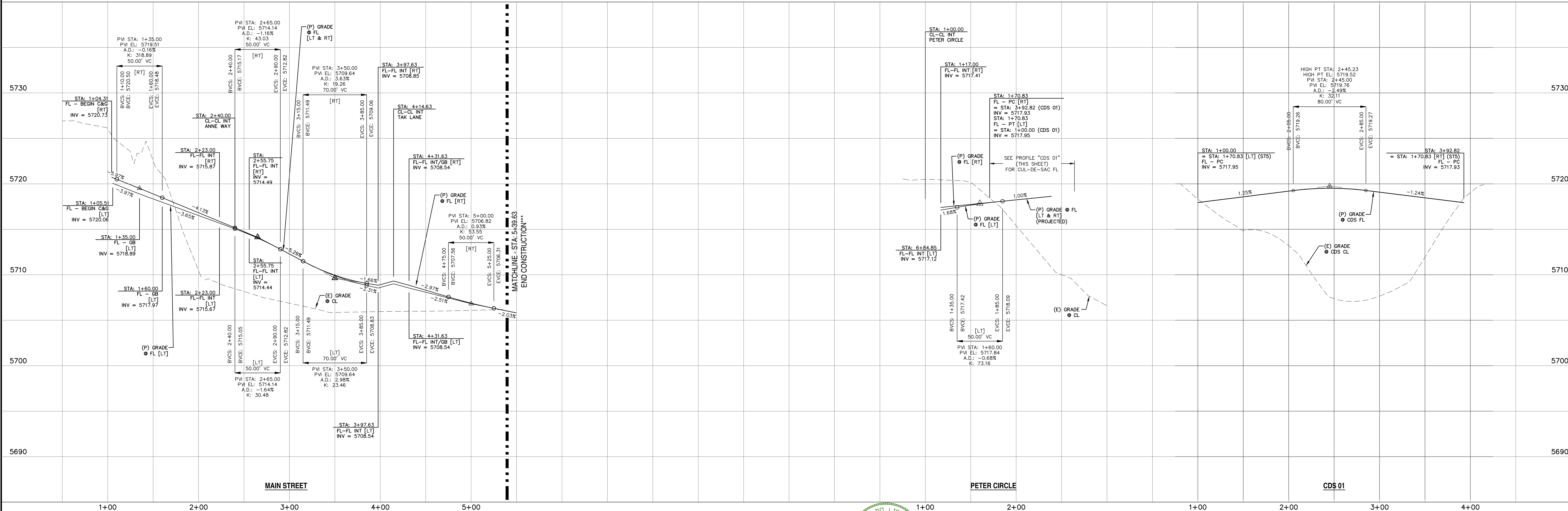


0 50 100  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



LOCATION MAP  
SCALE: N.T.S.

NOTE: SEE SHEETS 20 & 21 FOR PEDESTRIAN RAMP DETAILS



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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STREET NAME ABBREVIATIONS:		
MAIN STREET	= S11	
BOOKER DRIVE	= S12	
ANNE DRIVE	= S13	
CARTER DRIVE	= S14	
PETER CIRCLE	= S15	
TAK LANE	= S16	
MAGON WAY	= S17	
CUL-DE-SAC	= FL	

PREPARED FOR:  
AVATAR EQUITIES, LLC

6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.

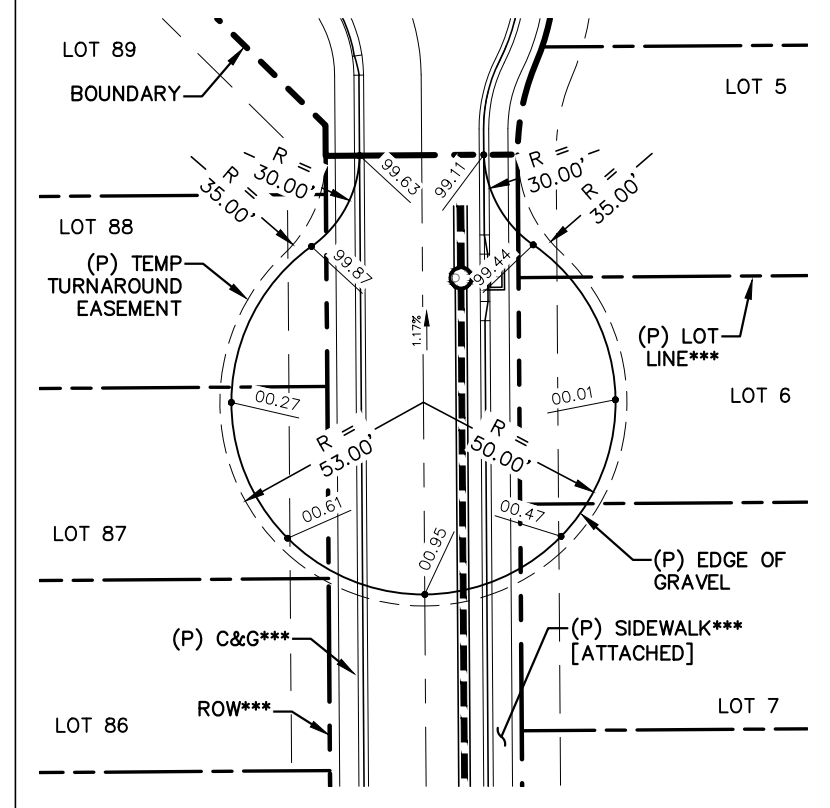
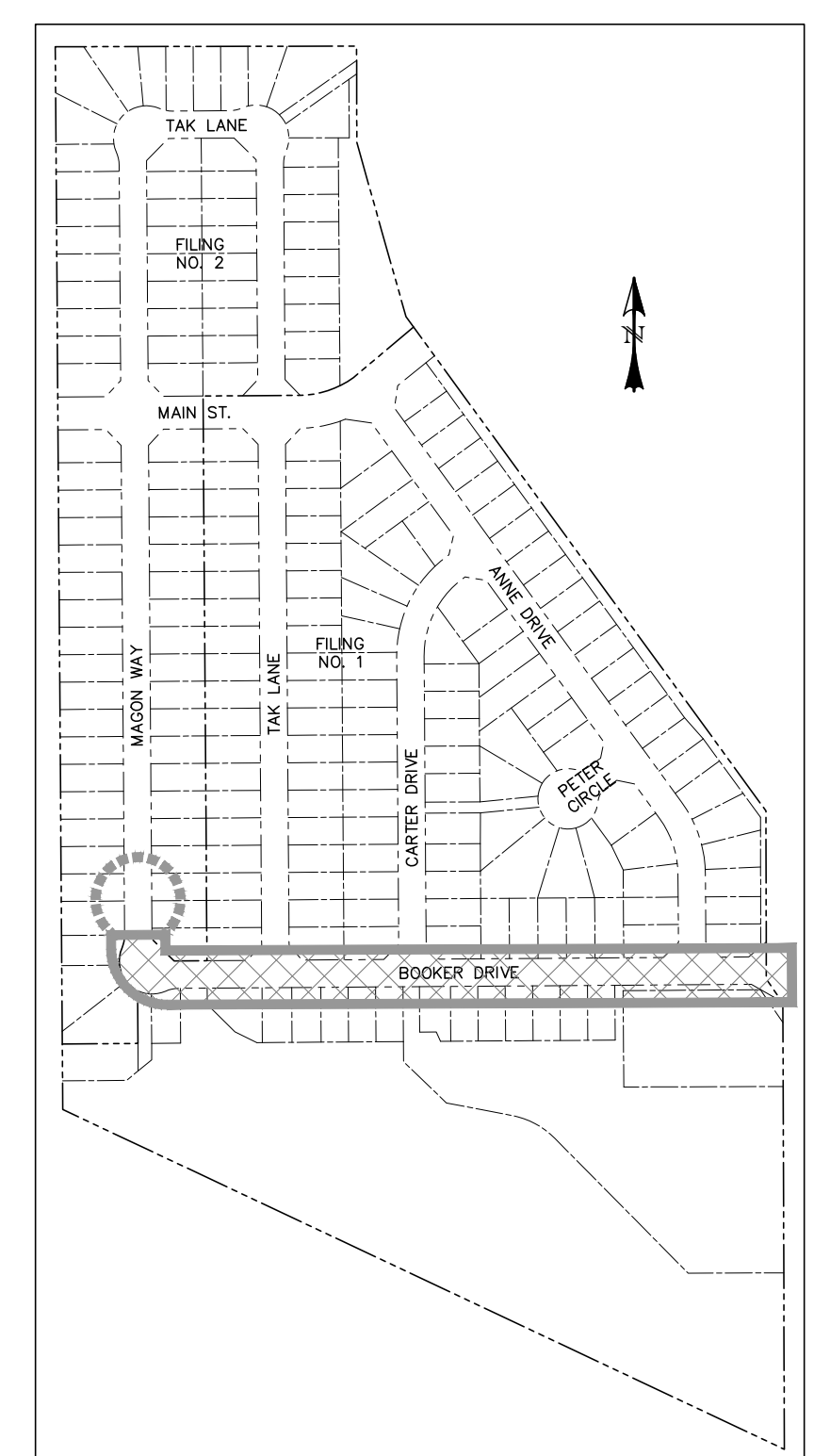
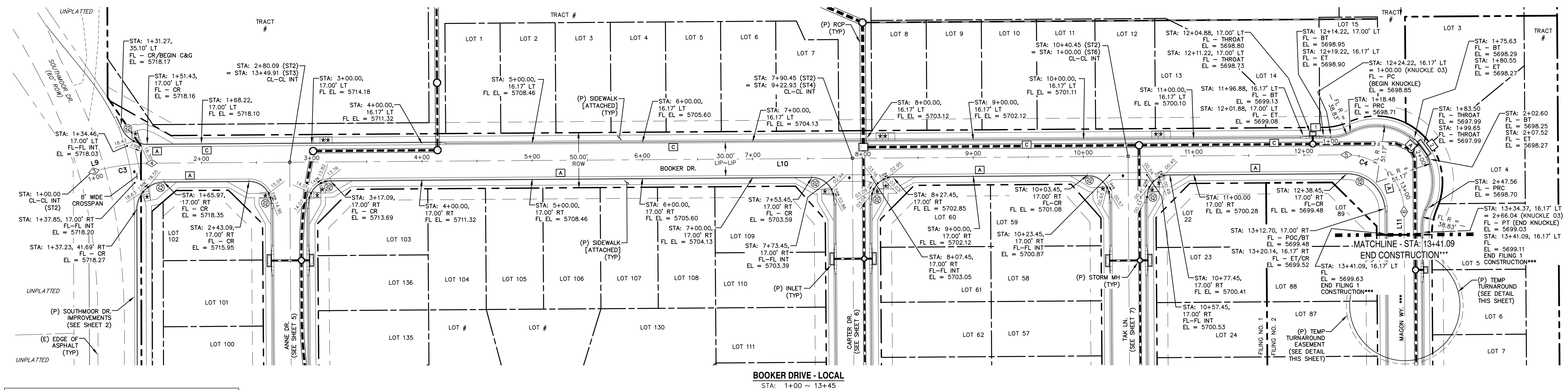
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER NO. 40510

10/19/20  
DATE

CATAMOUNT ENGINEERING  
321 W. HENRIETTA AVE  
PO BOX 221  
WOOLAND PARK, CO 80686  
(719)428-2124

RIVERBEND CROSSING FILING NO. 1		DESIGNED BY: MGP	DRAWN BY: MGP
MAIN STREET & PETER CIRCLE STREET IMPROVEMENT PLAN		SCALE: 1" = 50'	DATE: 03/30/21
		JOB NUMBER	SHEET
		17-114	3 OF 27





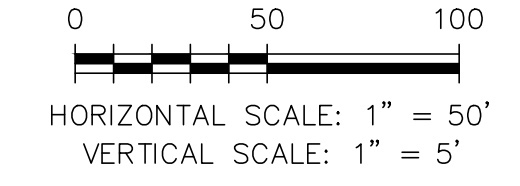
- \* PED INTERSECTION RAMP (REF: SD 2-41 & SD 2-42)
- \*\* PARALLEL PED RAMP (REF: SD 2-50)
- ♦ STANDARD CROSSSPAN (REF: SD 2-26)

LINE TABLE		
LINE	BEARING	DISTANCE
L9	S74° 21' 33"W	1.90
L10	S89° 35' 49"W	1083.37
L11	N0° 24' 11"W	20.96

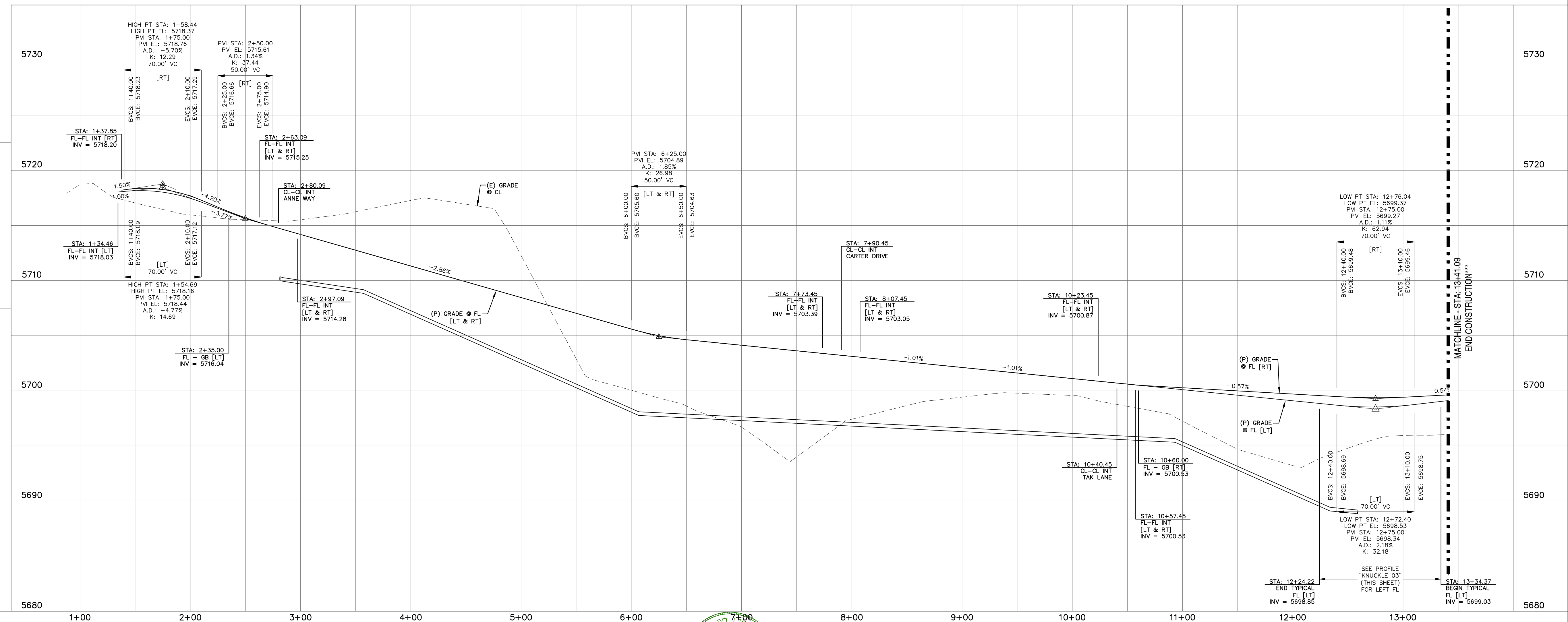
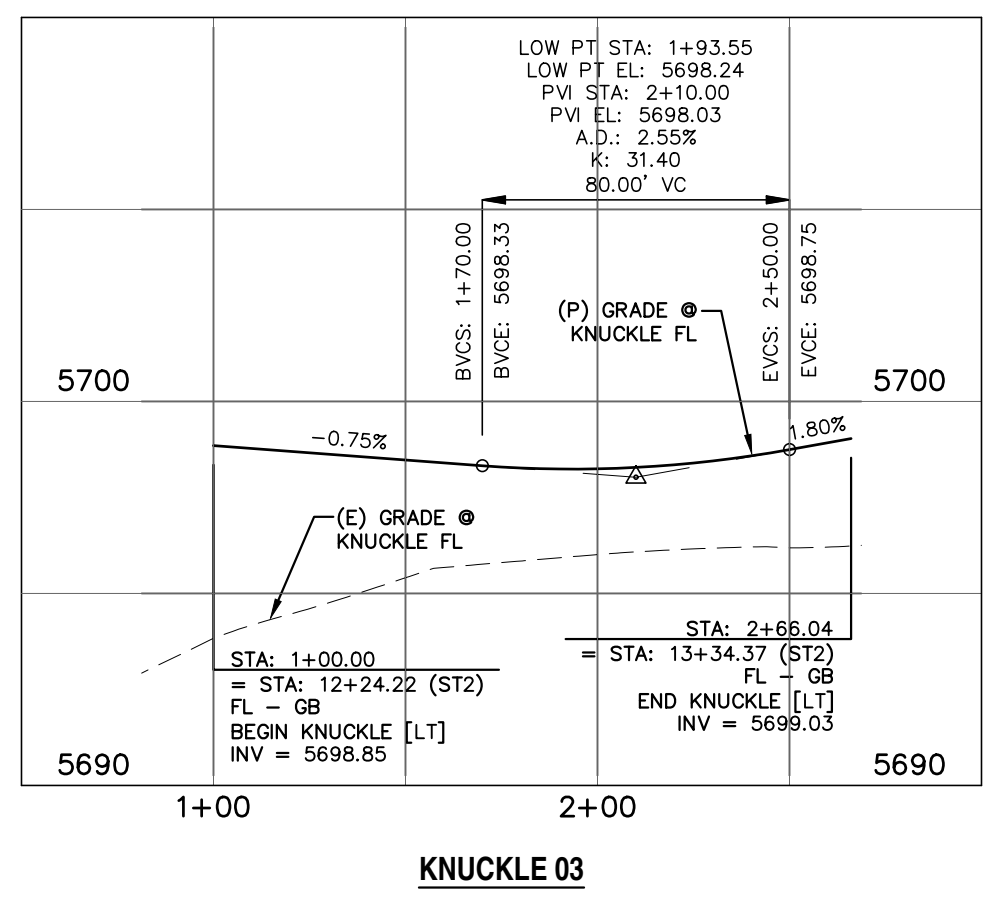
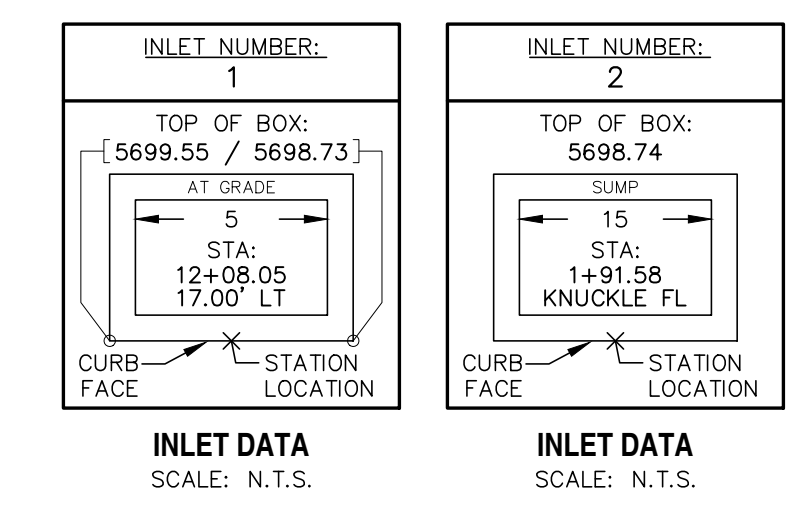
CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C3	151°14'16"	200.00	53.19
C4	90°00'00"	52.00	81.68

POINT TABLE - CL		
NUMBER	STATION	TYPE
3	1+01.90	PC
4	1+55.09	PT
5	12+38.45	PC
6	13+20.14	PT

\*\*\* FILING CONSTRUCTION NOTE:  
SEE "RIVERBEND COMMONS FILING NO. 2 STREETS, STORM SEWER, AND SIGNAGE AND STRIPING" CONSTRUCTION PLANS BY CATAMOUNT ENGINEERING.



NOTE: SEE SHEETS 20 & 21 FOR PEDESTRIAN RAMP DETAILS



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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ANNE DRIVE	= S13
CARTER DRIVE	= S14
PETER CIRCLE	= S15
TAK LANE	= S16
MAGON WAY	= S17
CL-CL-SAC	= FL

PREPARED FOR:  
**AVATAR EQUITIES, LLC**  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

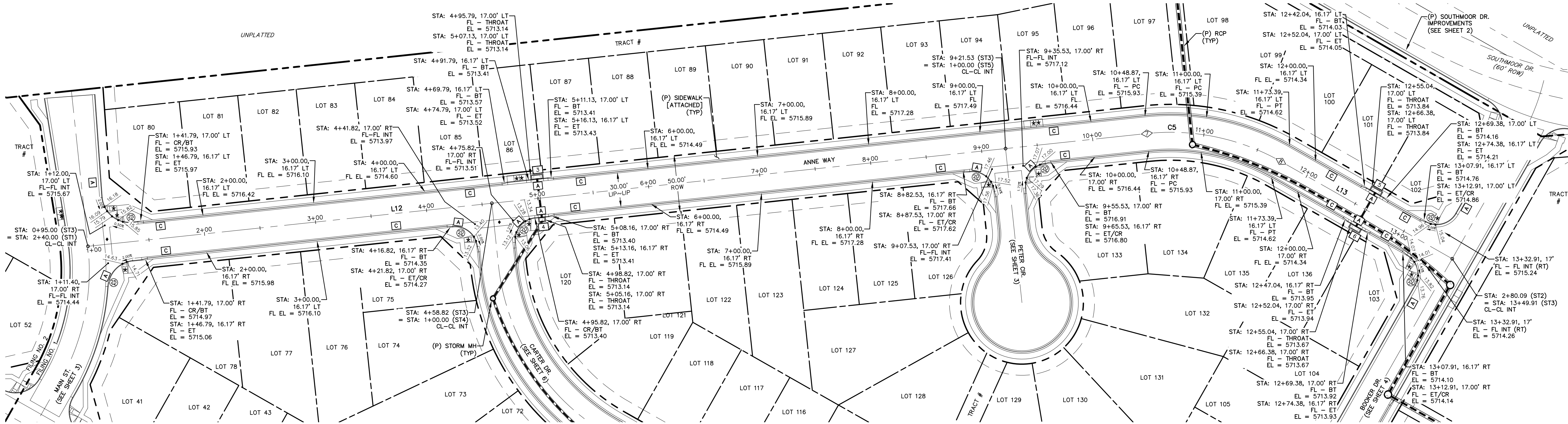
PREPARED UNDER CONTRACT AND FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
  
DAVID L. MAJARES, LICENSED PROFESSIONAL ENGINEER NO. 40510  
10/19/20  
DATE

**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80666  
(719) 428-2124

**RIVERBEND CROSSING**  
**FILING NO. 1**  
**BOOKER DRIVE**  
**STREET IMPROVEMENT PLAN**

DESIGNED BY:	MGP	DRAWN BY:	MGP
SCALE:	1" = 50'	DATE:	03/30/21
JOB NUMBER	17-114	SHEET	4 OF 27



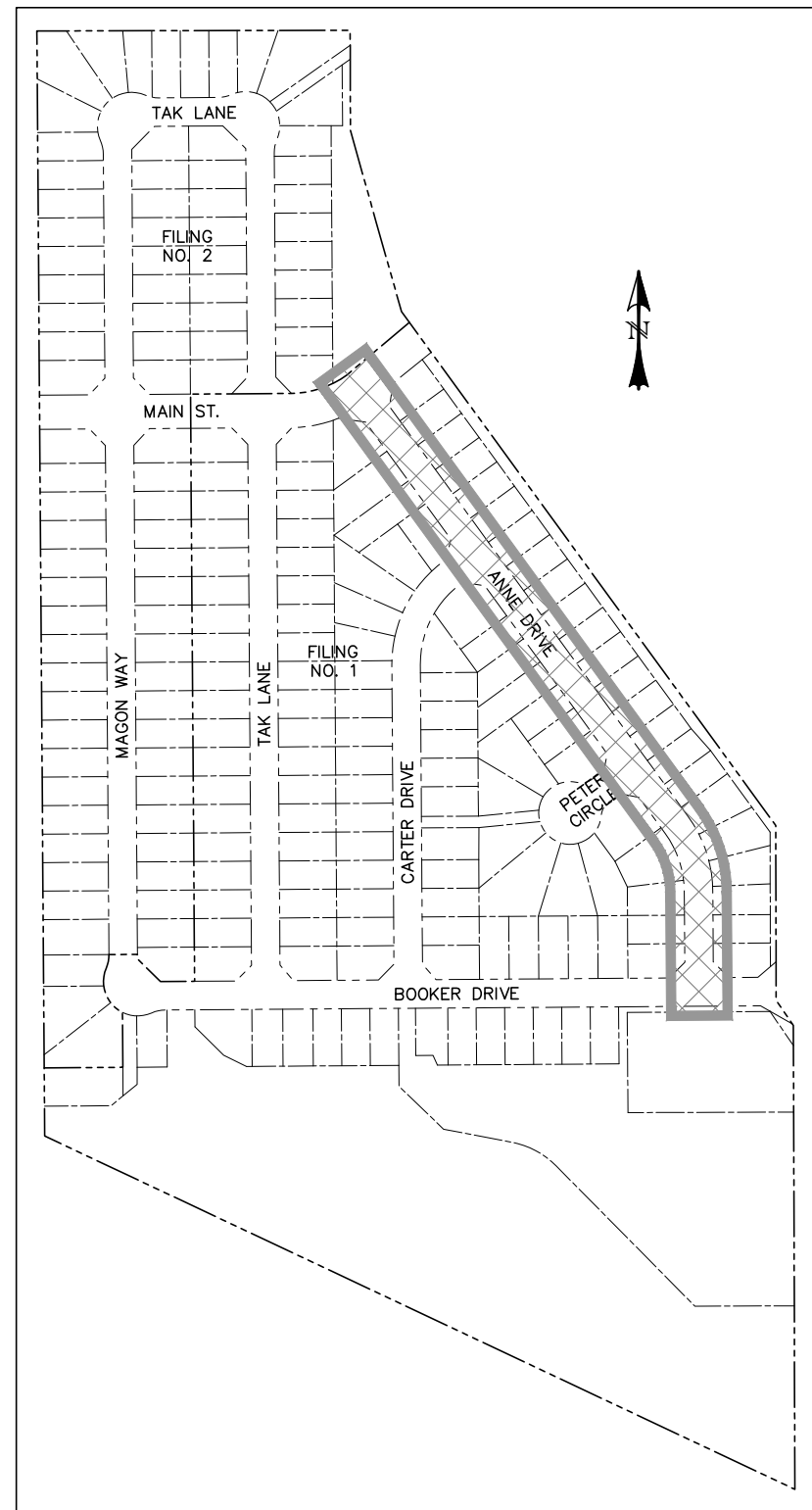


- \* PED INTERSECTION RAMP  
(REF: SD 2-41 & SD 2-42)
- \*\* PARALLEL PED RAMP  
(REF: SD 2-50)
- ♦ STANDARD CROSSPAN  
(REF: SD 2-26)

LINE TABLE		
LINE	BEARING	DISTANCE
L12	S36° 04' 35"E	953.87
L13	S0° 24' 11"E	176.52

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C5	35°40'24"	200.00	124.52

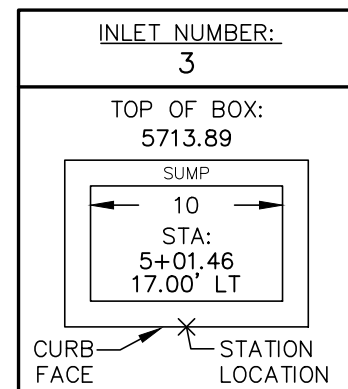
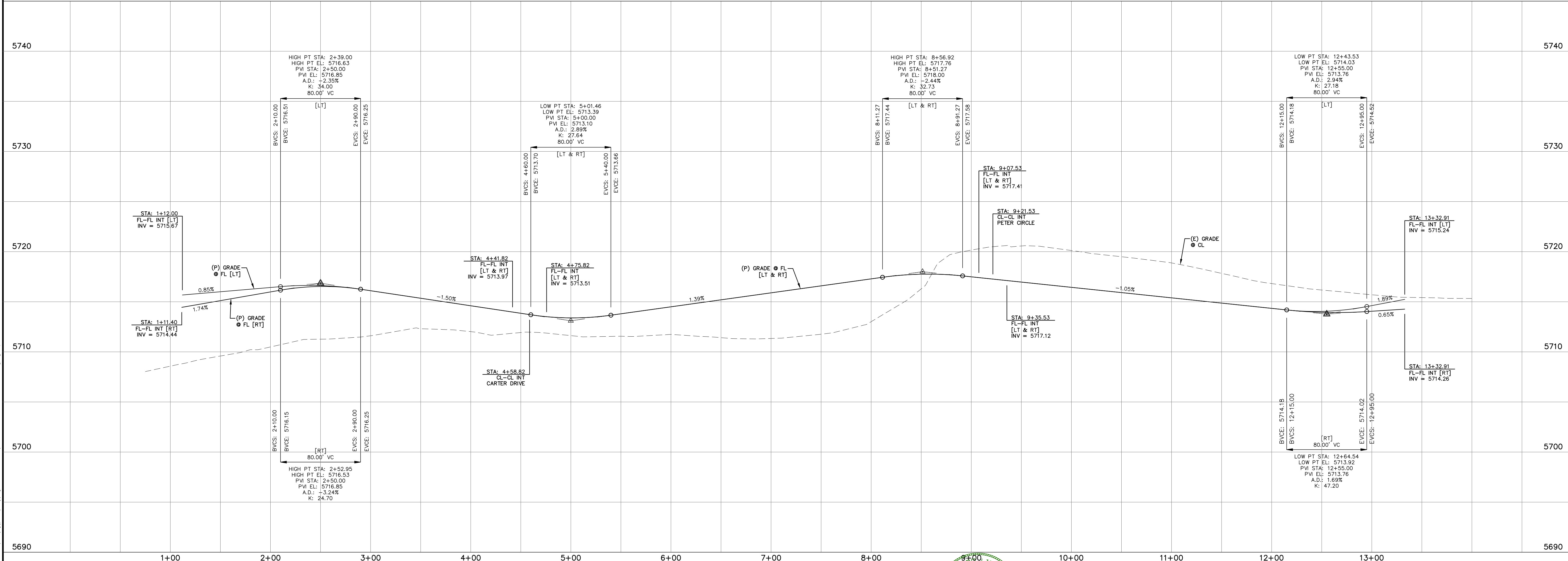
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



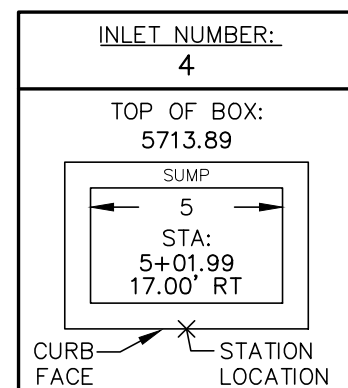
LOCATION MAP  
SCALE: N.T.S.

POINT TABLE - CL		
NUMBER	STATION	TYPE
7	10+48.87	PC
8	11+73.39	PT

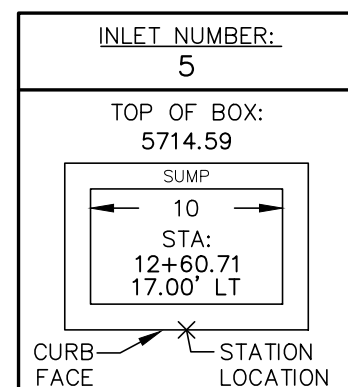
NOTE: SEE SHEETS 20 & 21 FOR PEDESTRIAN RAMP DETAILS



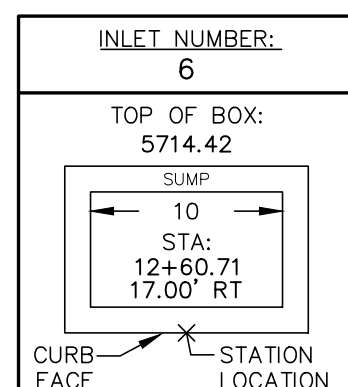
INLET DATA  
SCALE: N.T.S.



INLET DATA  
SCALE: N.T.S.



INLET DATA  
SCALE: N.T.S.



INLET DATA  
SCALE: N.T.S.

