

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 WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO 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 LOOSENED 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 ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE 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 **RMG 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



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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. 2
STREET, STORM, & STRIPING
CONSTRUCTION DRAWINGS

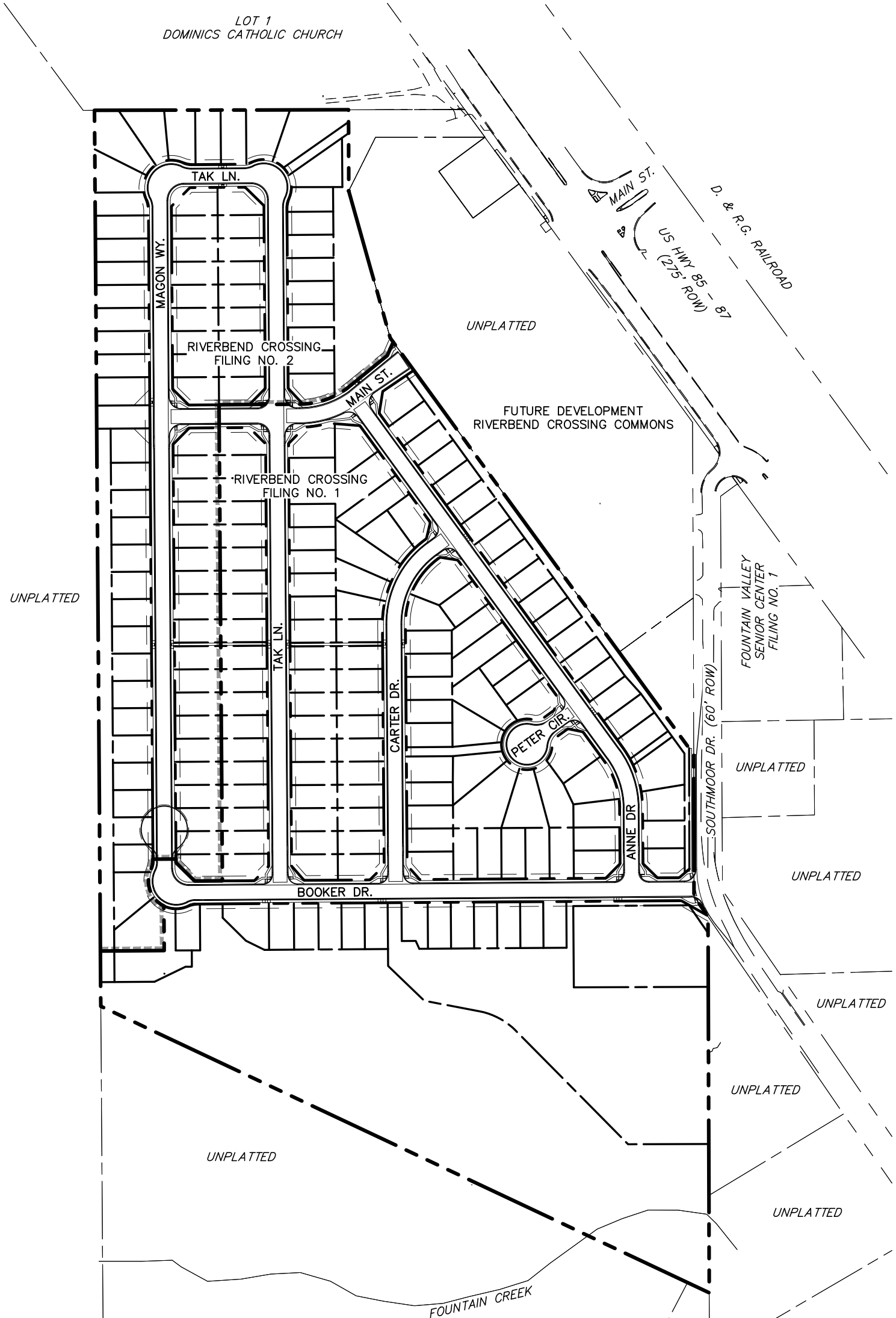
DESIGNED BY: MGP
SCALE: N/A
JOB NUMBER: 17-114
DRAWN BY: MGP
DATE: 03/30/21
SHEET: 1 OF 27

PCD FILE #: SF1844

RIVERBEND CROSSING FILING NO. 1

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

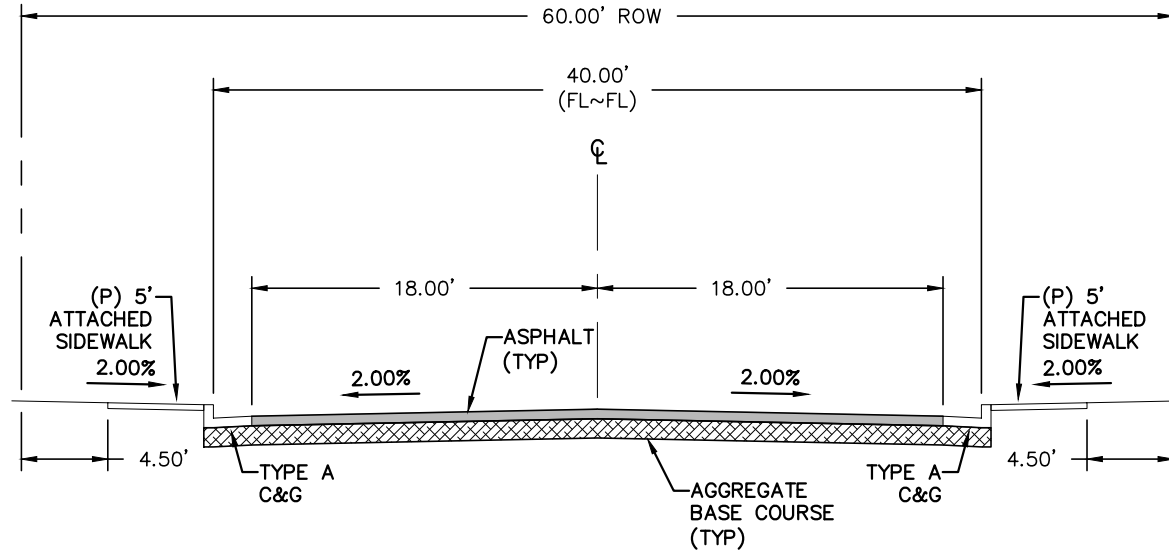
EL PASO COUNTY, COLORADO



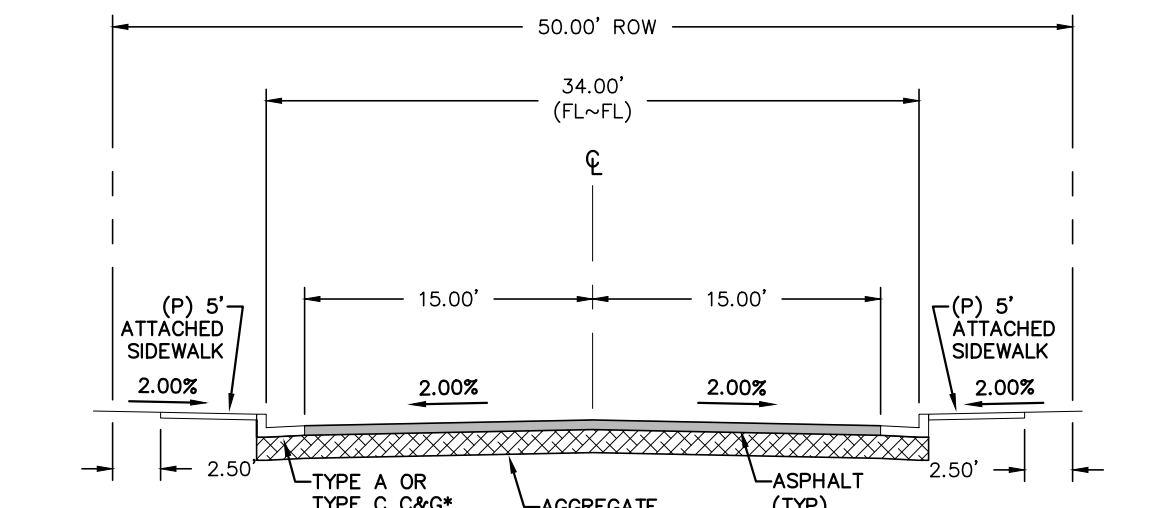
SITE MAP
SCALE: N.T.S.

LEGEND

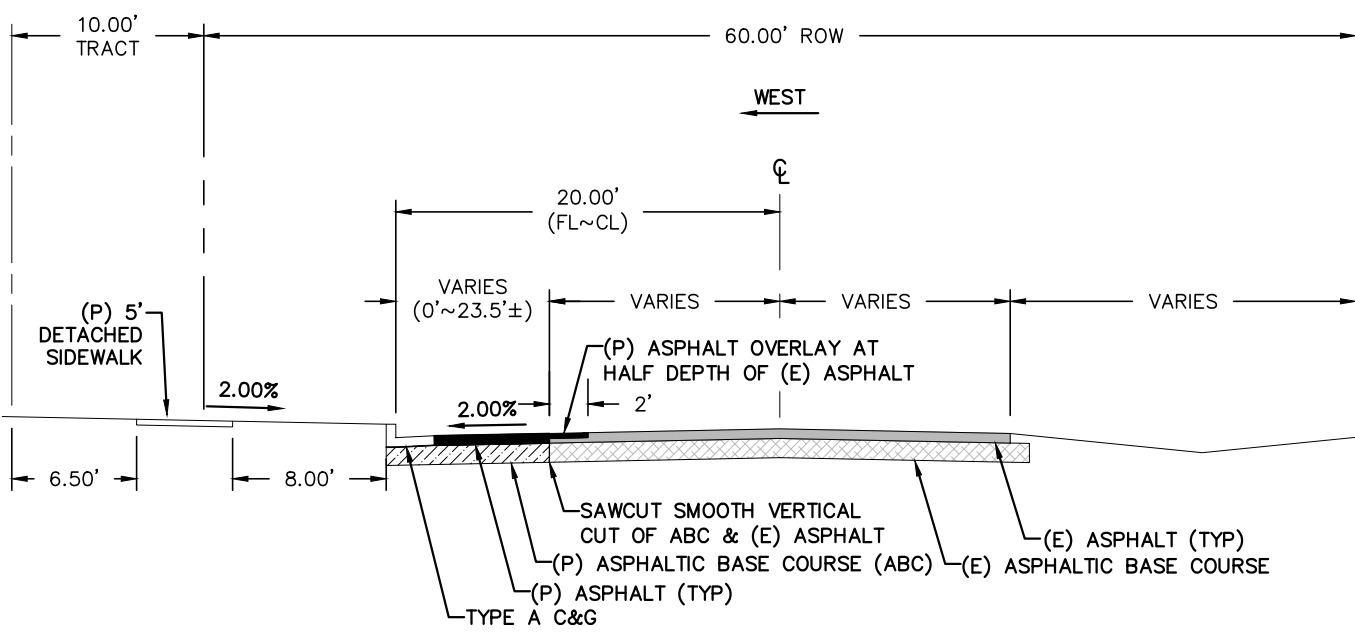
EXISTING	(E)	ALGEBRAIC DIFFERENCE	AD
PROPOSED	(P)	POINT OF VERTICAL INTERSECTION	PVI
CURB & GUTTER	C&G	STATION	STA
EASEMENT	ESMT	FLOWLINE	FL
PUBLIC	PUB	INTERSECTION-INTERSECTION	INT-INT
PUBLIC IMPROVEMENT	PI	BOUNDARY	---
BEGIN TRANSITION	BT	RIGHT-OF-WAY	----
EDGE OF ASPHALT	EOA	LOT LINE	----
GRADE BREAK	GB	EASEMENT	----
END TRANSITION	ET	(E) CONTOUR, INDEX	-----5700-----
CURB RETURN	CR	(E) CONTOUR	-----5700-----
POINT OF CURVATURE	PC	(E) STORM SEWER	-----5700-----
POINT OF TANGENCY	PT	(P) CONTOUR, INDEX	-----5700-----
POINT ON CURVE	POC	(P) CONTOUR	-----5700-----
POINT OF COMPOUND CURVATURE	PCC	(P) STORM SEWER, INLET, MH	-----5700-----
POINT OF REVERSE CURVATURE	PRC	INLET DETAIL CALL-OUT	-----5700-----
RADIUS POINT	RP	CURB RETURN RADIUS CALL-OUT	-----5700-----
TYPE 'A' CURB AND GUTTER	[A]	GRADE CALL-OUT	-----5700-----
TYPE 'C' CURB AND GUTTER, OPTIONAL	[C]	SPOT ELEVATION	-----5700-----



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



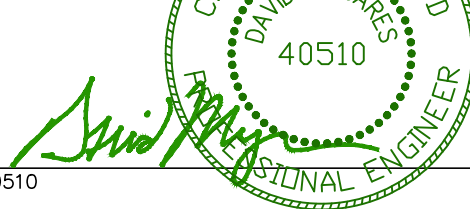
TYPICAL SECTION - URBAN LOCAL
(*SEE PLANS FOR LOCATIONS)
SCALE: N.T.S.



SOUTHMOOR DRIVE WIDENING DETAIL - URBAN 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 PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART OR THE PART OF ANY OTHER PERSONS IN THE DETAILED 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."