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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CARTER DRIVE = S14  
PETER CIRCLE = S15  
TAK LANE = S16  
MAGON WAY = S17  
CUL-DE-SAC = FL = CDS

PREPARED FOR:  
**AVATAR EQUITIES, LLC**  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

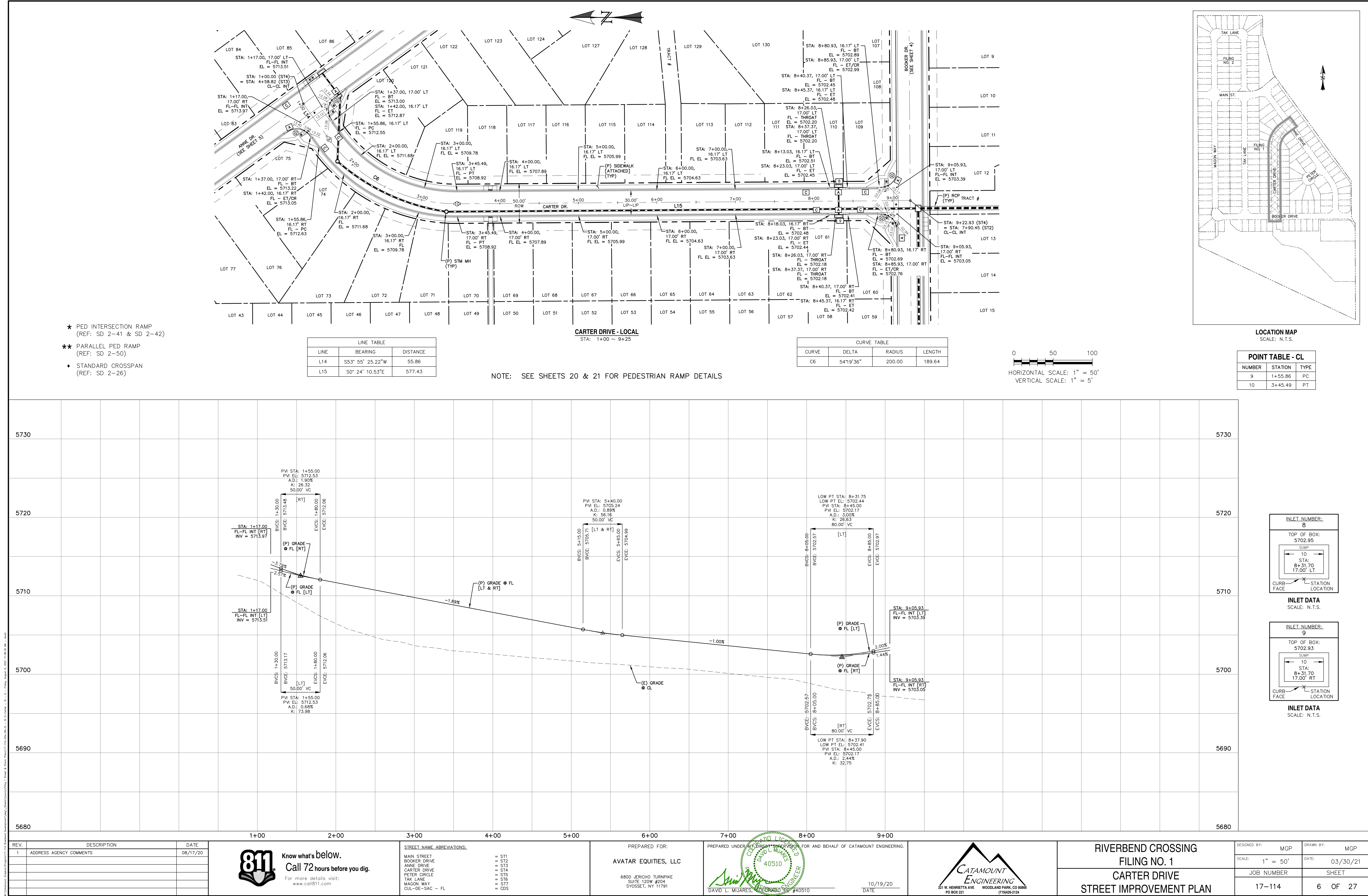
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
**DAVID L. MIJARES**  
40510  
10/19/20  
DATE

**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80866  
(719) 428-2124

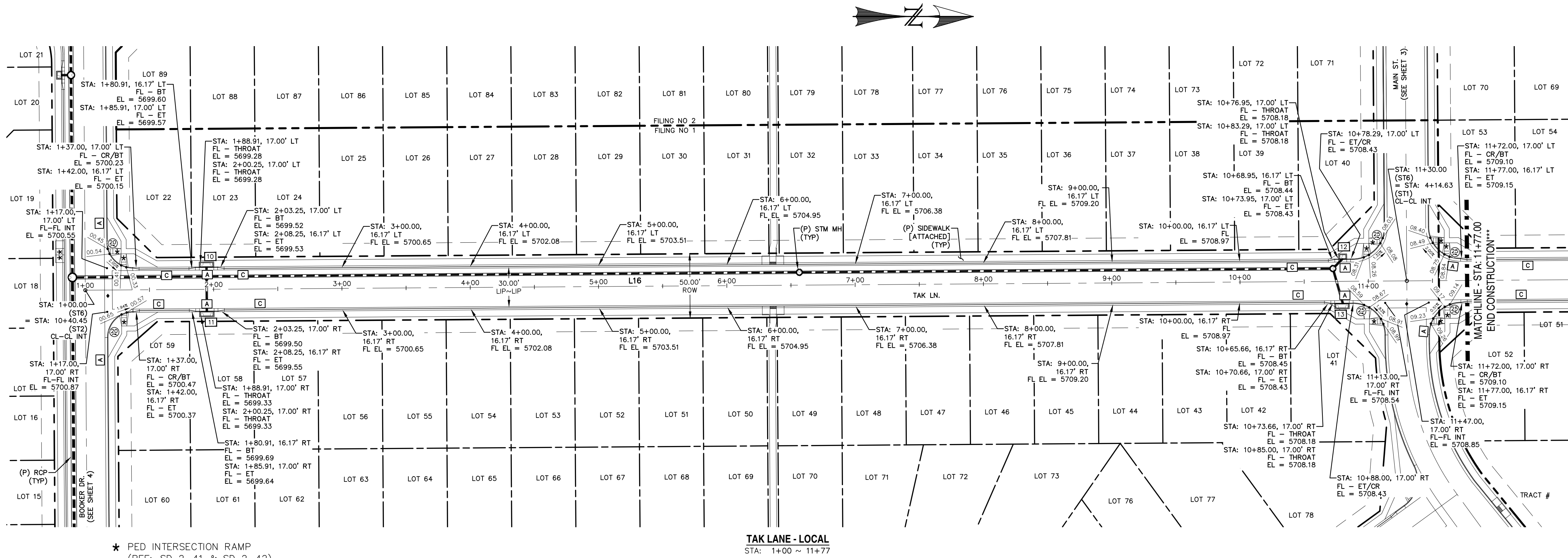
**RIVERBEND CROSSING**  
FILING NO. 1  
ANNE DRIVE  
STREET IMPROVEMENT PLAN

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 03/30/21
JOB NUMBER	SHEET
17-114	5 OF 27









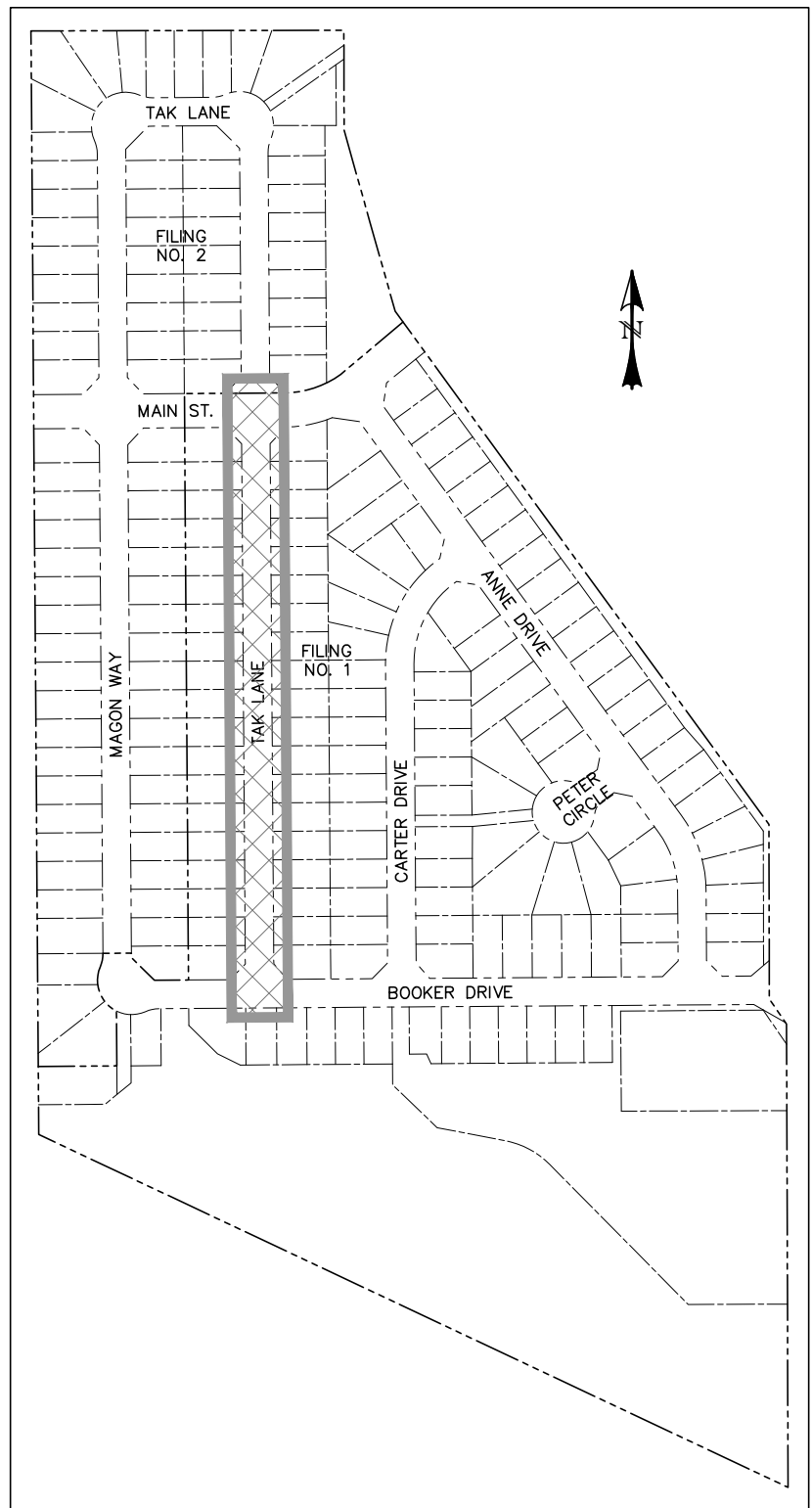
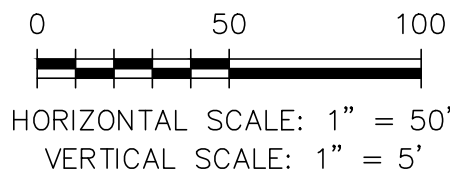
- \* PED INTERSECTION RAMP  
(REF: SD 2-41 & SD 2-42)
- \*\* PARALLEL PED RAMP  
(REF: SD 2-50)
- STANDARD CROSSSPAN  
(REF: SD 2-26)

LINE TABLE		
LINE	BEARING	DISTANCE
L16	N0° 24' 10"W	1076.50

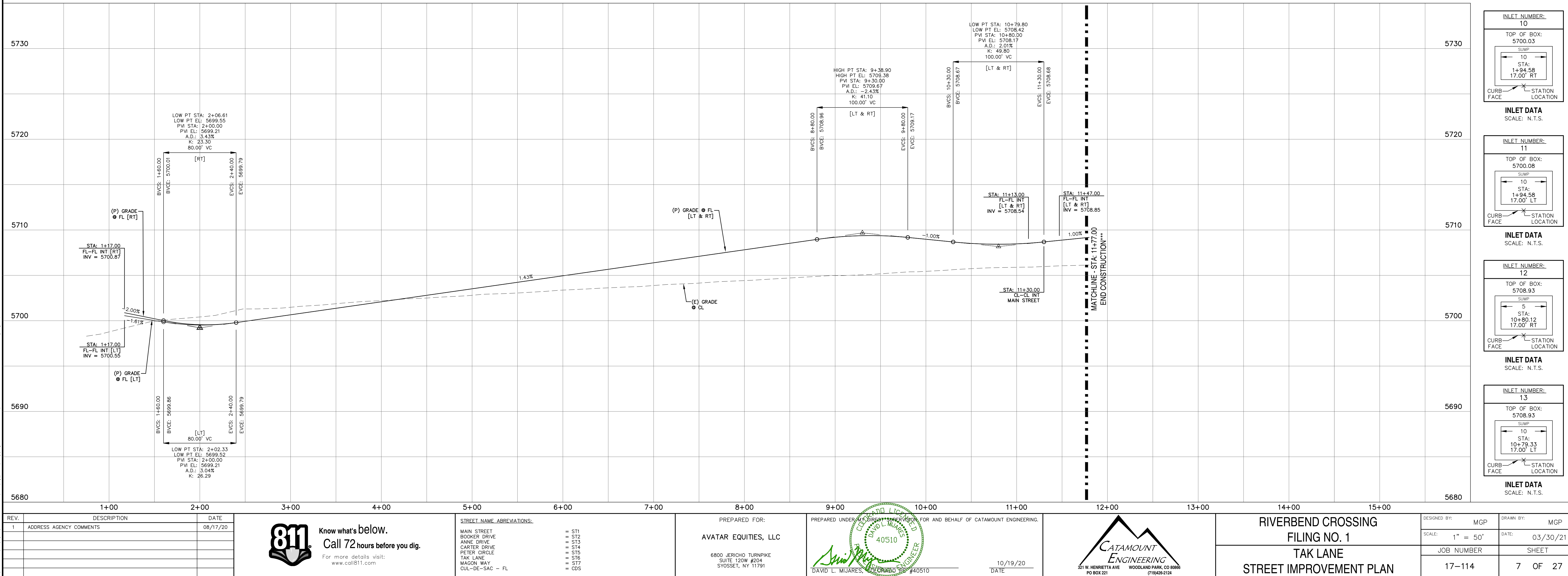
TAK LANE - LOCAL  
STA: 1+00 ~ 11+77

NOTE: SEE SHEETS 20 & 21 FOR PEDESTRIAN RAMP DETAILS

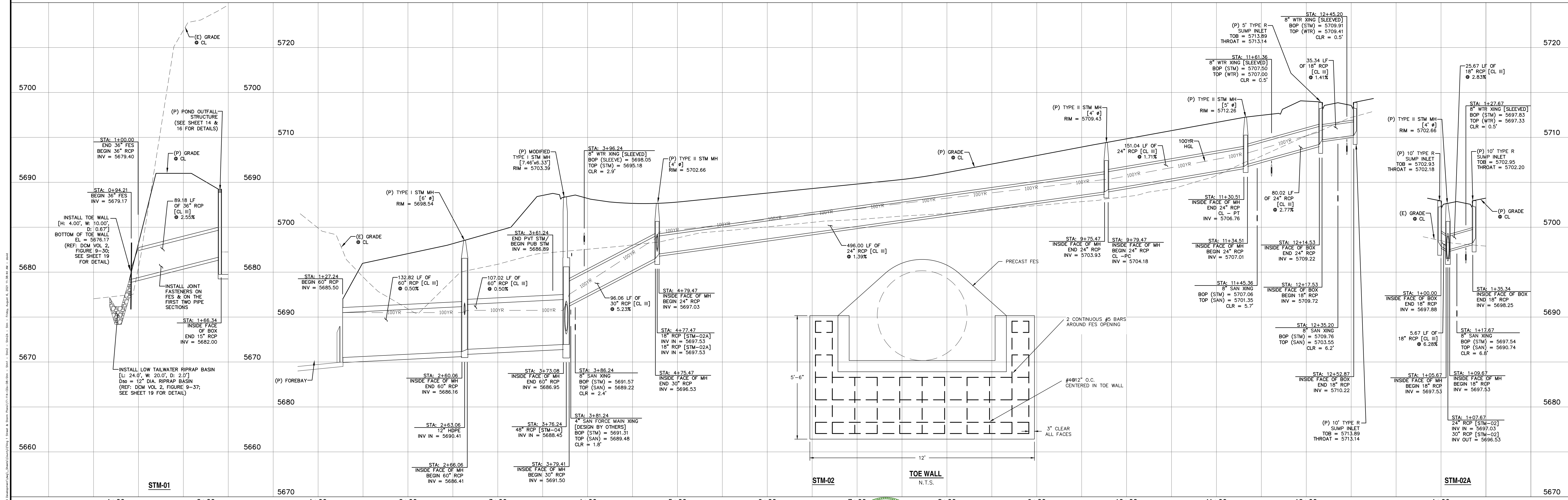
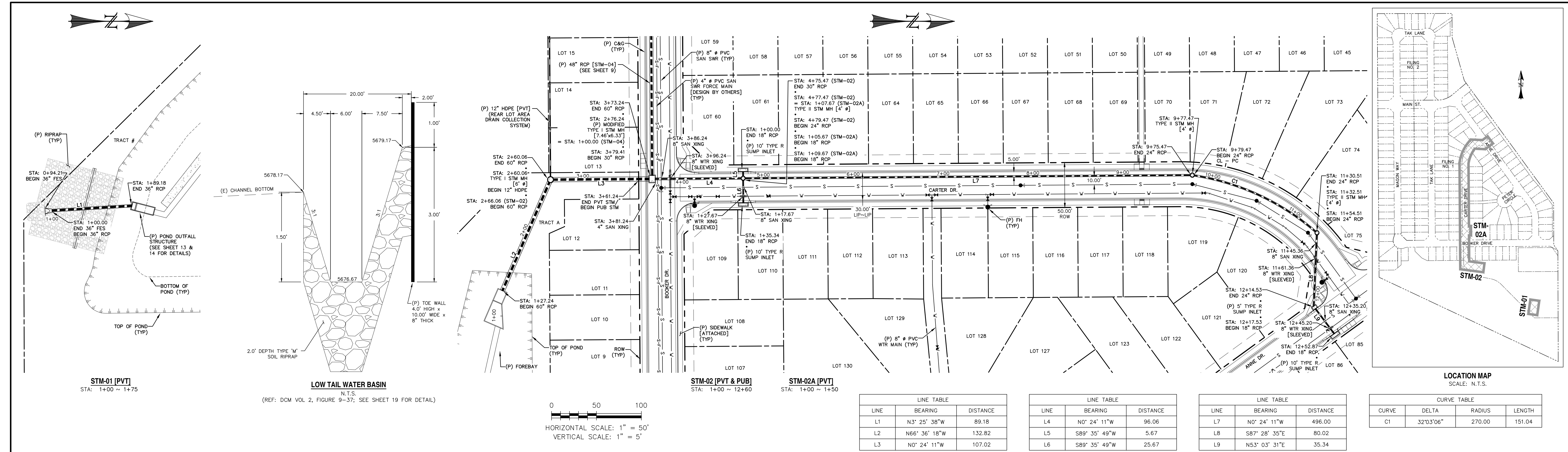
\*\*\* FILING CONSTRUCTION NOTE:  
SEE "RIVERBEND COMMONS FILING NO. 2, STREETS,  
STORM SEWER, AND SIGNAGE & STRIPING  
CONSTRUCTION PLANS BY CATAMOUNT ENGINEERING.




LOCATION MAP  
SCALE: N.T.S.







REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20



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PREPARED FOR:  
AVATAR EQUITIES, LLC

6800 JERICO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.

DAVID L. MUJARES, LICENSED PROFESSIONAL ENGINEER  
40510

10/19/20  
DATE



RIVERBEND CROSSING  
FILING NO. 1  
STORM SEWER  
PLAN & PROFILE

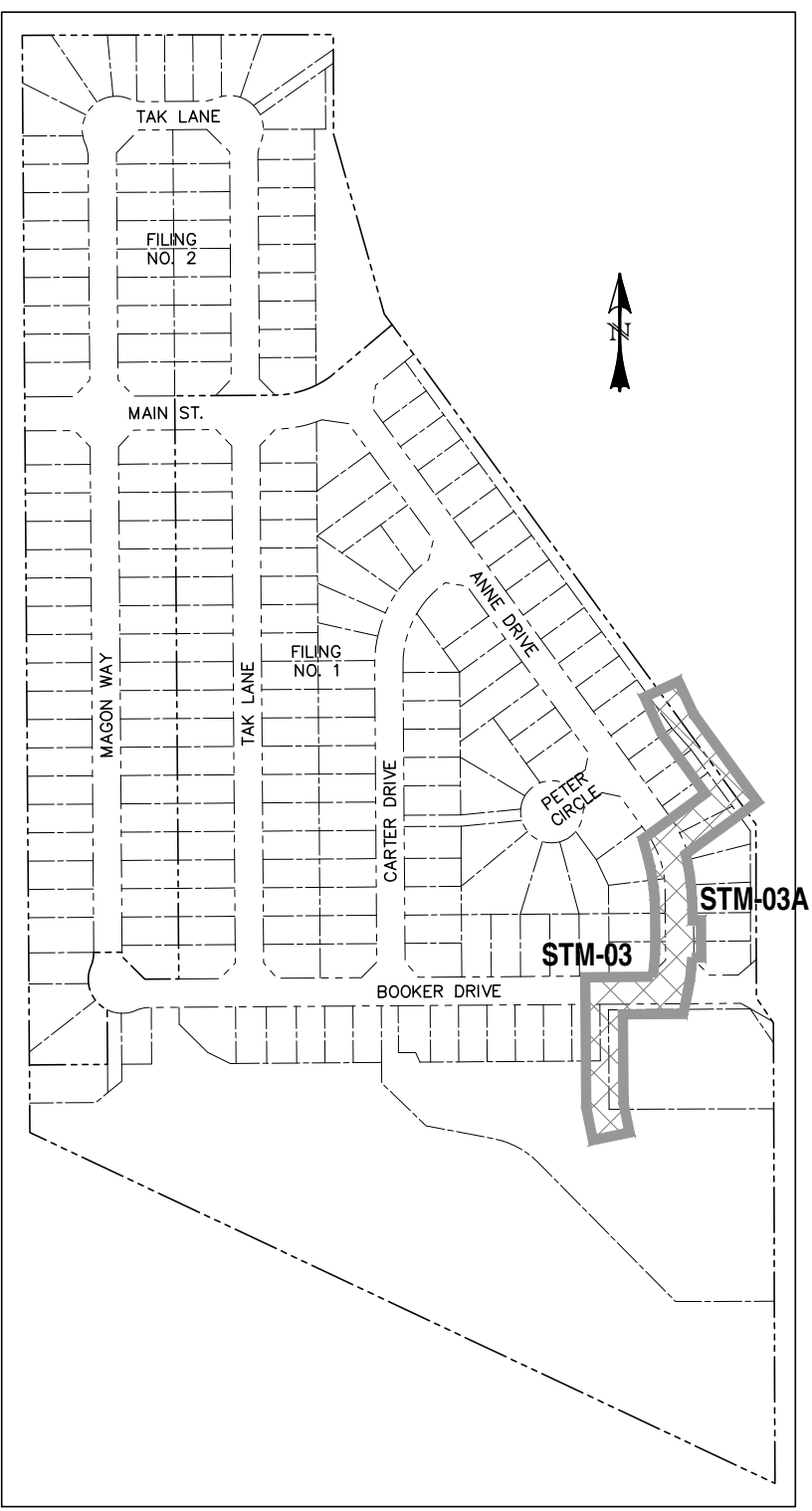
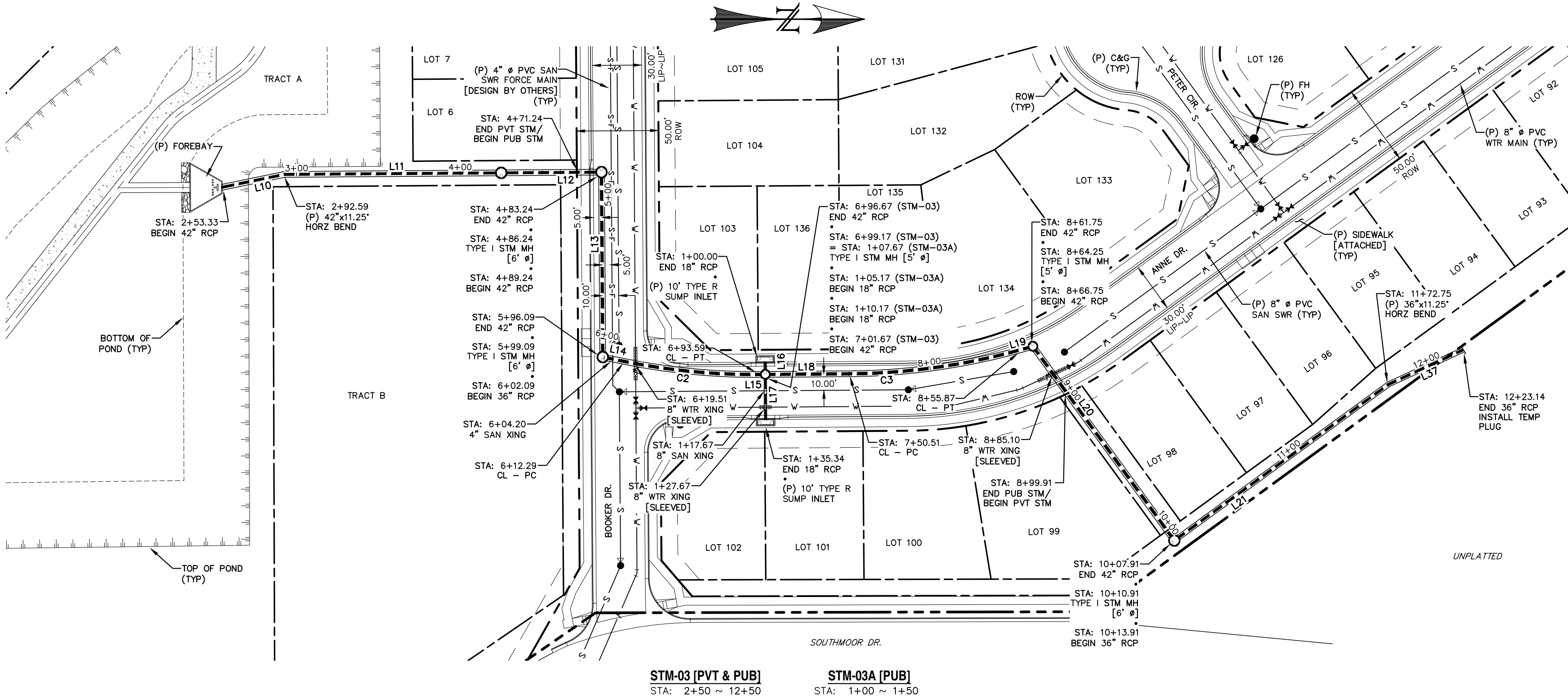
DESIGNED BY:	MGP	DRAWN BY:	MGP
SCALE:	1" = 50'	DATE:	03/30/21
JOB NUMBER	17-114	SHEET	8 OF 27



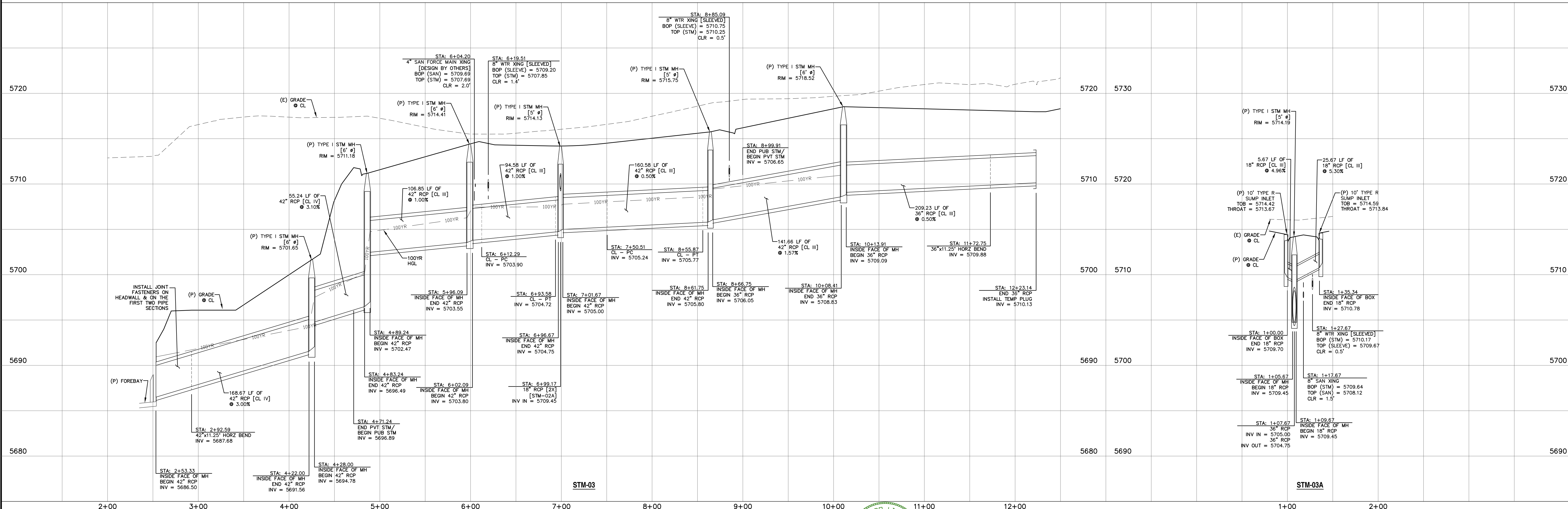
LINE TABLE		
LINE	BEARING	DISTANCE
L10	N11° 39' 11"W	39.27
L11	N0° 24' 11"W	129.41
L12	N0° 24' 11"W	55.24
L13	N89° 35' 49"E	106.85
L14	S11° 29' 15"W	10.20
L15	N0° 09' 27"W	3.08
L16	S89° 35' 49"W	5.17
L17	N89° 35' 49"E	25.17
L18	N0° 24' 11"W	48.85
L19	N15° 29' 41"W	5.88
L20	N53° 55' 25"E	141.16
L21	N36° 04' 35"W	158.84
L37	N24° 49' 35"W	50.39

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C2	11°38'42"	400.00	81.30
C3	15°05'30"	400.00	105.36

0 50 100  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



LOCATION MAP  
SCALE: N.T.S.

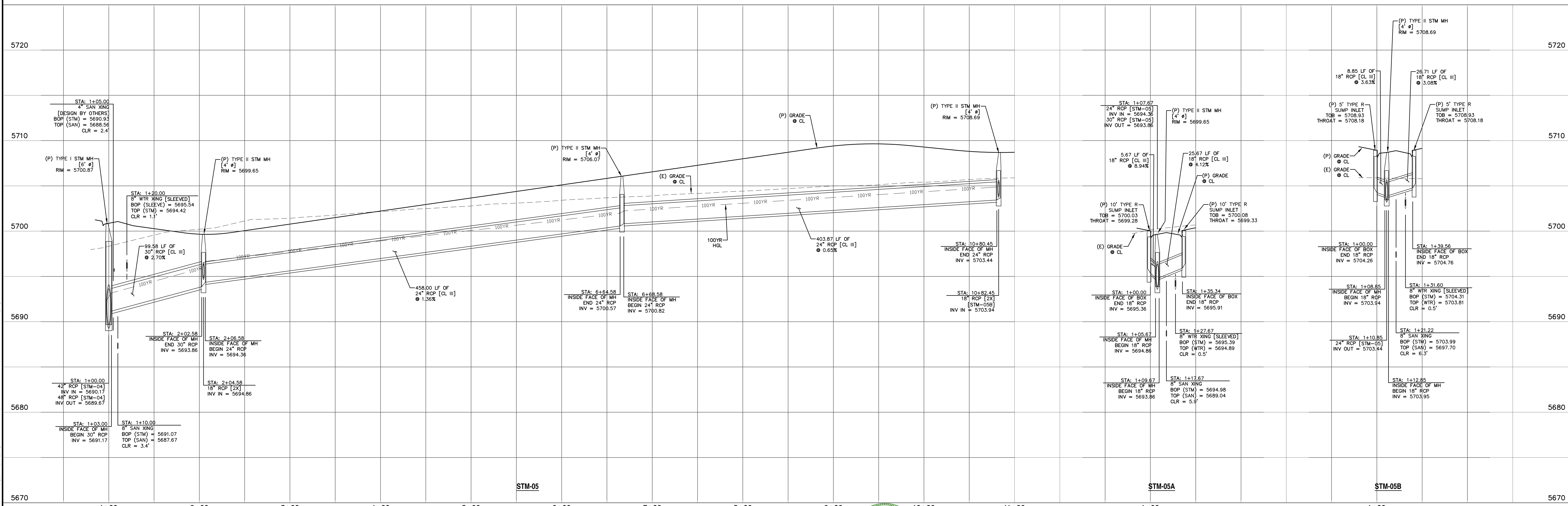
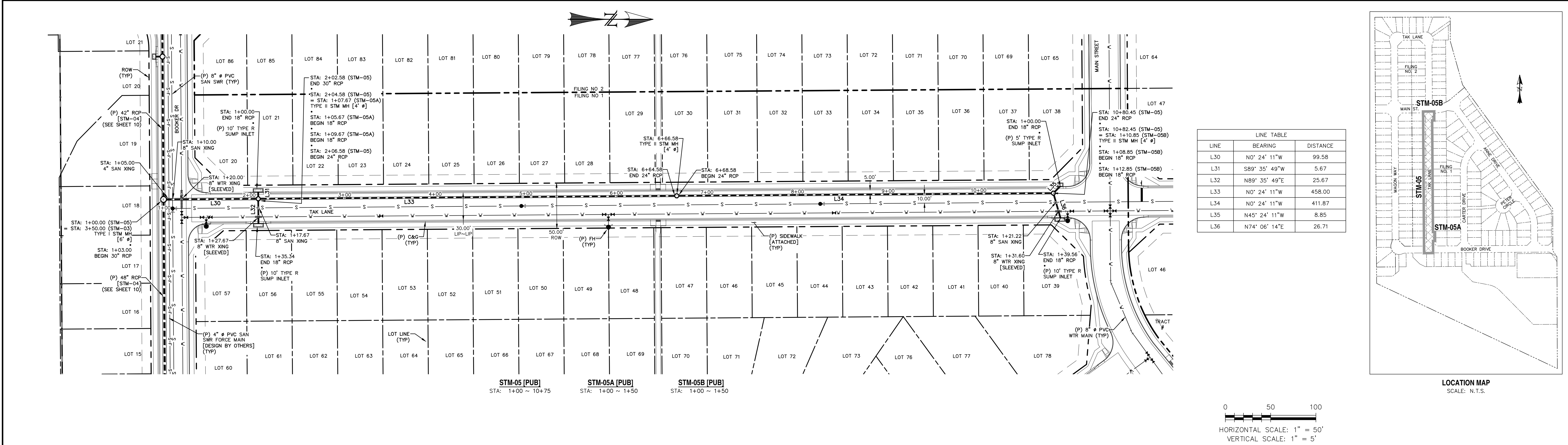


REV. 1 ADDRESS AGENCY COMMENTS DATE 08/17/20	<b>811</b> Know what's below. Call 72 hours before you dig. For more details visit: www.call811.com	PREPARED FOR: AVATAR EQUITIES, LLC 6800 JERICHO TURNPIKE SUITE 120W #204 SYOSSET, NY 11791	PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING. DAVID L. MUJARES, LICENSED PROFESSIONAL ENGINEER #40510 10/19/20 DATE	<b>CATAMOUNT ENGINEERING</b> 221 W. HENRIETTA AVE PO BOX 221 WOODLAND PARK, CO 80866 (719)426-2124	<b>RIVERBEND CROSSING FILING NO. 1 STORM SEWER 03 &amp; 03A PLAN &amp; PROFILE</b>	DESIGNED BY: MGP SCALE: 1" = 50' JOB NUMBER: 17-114	DRAWN BY: MGP DATE: 03/30/21 SHEET: 9 OF 27
--	--	--	---	--	--	---	---










REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20



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PREPARED FOR:  
AVATAR EQUITIES, LLC

6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.

DAVID L. MUJARES, LICENSED PROFESSIONAL ENGINEER  
40510

10/19/20  
DATE



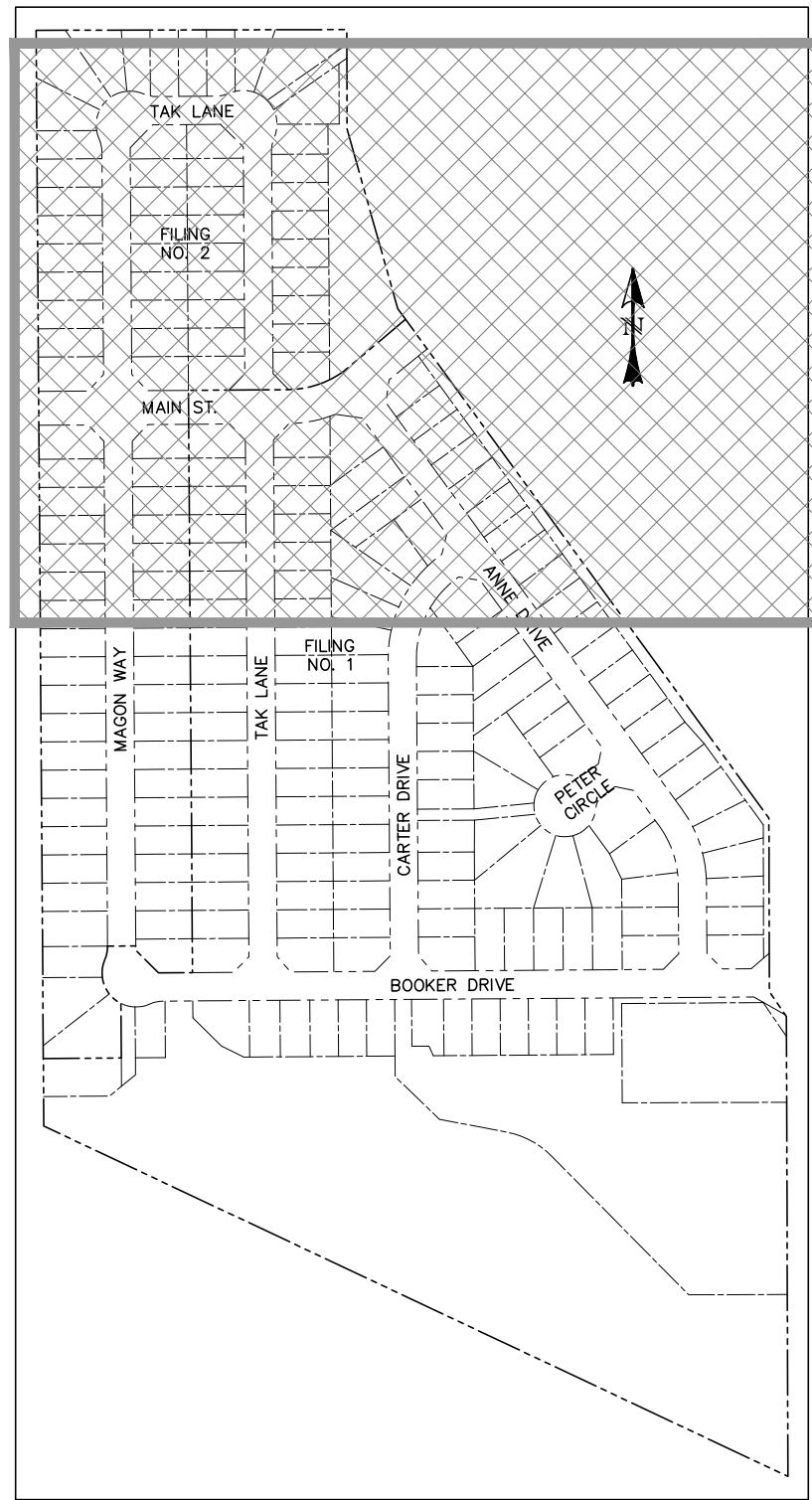
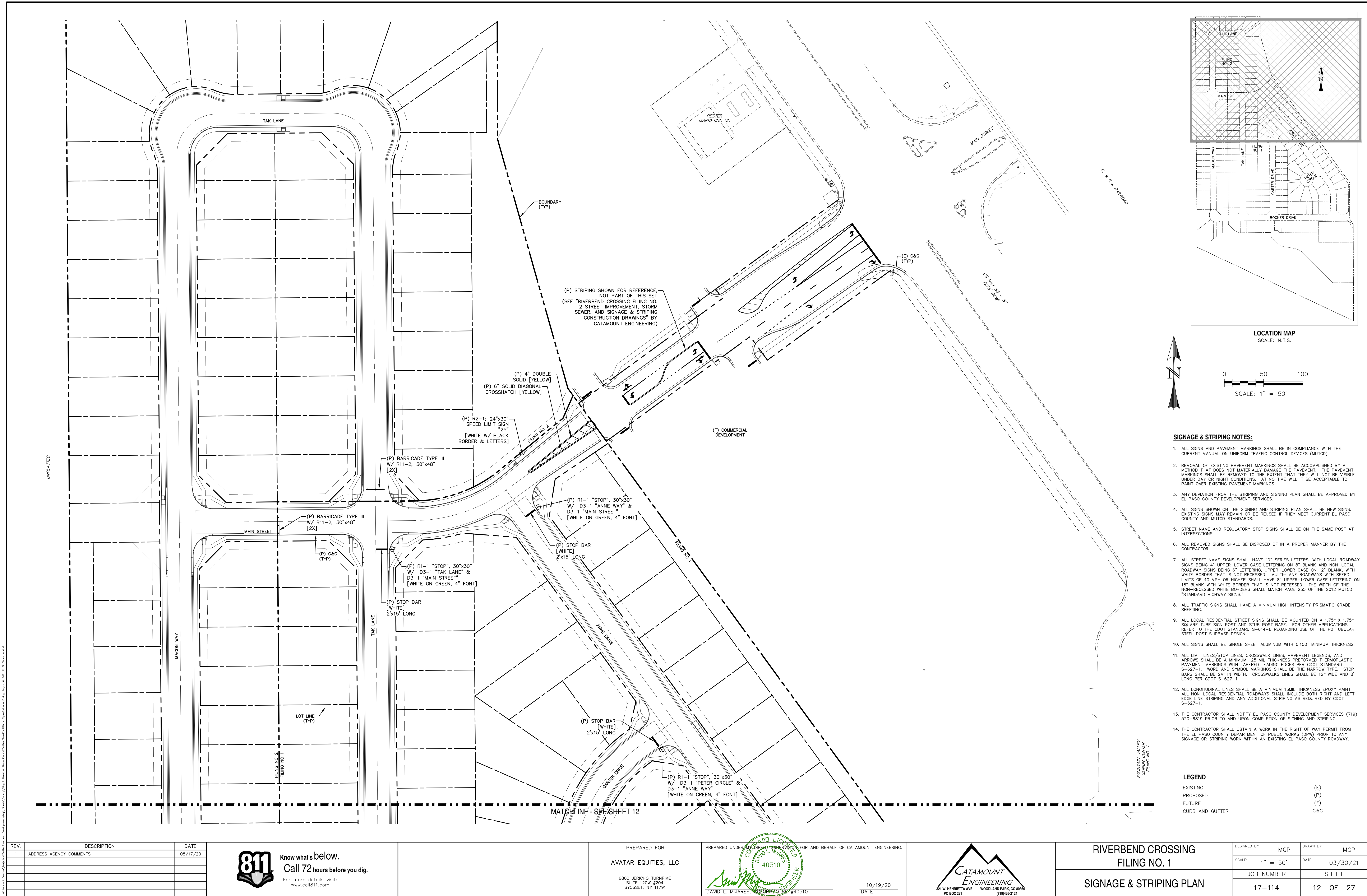
CATAMOUNT ENGINEERING  
221 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80866  
(719) 426-2124

RIVERBEND CROSSING  
FILING NO. 1  
STORM SEWER  
PLAN & PROFILE

DESIGNED BY: MGP  
SCALE: 1" = 50'  
JOB NUMBER: 17-114

DRAWN BY: MGP  
DATE: 03/30/21  
SHEET: 11 OF 27





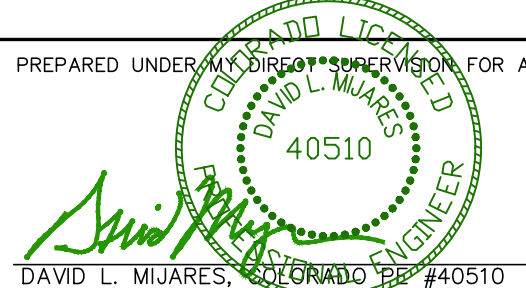
- SIGNAGE & STRIPING NOTES:**
1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
  2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
  3. ANY DEVIATION FROM THE SIGNING AND STRIPING PLAN SHALL BE APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES.
  4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
  5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
  6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
  7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS."
  8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
  9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SUBBASE DESIGN.
  10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
  11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8" LONG PER CDOT S-627-1.
  12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
  13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY DEVELOPMENT SERVICES (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
  14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.


LEGEND	
EXISTING	(E)
PROPOSED	(P)
FUTURE	(F)
CURE AND GUTTER	C&G

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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PREPARED FOR:  
**AVATAR EQUITES, LLC**  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
  
DAVID L. MJARES, LICENSED PROFESSIONAL ENGINEER #40510  
10/19/20  
DATE

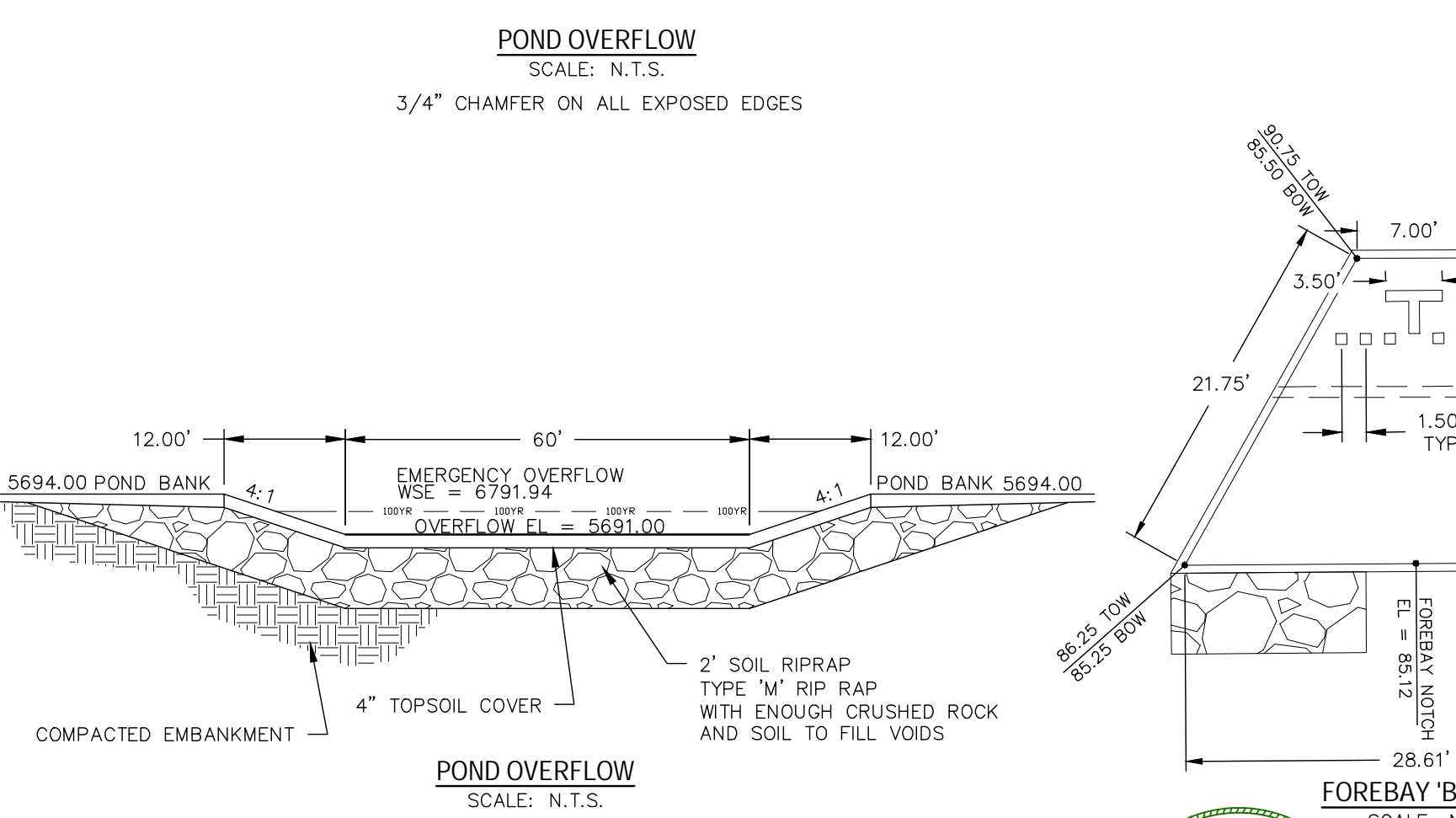
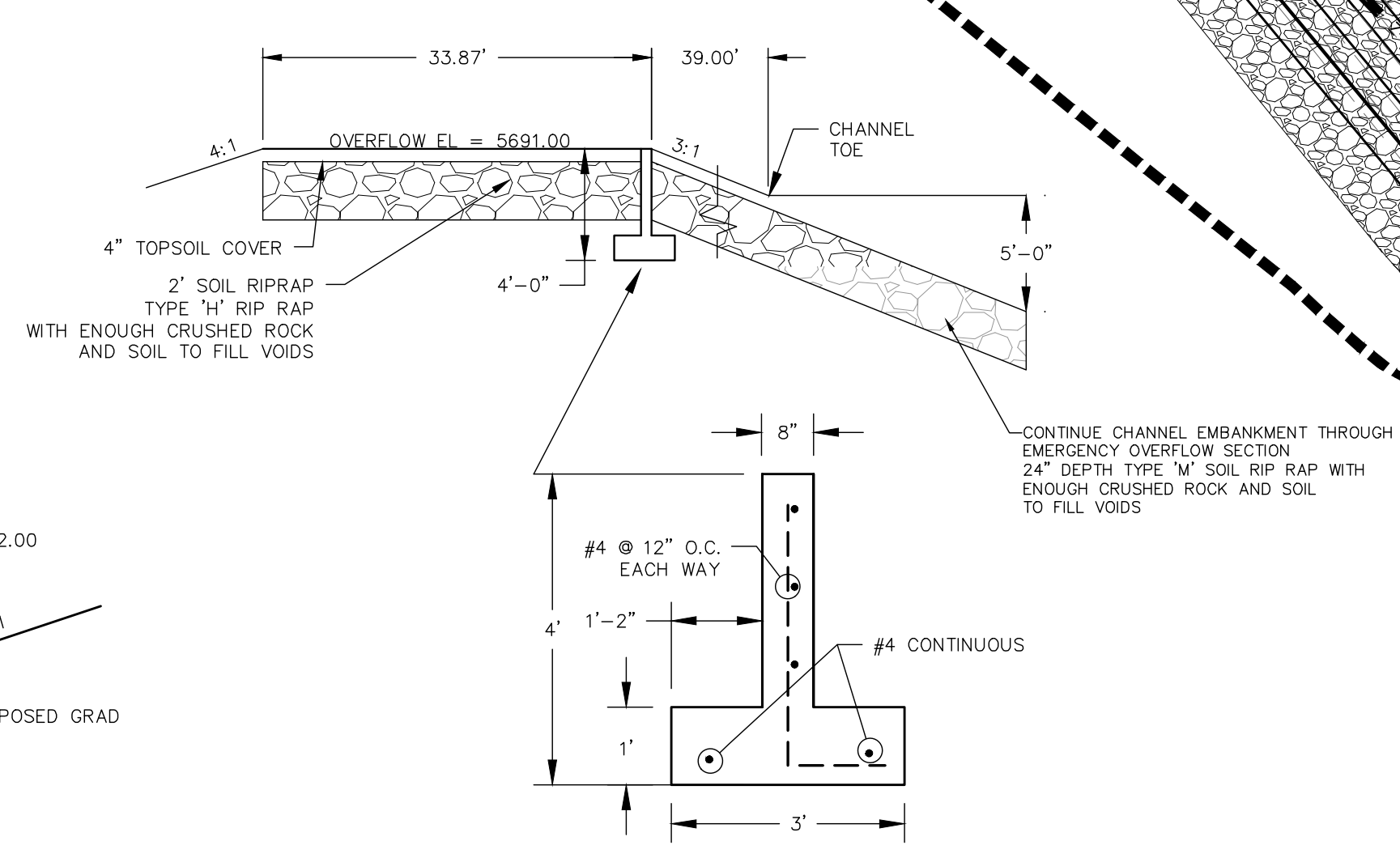
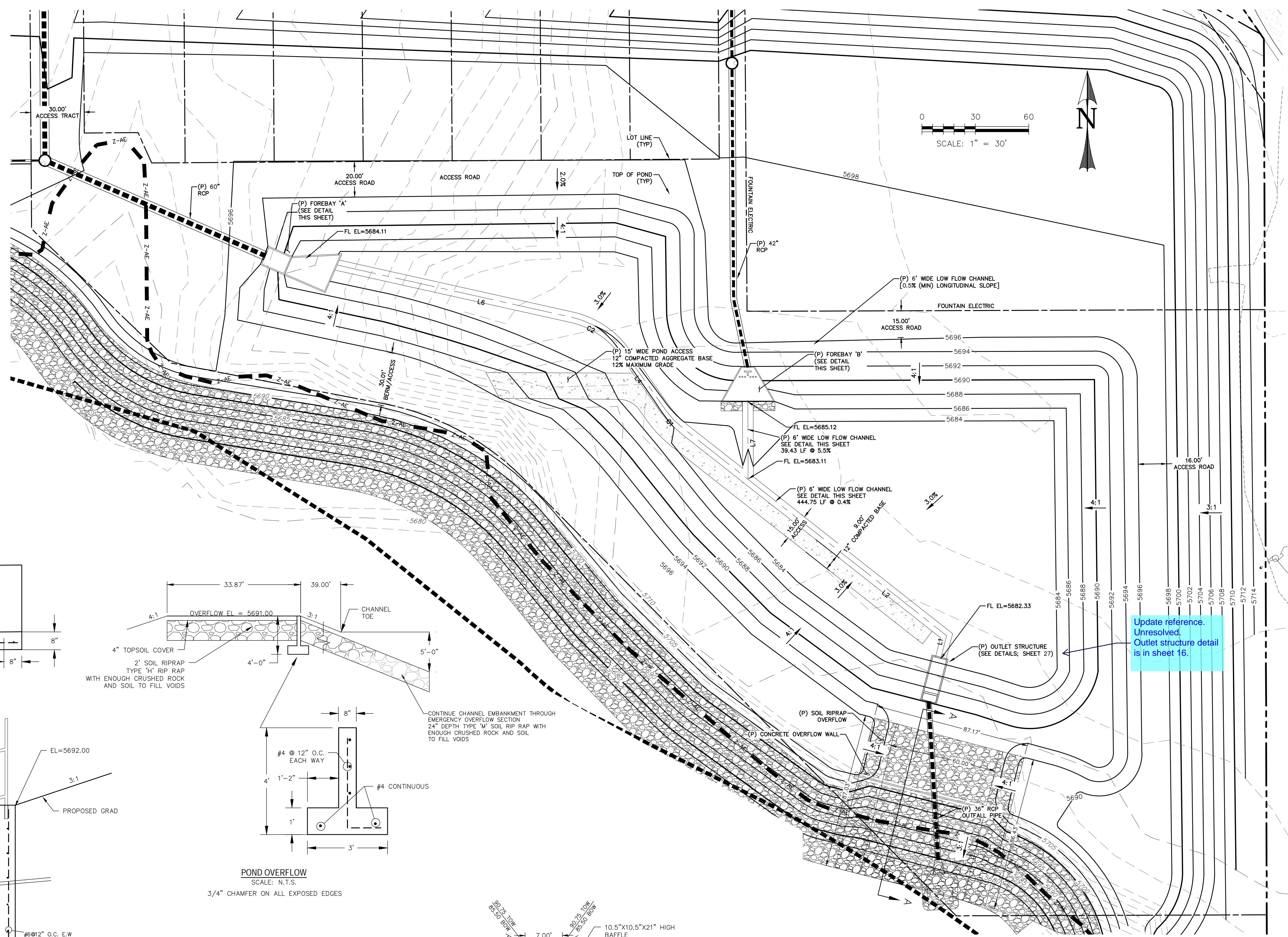
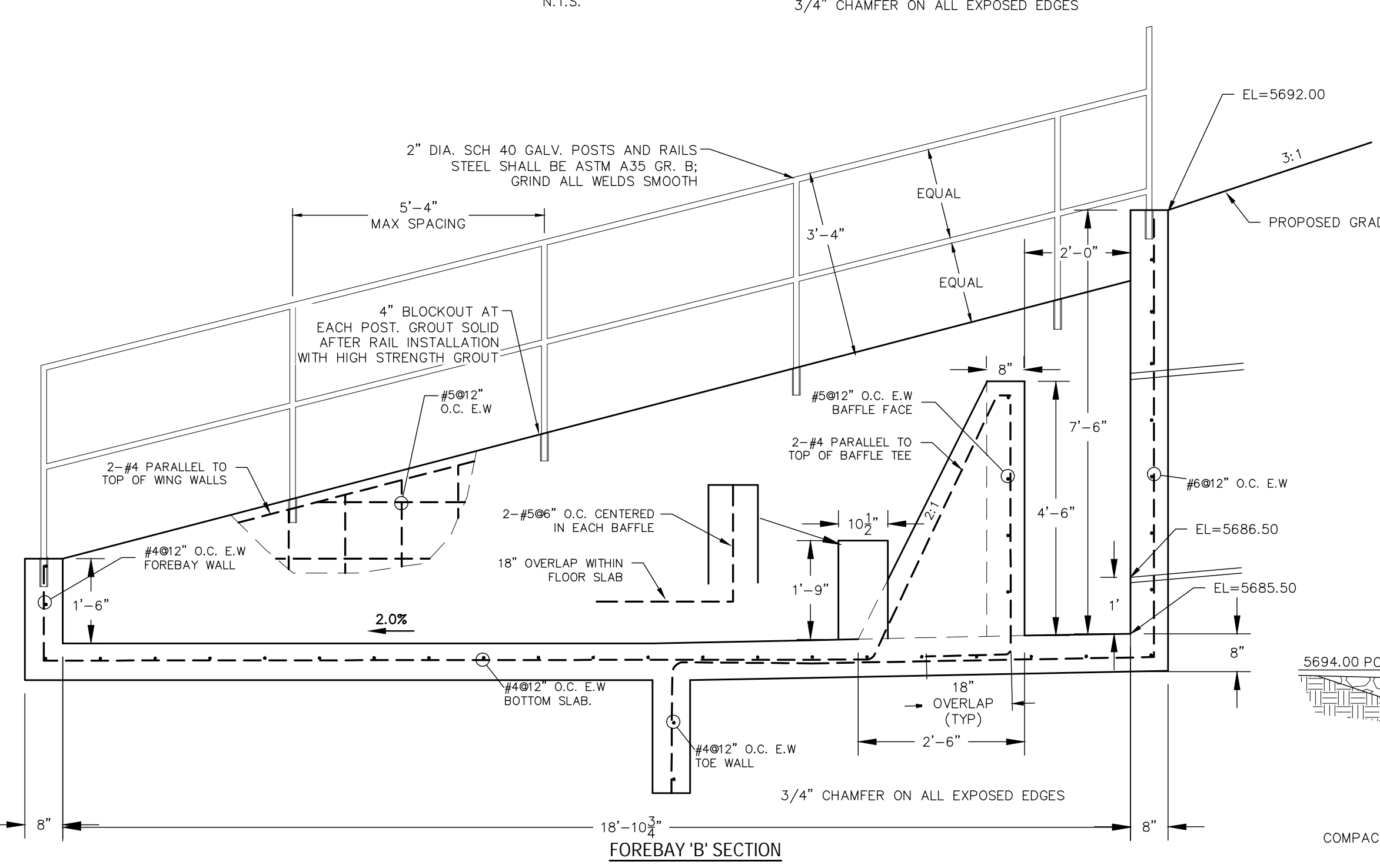
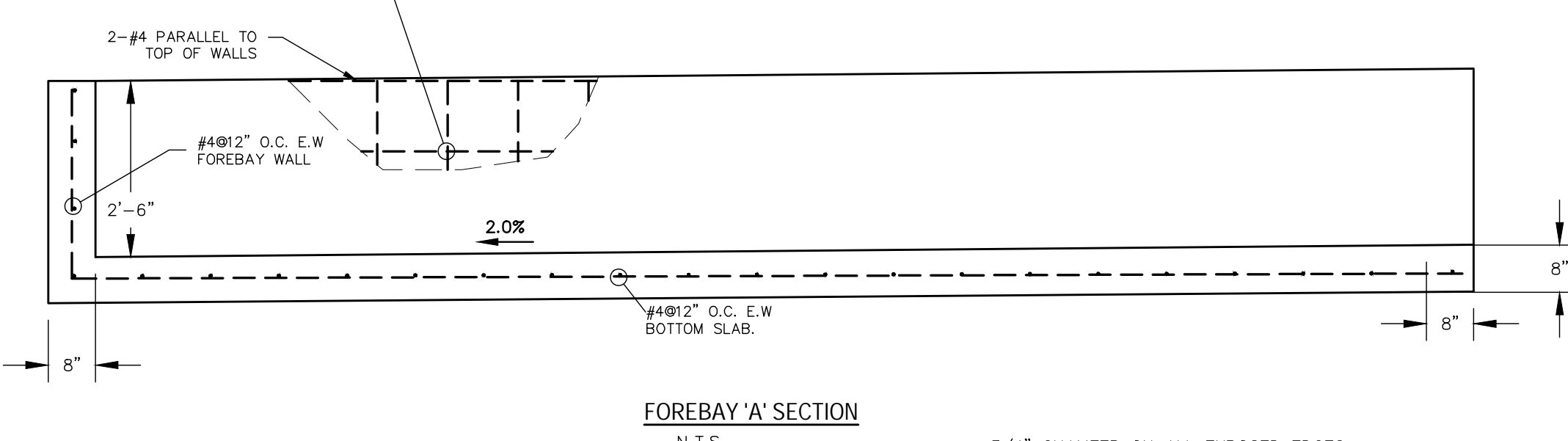
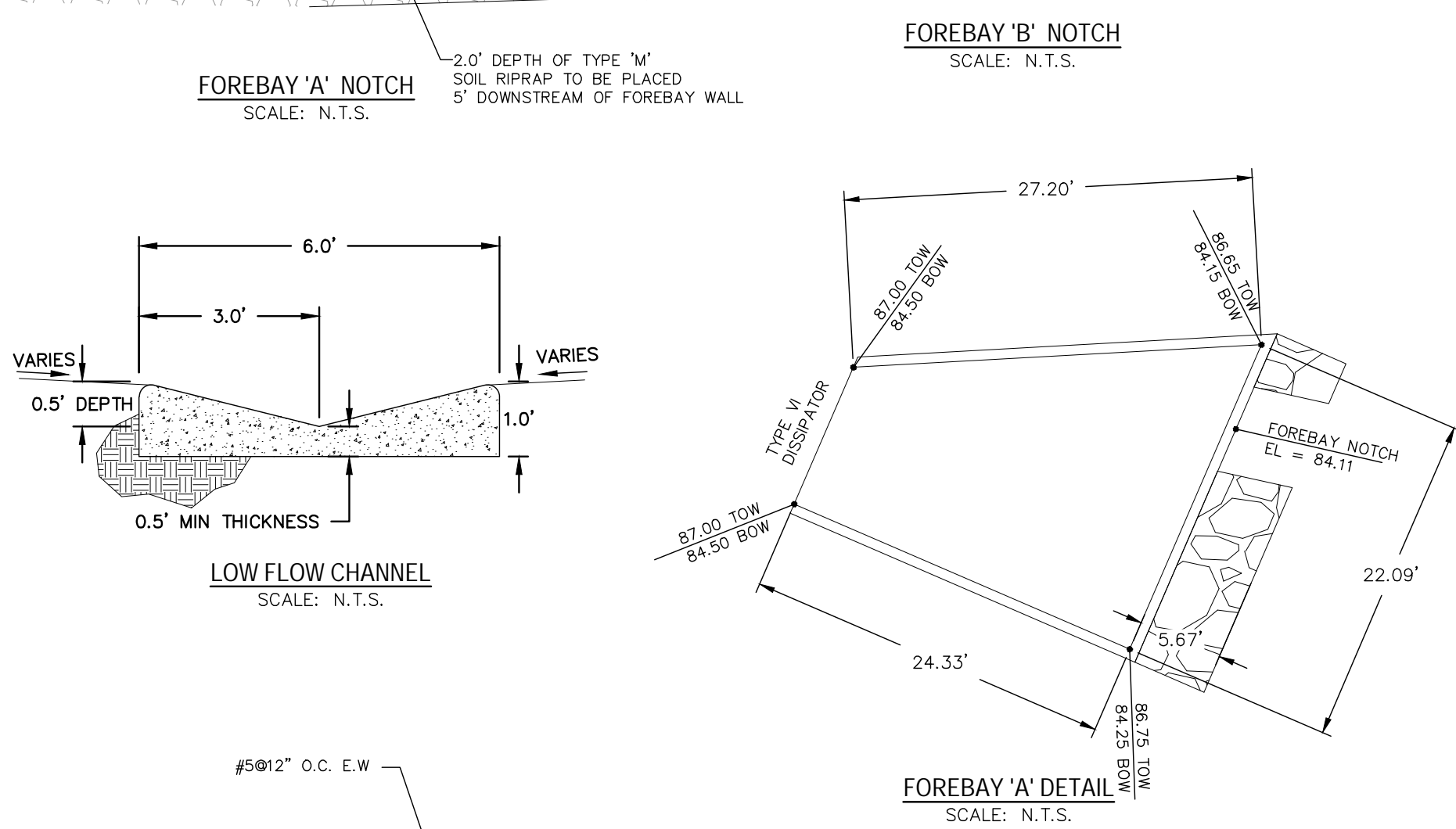
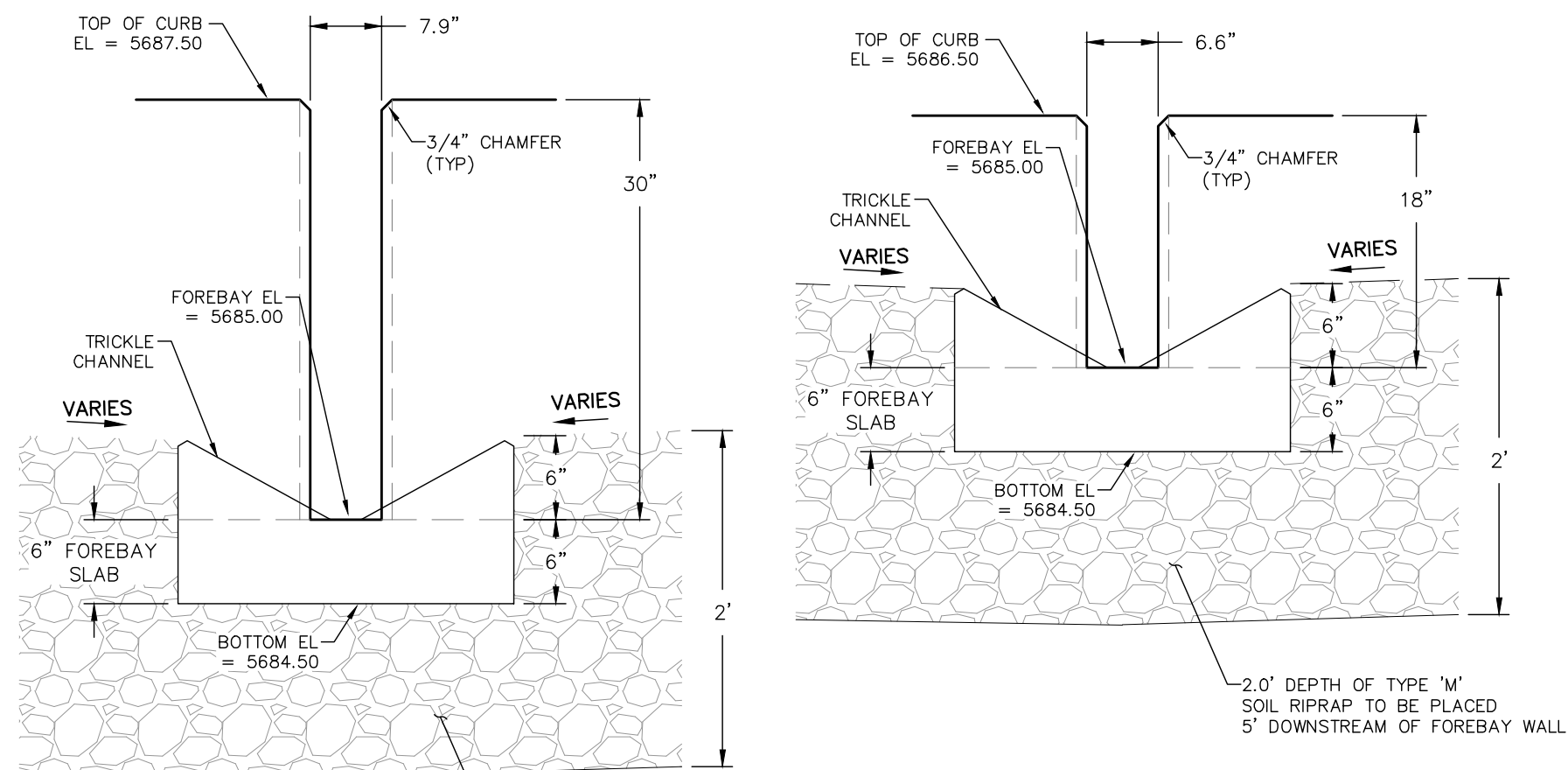
  
**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
WOODLAND PARK, CO 80866  
PO BOX 221  
(719) 426-2124

RIVERBEND CROSSING FILING NO. 1	
DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 03/30/21
JOB NUMBER 17-114	SHEET 12 OF 27









LINE TABLE		
LINE	BEARING	DISTANCE
L1	N14° 30' 05.17"E	13.21
L2	N51° 46' 58.47"W	188.49
L4	N35° 20' 23.20"W	39.21
L6	N77° 26' 49.20"W	152.73
L7	S0° 11' 17.58"E	39.43

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	16°26'35"	50.00	14.35
C2	42°06'26"	50.00	36.75

**WARNING**

THIS AREA IS A STORMWATER FACILITY AND IS SUBJECT TO PERIODIC FLOODING

**NOTES:**

- SIGN SHALL BE A MINIMUM OF 3 SF.
- SIGN SHALL BE FABRICATED OF DURABLE MATERIALS SUCH AS METAL OR PLASTIC.
- SIGN SHALL HAVE RED LETTERING ON A WHITE BACKGROUND.