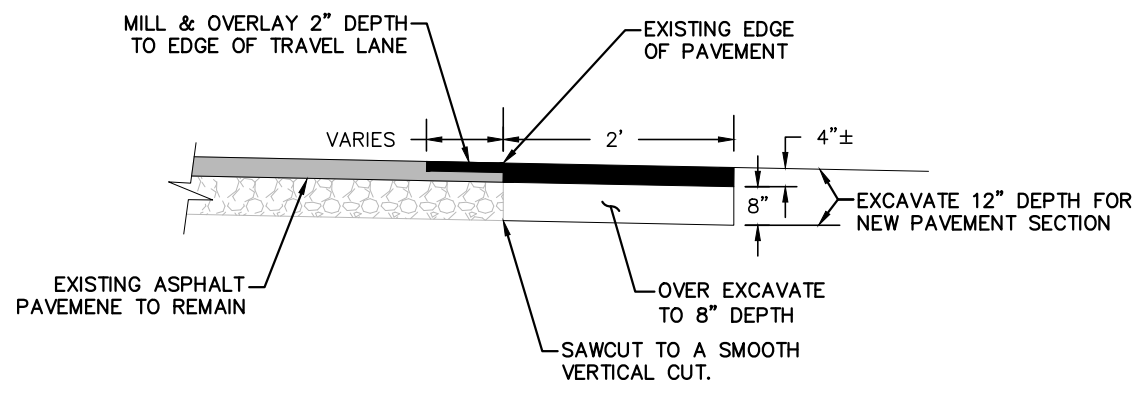
IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

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

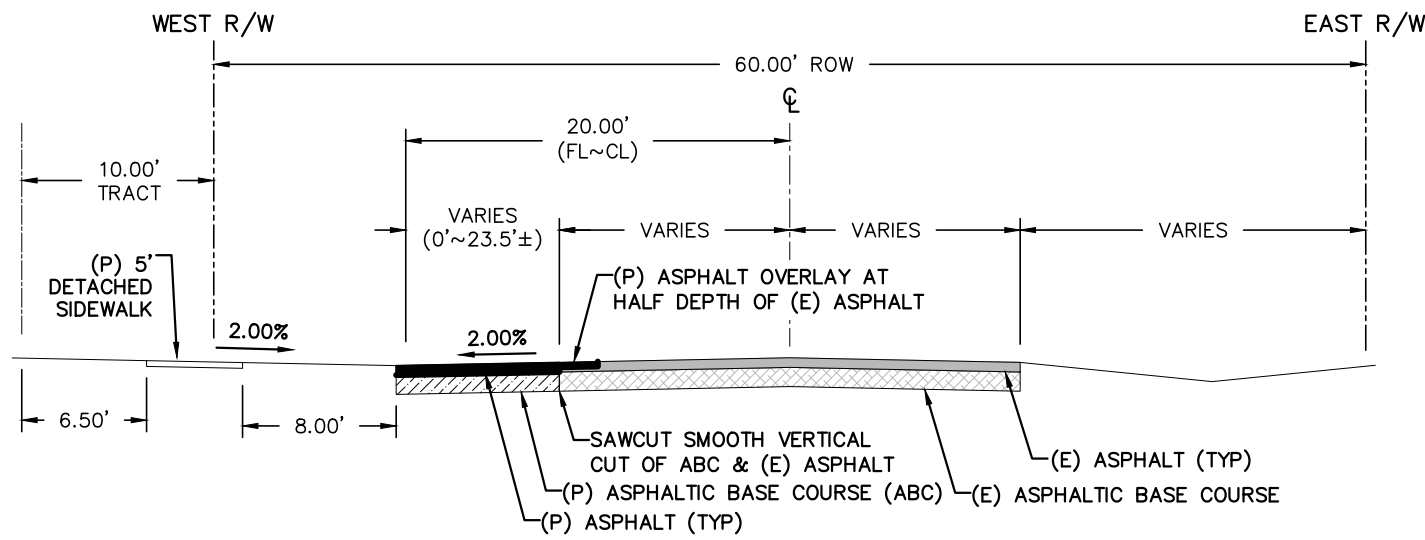
DATE

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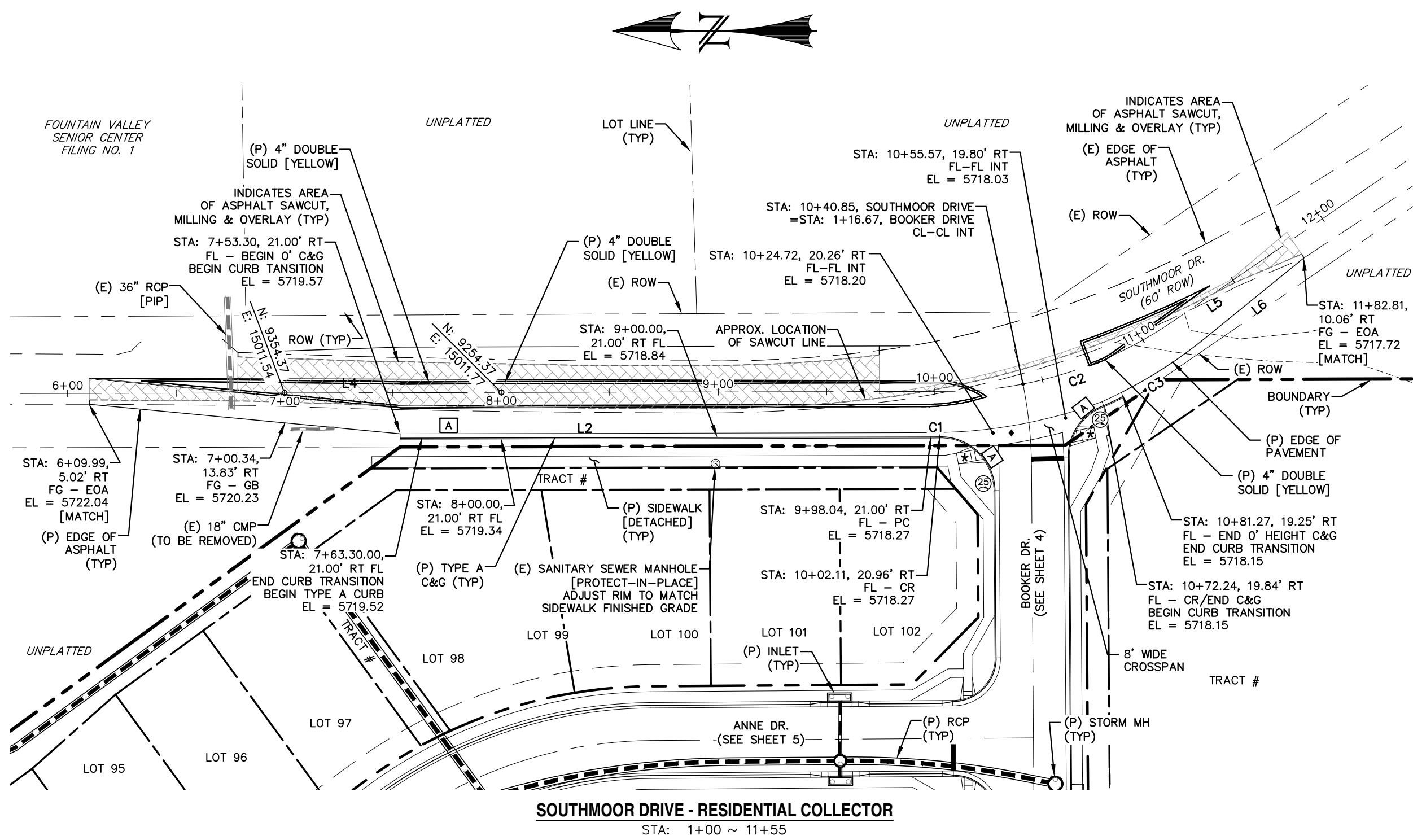
MILL & OVERLAY W/ T-PATCH JOINT DETAIL
SCALE: N.T.S.



SOUTHMOOR DRIVE W/O CURB & GUTTER-WIDENING DETAIL URBAN RESIDENTIAL COLLECTOR
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.



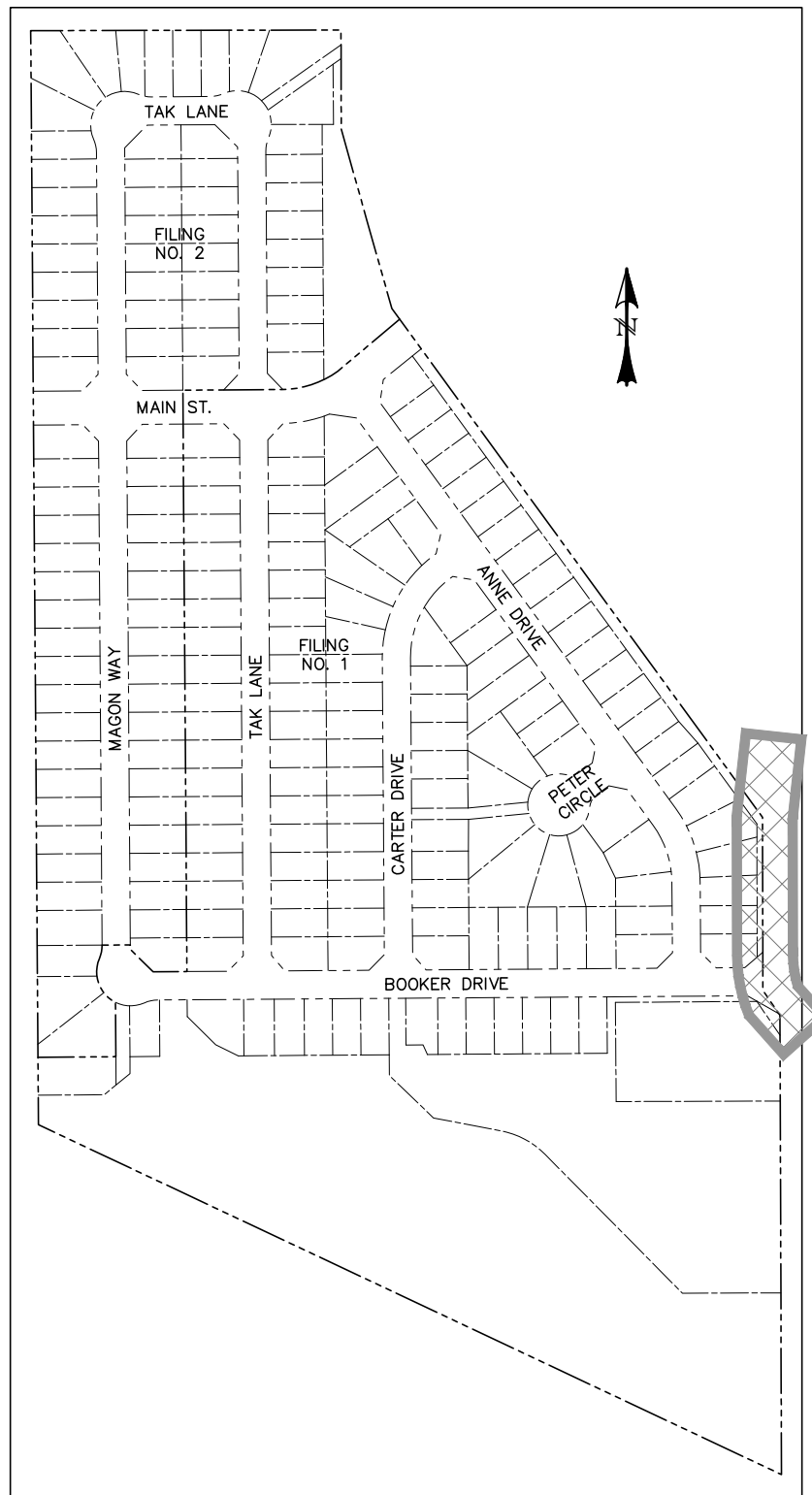
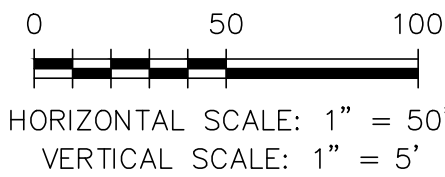
SOUTHMOOR DRIVE - RESIDENTIAL COLLECTOR
STA: 1+00 ~ 11+55

NOTE: SEE SHEETS 19 & 20 FOR PEDESTRIAN RAMP DETAILS

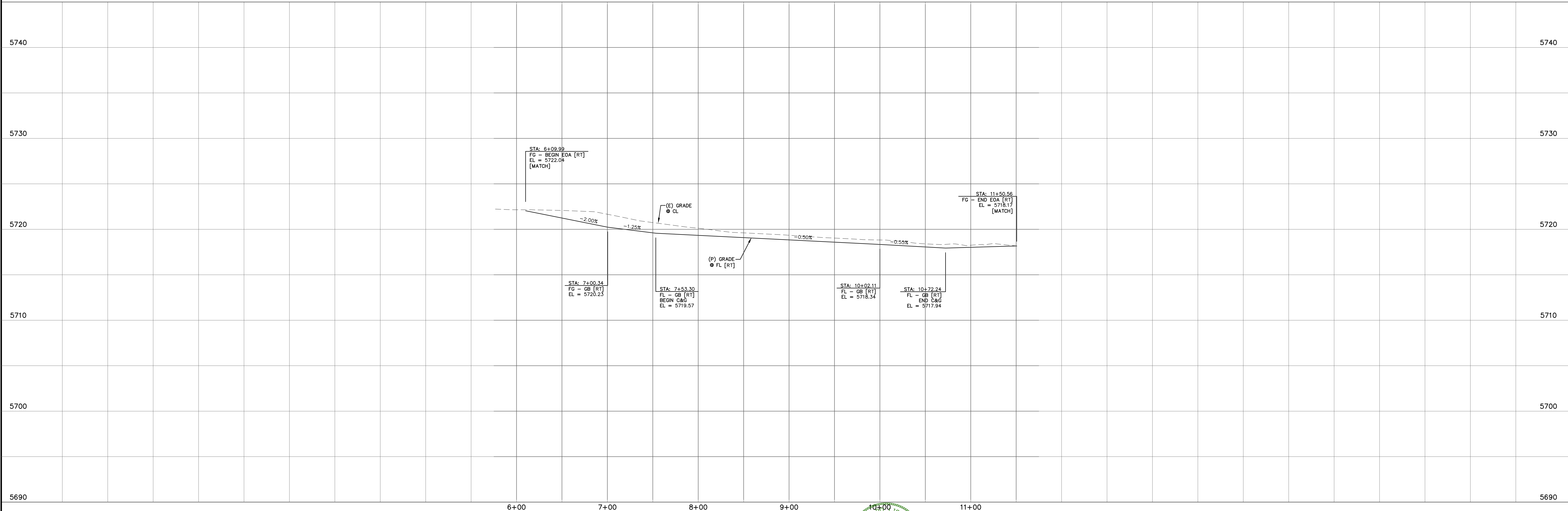
- ★ PED INTERSECTION RAMP
(REF: SD 2-41 & SD 2-42)
- ◆ STANDARD CROSSPAN
(REF: SD 2-26)

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



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
CLL-DE-SAC - FL = CDS

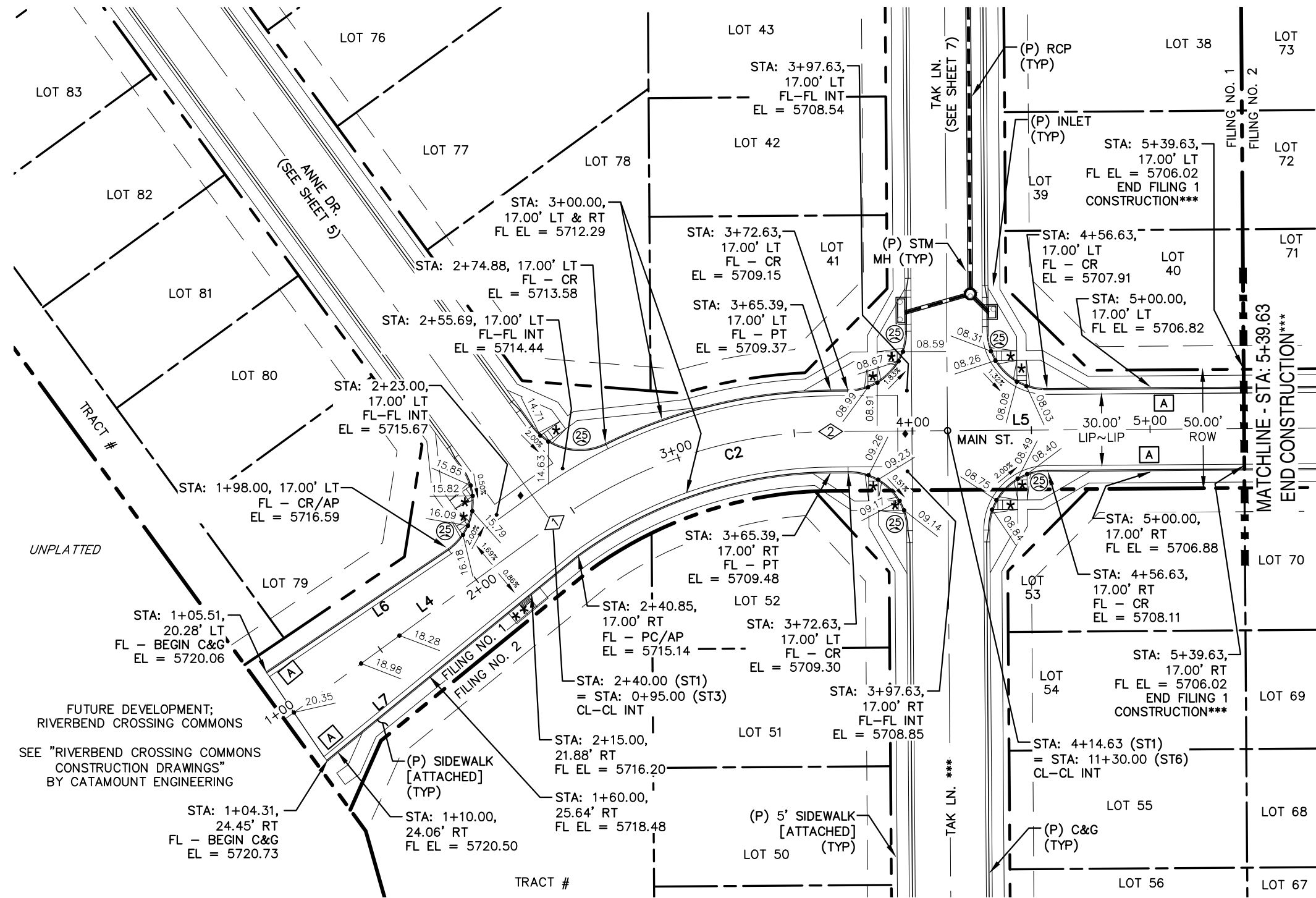
PREPARED FOR:
AVATAR EQUITIES, LLC
6800 JERICHO TURNPIKE
SUITE 120W #204
SYOSSET, NY 11791

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



RIVERBEND CROSSING
FILING NO. 2
SOUTHMOOR DRIVE
STREET IMPROVEMENT PLAN

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

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

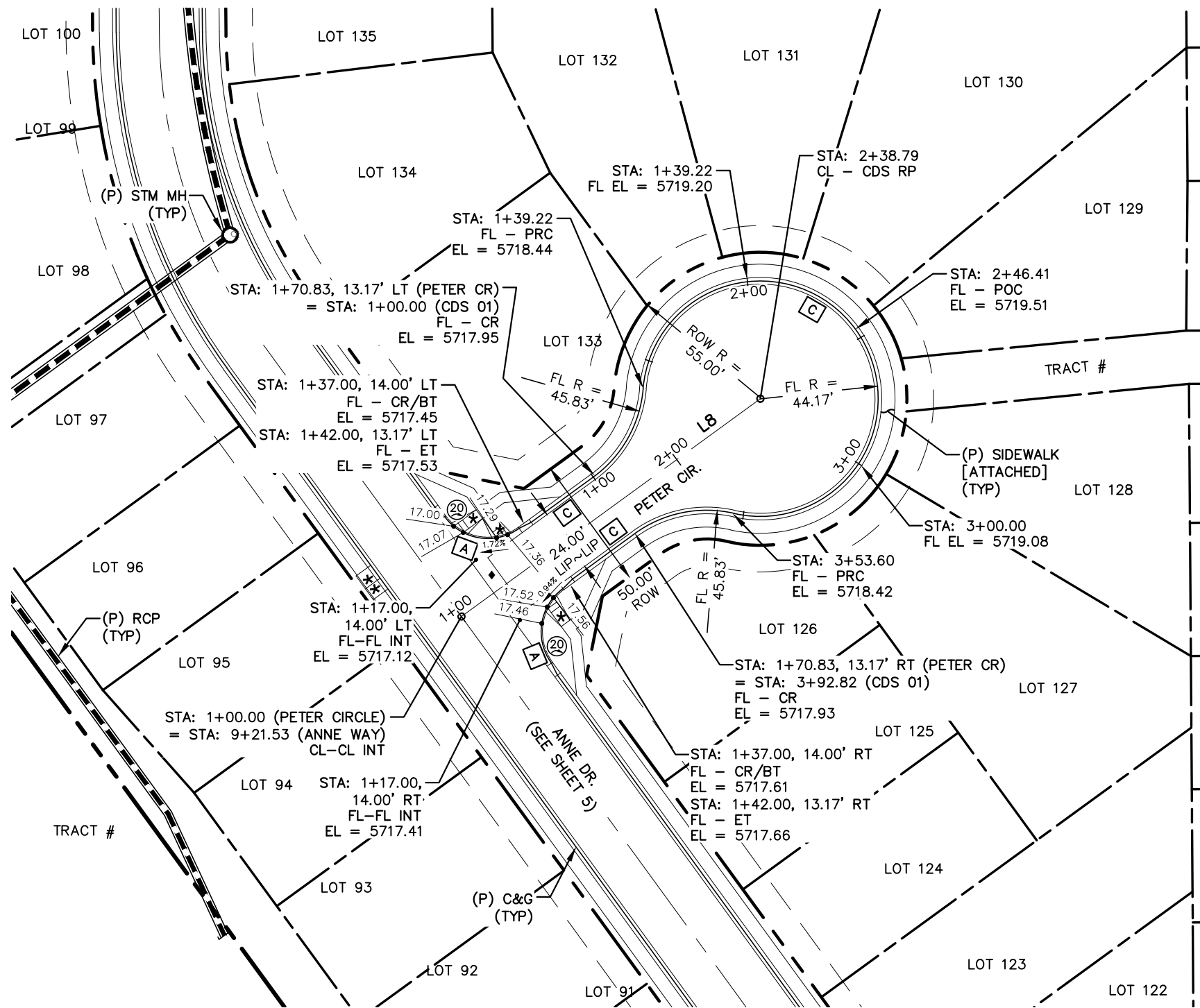
LINE TABLE - CL		
LINE	BEARING	DISTANCE
L4	S53° 55' 10"W	140.85
L5	S89° 35' 49"W	174.24
L8	S53° 55' 25"W	138.79

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

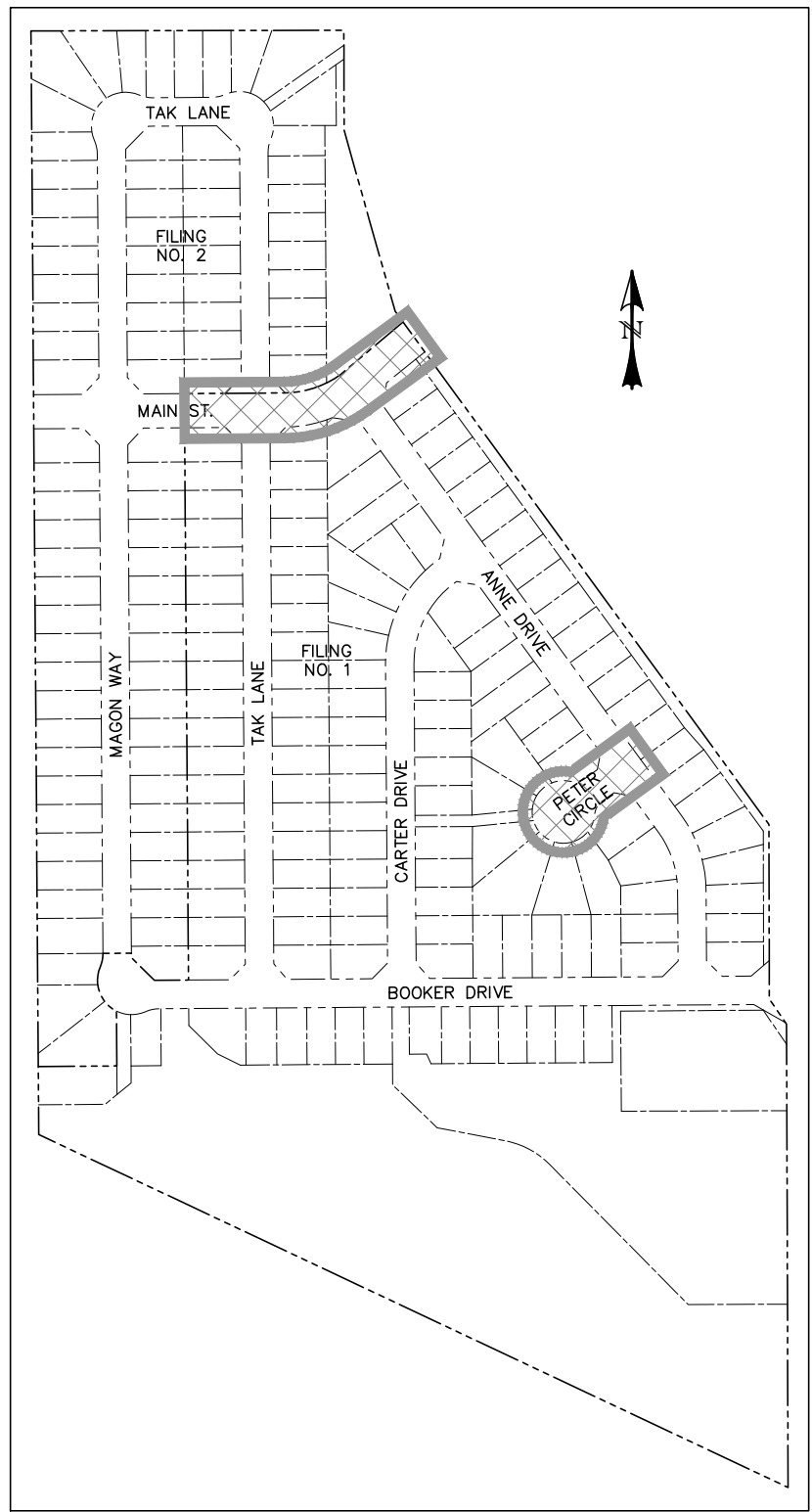
LINE TABLE - FL		
LINE	BEARING	DISTANCE
L6	S55° 57' 05"W	92.55
L7	S50° 47' 48"W	136.74