**WARNING SIGN DETAIL**  
SCALE: N.T.S.

**LEGEND**

EXISTING  
PROPOSED  
CURB AND GUTTER  
BOUNDARY  
RIGHT-OF-WAY  
LOT LINE  
(E) CONTOUR, INDEX  
(P) CONTOUR, INDEX  
(P) CONTOUR  
(E) STORM SEWER  
(P) STORM SEWER

(E)  
(P)  
C&G

1" = 30'

03/30/21

17-114

14 OF 27

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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www.call811.com

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**AVATAR EQUITIES, LLC**  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
**DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER #40510**  
10/19/20  
DATE

**CATAMOUNT ENGINEERING**  
301 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80096  
(719) 626-2124

**RIVERBEND CROSSING**  
FILING NO. 1  
**EXTENDED DETENTION BASIN**



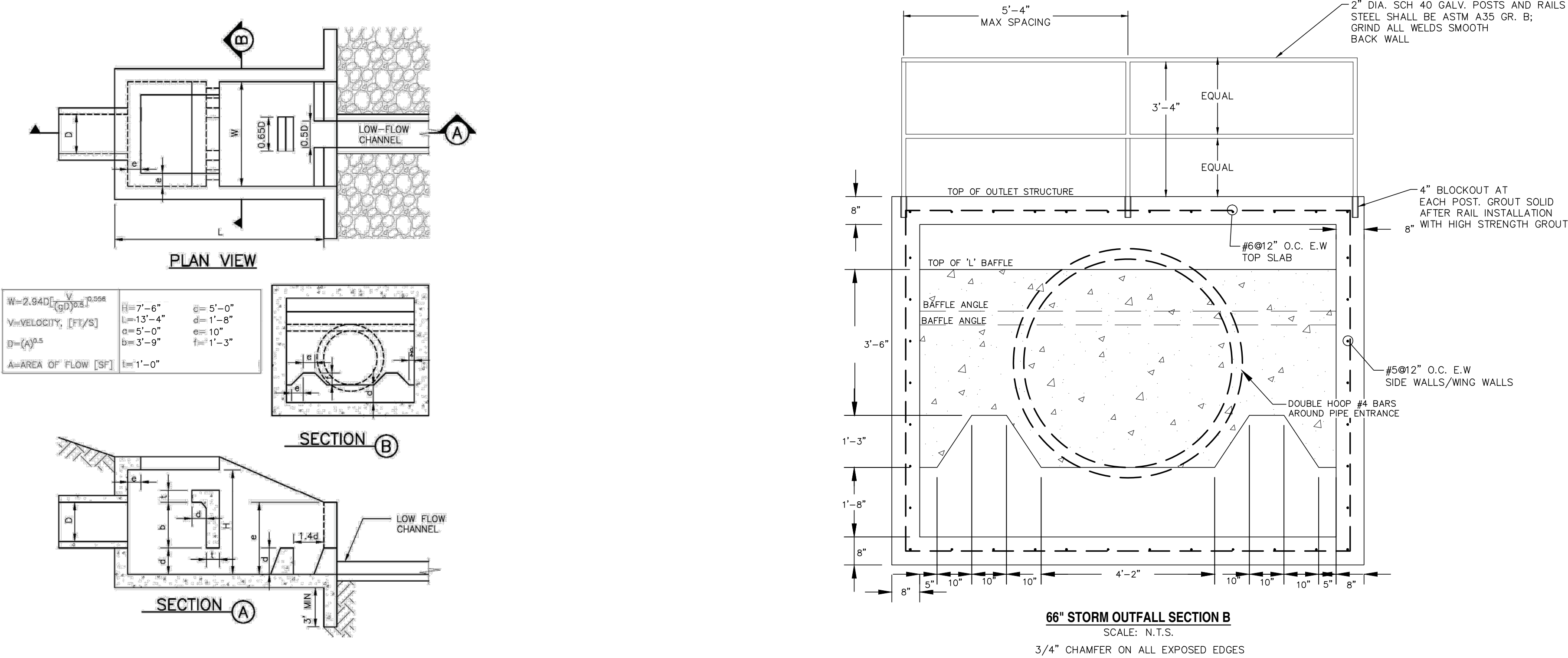
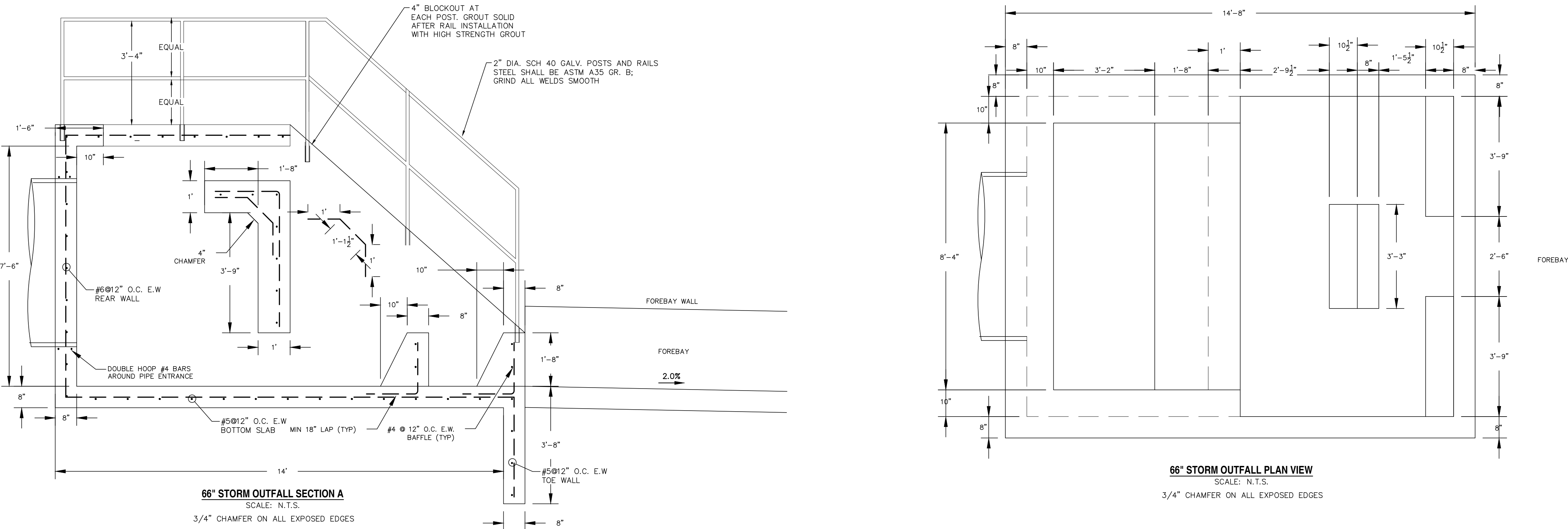


Figure 9-45. UDFCD modified USBR type VI impacts stilling basin (general design dimensions)



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
**DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER #40510**  
10/19/20  
DATE

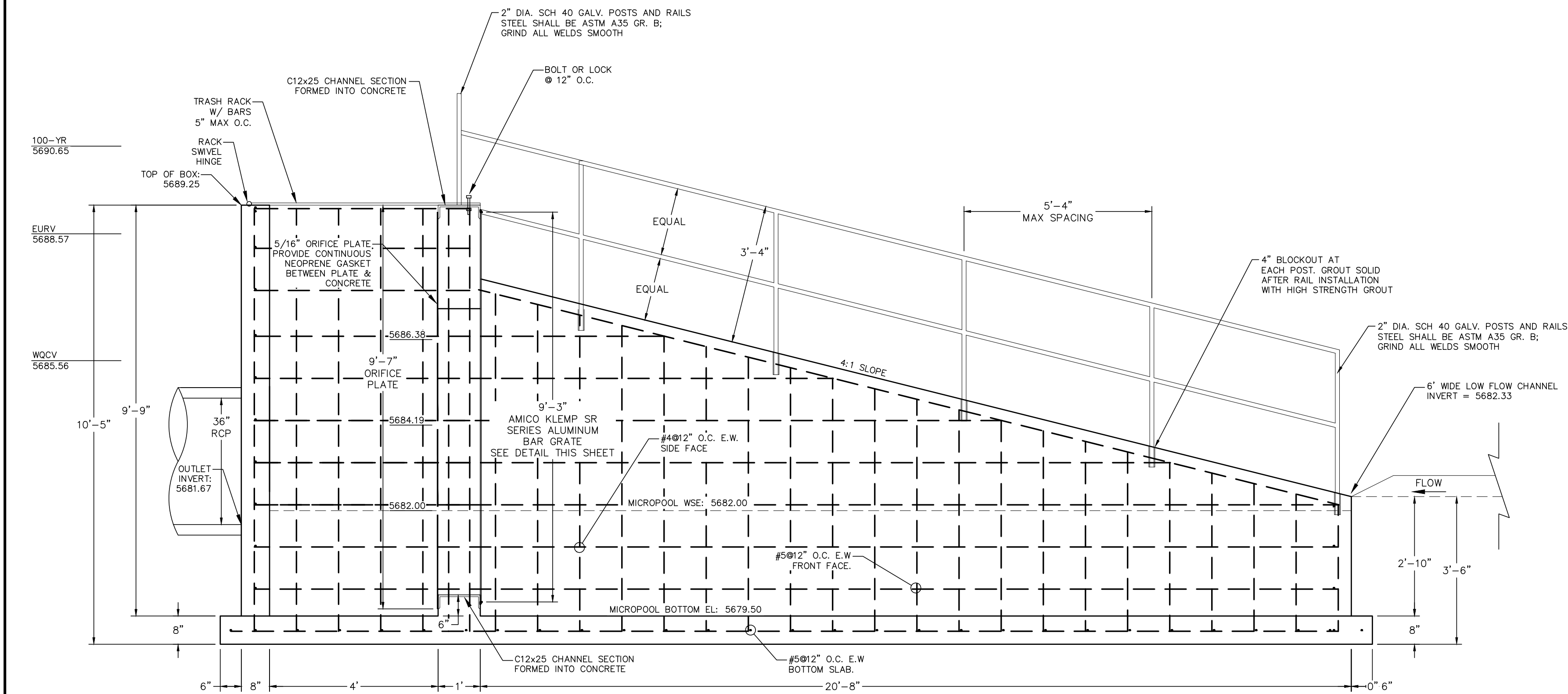
**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80866  
(719) 428-2124

**RIVERBEND CROSSING  
FILING NO. 1  
STORMWATER QUALITY  
FACILITY DETAILS**

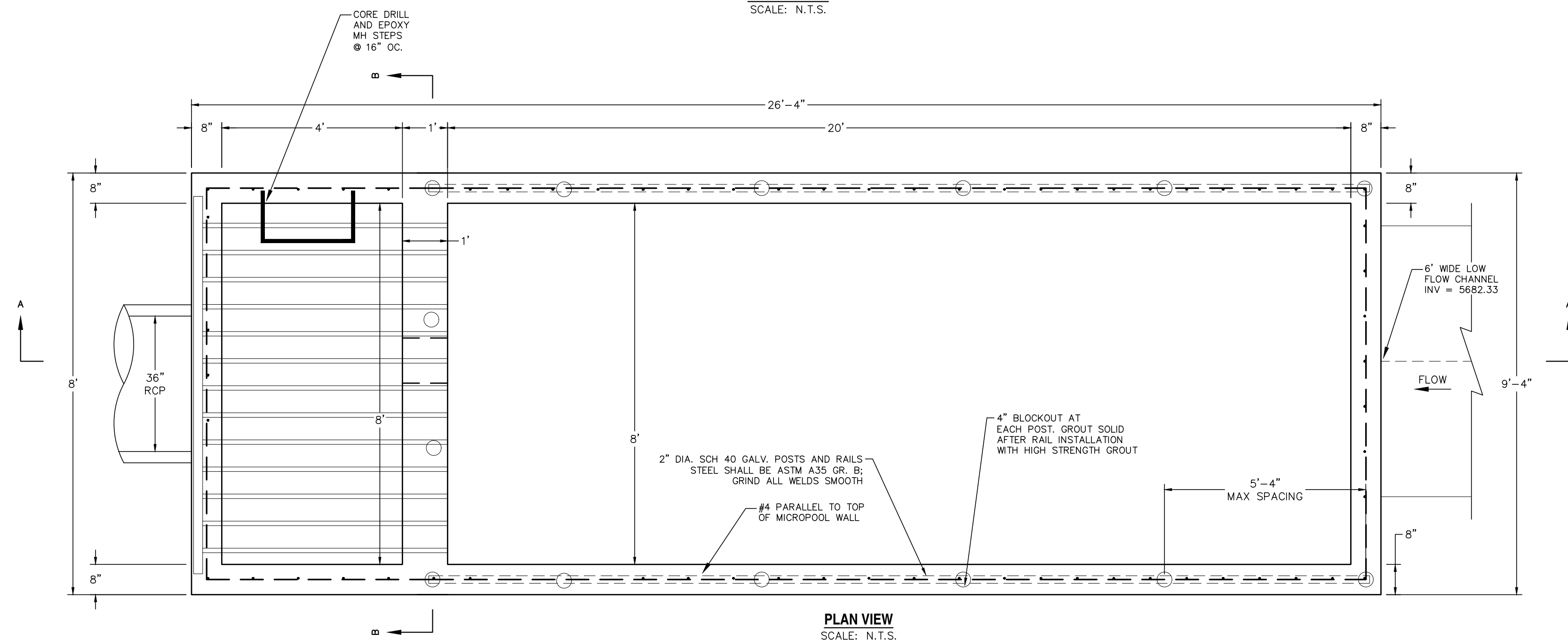
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SCALE: VARIES	DATE: 03/30/21
JOB NUMBER: 17-114	SHEET: 15 OF 27



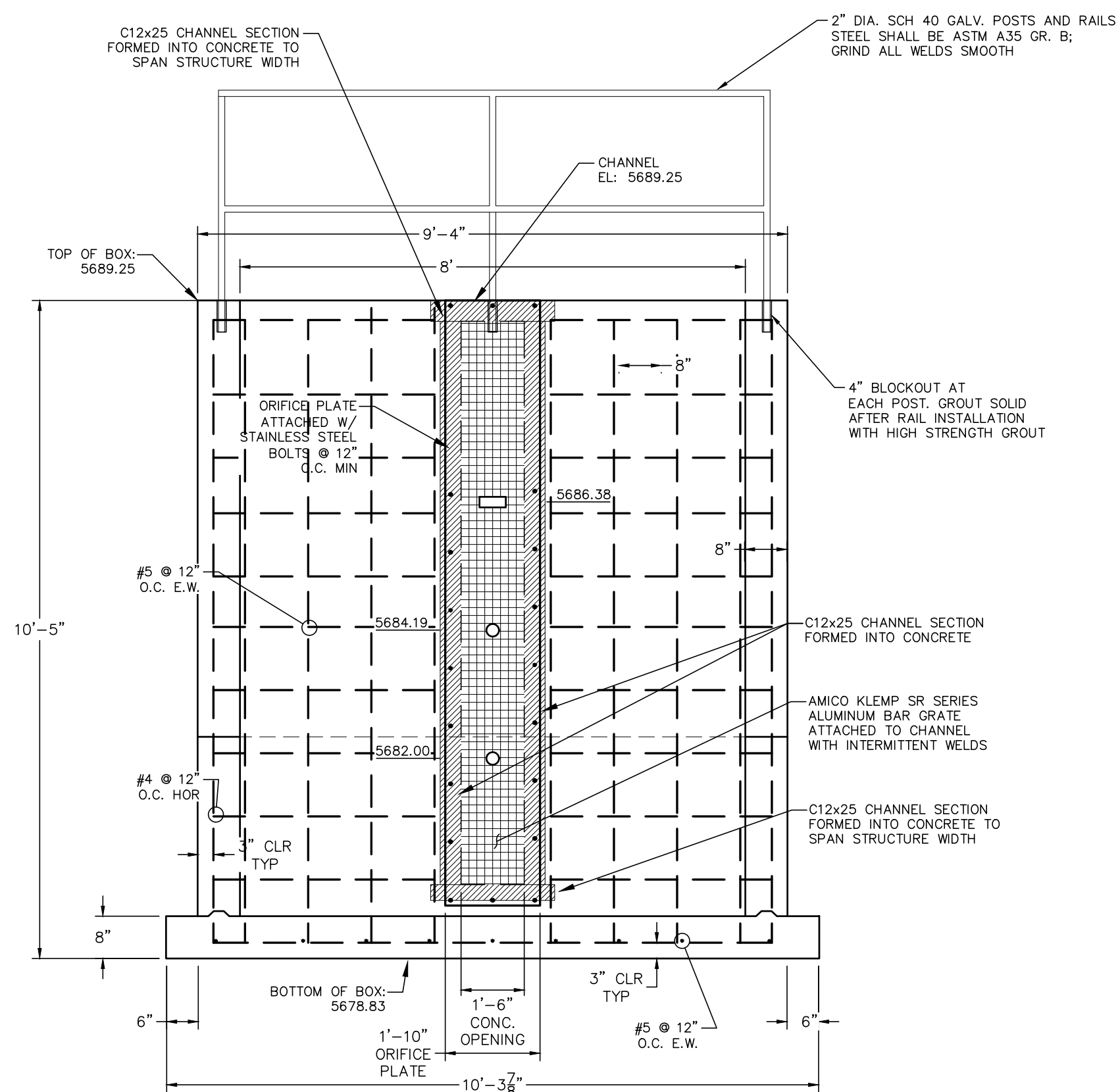
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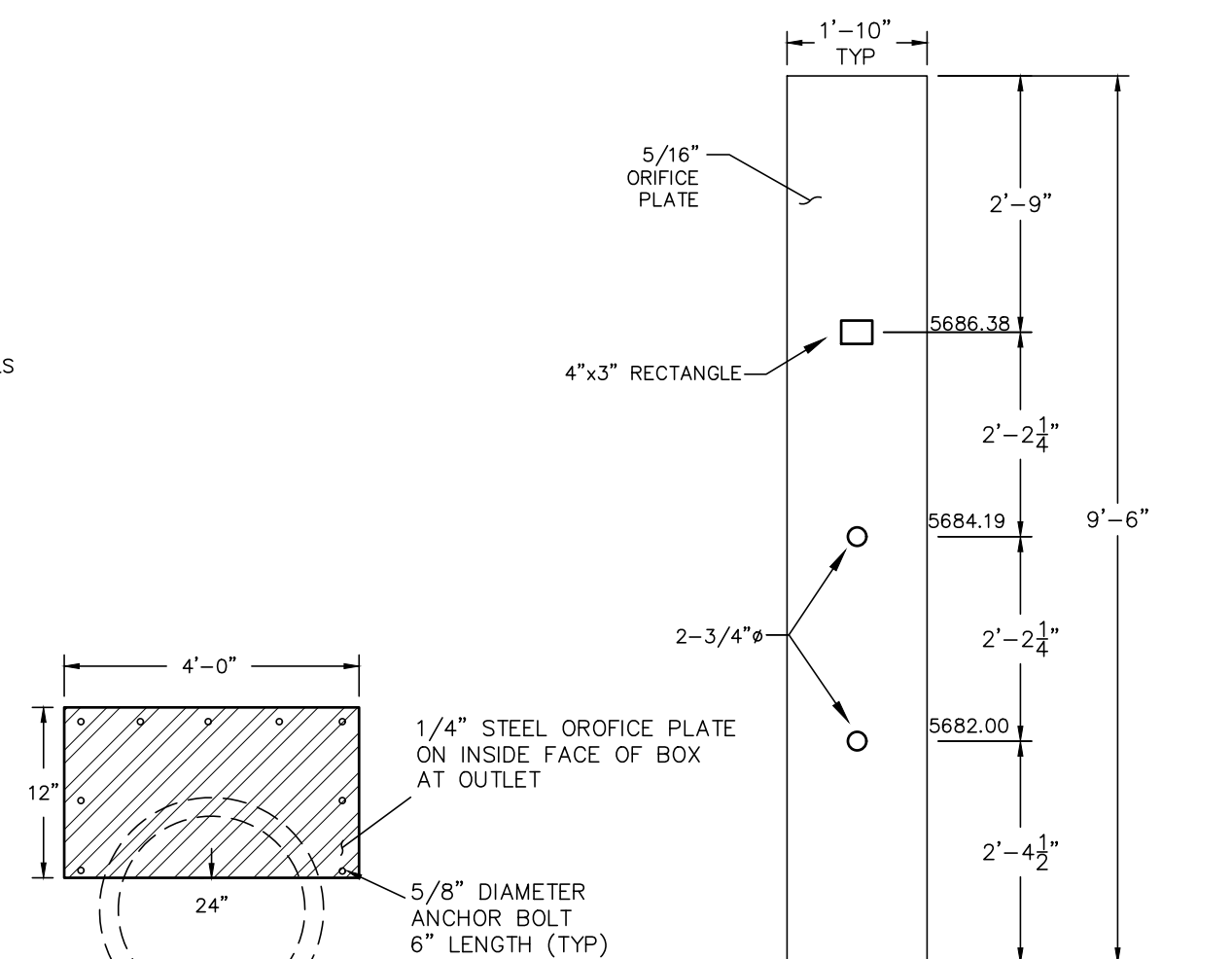
SECTION A-A  
SCALE: N.T.S.



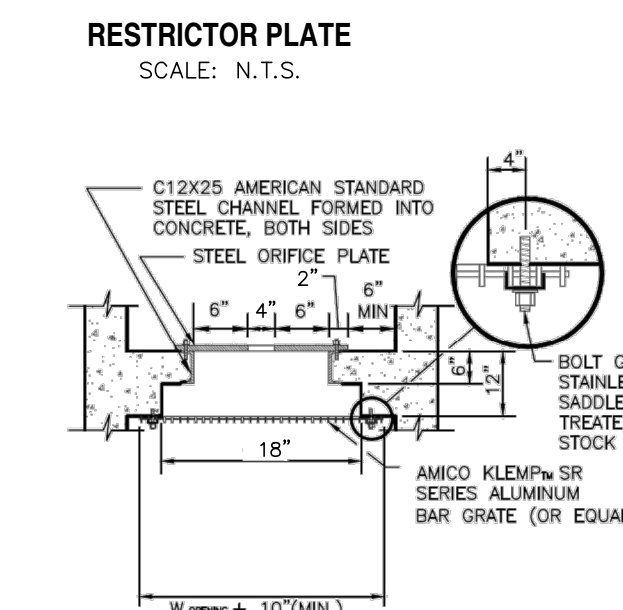
PLAN VIEW  
SCALE: N.T.S.



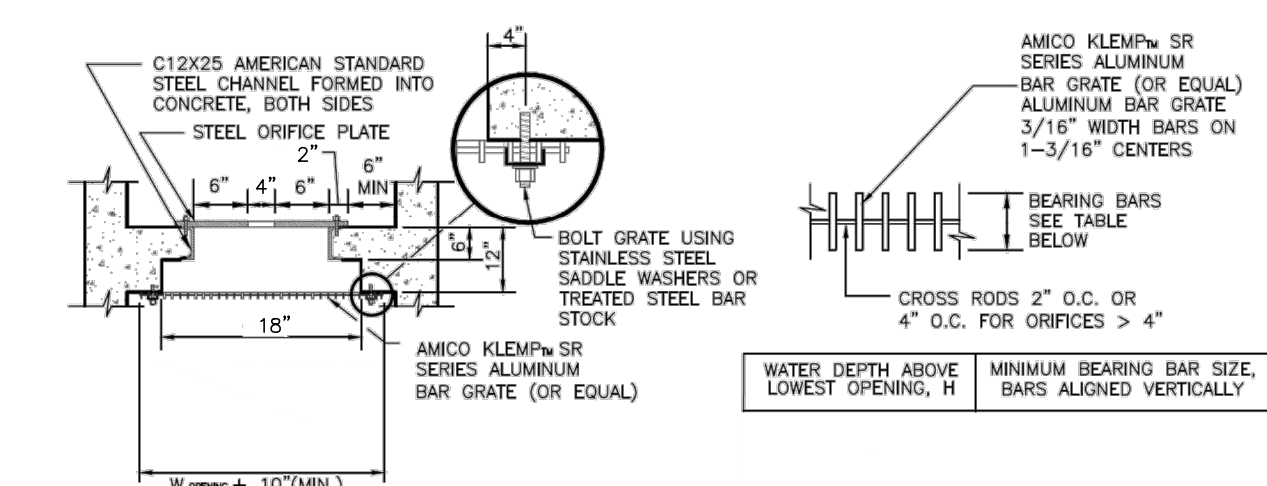
SECTION B-B  
SCALE: N.T.S.



ORIFICE PLATE  
SCALE: N.T.S.



RESTRICTOR PLATE  
SCALE: N.T.S.



CONCRETE OPENING DETAIL  
SCALE: N.T.S.

6.0 FT.	2'-1/4" x 3/16"
R VALUE-(NET OPEN AREA)/GROSS RACK AREA	
=0.71 FOR CROSS RODS ON 2' CENTERS	
=0.77 FOR CROSS RODS ON 4' CENTERS	

TRASH RACK DETAIL  
SCALE: N.T.S.

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20



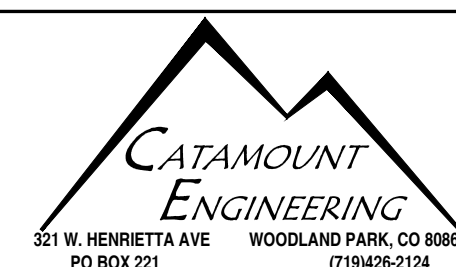
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AVATAR EQUITIES, LLC

6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.

DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER #40510

10/19/20  
DATE



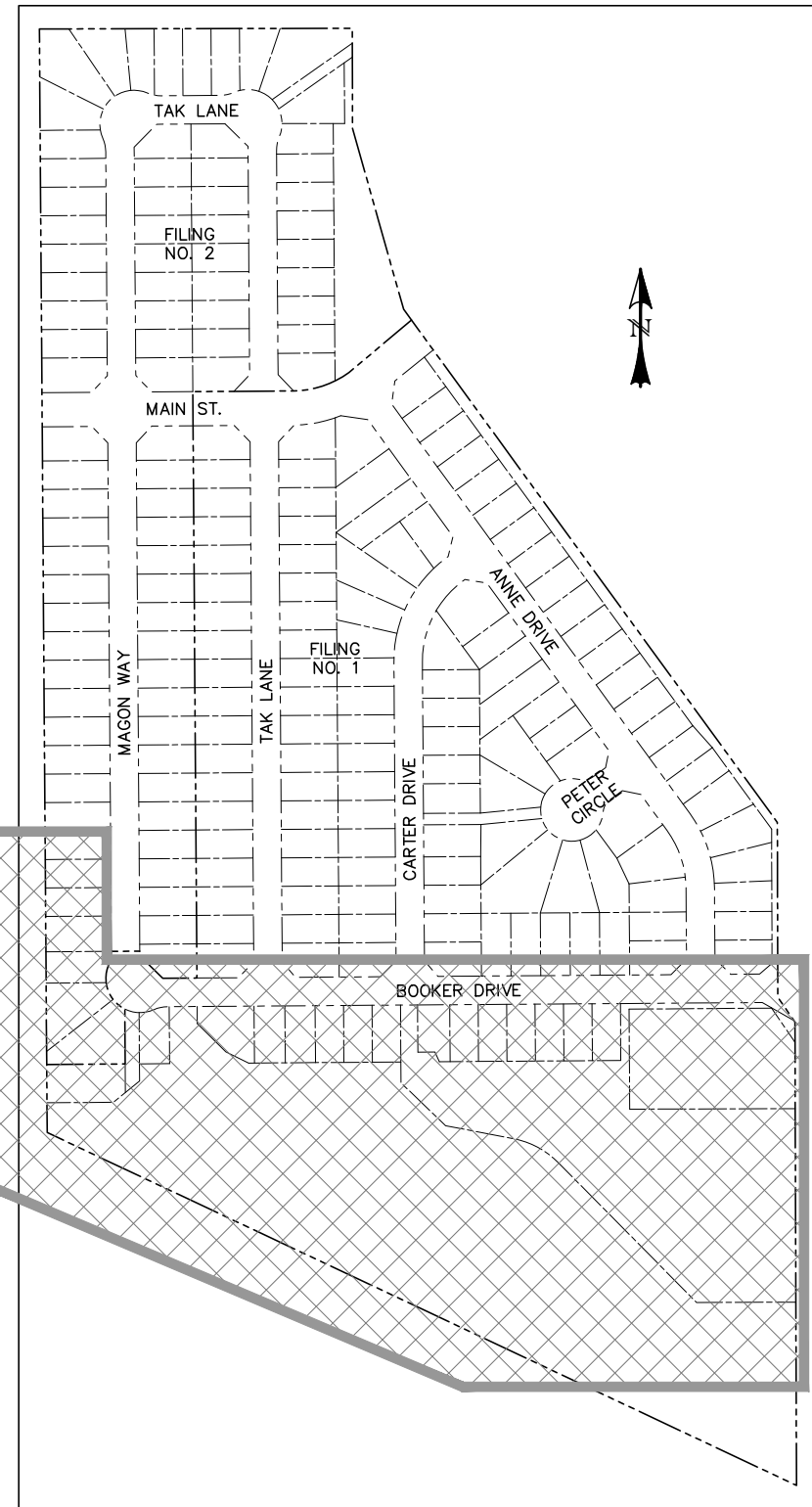
RIVERBEND CROSSING  
FILING NO. 1  
STORMWATER QUALITY  
FACILITY DETAILS

DESIGNED BY:	DLM	DRAWN BY:	DLM
SCALE:	VARIABLE	DATE:	03/30/21
JOB NUMBER	17-114	SHEET	16 OF 27









LOCATION MAP  
SCALE: N.T.S.

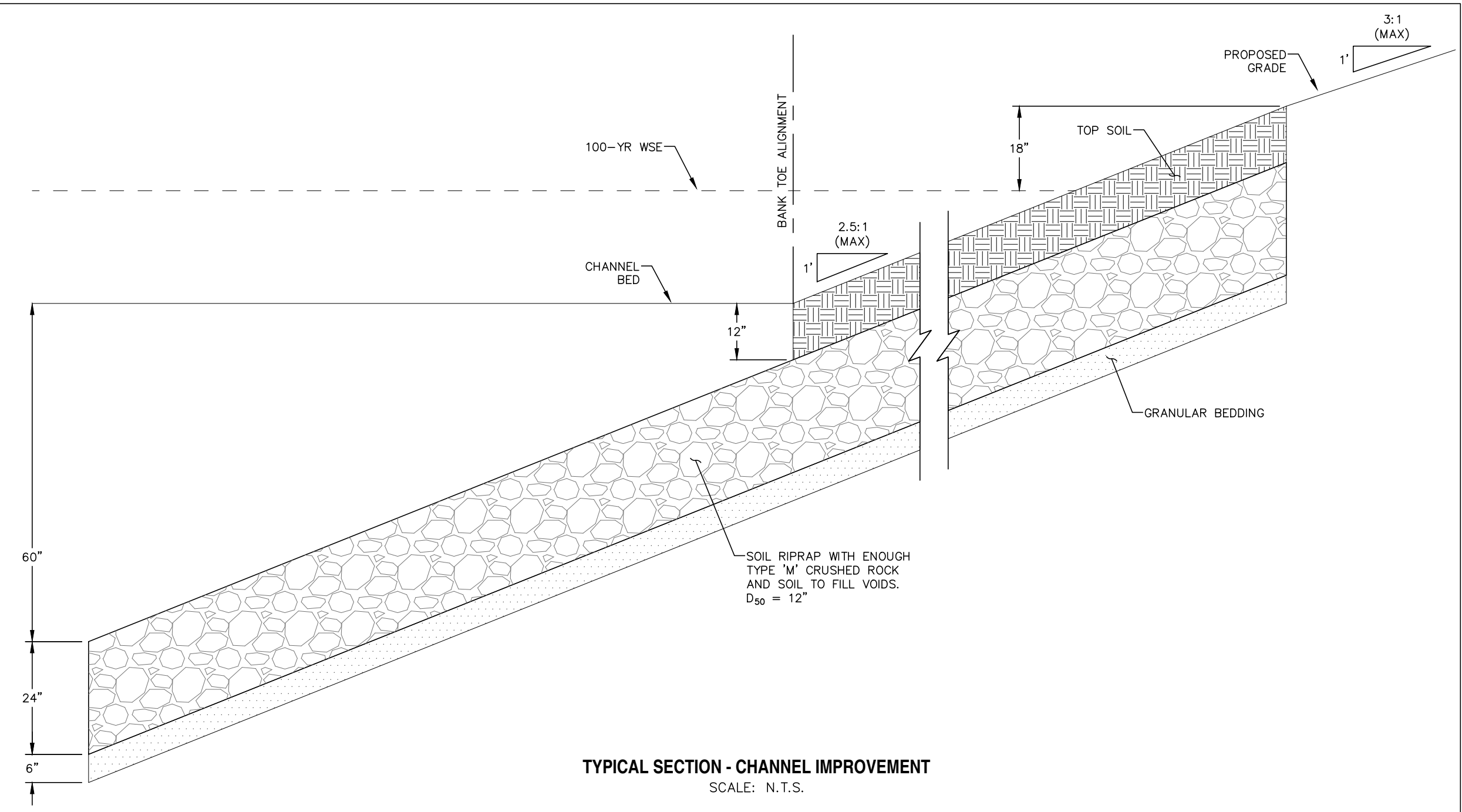
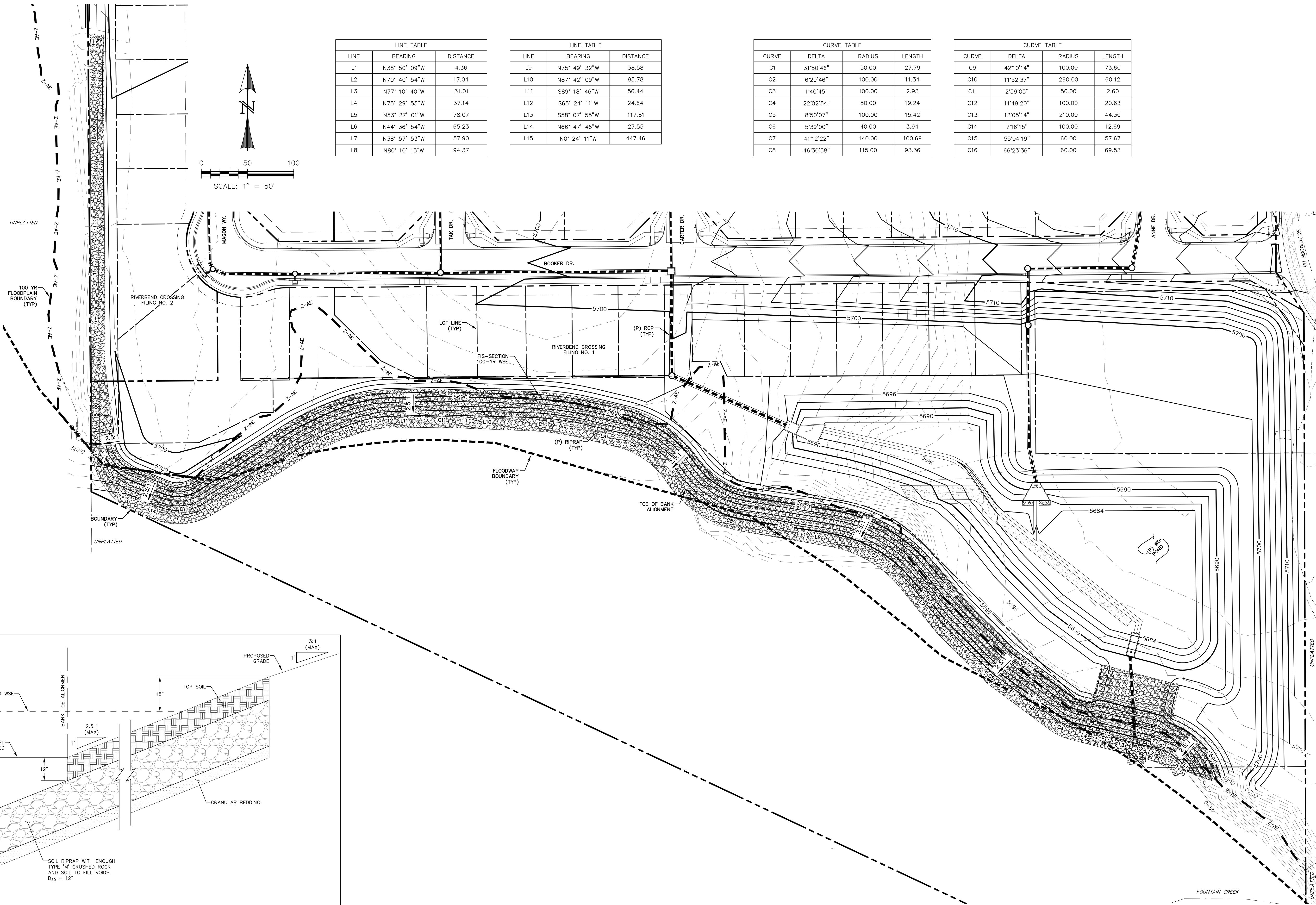
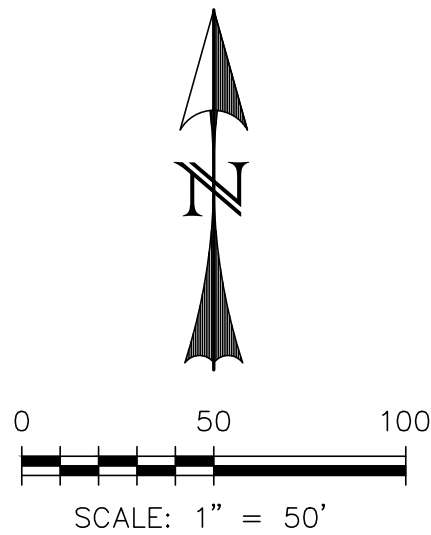
- LEGEND**
- EXISTING
  - PROPOSED
  - CURB & GUTTER
  - EASEMENT
  - BOUNDARY
  - RIGHT-OF-WAY
  - LOT LINE
  - EASEMENT
  - (E) CONTOUR, INDEX
  - (E) CONTOUR
  - (E) STORM SEWER
  - (P) CONTOUR, INDEX
  - (P) CONTOUR
  - (P) STORM SEWER, INLET, MH
  - GRADE CALL-OUT
- (E)  
(P)  
C&G  
ESMT
- 5700  
5700
- X.XX%

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N38° 50' 09"W	4.36
L2	N70° 40' 54"W	17.04
L3	N77° 10' 40"W	31.01
L4	N75° 29' 55"W	37.14
L5	N53° 27' 01"W	78.07
L6	N44° 36' 54"W	65.23
L7	N38° 57' 53"W	57.90
L8	N80° 10' 15"W	94.37

LINE TABLE		
LINE	BEARING	DISTANCE
L9	N75° 49' 32"W	38.58
L10	N87° 42' 09"W	95.78
L11	S89° 18' 46"W	56.44
L12	S65° 24' 11"W	24.64
L13	S58° 07' 55"W	117.81
L14	N66° 47' 46"W	27.55
L15	N0° 24' 11"W	447.46

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	31°50'46"	50.00	27.79
C2	6°29'46"	100.00	11.34
C3	1°40'45"	100.00	2.93
C4	22°02'54"	50.00	19.24
C5	8°50'07"	100.00	15.42
C6	5°39'00"	40.00	3.94
C7	41°12'22"	140.00	100.69
C8	46°30'58"	115.00	93.36

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C9	42°10'14"	100.00	73.60
C10	11°52'37"	290.00	60.12
C11	2°59'05"	50.00	2.60
C12	11°49'20"	100.00	20.63
C13	12°05'14"	210.00	44.30
C14	7°16'15"	100.00	12.69
C15	55°04'19"	60.00	57.67
C16	66°23'36"	60.00	69.53



TYPICAL SECTION - CHANNEL IMPROVEMENT  
SCALE: N.T.S.