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

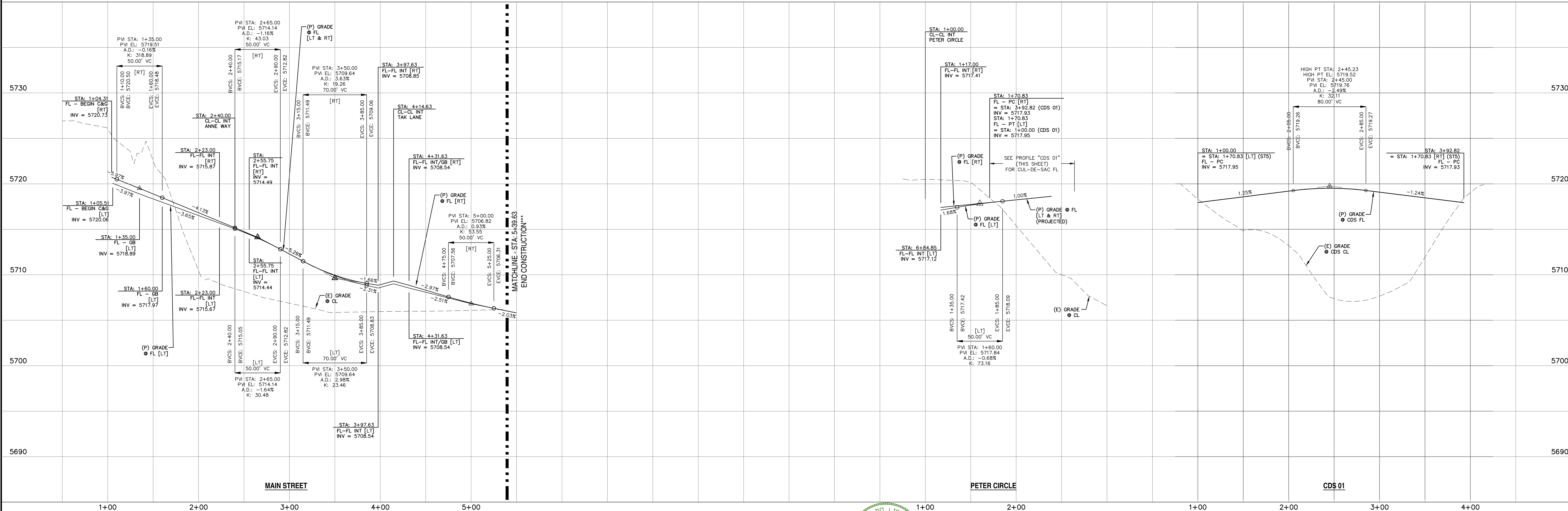
NOTE: SEE SHEETS 20 & 21 FOR PEDESTRIAN RAMP DETAILS



0 50 100
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

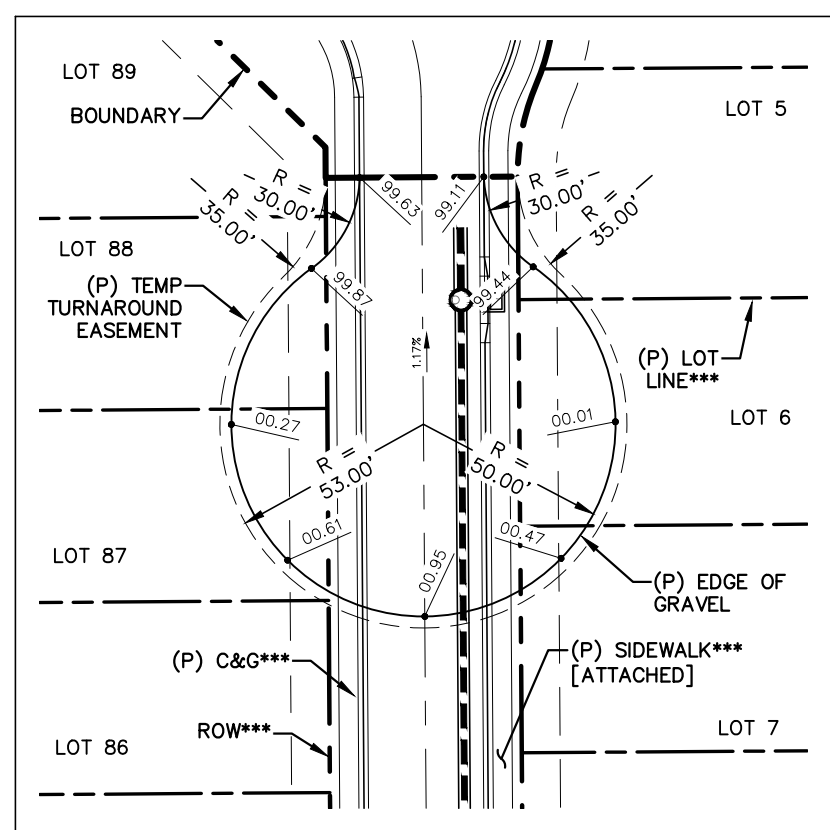
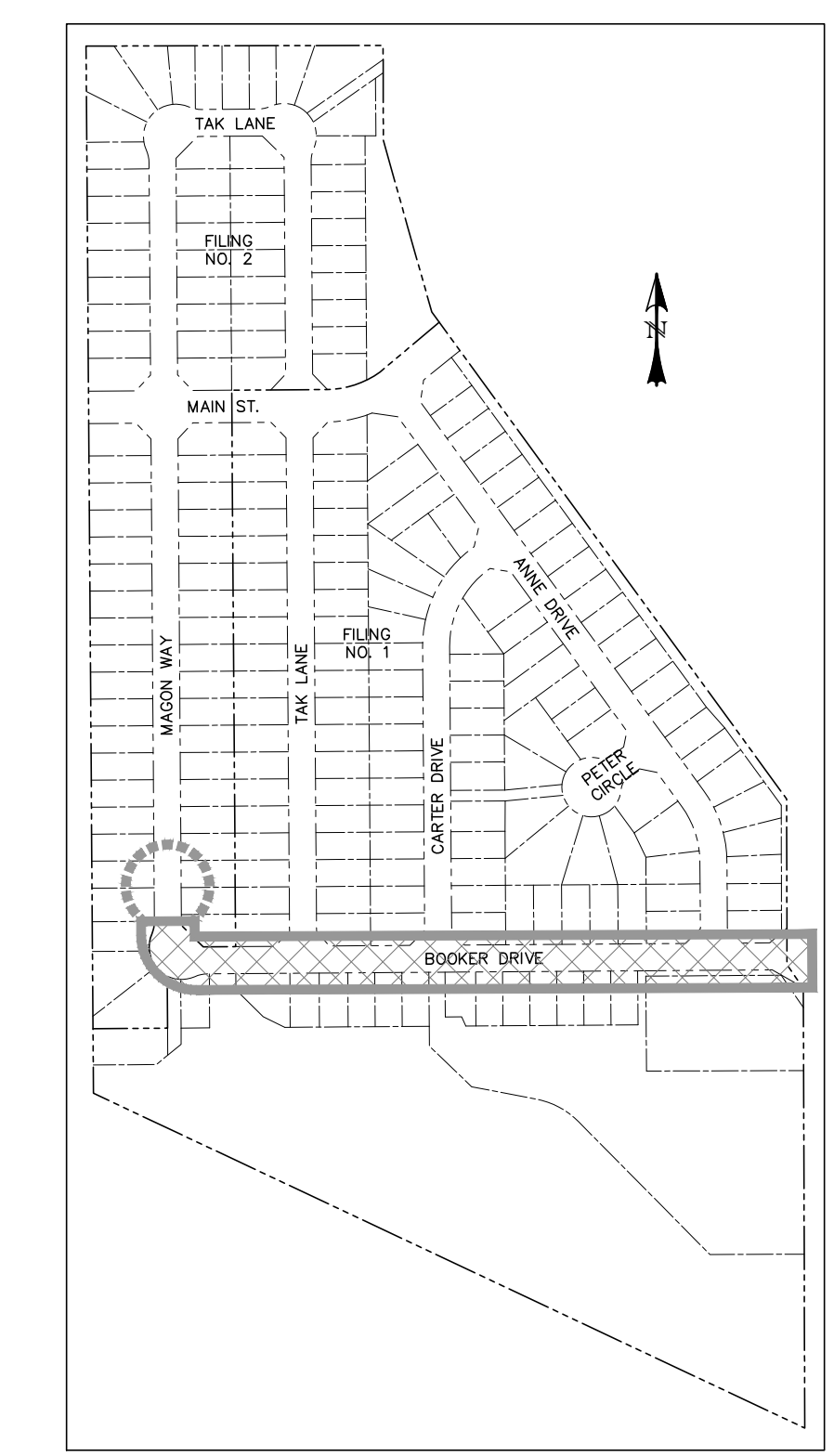
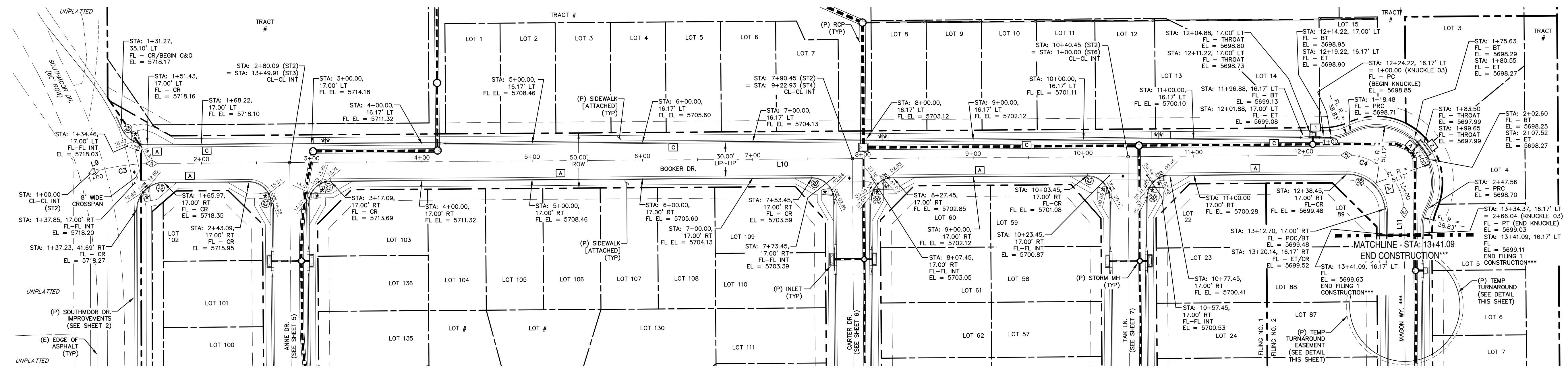
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER NO. 40510
10/19/20
DATE

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

RIVERBEND CROSSING FILING NO. 2 MAIN STREET & PETER CIRCLE STREET IMPROVEMENT PLAN		DESIGNED BY: MGP SCALE: 1" = 50' JOB NUMBER: 17-114	DRAWN BY: MGP DATE: 03/30/21 SHEET: 3 OF 27
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\\catamount\shared\projects\17-114_Riverbend_Crossing\Drawings\17-114_Riverbend_Crossing_Sheet_21.dwg, 10/19/2020, 10:28:29 AM, 8/17/20

\\catamount\shared\projects\17-114_Riverbend_Crossing\Drawings\17-114_Riverbend_Crossing_Sheet_21.dwg, 10/19/2020, 10:28:29 AM, 8/17/20



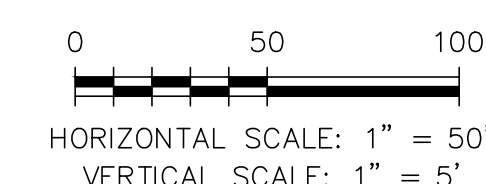
- * PED INTERSECTION RAMP (REF: SD 2-41 & SD 2-42)
- ** PARALLEL PED RAMP (REF: SD 2-50)
- ♦ STANDARD CROSSSPAN (REF: SD 2-26)

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

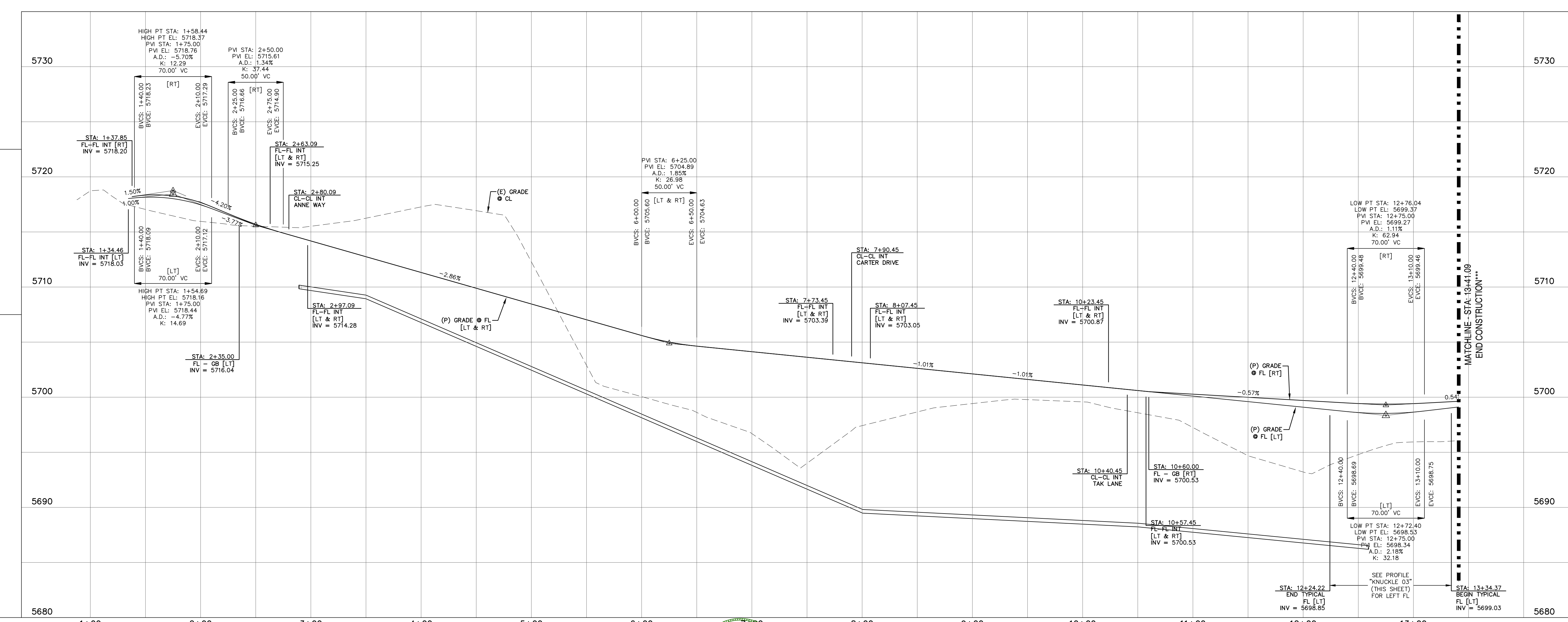
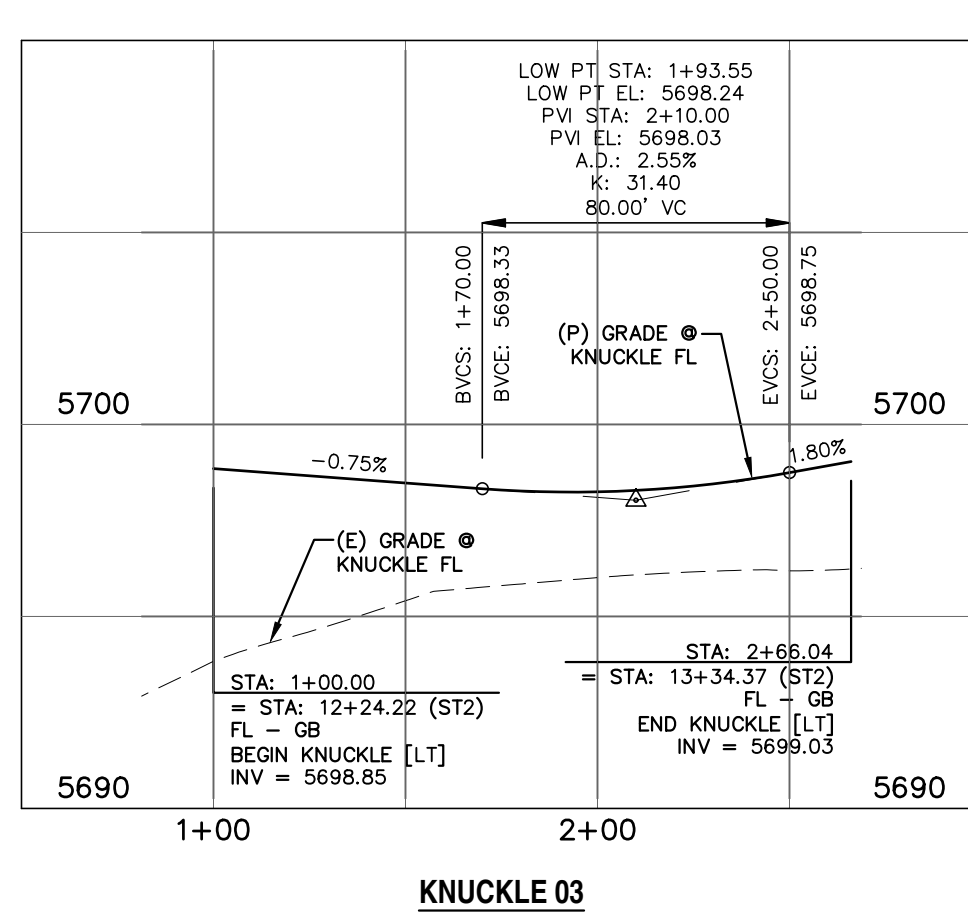
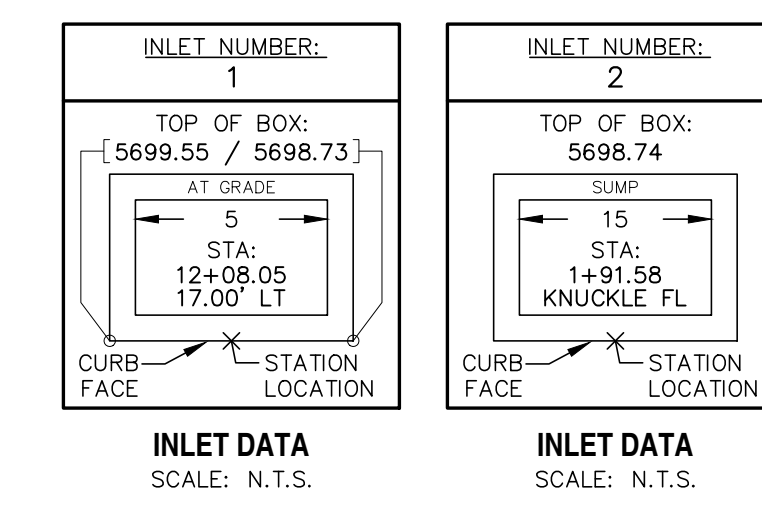
CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C3	15°14'16"	200.00	53.19
C4	90°00'00"	52.00	81.68

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. 1

DESCRIPTION ADDRESS AGENCY COMMENTS

DATE 08/17/20

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ANNE DRIVE = S13
CARTER DRIVE = S14
PETER CIRCLE = S15
TAK LANE = S16
MAZON WAY = S17
CUL-DE-SAC = FL = CDS

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

PREPARED UNDER CONTRACT AND FOR AND BEHALF OF CATAMOUNT ENGINEERING.

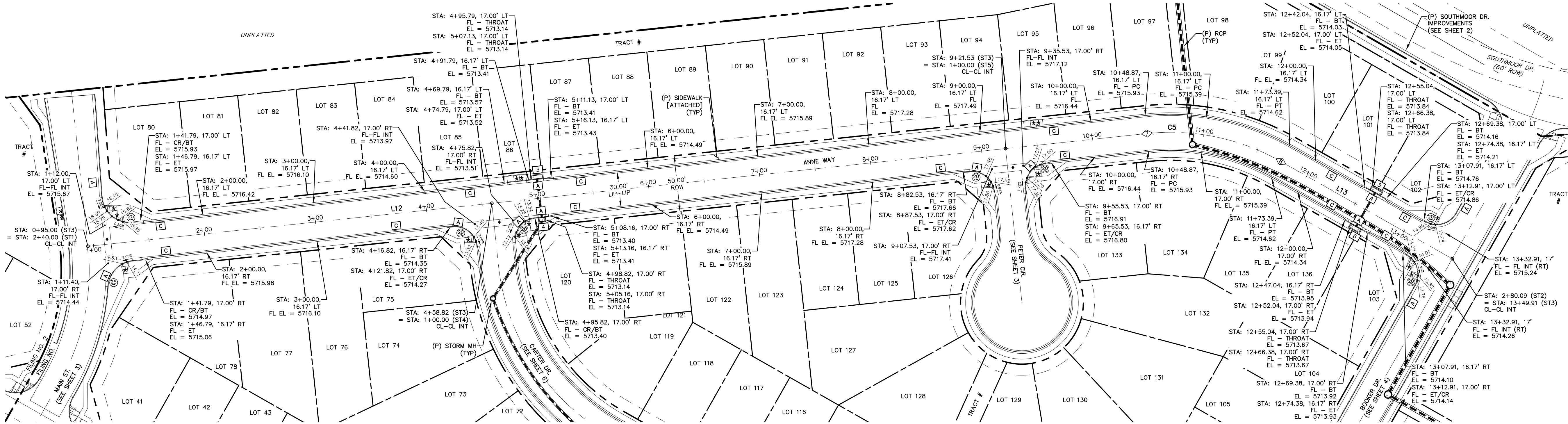
DAVID L. MAJARES, LICENSED PROFESSIONAL ENGINEER NO. 40510
10/19/20
DATE

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

RIVERBEND CROSSING
FILING NO. 2
BOOKER DRIVE
STREET IMPROVEMENT PLAN

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

DRAWN BY: MGP
DATE: 03/30/21
SHEET 4 OF 27

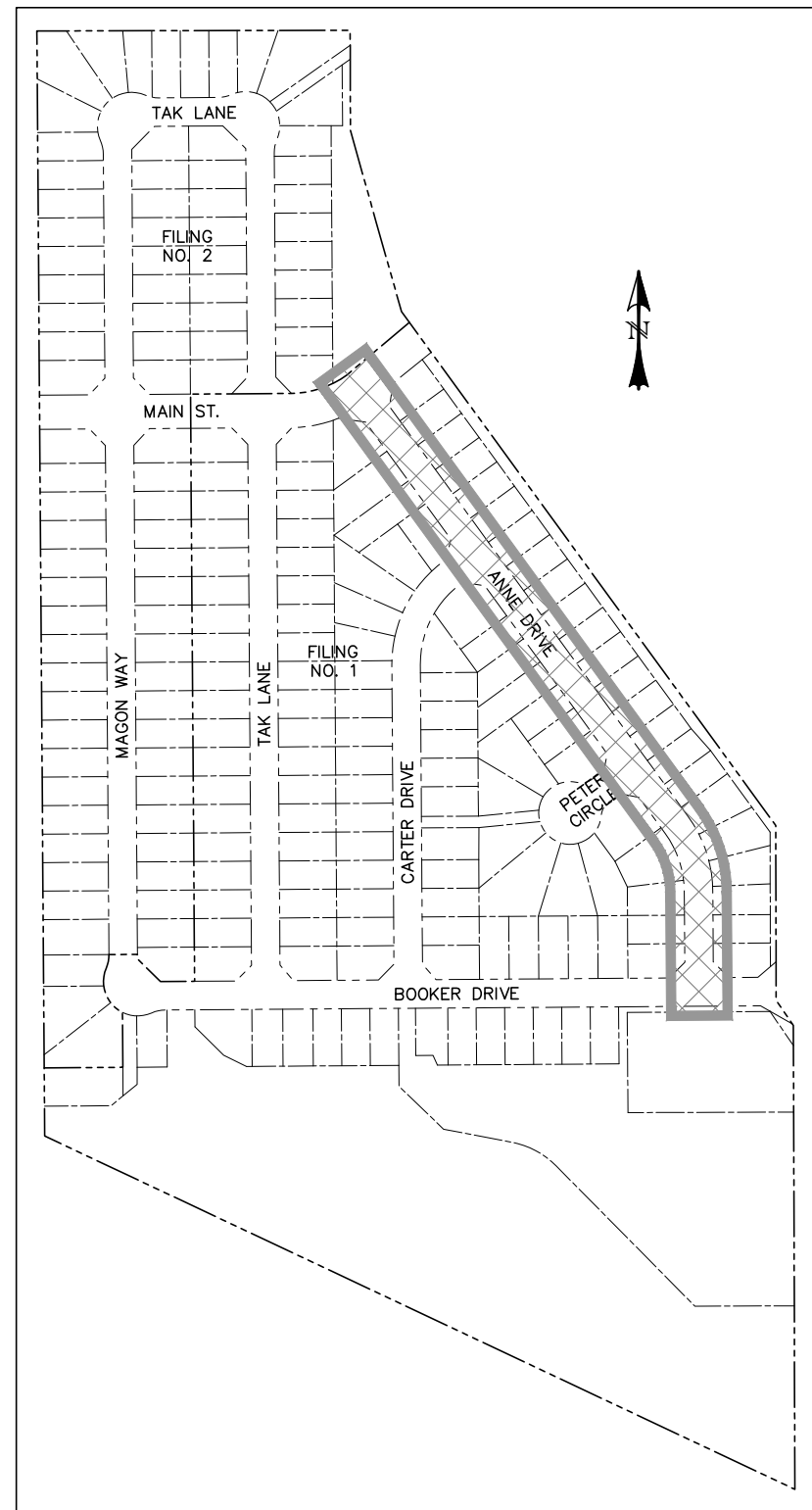


- * PED INTERSECTION RAMP
(REF: SD 2-41 & SD 2-42)
- ** PARALLEL PED RAMP
(REF: SD 2-50)
- ♦ STANDARD CROSSPAN
(REF: SD 2-26)