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20



PREPARED FOR:  
AVATAR EQUITIES, LLC  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER  
40510  
10/19/20  
DATE



RIVERBEND CROSSING  
FILING NO. 1  
FOUNTAIN CREEK  
CHANNEL IMPROVEMENTS

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 03/30/21
JOB NUMBER	SHEET
17-114	18 OF 27



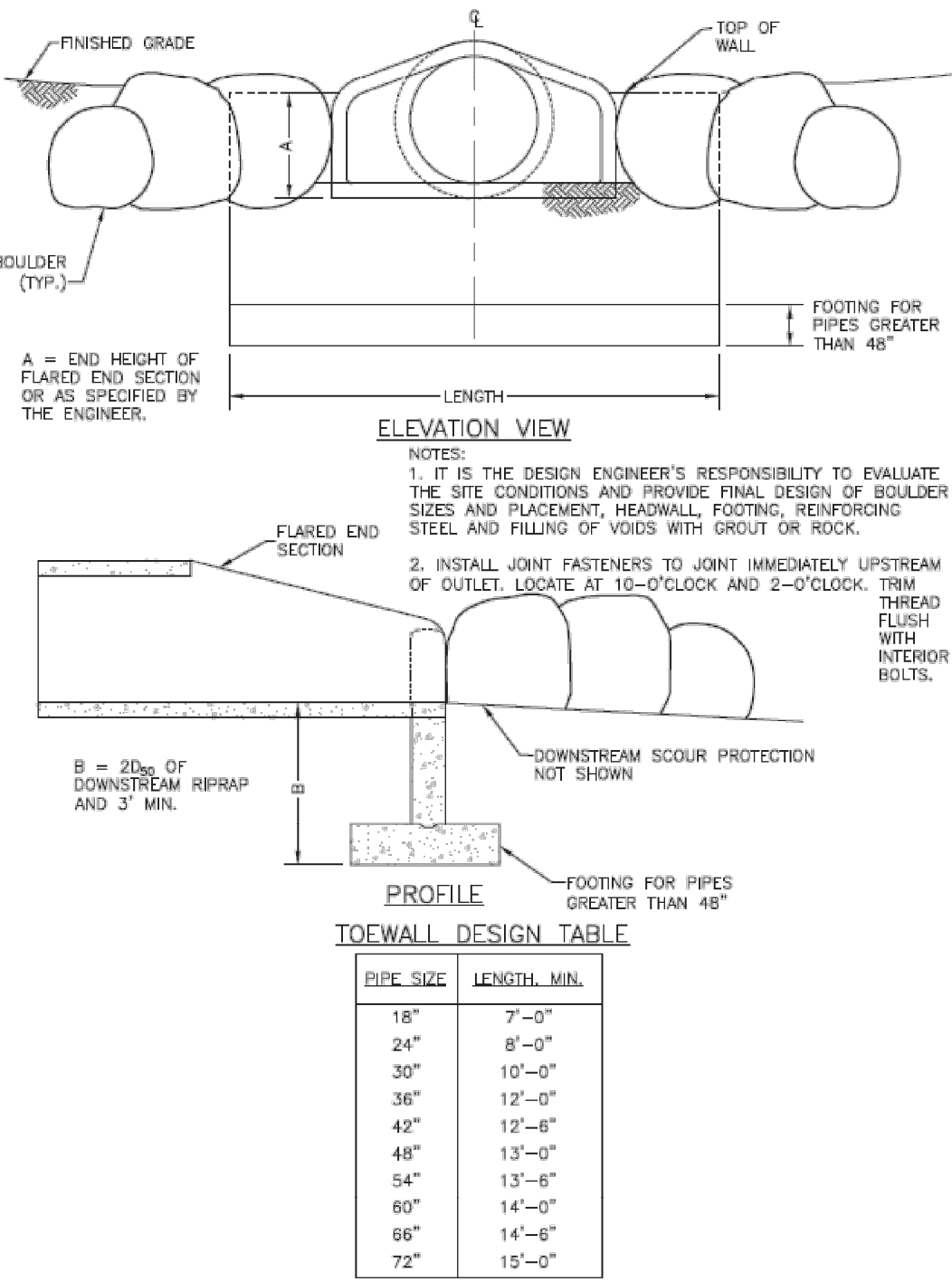


Figure 9-30. Flared end section (FES) headwall concept

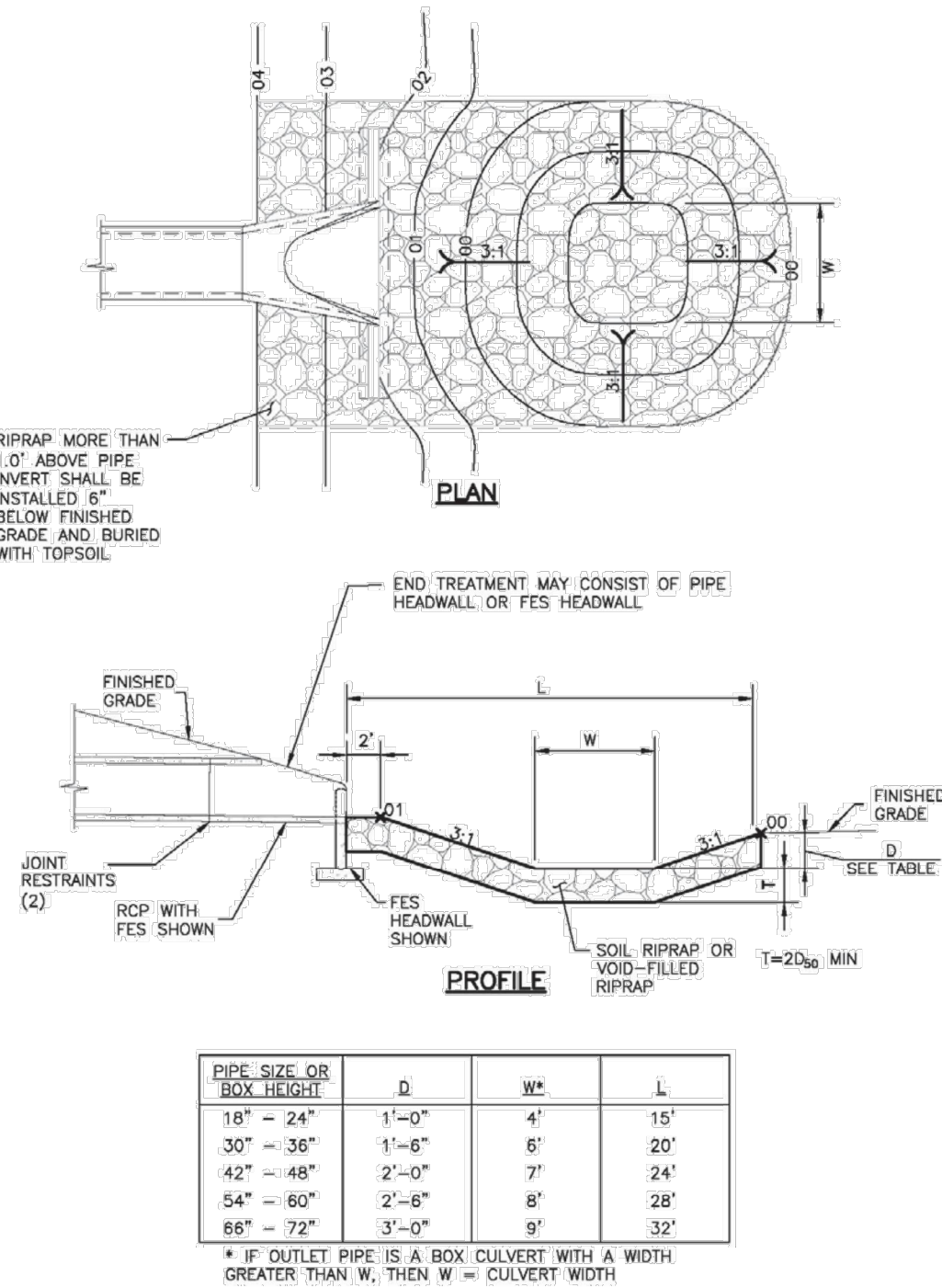
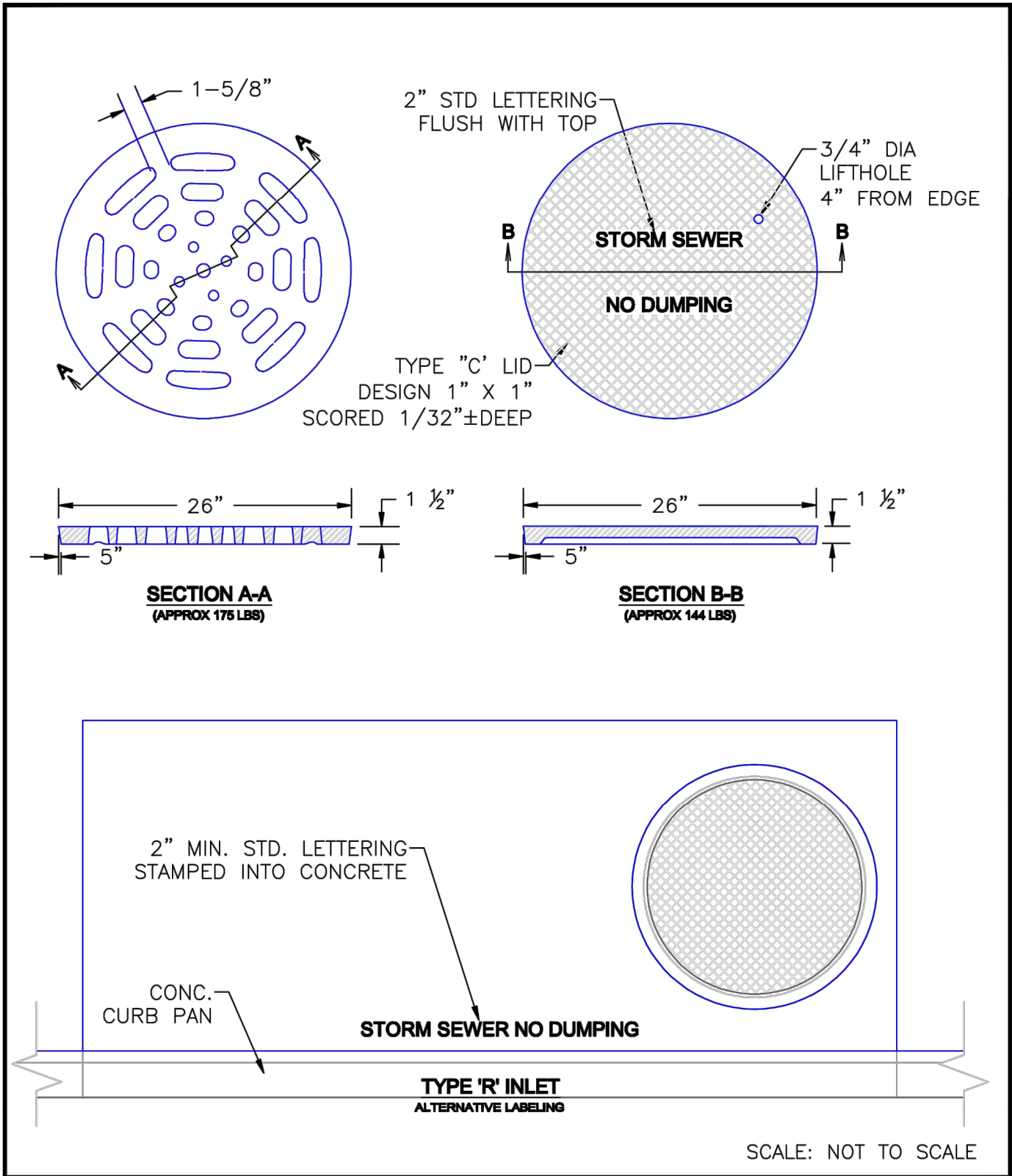


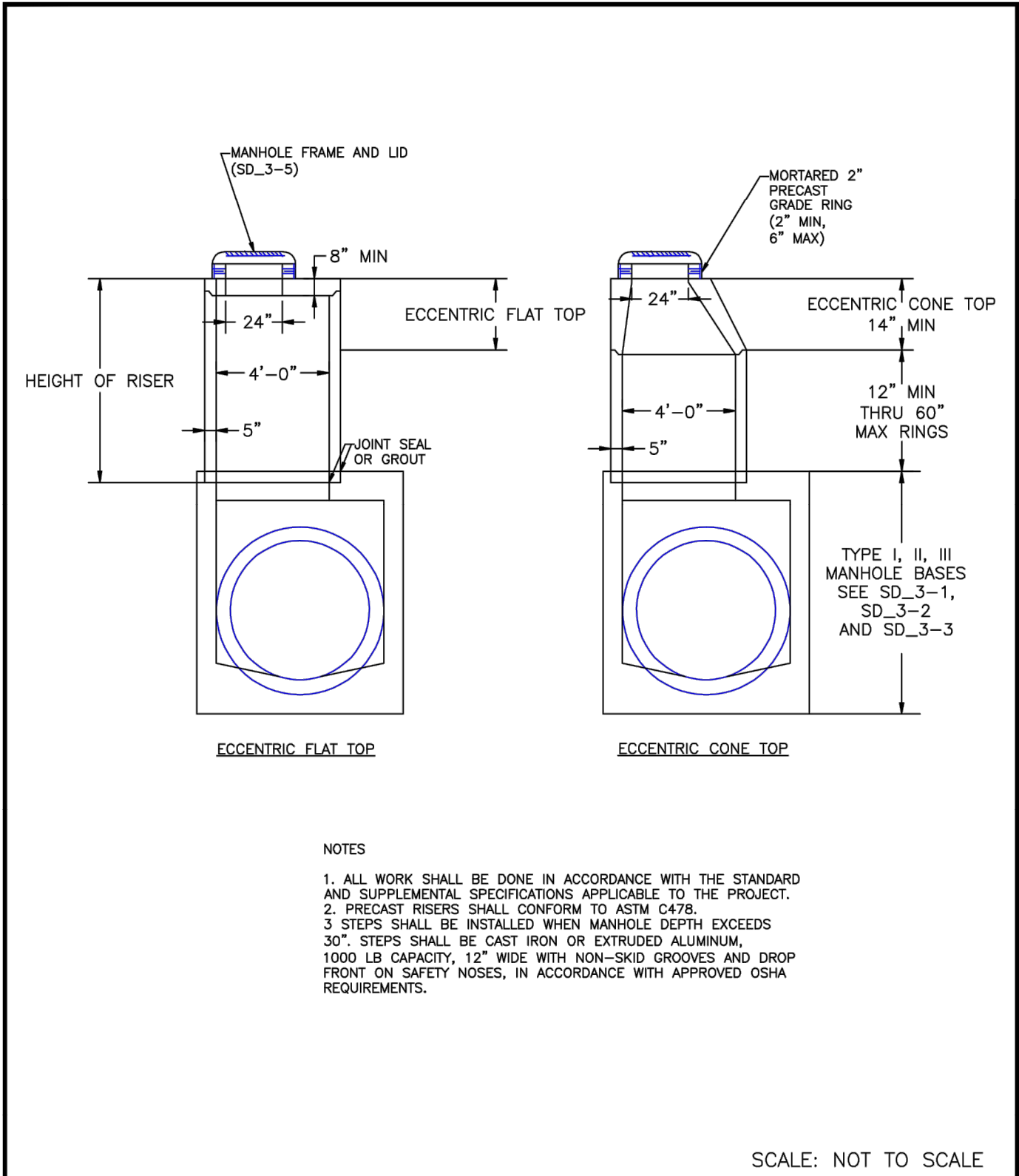
Figure 9-37. Low tailwater riprap basin



9/16/10  
DATE APPROVED: André P. Brackin  
DEPARTMENT OF TRANSPORTATION

Storm Sewer Manhole Details  
Standard Drawing  
REVISION DATE: 9/16/10  
FILE NAME: SD\_3-5

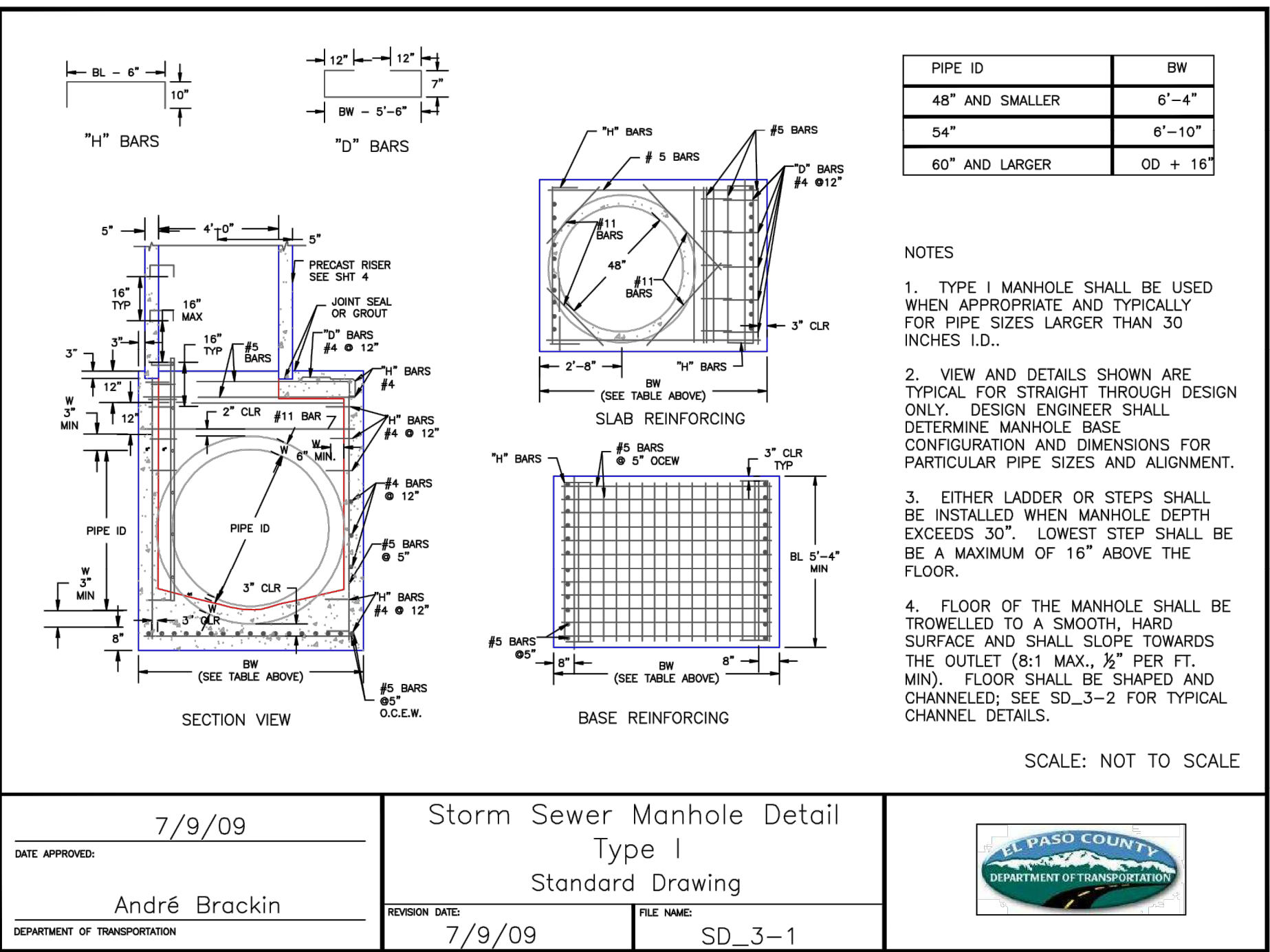
EL PASO COUNTY  
DEPARTMENT OF TRANSPORTATION



8/11/11  
DATE APPROVED: André P. Brackin  
DEPARTMENT OF TRANSPORTATION

Storm Sewer Manhole Riser and Cover Detail  
Standard Drawing  
REVISION DATE: 11/23/04  
FILE NAME: SD\_3-7

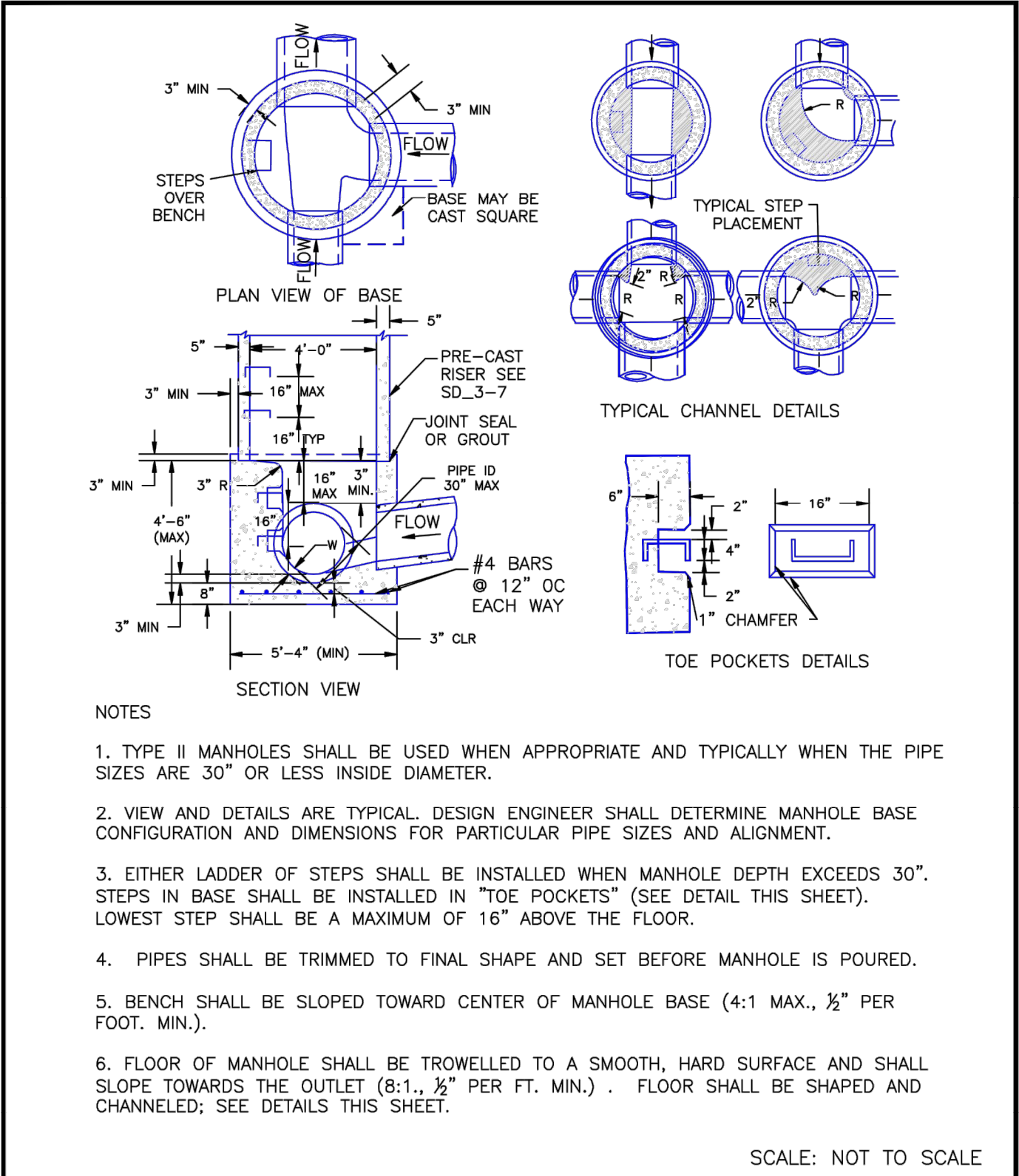
EL PASO COUNTY  
DEPARTMENT OF TRANSPORTATION



7/9/09  
DATE APPROVED: André Brackin  
DEPARTMENT OF TRANSPORTATION

Storm Sewer Manhole Detail  
Type I  
Standard Drawing  
REVISION DATE: 7/9/09  
FILE NAME: SD\_3-1

EL PASO COUNTY  
DEPARTMENT OF TRANSPORTATION



Storm Sewer Manhole Detail  
Type II  
Standard Drawing  
REVISION DATE: 11/10/04  
FILE NAME: SD\_3-2

EL PASO COUNTY  
DEPARTMENT OF TRANSPORTATION

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

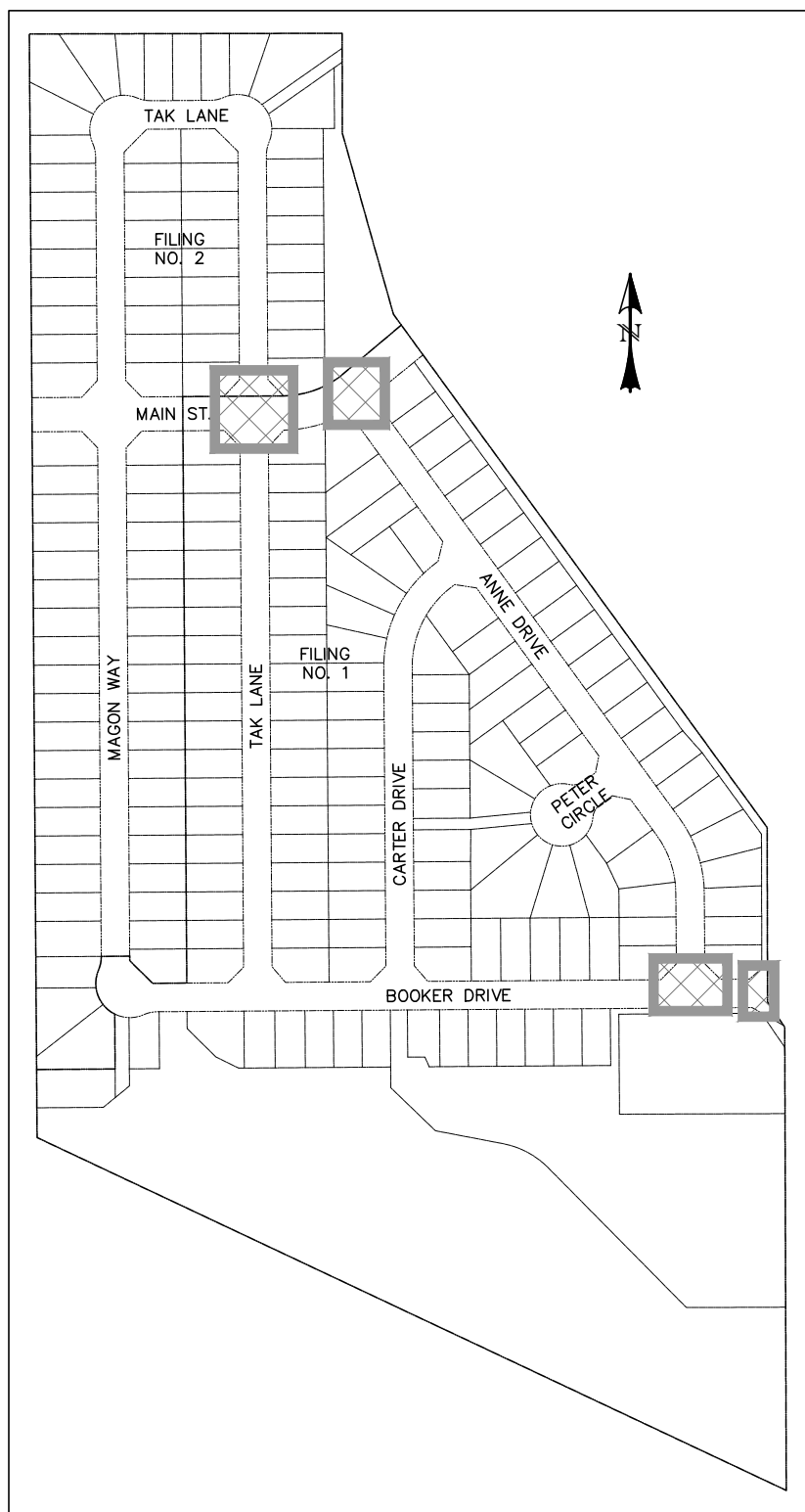
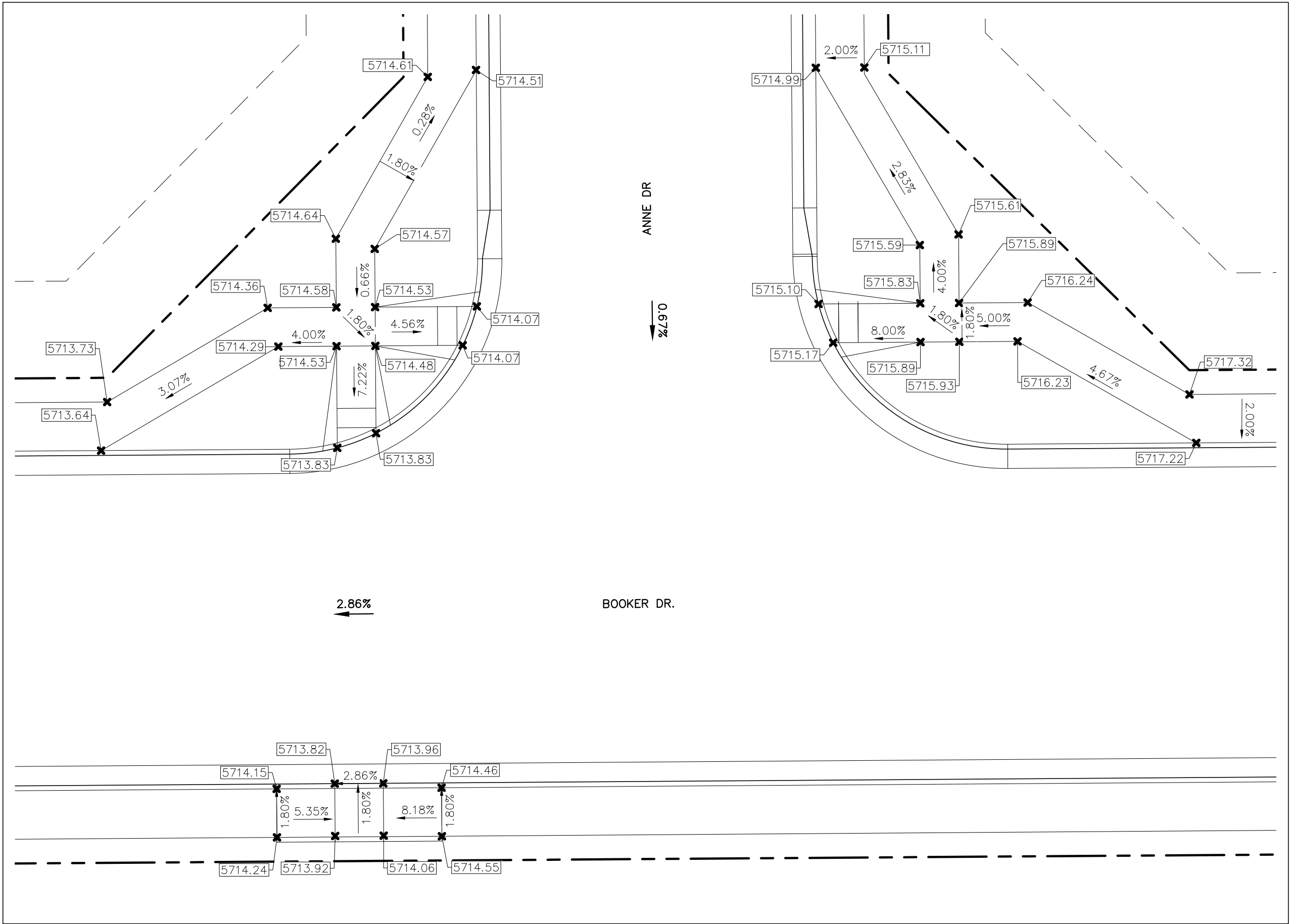
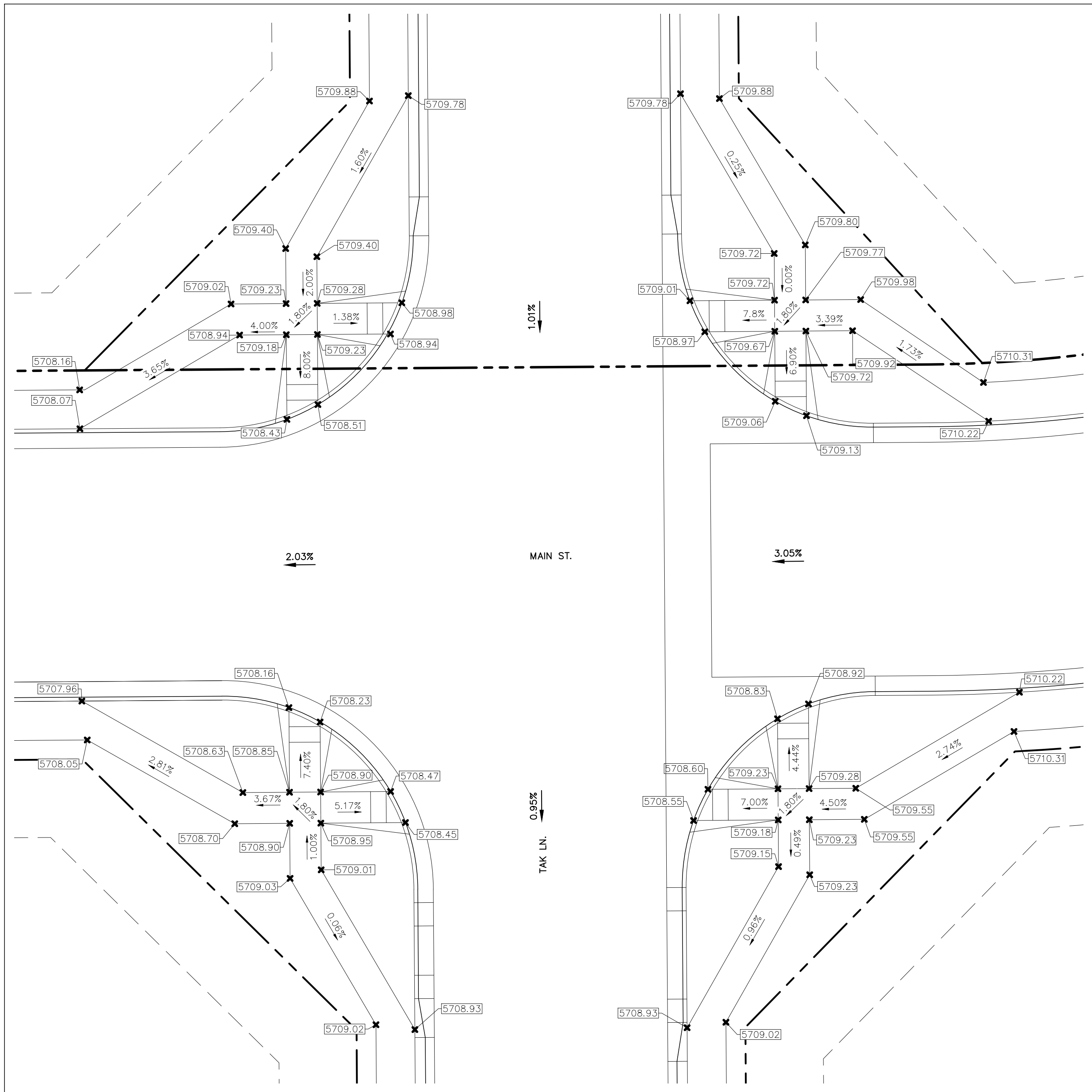
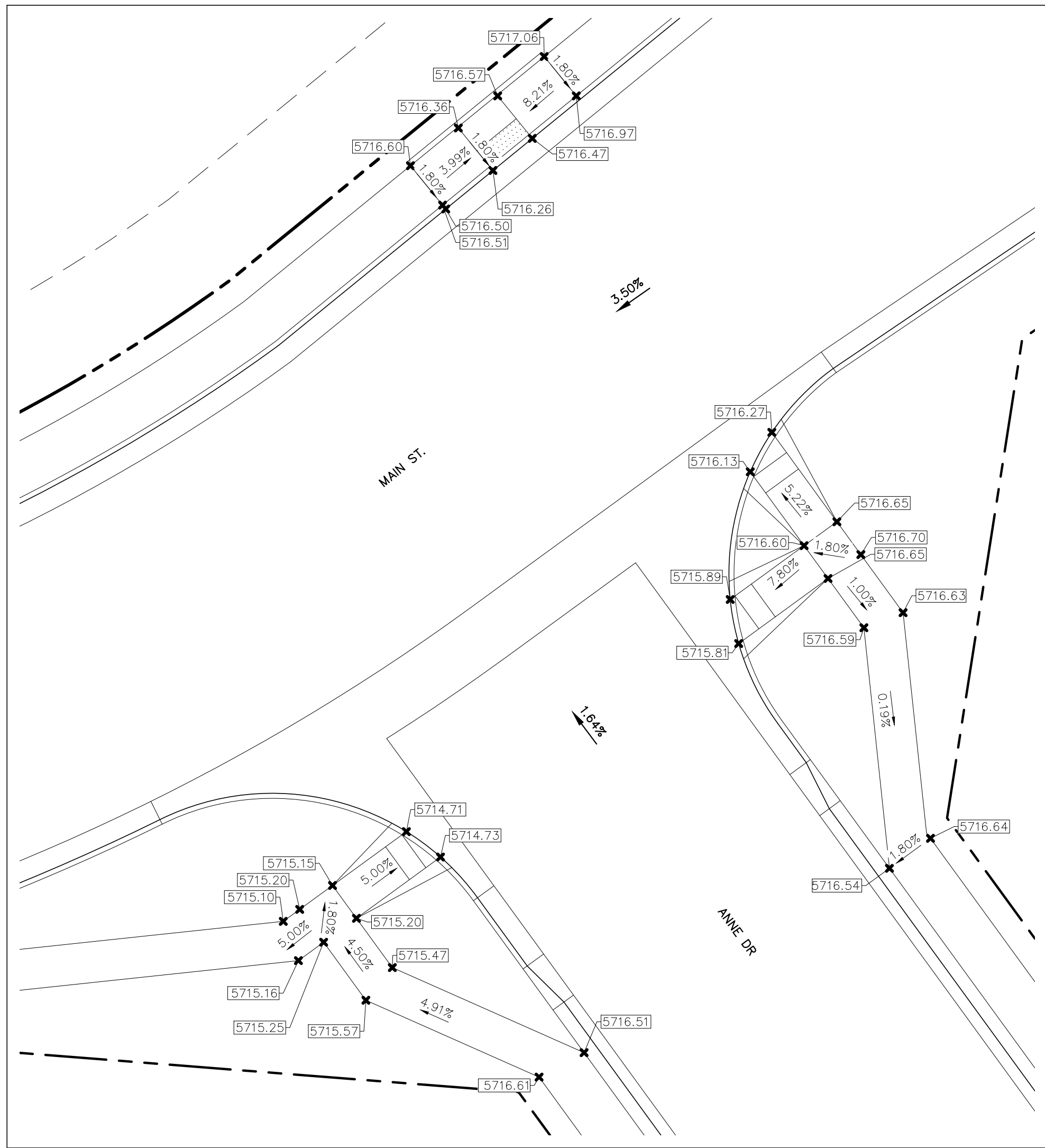
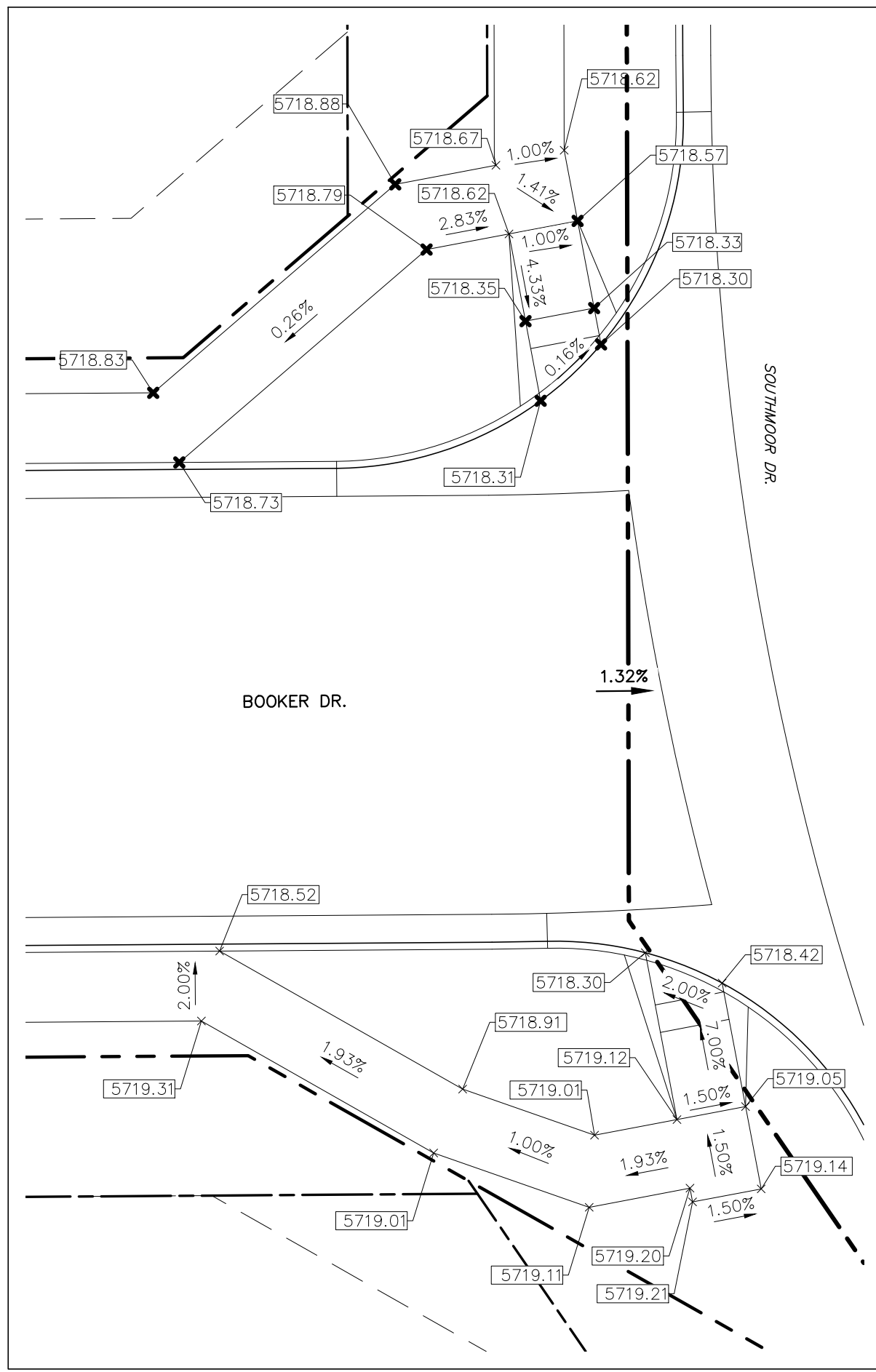
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER NO. 40510  
10/19/20  
DATE

**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80866  
(719) 428-2124

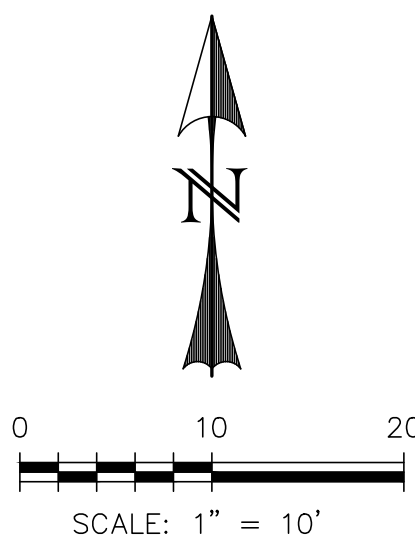
RIVERBEND CROSSING  
FILING NO. 1  
DETAIL SHEET

DESIGNED BY: MGP  
DRAWN BY: MGP  
SCALE: VARIES  
DATE: 03/30/21  
JOB NUMBER: 17-114  
SHEET: 19 OF 27





LOCATION MAP  
SCALE: N.T.S.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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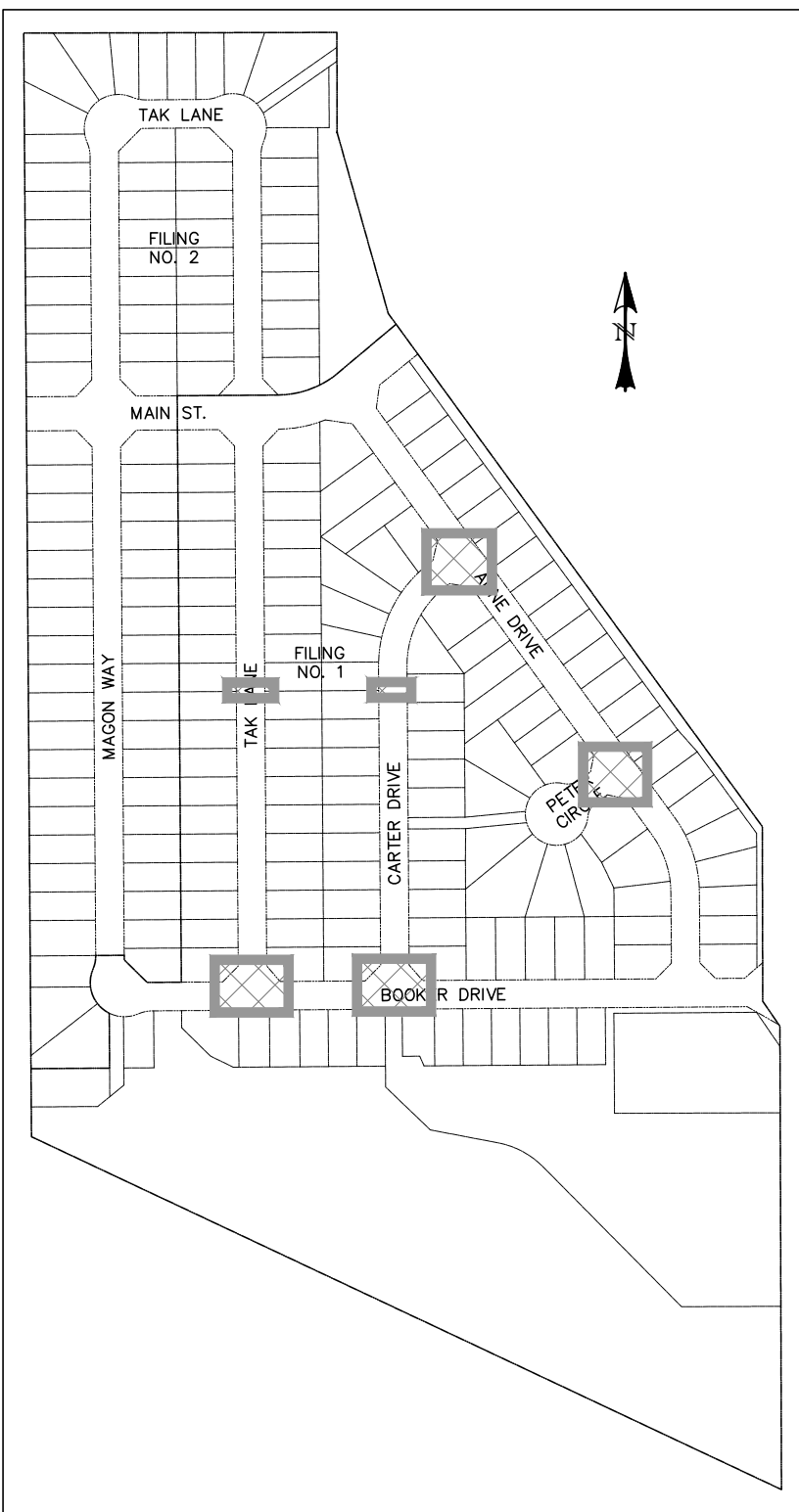
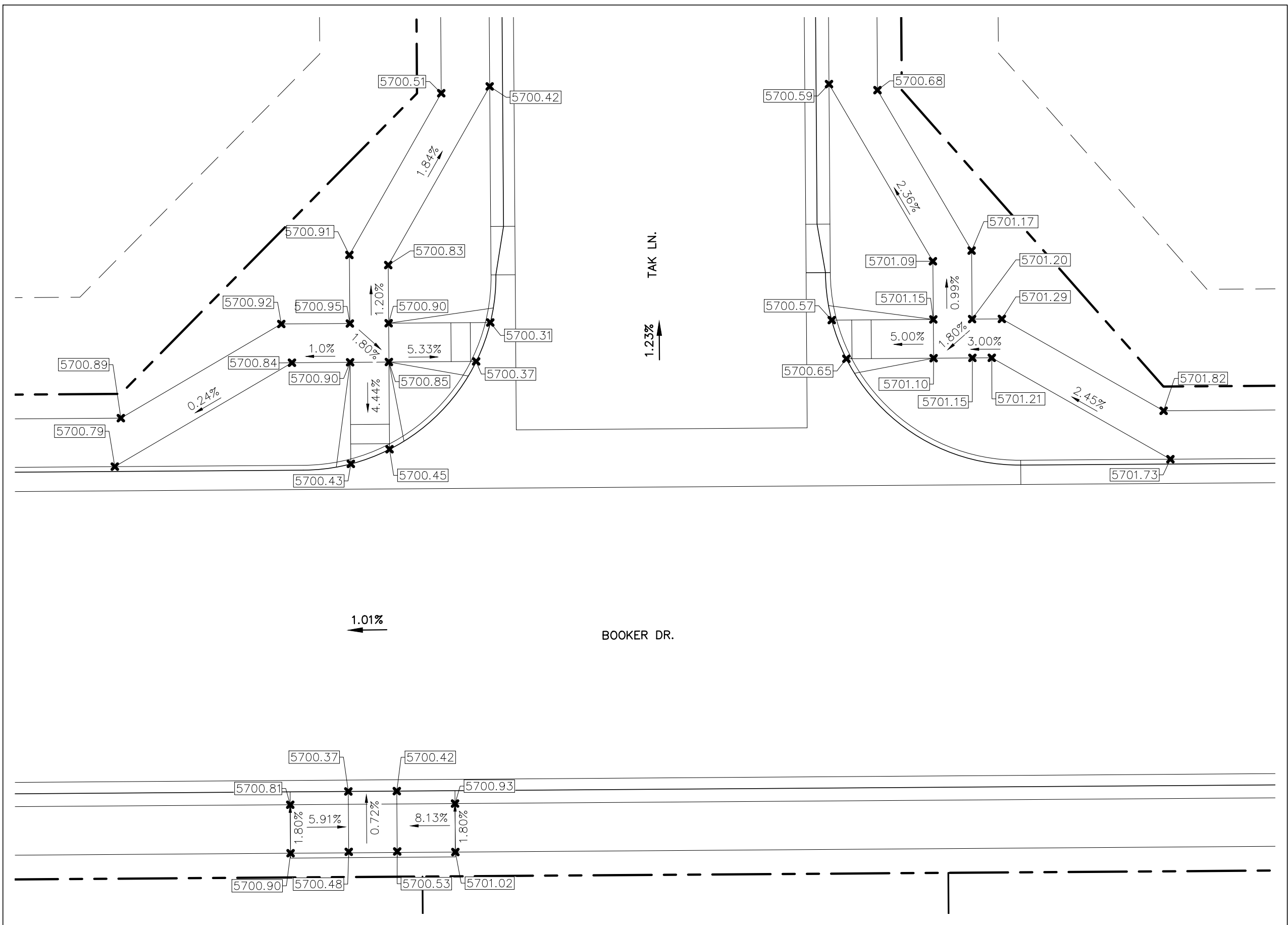
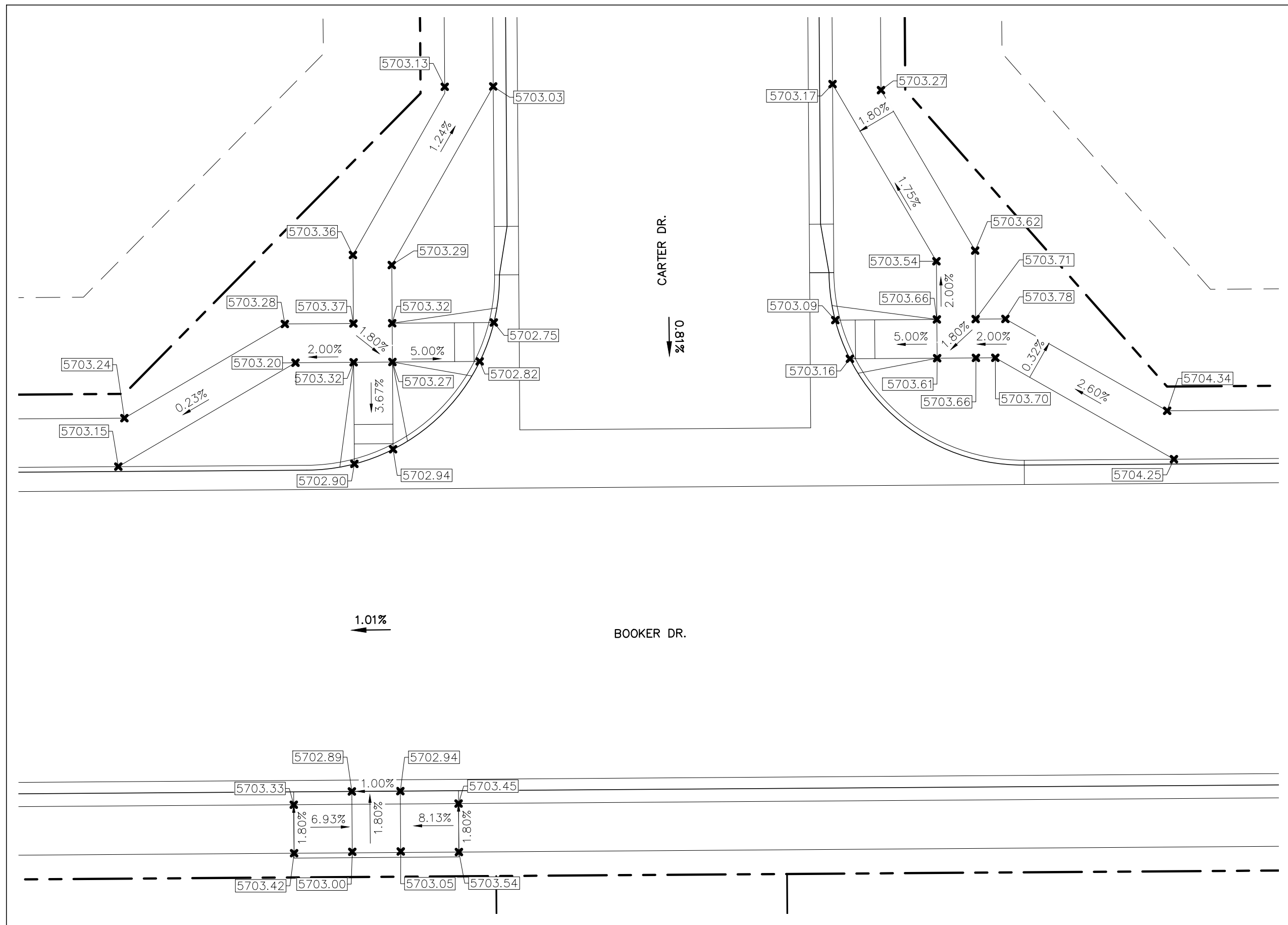
PREPARED FOR:  
**AVATAR EQUITIES, LLC**  
  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

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DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER #40510  
10/19/20  
DATE

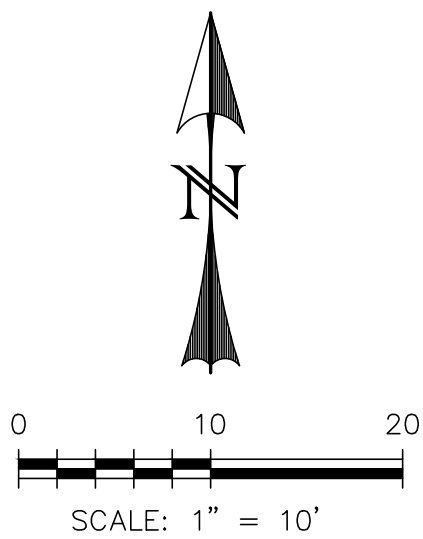
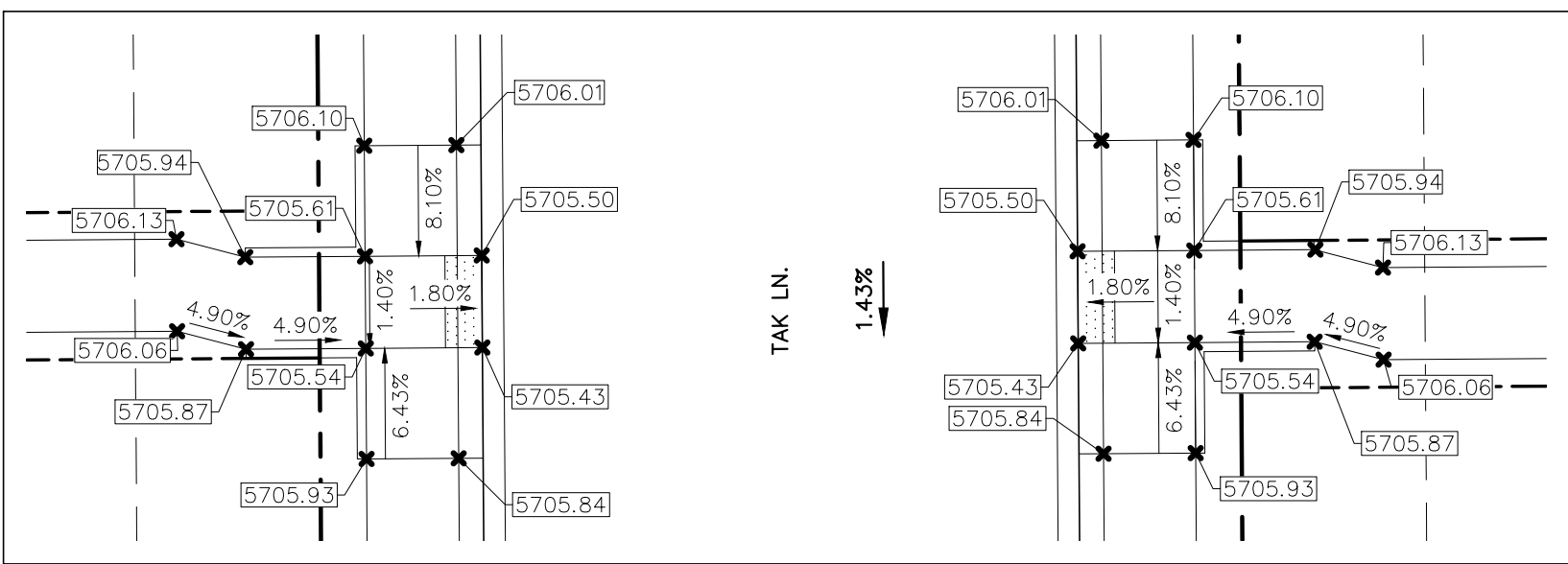
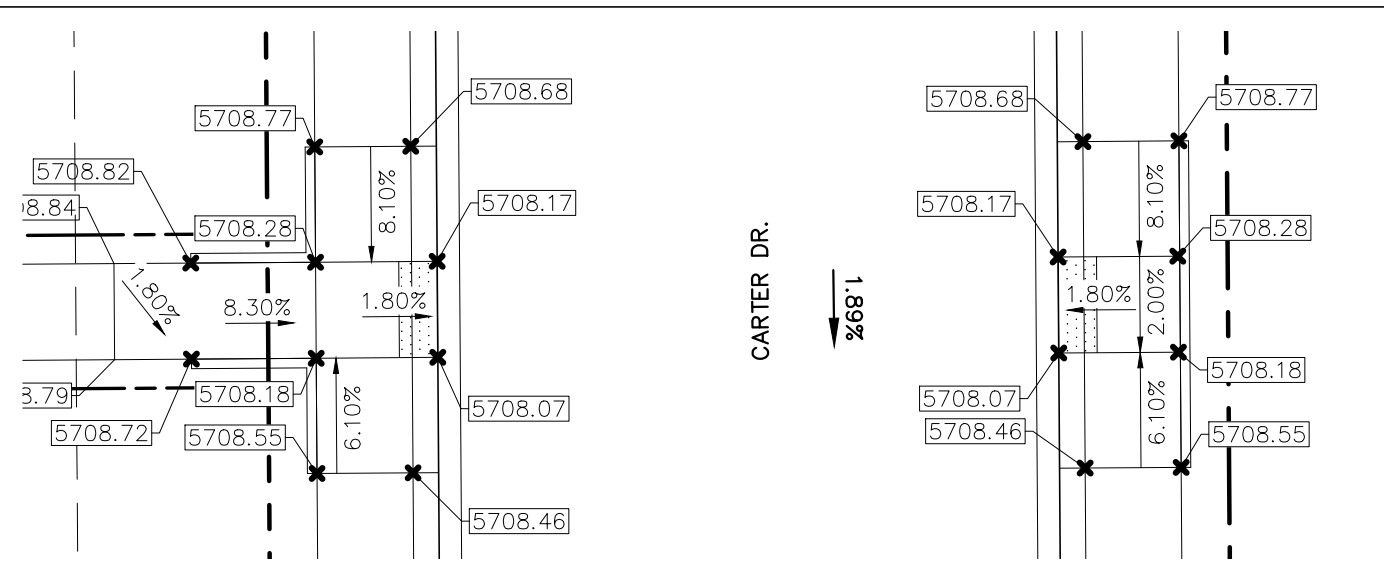
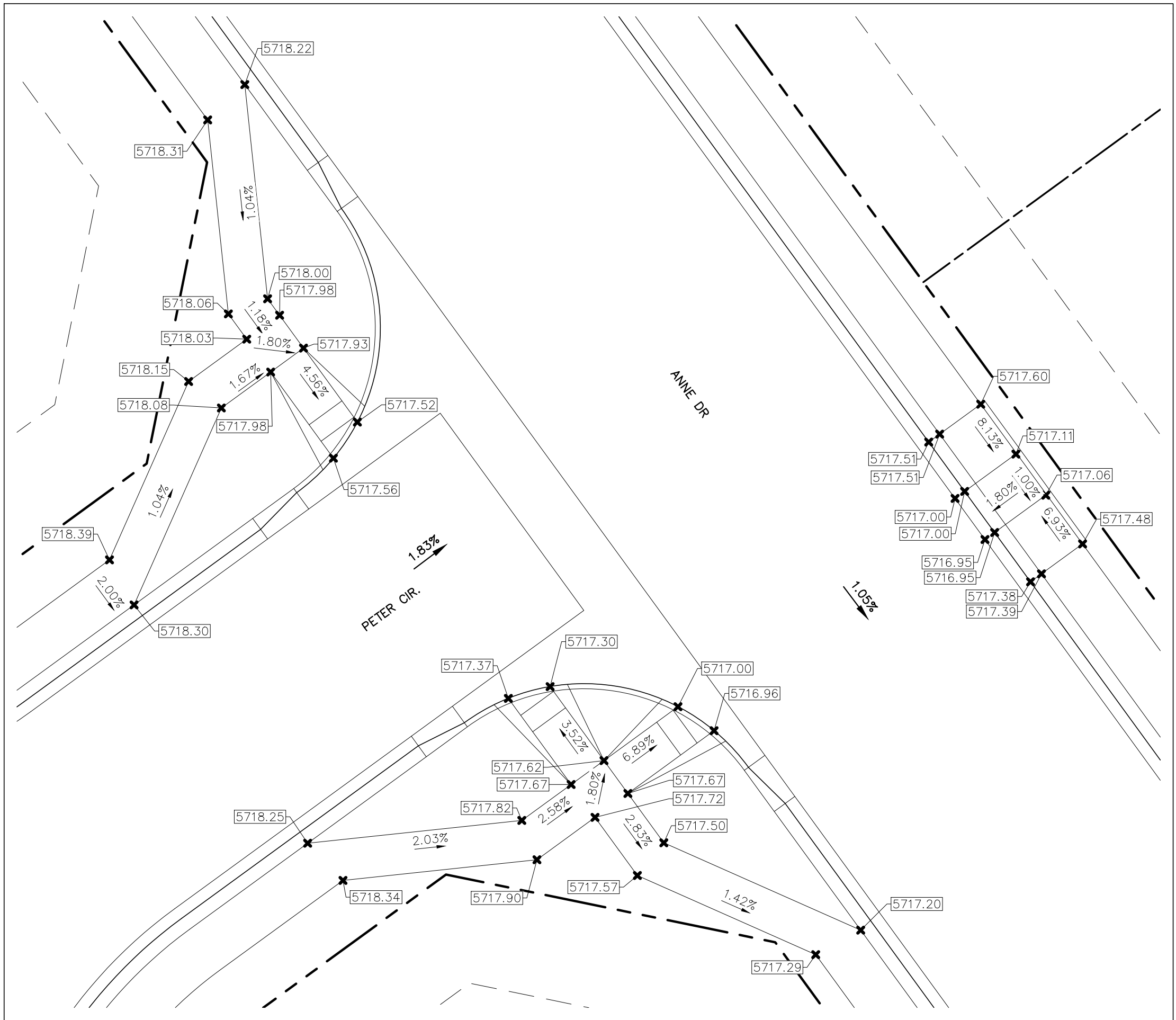
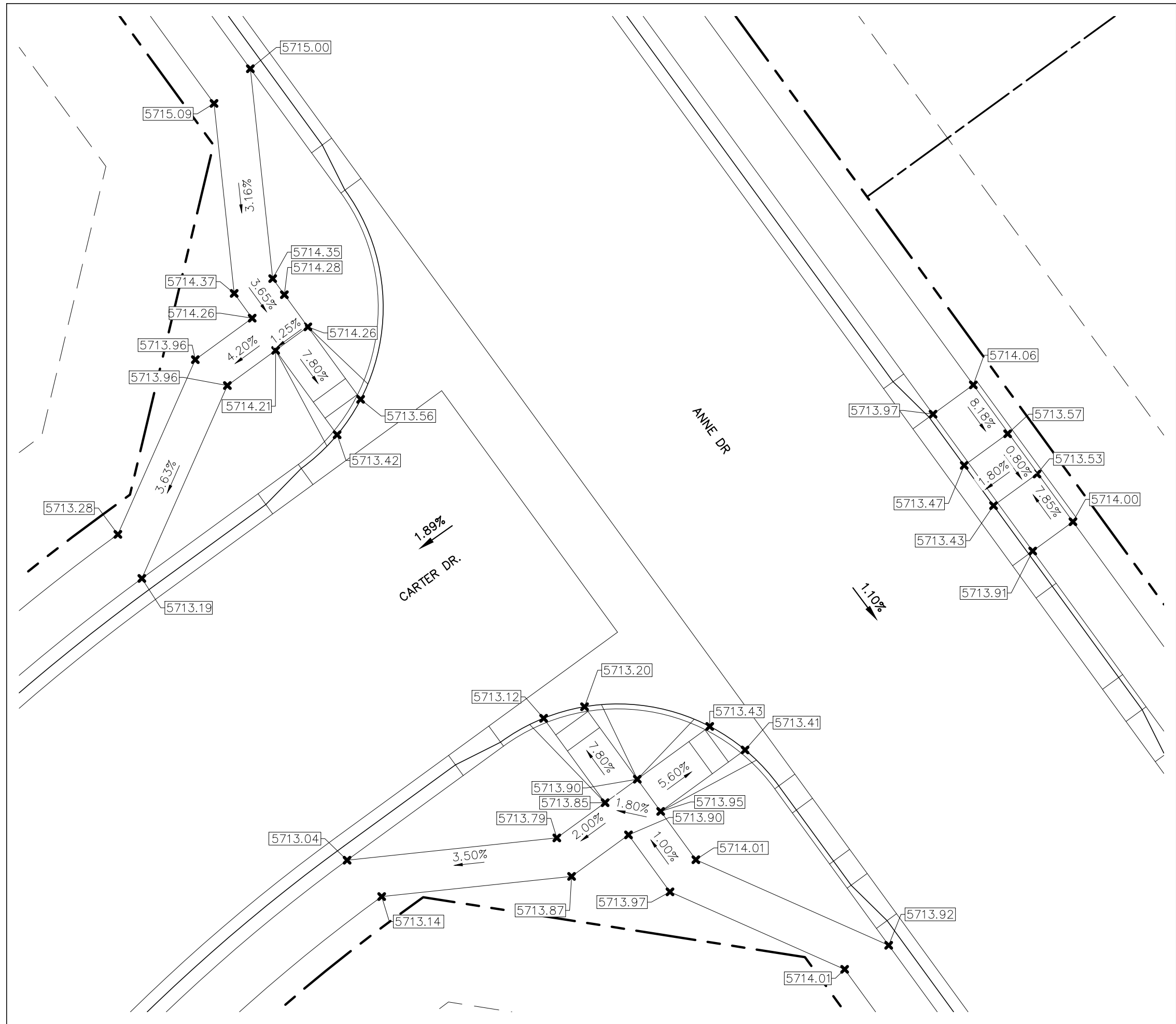