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

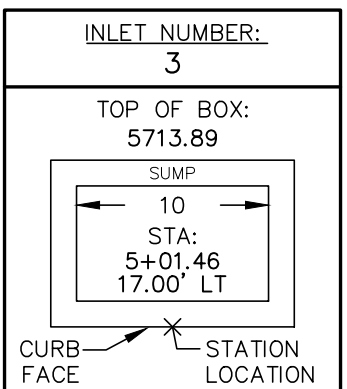
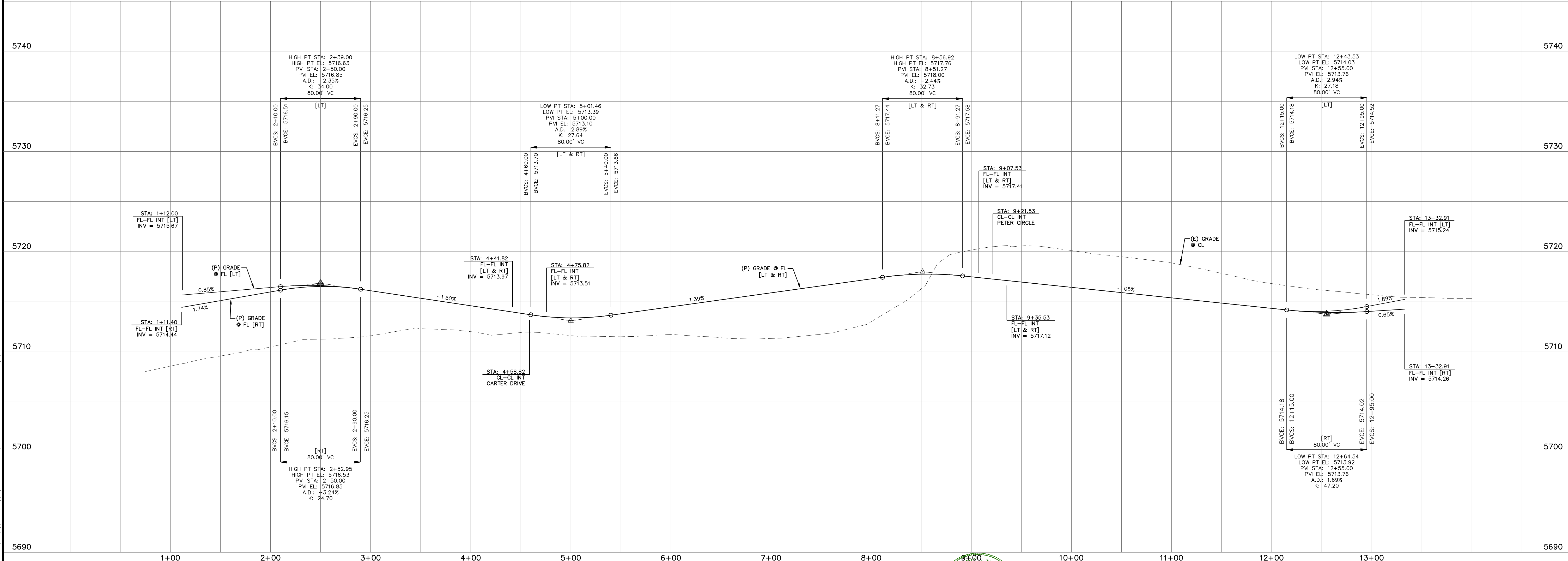
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



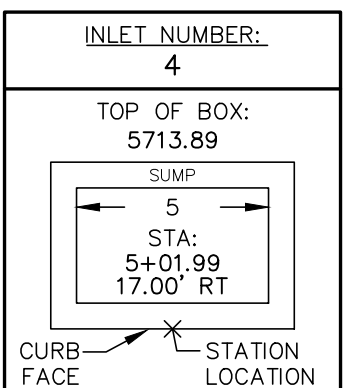
LOCATION MAP
SCALE: N.T.S.

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

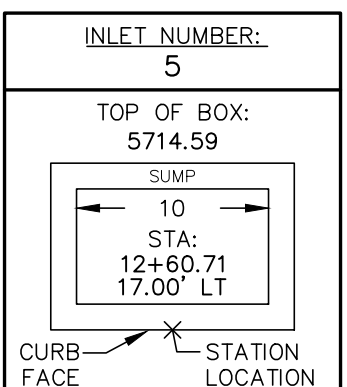
NOTE: SEE SHEETS 20 & 21 FOR PEDESTRIAN RAMP DETAILS



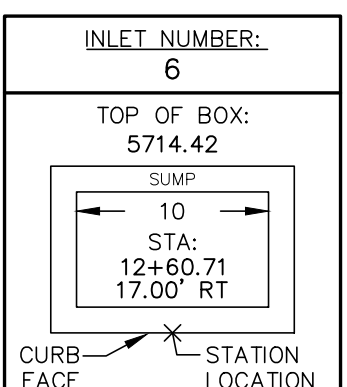
INLET DATA
SCALE: N.T.S.



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

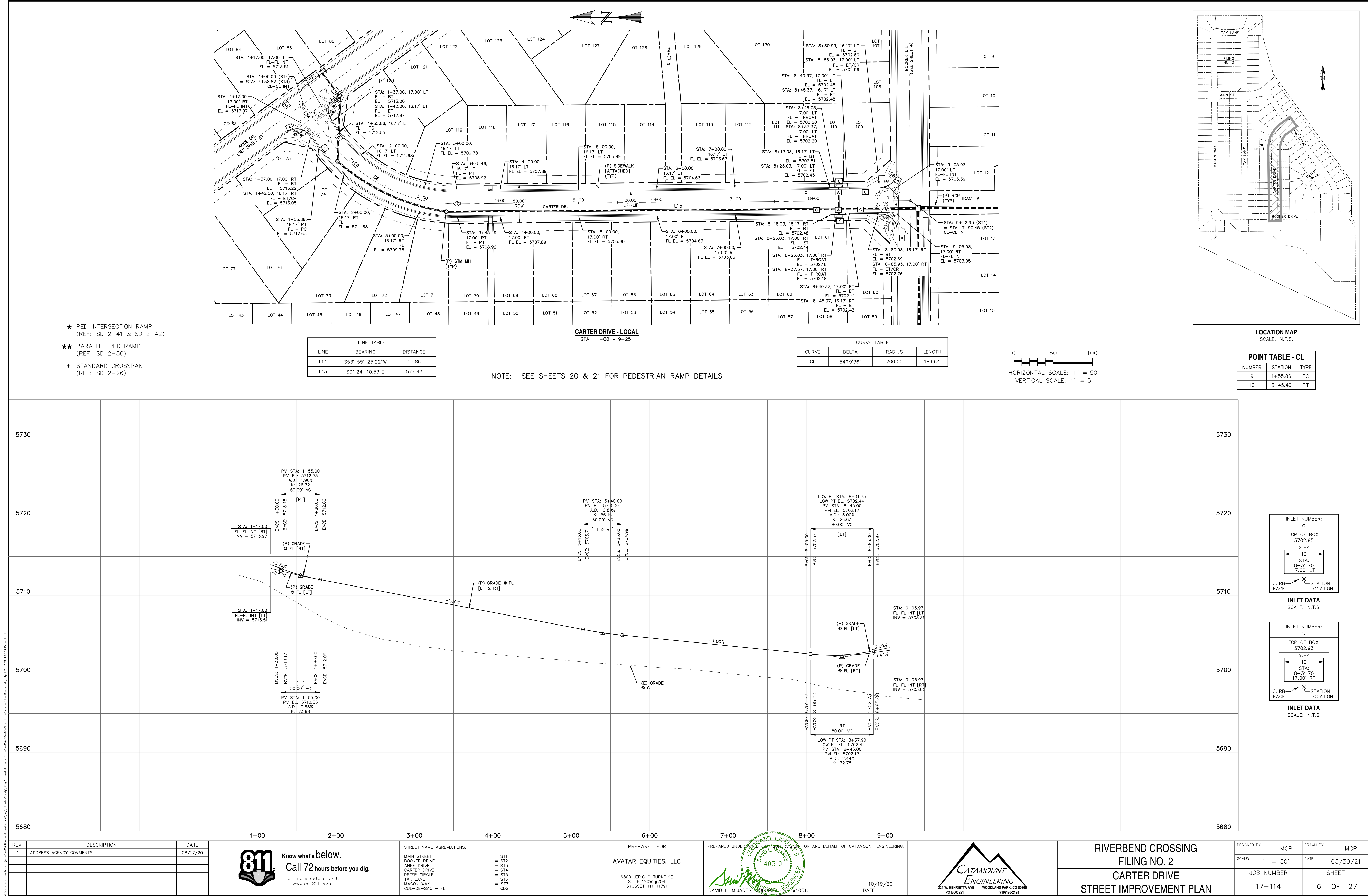
PREPARED FOR:
AVATAR EQUITIES, LLC
6800 JERICHO TURNPIKE
SUITE 120W #204
SYOSSET, NY 11791

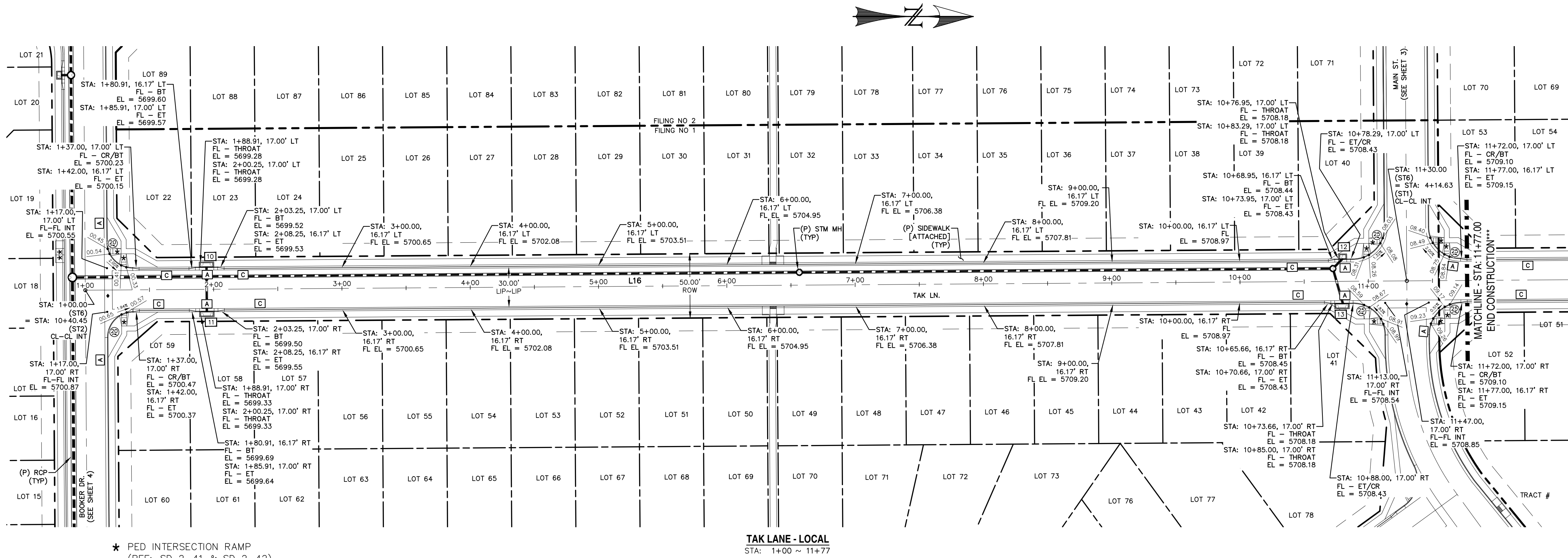
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.
DAVID L. MIJARES
40510
10/19/20
DATE

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

RIVERBEND CROSSING
FILING NO. 2
ANNE DRIVE
STREET IMPROVEMENT PLAN

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





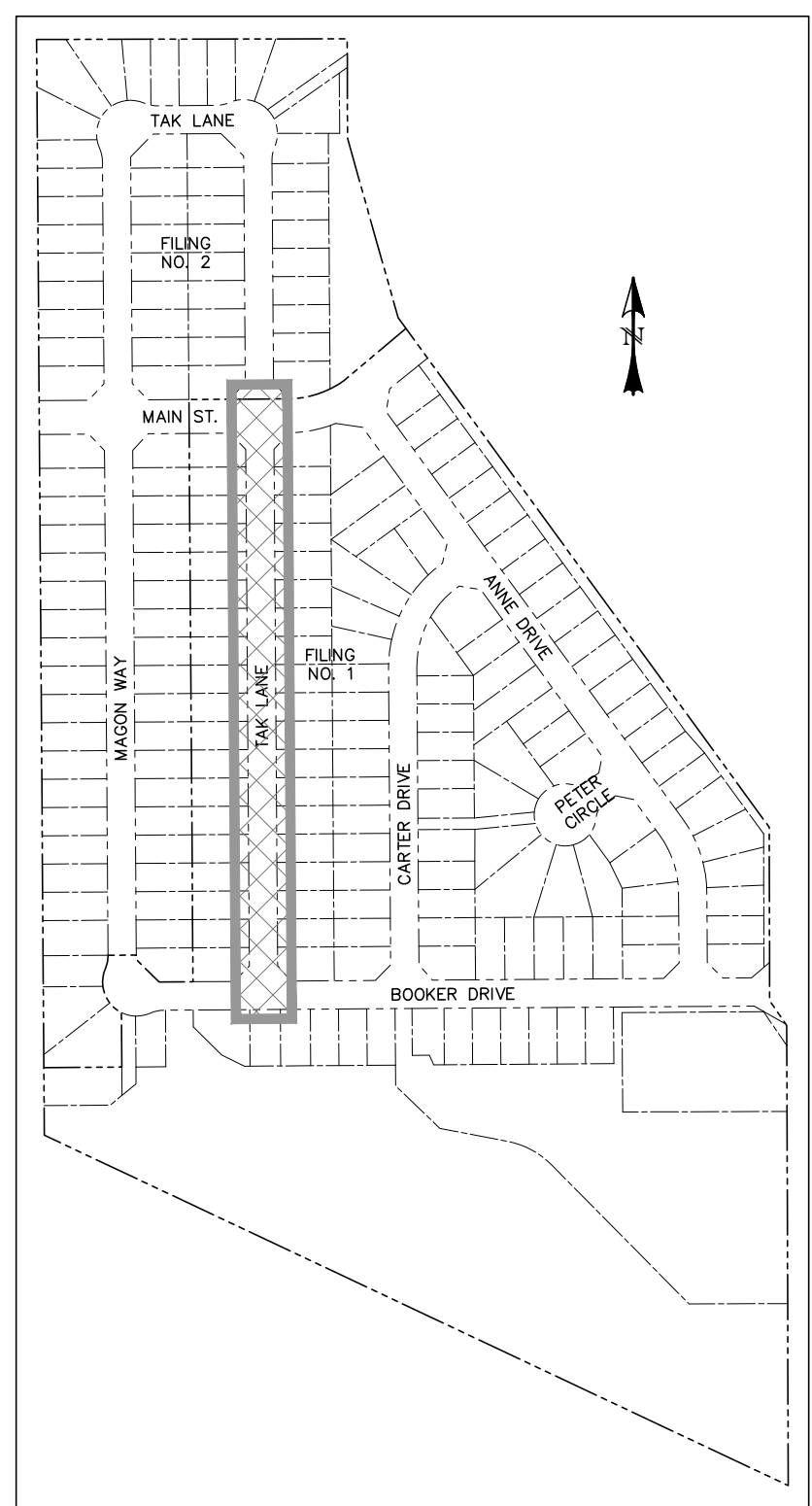
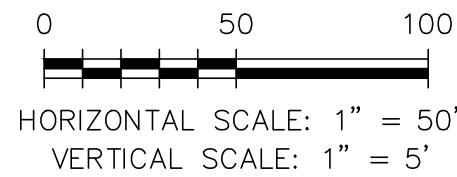
- ★ PED INTERSECTION RAMP
(REF: SD 2-41 & SD 2-42)
- ★★ PARALLEL PED RAMP
(REF: SD 2-50)
- ◆ STANDARD CROSSSPAN
(REF: SD 2-26)

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

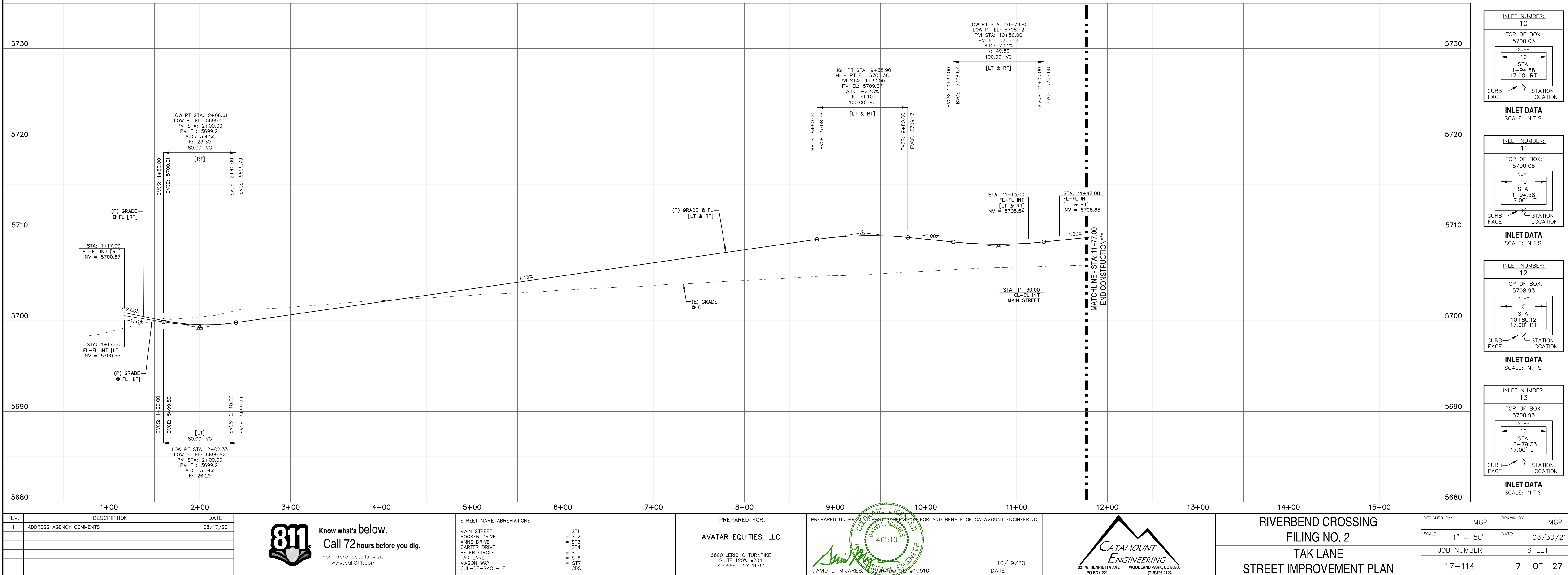
TAK LANE - LOCAL
STA: 1+00 ~ 11+77

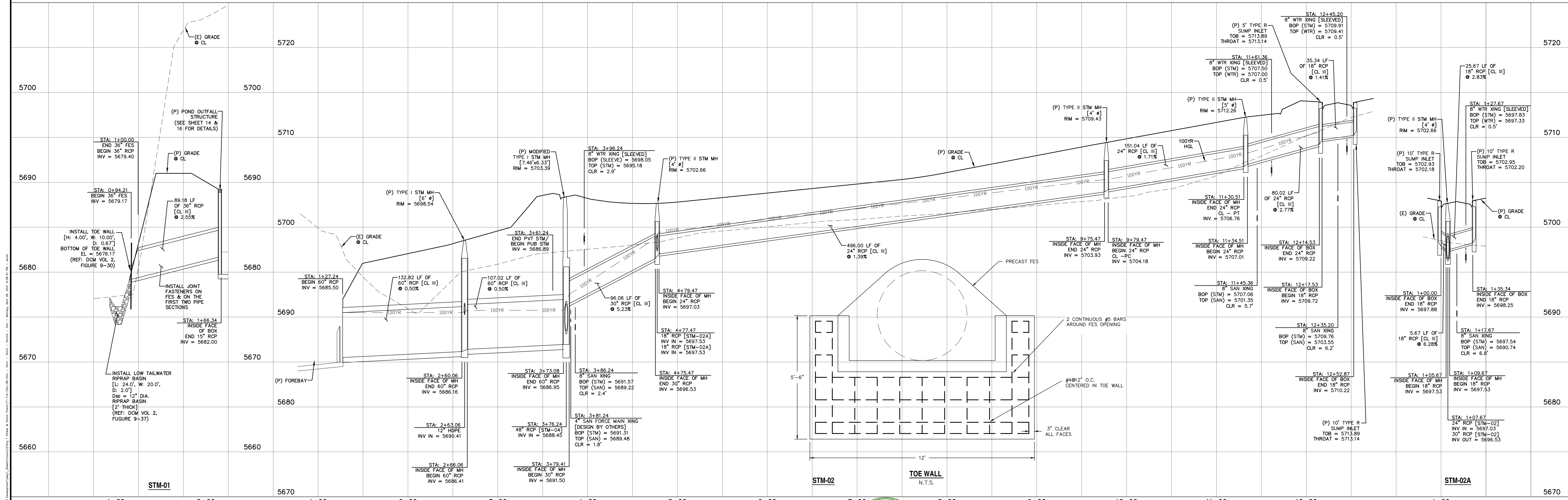
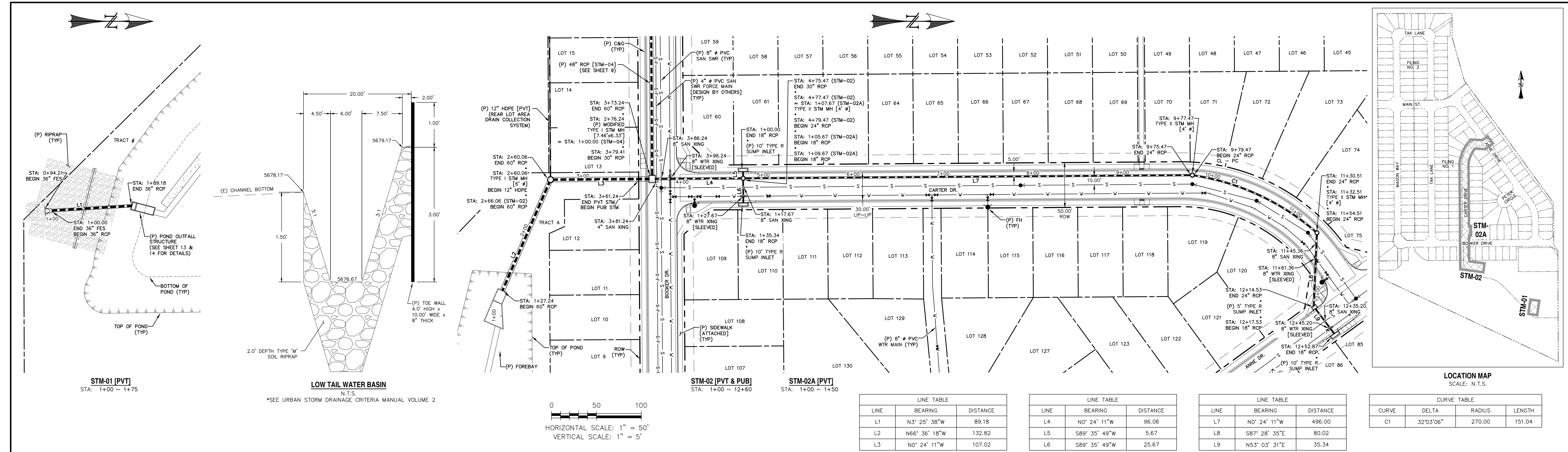
NOTE: SEE SHEETS 20 & 21 FOR PEDESTRIAN RAMP DETAILS