RIVERBEND CROSSING FILING NO. 1		DESIGNED BY: XXX	DRAWN BY: MGP
PEDESTRIAN RAMP DETAILS		SCALE: 1" = 10'	DATE: 03/30/21
		JOB NUMBER	SHEET
		17-114	20 OF 27






LOCATION MAP  
SCALE: N.T.S.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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**AVATAR EQUITIES, LLC**  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

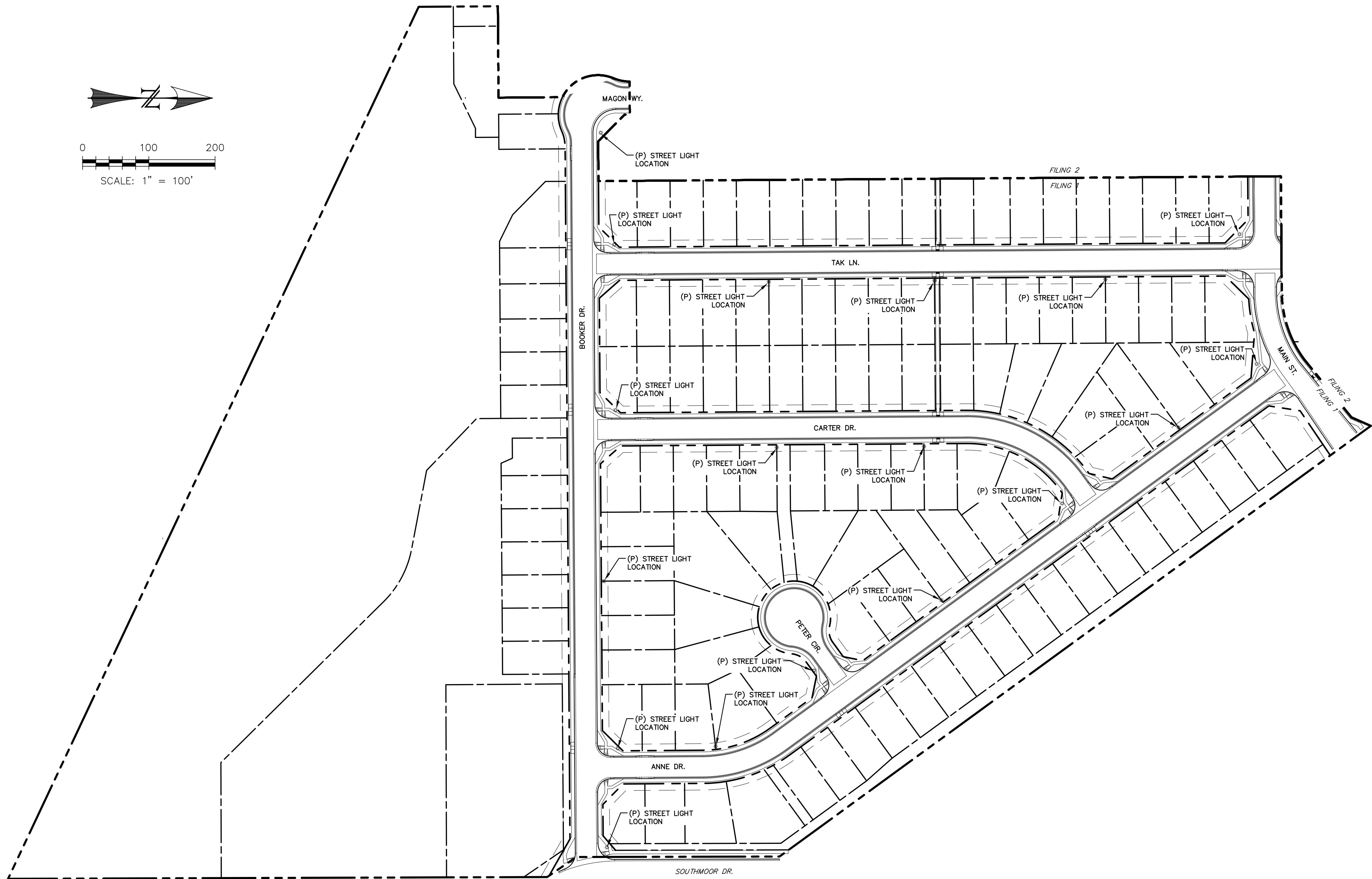
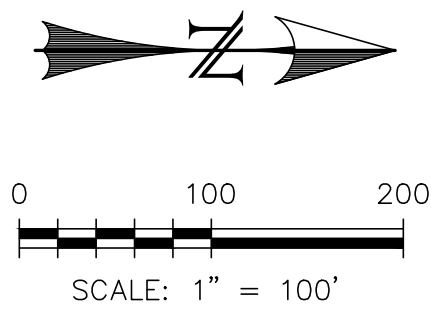
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER, NO. 40510  
10/19/20  
DATE

  
**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE. WOODLAND PARK, CO 80869  
PO BOX 221 (719)428-2124

**RIVERBEND CROSSING**  
**FILING NO. 1**  
**PEDESTRIAN RAMP DETAILS**

DESIGNED BY: XXX DRAWN BY: MGP  
SCALE: 1" = 10' DATE: 03/30/21  
JOB NUMBER SHEET  
17-114 21 OF 27





Fountain Electric Construction Standards and Specifications  
2017 Edition

**Street Lights**

**Overview**  
The intent of this policy is to specify street lighting standards to be uniformly implemented throughout the certified service territory of the Electric Department. This policy has been designed to promote vehicle and pedestrian safety that is fair and affordable to the residents of the territory.

**The purpose of the Standard**  
For the installation of all street lighting fixtures (luminaires) to be in conformance with this Standard as well as the provisions of the International Dark-Sky Association where feasible.

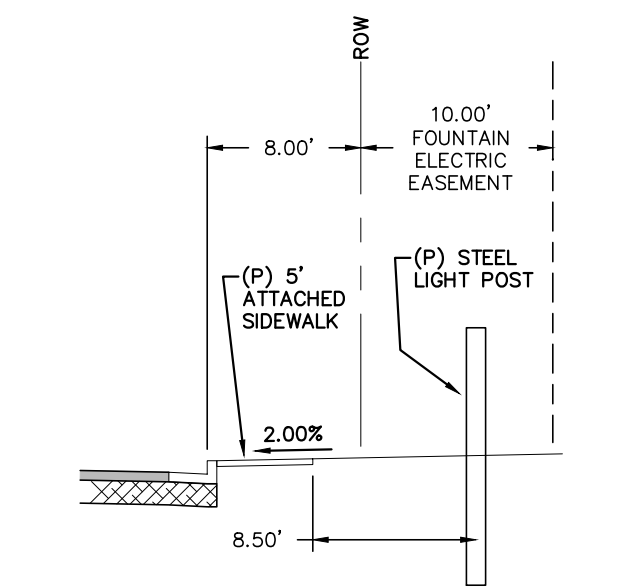
**Contract Lights**  
The City will install private property contract lighting. (See City of Fountain tariff for pricing.)

**New Subdivisions**  
The developer shall pay the full capital costs of every light to be installed by the Electric Department. This includes, but is not limited to, poles, fixtures, underground wiring, and any equipment necessary to construct an operational lighting system.

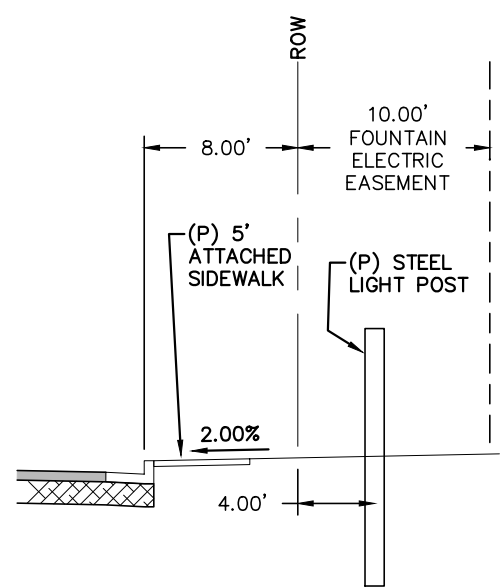
**Residential Streets - Minimum Standards**  
Street lights shall be located at all intersections and 250' or every four lots between the intersections. Street light standards shall be as follows:  
Standard Street Light Type: 22' direct-buried fiberglass pole, 100W high pressure sodium or LED equivalent, full cutoff post top style fixture.

**Collector Streets in Residential Areas - Minimum Standards**  
Street lights shall be located at all intersections and 250' spacing between the intersections. Street light standards shall be as follows:  
Standard Street Light Type: 25' steel pole, 8' mast arm, 100W high pressure sodium or LED equivalent, and full cutoff Cobra head style fixture.  
• Alternatives to the standards listed above may be proposed for consideration by Electric Department.

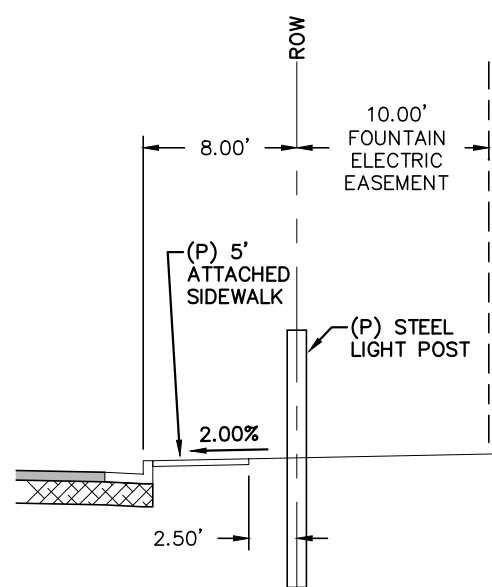
**Arterial Streets - Minimum Standards**  
Street lighting shall be located at all intersections and 185' spacing between the intersections. Street light standards shall be as follows:  
Standard Street Light Type: 32' AL pole, 8' mast arm, 400W high pressure sodium or LED equivalent, and full cutoff Cobra head style fixture.  
• Alternatives to the standards listed above may be proposed for consideration by the Electric Department **Operation and Maintenance**



**TYPICAL LIGHT POST LOCATION - COLLECTOR**  
(14.00' MIN; SEE PLANS FOR LOCATIONS)  
SCALE: N.T.S.

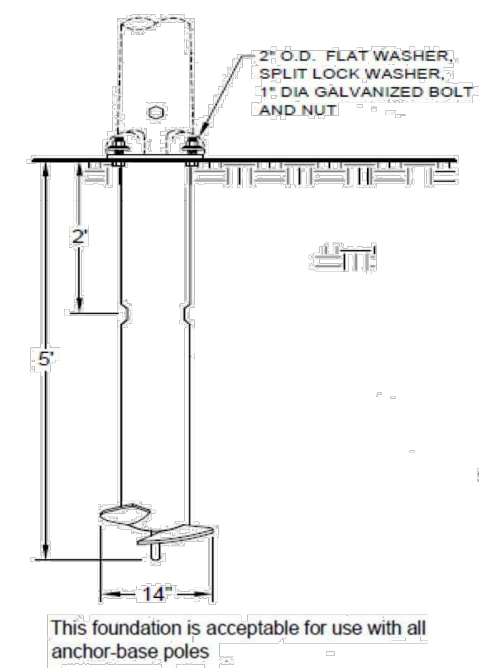


**TYPICAL LIGHT POST LOCATION - LOCAL**  
(12.00' MIN; SEE PLANS FOR LOCATIONS)  
SCALE: N.T.S.



**TYPICAL LIGHT POST LOCATION - LOCAL - LOW VOLUME**  
(7.00' MIN; SEE PLANS FOR LOCATIONS)  
SCALE: N.T.S.

Fountain Electric Construction Standards and Specifications  
2017 Edition



- SCREW-IN BASE (FOUNDATION)**
1. Install foundation just above grade.
  2. Avoid use in areas with existing underground utilities if location is within 18" from the edge of the helix. If potholing is required, backfill around the screw-in base with flowable fill to achieve proper compaction.
  3. Neutral conductor shall be bonded to the pole at the pole grounding lug.
  4. This foundation is designed to be used with a maximum 40' steel pole with a 12' mast arm and a 75 lb. luminaire, under the condition of 100 m.p.h. winds.

Fountain Electric Construction Standards and Specifications  
2017 Edition

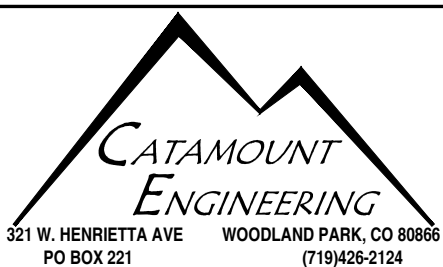
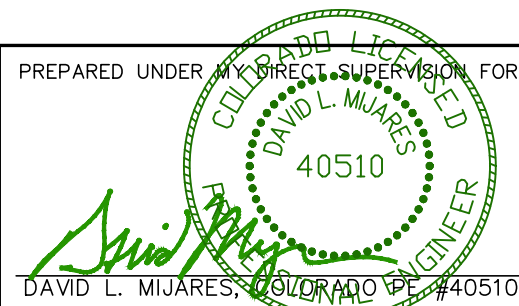
The replacement of lamps, fixtures, and poles are maintained by the Electric Department.  
Residents are requested to contact the Electric Department for street lights that are not operating, stay on continuously, or are turning on and off repeatedly.

Maintenance costs, which include power, equipment failures and equipment replacement, are covered through the operating costs of the street lights and shall be a cost to the City of Fountain.

REV.	DESCRIPTION	DATE

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Call 72 hours before you dig.  
For more details visit:  
www.call811.com

PREPARED FOR: \_\_\_\_\_  
PREPARED UNDER: \_\_\_\_\_  
DESIGNED BY: DLM  
SCALE: 1" = 100'  
JOB NUMBER: 17-114  
DATE: 03/26/21  
SHEET: 22 OF 27



LIGHTING PLAN



BASIC GRADING, EROSION AND STORMWATER QUALITY REQUIREMENTS AND GENERAL PROHIBITIONS:

- \*INFORMATION TAKEN FROM THE EL PASO COUNTY DRAINAGE CRITERIA MANUAL VOLUME 2, HEREIN REFERRED TO AS THE "MANUAL".
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS.
  - CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM FACILITIES.
  - 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. BMP'S MAY BE REQUIRED BY COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES (E.G., ESTIMATED TIME OF EXPOSURE, SEASON OF THE YEAR, ETC.).
  - VEHICLE TRACKING OF SOILS OFF-SITE SHALL BE MINIMIZED.
  - ALL WASTES COMPOSED OF BUILDING MATERIALS MUST BE REMOVED FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
  - 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 COUNTY ENGINEER. 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.
  - ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMP'S IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE MANUAL AND IN ACCORDANCE WITH THE EROSION AND STORMWATER QUALITY CONTROL PLAN APPROVED BY THE COUNTY OF EL PASO, IF REQUIRED.
  - ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMP'S AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS AND THE MANUAL AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION. THE INSTALLATION OF THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMP'S SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE.
  - ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION.
  - ALL EARTH DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
  - ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
  - SUSPENDED SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE MINIMIZED IN RUNOFF WATER BEFORE IT LEAVES THE SITE OF THE EARTH DISTURBANCE.
  - 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.
  - TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO THE STANDARDS AND SPECIFICATIONS PRESCRIBED IN THE MANUAL AND IN ACCORDANCE WITH THE PERMANENT EROSION CONTROL FEATURES SHOWN ON THE EROSION AND STORMWATER QUALITY CONTROL PLANS APPROVED BY THE COUNTY OF EL PASO, IF REQUIRED.
  - SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND 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 SEED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
  - NO PERSON SHALL CAUSE, PERMIT, OR CONTRIBUTE TO THE DISCHARGE INTO THE MUNICIPAL SEPARATE STORM SEWER POLLUTANTS THAT COULD CAUSE THE COUNTY OF EL PASO TO BE IN VIOLATION OF ITS COLORADO DISCHARGE PERMIT SYSTEM MUNICIPAL STORMWATER DISCHARGE PERMIT.
  - 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.
  - NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER, INCLUDING THE TEMPORARY OR PERMANENT RAMPING WITH MATERIALS FOR VEHICLE ACCESS.
  - INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), REGULATIONS PROMULGATED, CERTIFICATIONS OR PERMITS ISSUED, IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE MANUAL. IN THE EVENT OF CONFLICT BETWEEN THESE REQUIREMENTS AND WATER QUALITY CONTROL LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL OR STATE AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
  - THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS. MATERIALS SHALL NOT BE STORED IN A LOCATION WHERE THEY MAY BE CARRIED BY STORMWATER RUNOFF INTO A STATE WATER AT ANY TIME.
  - SPILL PREVENTION AND CONTAINMENT MEASURES SHALL BE USED AT STORAGE, AND EQUIPMENT FUELING AND SERVICING AREAS TO PREVENT THE POLLUTION OF ANY STATE WATERS, INCLUDING WETLANDS. ANY SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY, OR CONTAINED UNTIL APPROPRIATE CLEANUP METHODS CAN BE EMPLOYED. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE FOLLOWED, ALONG WITH PROPER DISPOSAL METHODS.

EROSION PROTECTION & REVEGETATION REQUIREMENTS  
\*PER U.S.D.A. SOIL CONSERVATION SERVICE GUIDELINES:

1. PRACTICE NO. & NAME: 342 - CRITICAL AREA TREATMENT  
RANGE SITE: SANDY FOOTHILLS

2. PLANNED SEEDING PREP:  
A. METHOD: DRILL  
B. DATES OCT. 15-MAY 31  
C. CLEAN TILLED: XX  
FIRM SEEDBED: XX  
STUBBLE COVER  
INTERSEED  
OTHER

FERTILIZER:  
POUNDS ACTUAL PER ACRE N2: 40  
(AVAILABLE)  
P2O5: 40  
K: N/A

MULCH:  
KIND: LONG - STEM NATIVE HAY  
AMOUNT: 4,000  
HOW-APPLIED: N/A  
HOW-ANCHORED: GEOTEXTILE  
ANCHORAGE DEPTH: 4"

SEED:  
VARIETY SPECIES REQUIRED PLS. RATES PER ACRES (10002)  
GOSHEN PRAIRIE SANDREED 6.5  
VAUGHN SIEDATS GRAMMA 9.0  
LOVINGTON BLUE GRAMMA 3.0  
BLACKWELL SWITCH GRASS 4.5  
PASTURA LITTLE BLUESTEM 7.0

(2) PLS SEEDING RATE (4) TOTAL PLS LBS/ SPECIES PLANNED (3) x (4)  
X OF SPECIES PER SPECIES/ACRE  
IN MIXTURE  
15 0.98 43.6 42.7  
25 2.25 43.6 98.1  
15 0.45 43.6 19.6  
20 0.90 43.6 29.2  
25 1.75 43.6 76.3

SEEDING GUIDELINES:  
1. SEEDBED PREPARATION  
THE SEEDBED SHOULD BE WELL-SETTLED AND FIRM, BUT FRAGILE ENOUGH THAT THE SEED CAN BE PLACED AT THE SPECIFIED DEPTHS. COMPETITIVE STANDS OF WEEDS THAT ARE PRESENT BEFORE SEEDING MUST BE CONTROLLED BY SHALLOW TILLAGE OR BY APPLICATION OF HERBICIDES. SOILS THAT HAVE BEEN OVER-COMPACTED BY TRAFFIC OR EQUIPMENT, ESPECIALLY WHEN WET, SHOULD BE RILLED TO BREAK UP ROOTING-RESTRICTIVE LAYERS, THEN HARROWED, ROLLED, OR PAKED TO PREPARE THE REQUIRED FIRM SEEDBED.  
2. FERTILIZER  
FERTILIZER SHOULD BE APPLIED AT A RATE OF 50 POUNDS OF AVAILABLE NITROGEN PER ACRE AND 40 POUNDS OF AVAILABLE PHOSPHATE PER ACRE. THE TIME OF APPLICATION SHOULD BE IMMEDIATELY PRIOR TO SEEDING, AT THE TIME OF SEEDING, OR IMMEDIATELY FOLLOWING SEEDING, DEPENDING ON THE KIND OF FERTILIZER AND TYPE OF EQUIPMENT USED.  
3. SEEDING  
SEED SHOULD BE PLANTED WITH A GRASS DRILL ON ALL SLOPES OF 33% (3:1) OR FLATTER. SEED MAY BE BROADCAST BY HAND, BY MECHANICAL SPREADER, OR BY HYDRAULIC EQUIPMENT ON AREAS THAT ARE SHALLOO, TOO STEEP, OR NOT ACCESSIBLE FOR SEED DRILL OPERATIONS. SEED PLANTED WITH A DRILL SHOULD BE COVERED WITH SOIL TO A DEPTH OF 1/4 TO 3/4 INCH. SEED PLANTED BY THE BROADCAST METHOD SHALL BE INCORPORATED INTO THE SOIL SURFACE, NOT TO EXCEED A DEPTH OF 3/4 INCH, BY RAKING, HARROWING, OR OTHER PROVEN METHOD. THE TIME OF SEEDING IS FROM OCTOBER 15th - MAY 31st. SEED PLANTED IN THE LATE FALL WILL REMAIN DORMANT UNTIL SPRING, WHEN IT WILL GERMINATE.  
4. MULCHING  
SEEDING AREAS SHOULD BE MULCHED TO CONSERVE MOISTURE, PREVENT SURFACE COMPACTION OR CRUSTING, REDUCE RUNOFF AND EROSION, CONTROL INSECTS, AND HELP ESTABLISH PLANT COVER. NATIVE HAY OR STRAW SHOULD BE APPLIED AT A RATE OF 4,000 POUNDS PER ACRE AND CRAMPED INTO THE GROUND. ON SLOPES GREATER THAN 3:1, AN AGGROMY BLANKET SHOULD BE USED.  
5. SUPPLEMENTAL WATER  
ON LOW RAINFALL AREAS WHERE WATER IS AVAILABLE AND WHERE RAPID ESTABLISHMENT IS NEEDED, IRRIGATION OF NEW SEEDING SHOULD BE PERFORMED DURING THE FIRST GROWING SEASON. WATER SHOULD BE APPLIED AT APPROXIMATELY ONE WEEK INTERVALS, AT A RATE OF 3/4 TO 1 INCH PER APPLICATION, WHEN RAINFALL IS DEFICIENT FOR PLANT DEVELOPMENT.

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20



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PREPARED FOR:  
AVATAR EQUITIES, LLC  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF CATAMOUNT ENGINEERING.  
DAVID L. MJARES, COLORADO PROFESSIONAL ENGINEER  
40510  
10/19/20  
DATE

CATAMOUNT ENGINEERING  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80606  
(719)428-2124

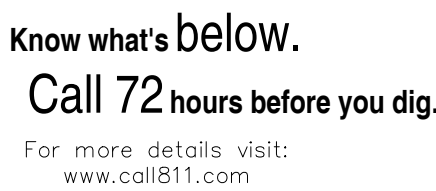
RIVERBEND CROSSING  
FILING NO. 1  
GRADING & EROSION  
CONTROL PLAN

DESIGNED BY:	DLM	DRAWN BY:	DBM
SCALE:	1" = 60'	DATE:	03/30/21
JOB NUMBER	17-114	SHEET	23 OF 27



1. INFORMATION TAKEN FROM THE EL PASO COUNTY DRAINAGE CRITERIA MANUAL VOLUME 2, HEREIN REFERRED TO AS THE "MANUAL".
2. 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.
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5. VEHICLE TRACKING OF SOILS OFF-SITE SHALL BE MINIMIZED.
6. ALL WASTES COMPOSED OF BUILDING MATERIALS MUST BE REMOVED FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
7. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER WATERS. PERMISSION FOR THE USE OF A SPECIALTY CHEMICAL IS GRANTED IN WRITING BY THE COUNTY ENGINEER, IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
8. 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.
9. ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMP'S IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE MANUAL AND IN ACCORDANCE WITH THE EROSION AND STORMWATER QUALITY CONTROL PLAN APPROVED THE COUNTY OF EL PASO, IF REQUIRED.
10. ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMP'S AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS AND THE MANUAL. ANY EARTH DISTURBANCE OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE INSTALLATION OF THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMP'S SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE.
11. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION.
12. ALL EARTH DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
13. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
14. SUSPENDED SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE MINIMIZED IN RUNOFF WATER BEFORE IT LEAVES THE SITE OF THE EARTH DISTURBANCE.
15. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR OVER THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON-EROSION VELOCITY.
16. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO THE STANDARDS AND SPECIFICATIONS AND THE REQUIREMENTS OF THE MANUAL AND IN ACCORDANCE WITH THE PERMANENT EROSION CONTROL FEATURES SHOWN ON THE EROSION AND STORMWATER QUALITY CONTROL PLANS APPROVED BY THE COUNTY OF EL PASO, IF REQUIRED.
17. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR MORE THAN 90 DAYS, OR ANY OTHER INTERIM GRADING, AN AREA THAT IS GOING TO REMAIN IN AN INTERM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
18. NO PERSON SHALL CAUSE, PERMIT, OR CONTRIBUTE TO THE DISCHARGE INTO THE MUNICIPAL SEPARATE STORM SEWER POLLUTANTS THAT COULD CAUSE THE COUNTY OF EL PASO TO BE IN VIOLATION OF ITS COLORADO DISCHARGE PERMIT SYSTEM MUNICIPAL STORMWATER DISCHARGE PERMIT.
19. 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 SITE DRAINAGE OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER, INCLUDING THE TEMPORARY OR PERMANENT RAMPS WITH MATERIALS FOR VEHICLE ACCESS.
21. INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), REGULATIONS PROMULGATED, CERTIFICATIONS OR PERMITS ISSUED, IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE MANUAL. IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND WATER QUALITY CONTROL LAWS, REGULATIONS OR OTHER FEDERAL OR STATE AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
22. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS. MATERIALS SHALL NOT BE STORED IN A LOCATION WHERE THEY MAY BE CARRIED BY STORMWATER RUNOFF INTO A STATE WATER AT ANY TIME.
23. SPILL PREVENTION AND CONTAINMENT MEASURES SHALL BE USED AT STORAGE, AND EQUIPMENT FUELING AND SERVING AREAS TO PREVENT THE POLLUTION OF ANY STATE WATERS, INCLUDING WETLANDS. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER THE CONTAINED UNDESIRABLE CLEANUP METHODS CAN BE DETERMINED. THE RECOMMENDED MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE FOLLOWED, ALONG WITH PROPER DISPOSAL METHODS.

**LEGEND - EROSION CONTROL MEASURES**



<p>Know what's <b>below.</b>  <b>Call 72</b> hours before you dig.          For more details visit:  <a href="http://www.call811.com">www.call811.com</a></p>		<p>PREPARED FOR:   <b>AVATAR EQUITIES, LLC</b>           6800 JERICO TURNPIKE          SUITE 120W #204          SYOSSET, NY 11791</p>
---	--	---

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF CATAMOUNT ENGINEERING

1. 10/10/2019



CATAMOUNT  
ENGINEERING

321 W. HENRIETTA AVE      WOODLAND PARK, CO 80866  
PO BOX 221      (719) 426-2124

**NOTES:**

1. EXISTING VEGETATION ON THIS SITE PRIMARILY CONSIST OF GRASSES AND WEEDS.



## SC-1



### Silt Fence (SF)

November 2010

**MM-1**

1. SEE PLAN FORM FOR:
  - a. CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 40' OF ANY NATURAL DRAINAGE PATHWAY OR WATER BODY. AVOID LOCATING WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PREFERRED, OBTAIN STATE, LOCAL, OR FEDERAL PERMITS. IF THE CWA IS LOCATED WITHIN 1,000' OF A NATURAL DRAINAGE OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CEMENT PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SURFACE/PIT THAT IS AT LEAST 8" BY 8" FLOORS. WASHING OF THE SURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDS AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRUCKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND AT THE NEAREST ROAD INTERSECTION TO INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERMITS BERM CONSTRUCTION.



### Concrete Washout Area (CWA)

November 2010

## SM-6



STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE, AND ALWAYS IMMEDIATELY FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REPOSED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.



### Stabilized Staging Area (SSA)

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2010

## MM-2



1. SEE PLAN FOR:
  - a. LOCATION OF STOCKPILES
  - b. TYPE OF STOCKPILE
2. INSTALL PERMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS AND INSTRUCTIONS. PERMETER PROTECTION DETAILS, HOWEVER, OTHER TYPES OF PERMETER CONTROLS INCLUDING SEDIMENT CONTROL, LOSS OR ROCK SOCKS MAY BE USED TO PROTECT THE PERMETER CONTROL FROM DAMAGE.
3. THE FOLLOWING ARE THE MINIMUM REQUIREMENTS FOR PERMETER CONTROL:
  - a. TYPE OF PERMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS TO BE PROTECTED BY A PERMETER CONTROL OR BY A PERMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERMETER CONTROL TO CONTAIN THE STOCKPILE, THE ABILITY OF THE PERMETER CONTROL TO PROTECT THE STOCKPILE OR SLUMPS AGAINST THE PERMETER, AND OTHER FACTORS.
4. STABILIZE THE STOCKPILE SURFACE WITH SURFACE FACING:
  - a. STOCKPILES OF SOILS, SANDS, OR GRAVELS, OR SOIL BRUSHES, LAID STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED PERMANENTLY TO PREVENT EROSION.
  - b. STOCKPILES OF SOILS, SANDS, OR GRAVELS, OR SOIL BRUSHES, LAID STOCKPILED FOR 60 DAYS OR LESS, SHOULD BE SEEDED AND MULCHED PERMANENTLY.
  - c. USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE USED FOR A SHORT PERIOD OF TIME.
5. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNSTREAM CONTROLS, INCLUDING PERMETER CONTROL, ARE IN PLACE, STOCKPILES MAY BE PLACED ON THE INTERIOR PORTION OF A CONSTRUCTION SITE.

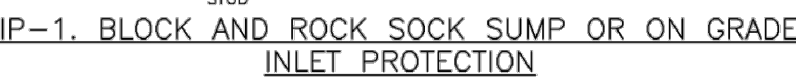


### Stockpile Management (SM)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

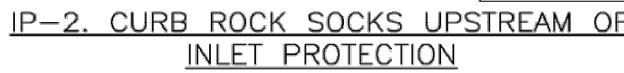
November 2010

### Inlet Protection (IP)



BLOCK AND CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



CURB ROCK SOCK IN PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLET.

IP1

### Inlet Protection (IP)

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

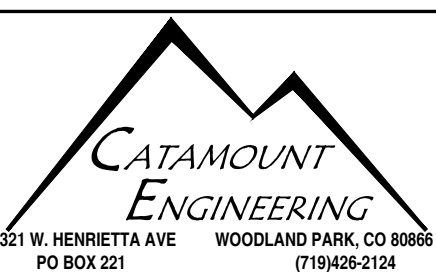
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

August 2013



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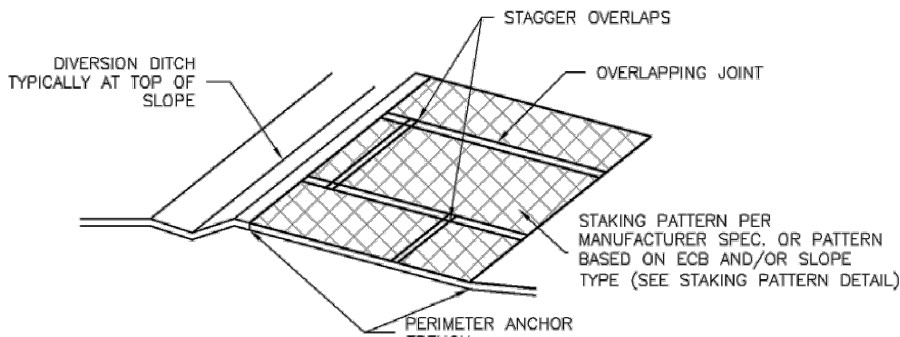
DATE 10/19/20



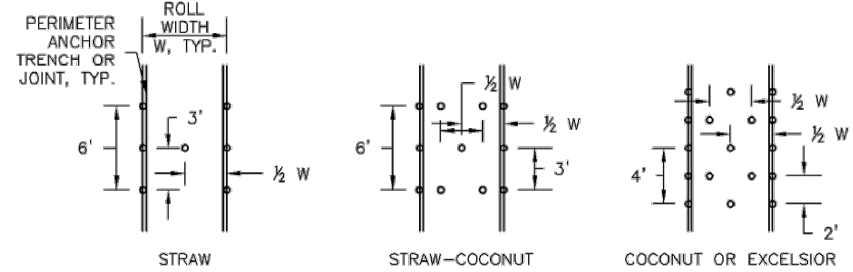
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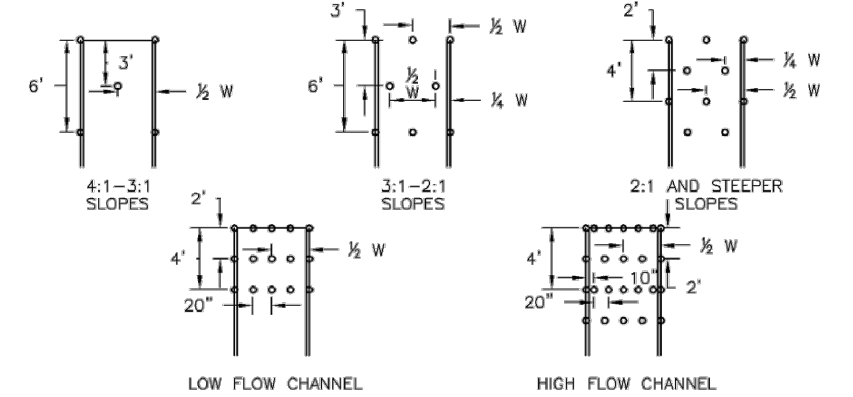
Rolled Erosion Control Products (RECP) EC-6



ECB-3. OUTSIDE OF DRAINAGEWAY



STAKING PATTERNS BY ECB TYPE



STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RECP-7



EC-6 Rolled Erosion Control Products (RECP)

EROSION CONTROL BLANKET INSTALLATION NOTES

- SEE PLAN VIEW FOR:
  - LOCATION OF ECBs
  - TYPE OF ECB (STRAW, STRAW-COCOONUT, COCONUT, OR EXCELSIOR)
  - AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.
- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
- IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
- INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
- OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
- MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBs SHALL BE RESEEDED AND MULCHED.
- DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TABLE ECB-1. ECB MATERIAL SPECIFICATIONS			
TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT
STRAW*	—	100%	—
STRAW-COCOONUT	30% MIN	70% MAX	—
COCONUT	100%	—	—
EXCELSIOR	—	—	100%

\*STRAW ECBs MAY ONLY BE USED OUTSIDE OF URBAN AND DRAINAGE CHANNELS. ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS.

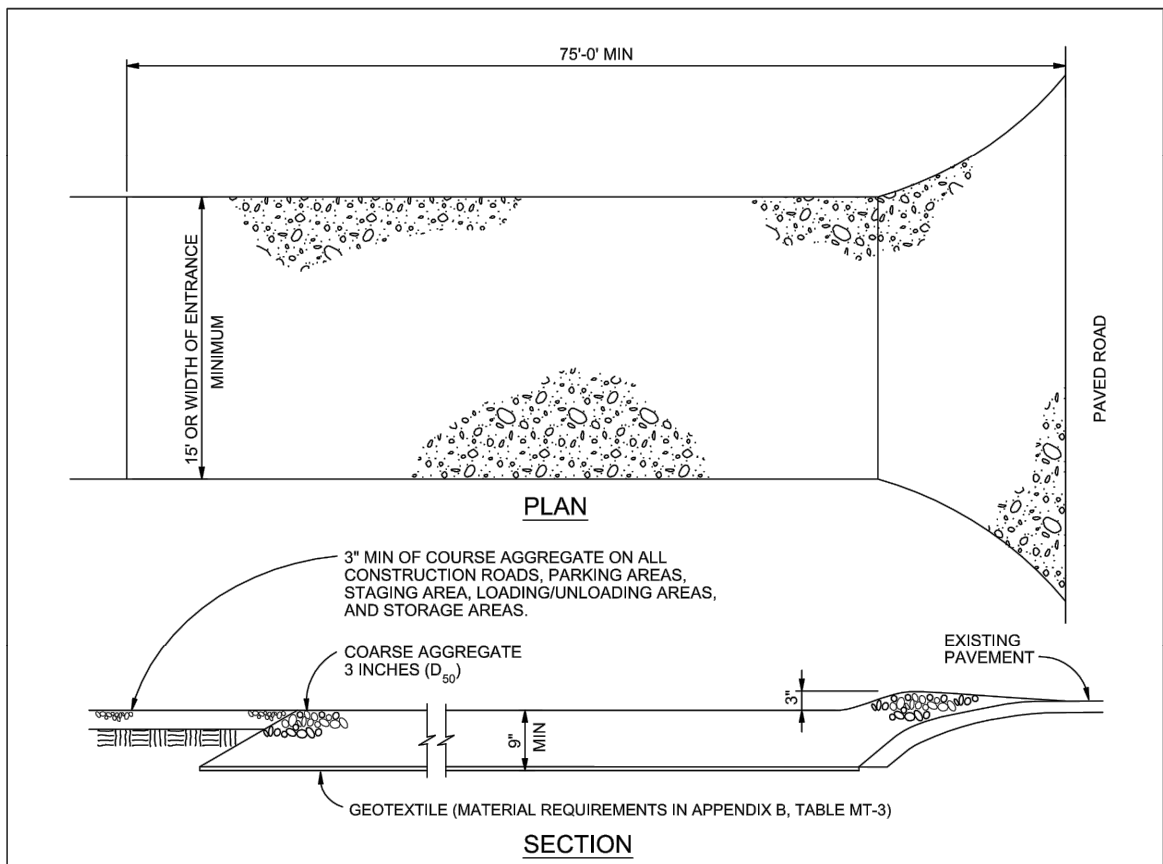
RECP-8 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Rolled Erosion Control Products (RECP) EC-6

EROSION CONTROL BLANKET MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
  - ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS, SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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VEHICLE TRACKING

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

- ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
- CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
- CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
- CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

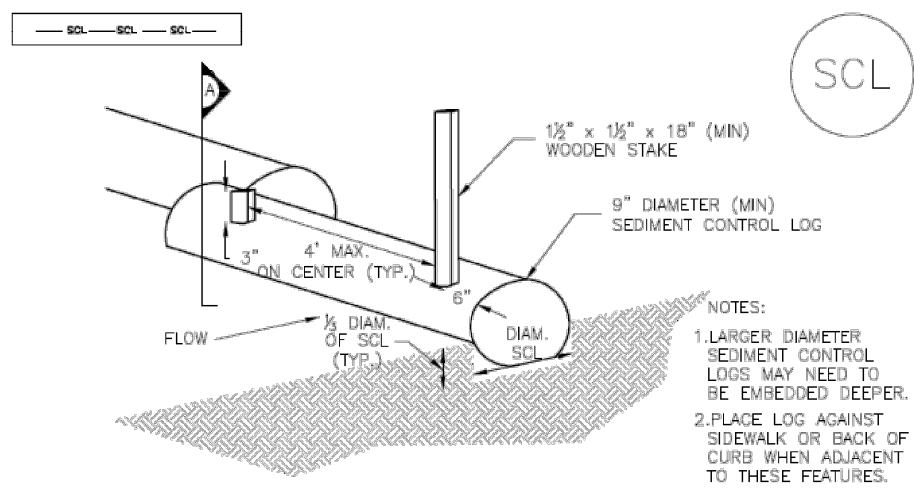
MAINTENANCE REQUIREMENTS

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED ONLY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
- STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
- OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

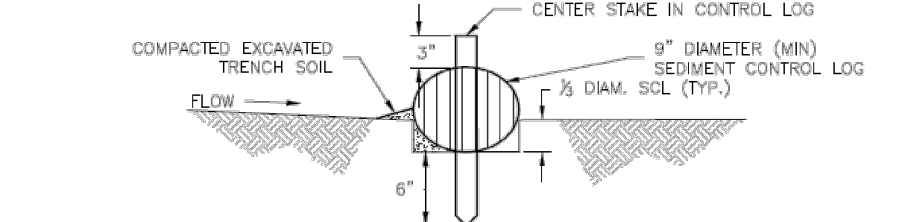
City of Colorado Springs Stormwater Quality	Figure VT-2 Vehicle Tracking Application Examples
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3-54

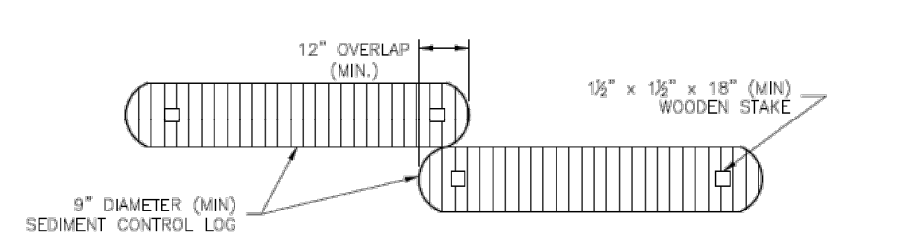
Sediment Control Log (SCL) SC-2



TRENCHED SEDIMENT CONTROL LOG



TRENCHED SEDIMENT CONTROL LOG



LOG JOINTS

SCL-1. TRENCHED SEDIMENT CONTROL LOG

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



SC-2 Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
- SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADE/ LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
- IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
- THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
- FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

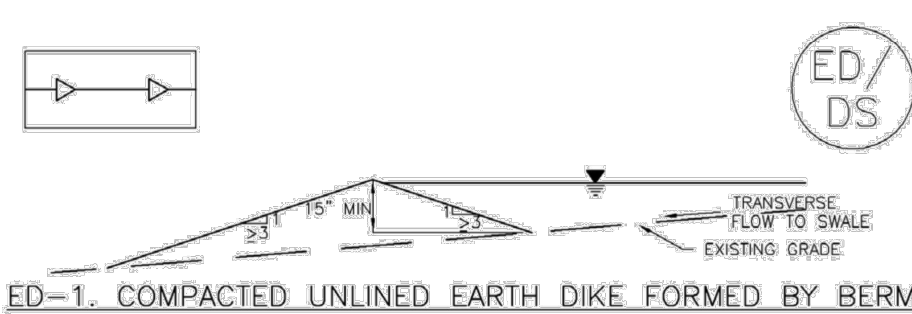
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- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/3 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION/COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDS. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDS AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

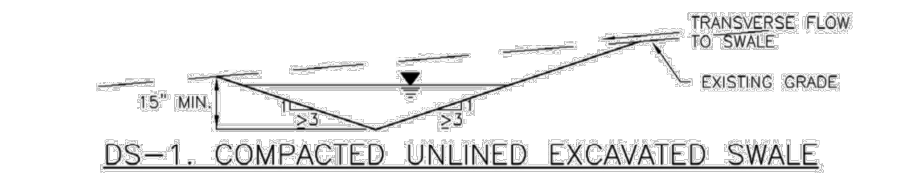
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SCL-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2015

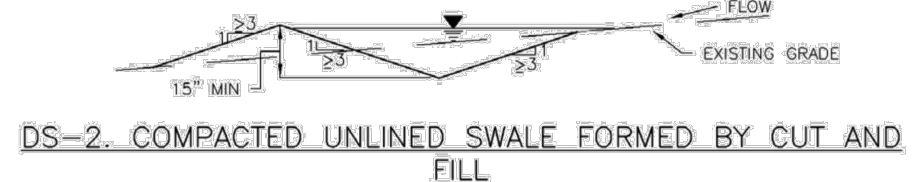
Earth Dikes and Drainage Swales (ED/DS) EC-10



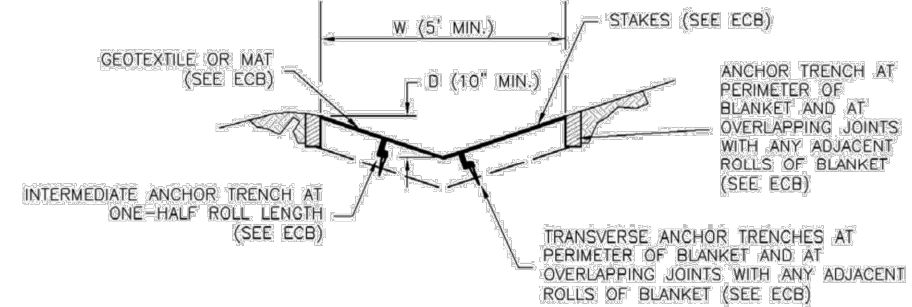
ED-1. COMPACTED UNLINED EARTH DIKE FORMED BY BERM



DS-1. COMPACTED UNLINED EXCAVATED SWALE



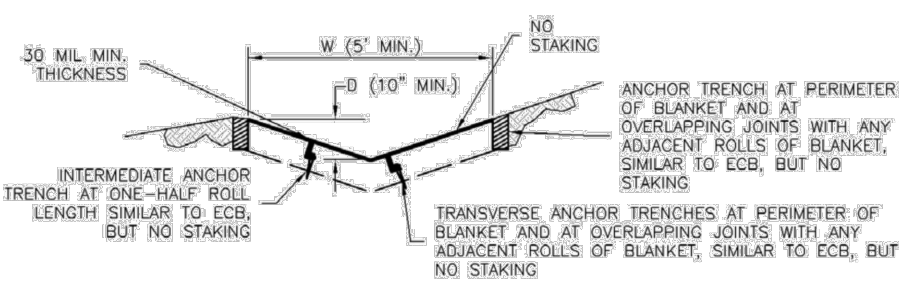
DS-2. COMPACTED UNLINED SWALE FORMED BY CUT AND FILL



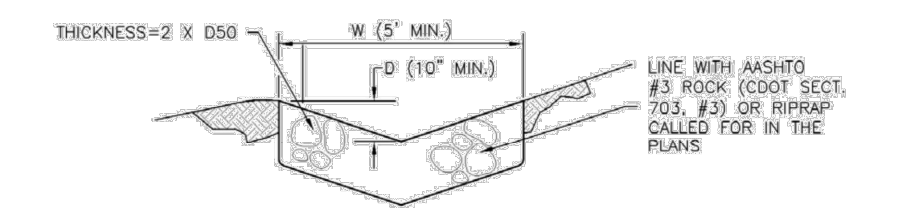
DS-3. ECB LINED SWALE (CUT AND FILL OR BERM)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 ED/DS-3

EC-10 Earth Dikes and Drainage Swales (ED/DS)



DS-4. SYNTHETIC LINED SWALE



DS-5. RIPRAP LINED SWALE

EARTH DIKE AND DRAINAGE SWALE INSTALLATION NOTES

- SEE SITE PLAN FOR:
  - LOCATION OF DIVERSION SWALE
  - TYPE OF SWALE (UNLINED, COMPACTED AND/OR LINED)
  - LENGTH OF EACH SWALE
  - DEPTH, D, AND WIDTH, W, DIMENSIONS
  - FOR ECB/TRM LINED DITCH, SEE ECB DETAIL
  - FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, D50.
- SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES AND/OR DIVERSION SWALES EXCEEDING 2-YEAR FLOW RATE OR 10 CFS.
- DEPTH DIMENSIONS AND SWALES, INDICATED ON SWAMP PLAN SHALL BE INSTALLED PRIOR TO LAND-DISTURBING ACTIVITIES IN PROXIMITY.
- EMBANKMENT IS TO BE COMPACTED TO 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698.
- SWALES ARE TO DRAIN TO A SEDIMENT CONTROL BMP.
- FOR LINED DITCHES, INSTALLATION OF ECB/TRM SHALL CONFORM TO THE REQUIREMENTS OF THE ECB DETAIL.
- WHEN CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION SWALE, INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12 INCHES.

ED/DS-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

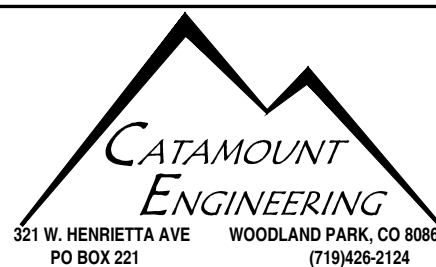
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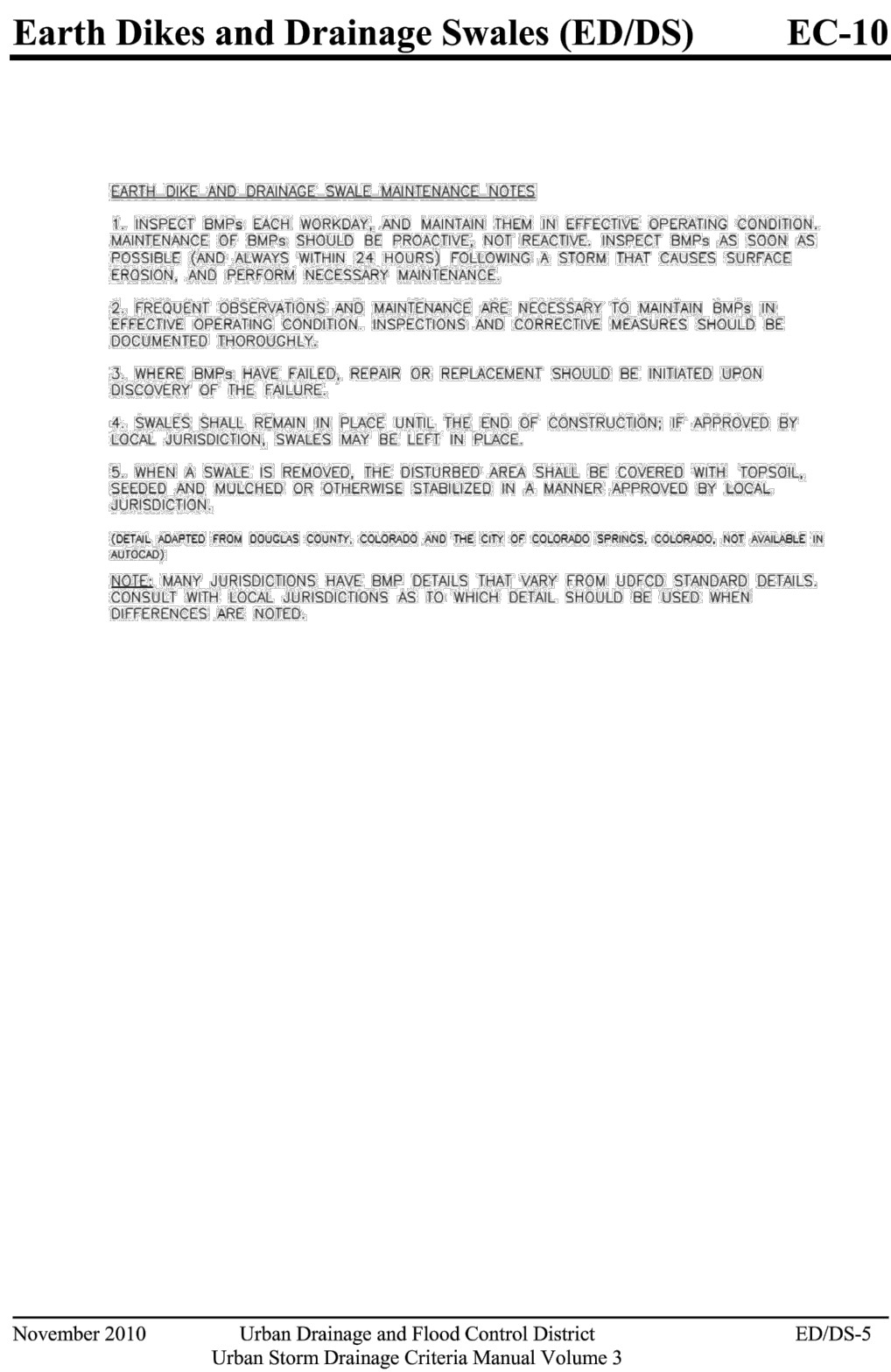
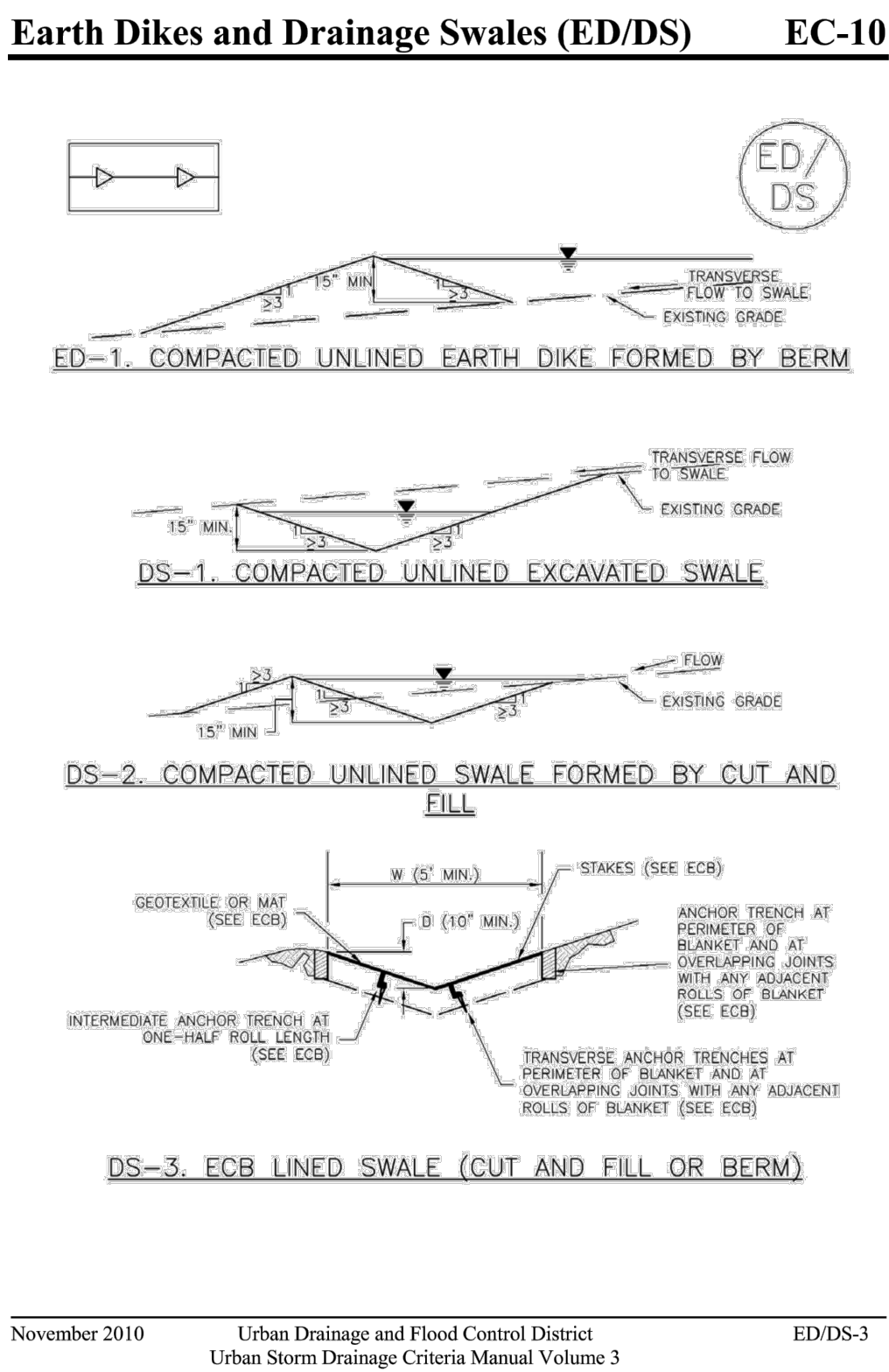
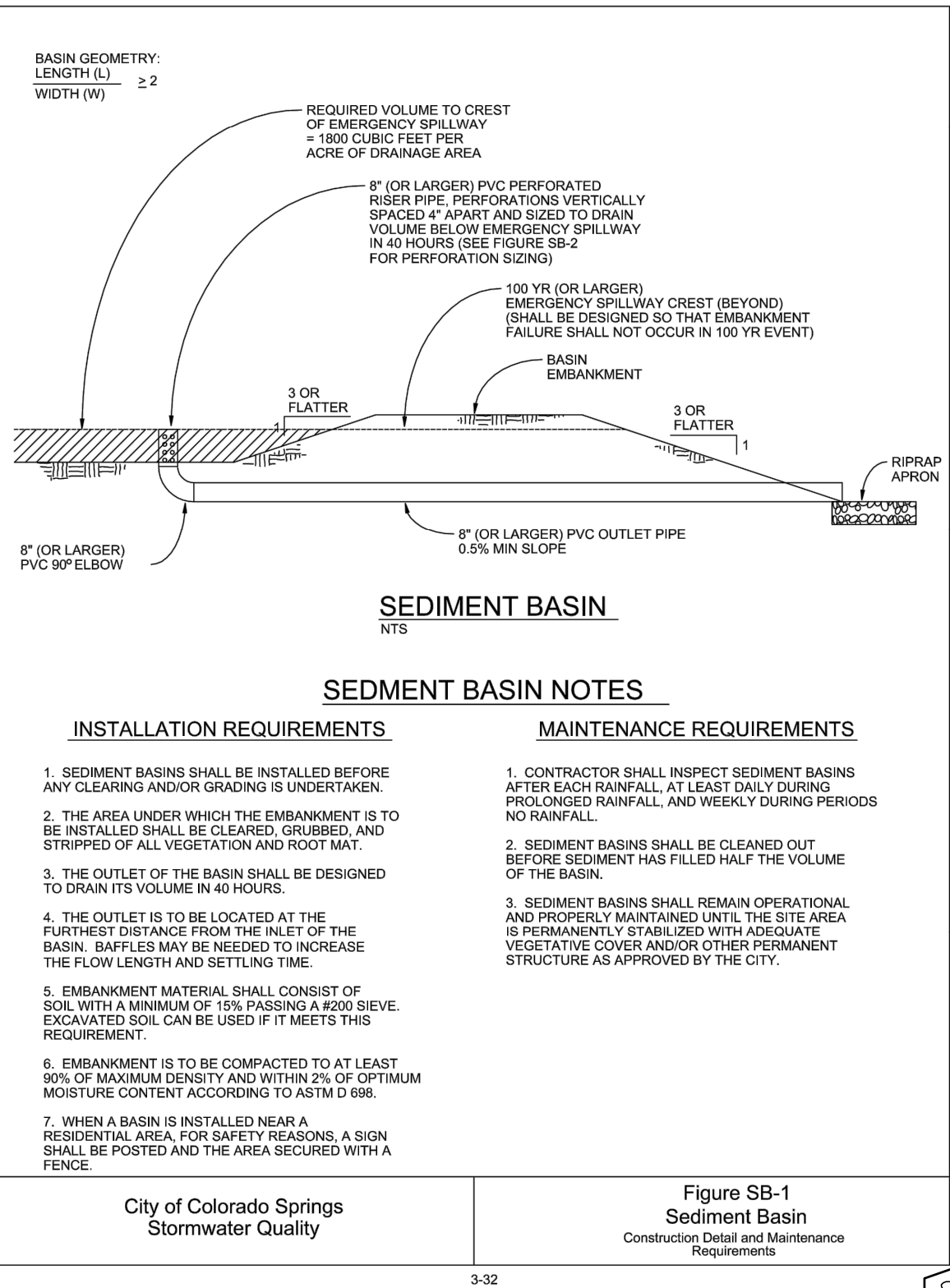
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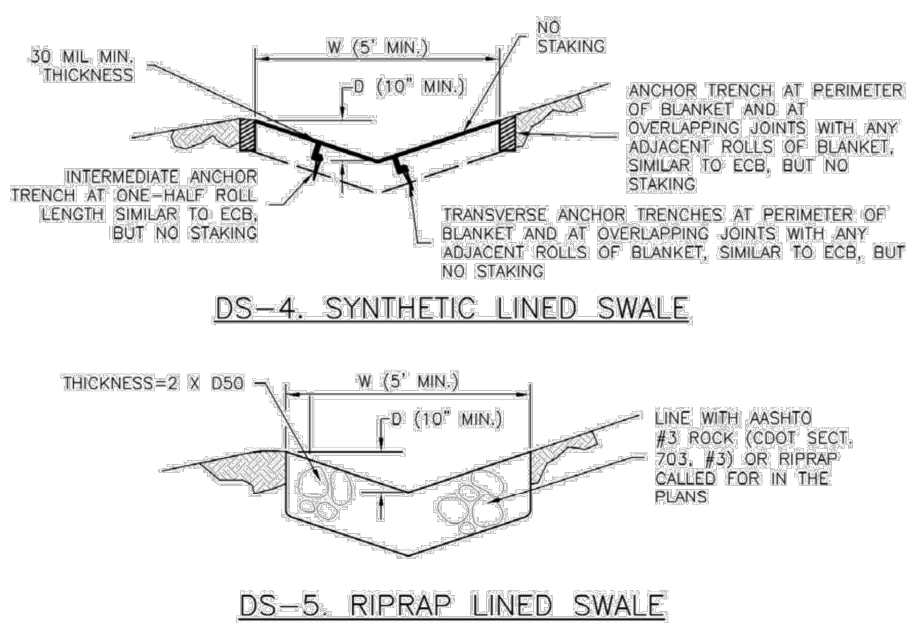
RIVERBEND CROSSING  
FILING NO. 1  
GRADING & EROSION  
CONTROL DETAILS

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EC-10 Earth Dikes and Drainage Swales (ED/DS)



Required Area per Row (in<sup>2</sup>)

Depth at Outlet (ft)	Depth at Outlet (ft)									
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5		
2	15.04	7.71	5.10	3.76	2.65	2.41	2.02	1.73		
1	7.52	3.86	2.55	1.88	1.48	1.21	1.01	0.87		
0.6	4.51	2.31	1.53	1.13	0.89	0.72	0.61	0.52		
0.4	3.01	1.54	1.02	0.75	0.60	0.48	0.40	0.35		
0.2	1.50	0.77	0.51	0.38	0.30	0.24	0.20	0.17		
0.1	0.75	0.39	0.26	0.19	0.15	0.12	0.10	0.09		
0.08	0.45	0.23	0.15	0.11	0.09	0.07	0.06	0.05		
0.04	0.30	0.15	0.10	0.08	0.06	0.05	0.04	0.03		
0.02	0.15	0.08	0.05	0.04	0.03	0.02	0.02	0.02		
0.01	0.08	0.04	0.03	0.02	0.01	0.01	0.01	0.01		

TABLE SB-1

Circular Perforation Sizing

Hole Diameter (in)	Hole Diameter (in)	Area per Row (in <sup>2</sup> )		
		n=1	n=2	n=3
1/4	0.250	0.05	0.10	0.15
5/16	0.313	0.09	0.18	0.23
3/8	0.375	0.11	0.22	0.33
7/16	0.438	0.15	0.30	0.45
1/2	0.500	0.20	0.39	0.59
9/16	0.563	0.25	0.50	0.75
5/8	0.625	0.31	0.61	0.92
11/16	0.688	0.37	0.74	1.11
3/4	0.750	0.44	0.88	1.33
7/8	0.875	0.60	1.20	1.80
1	1.000	0.79	1.57	2.36
1 1/8	1.125	0.99	1.99	2.98
1 1/4	1.250	1.23	2.45	3.68
1 3/8	1.375	1.48	2.97	4.45
1 1/2	1.500	1.77	3.53	5.30
1 5/8	1.625	2.07	4.15	6.22
1 3/4	1.750	2.41	4.81	7.22
1 7/8	1.875	2.78	5.52	8.28
2	2.000	3.14	6.28	9.42

n = Number of courses of perforations

Minimum steel plate thickness

1/4"	5/16"	3/8"
------	-------	------

TABLE SB-2

City of Colorado Springs  
Stormwater Quality

Figure SB-2  
Outlet Sizing  
Application Techniques and Maintenance  
Requirements

3-33

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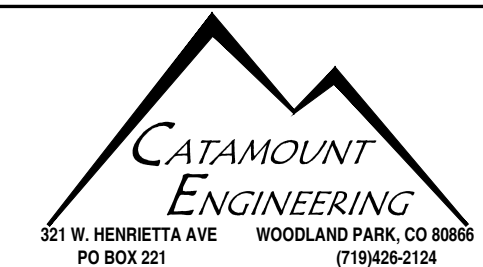
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CONTROL DETAILS

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