*** 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. 1	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



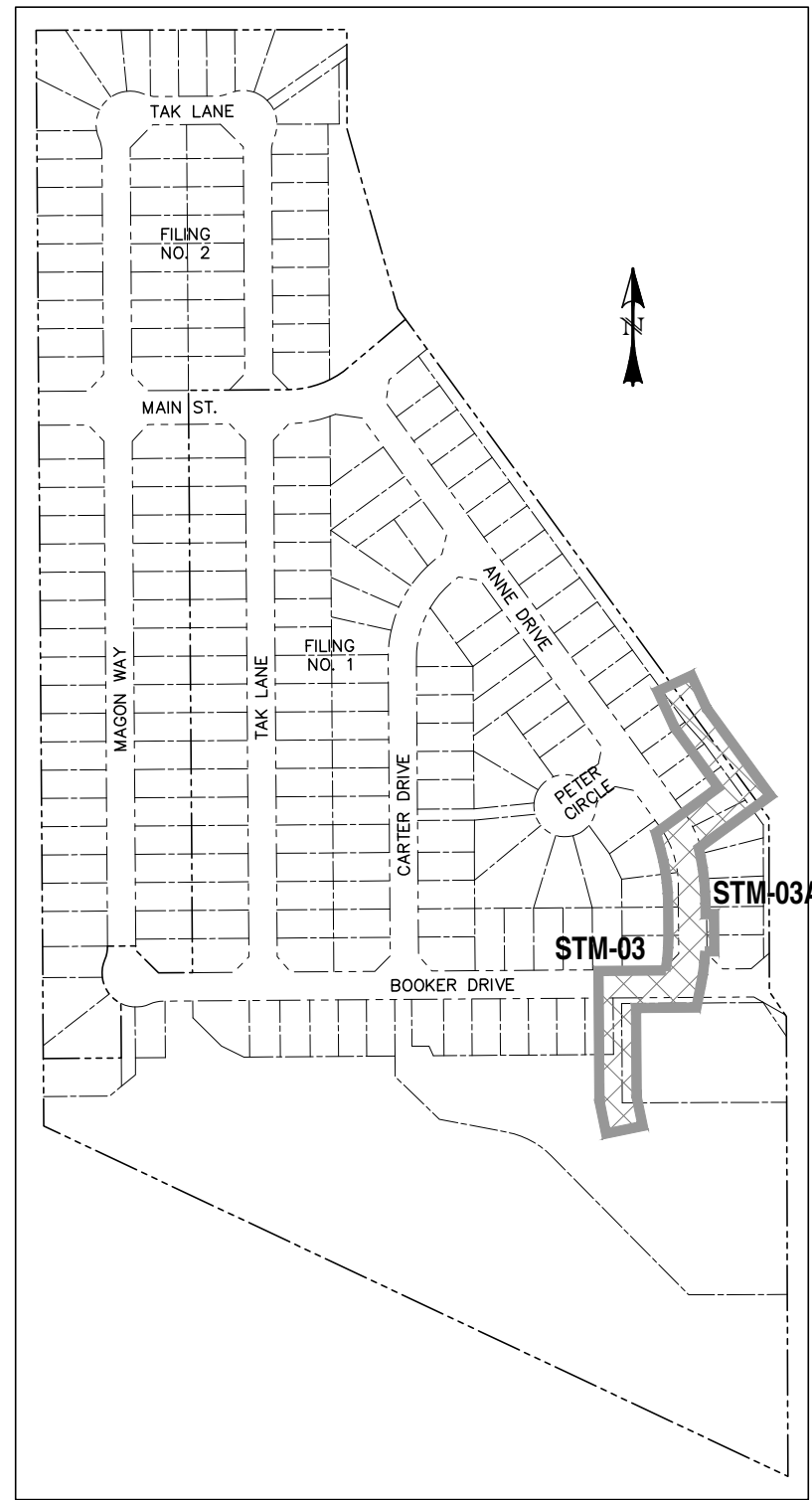
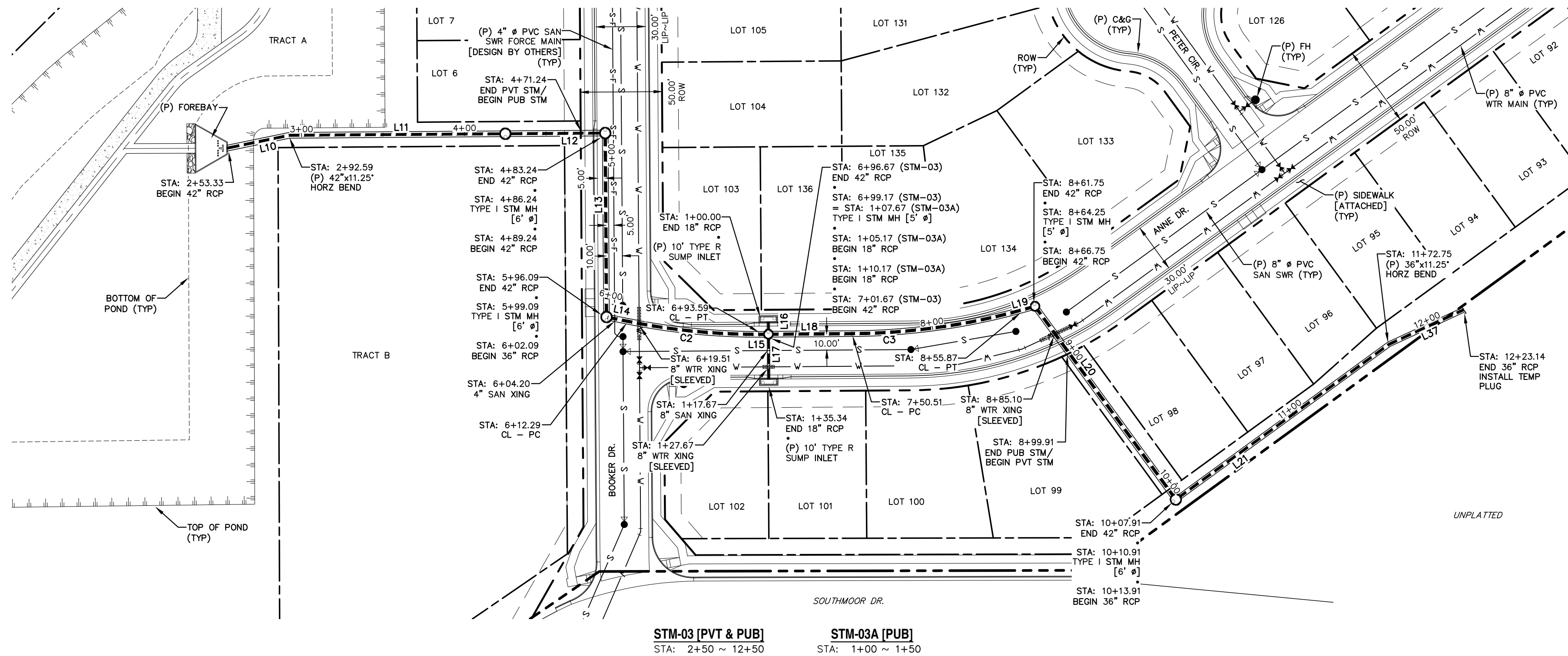
RIVERBEND CROSSING
FILING NO. 2
STORM SEWER
PLAN & PROFILE

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

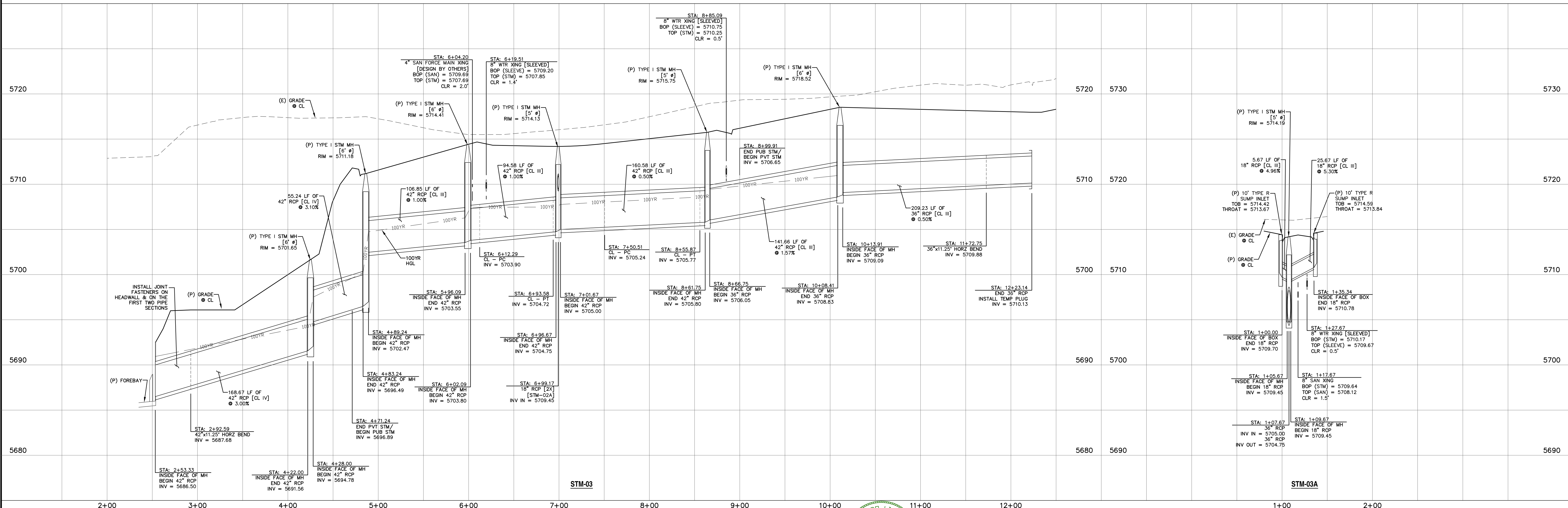
LINE TABLE		
LINE	BEARING	DISTANCE
L10	N11° 39' 11"W	39.27
L11	N0° 24' 11"W	129.41
L12	N0° 24' 11"W	55.24
L13	N89° 35' 49"E	106.85
L14	S11° 29' 15"W	10.20
L15	N0° 09' 27"W	3.08
L16	S89° 35' 49"W	5.17
L17	N89° 35' 49"E	25.17
L18	N0° 24' 11"W	48.85
L19	N15° 29' 41"W	5.88
L20	N53° 55' 25"E	141.16
L21	N36° 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.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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

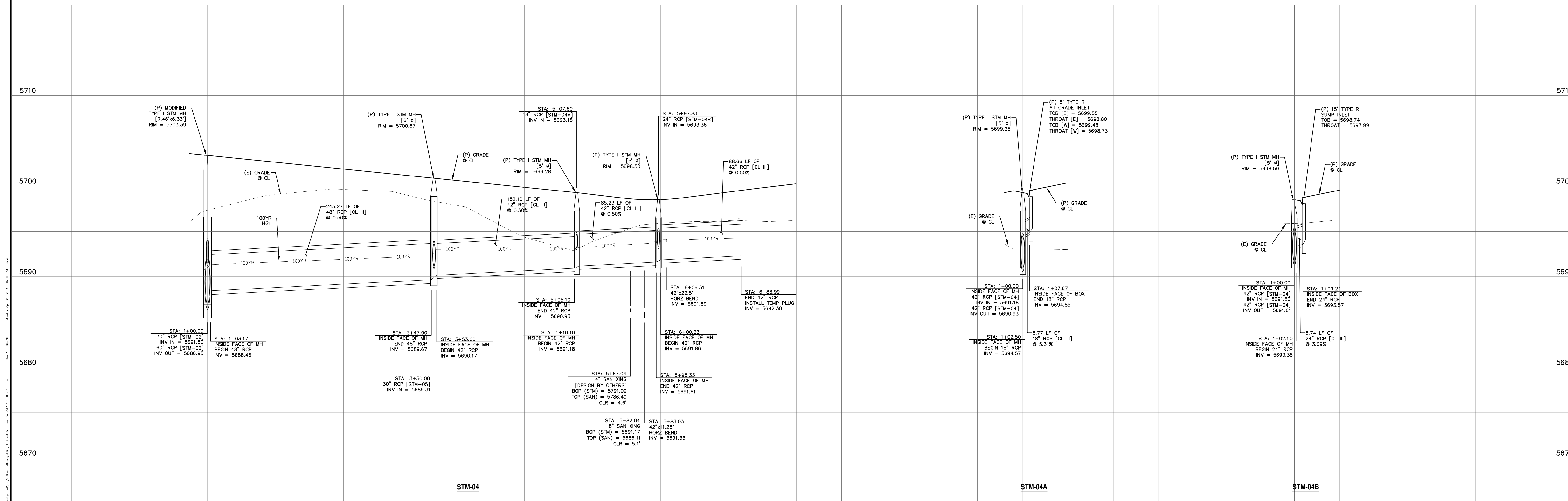
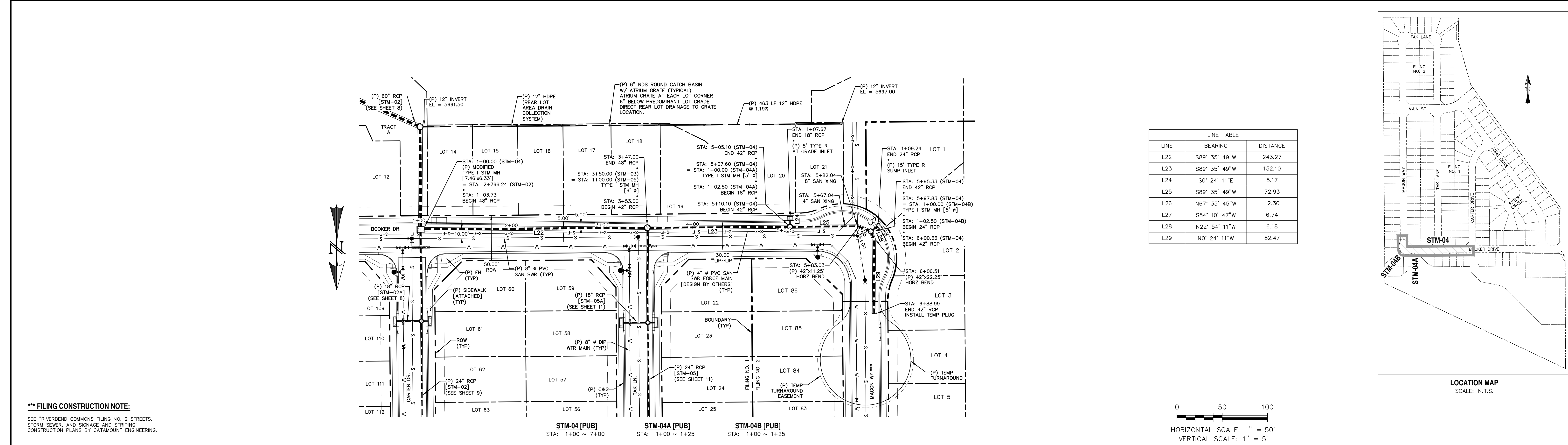
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.
DAVID L. MUJARES, LICENSED PROFESSIONAL ENGINEER
40510
10/19/20
DATE

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

RIVERBEND CROSSING
FILING NO. 2
STORM SEWER 03 & 03A
PLAN & PROFILE

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

DRAWN BY: MGP
DATE: 03/30/21
SHEET: 9 OF 27



REV. 1

DESCRIPTION

DATE

ADDRESS AGENCY COMMENTS

08/17/20

811

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PREPARED FOR:

AVATAR EQUINES, LLC

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

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.

DAVID L. MUJARES, ENGINEER

40510

10/19/20

CATAMOUNT ENGINEERING

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

RIVERBEND CROSSING
FILING NO. 2
STORM SEWER
PLAN & PROFILE

DESIGNED BY: MGP

SCALE: 1" = 50'

JOB NUMBER

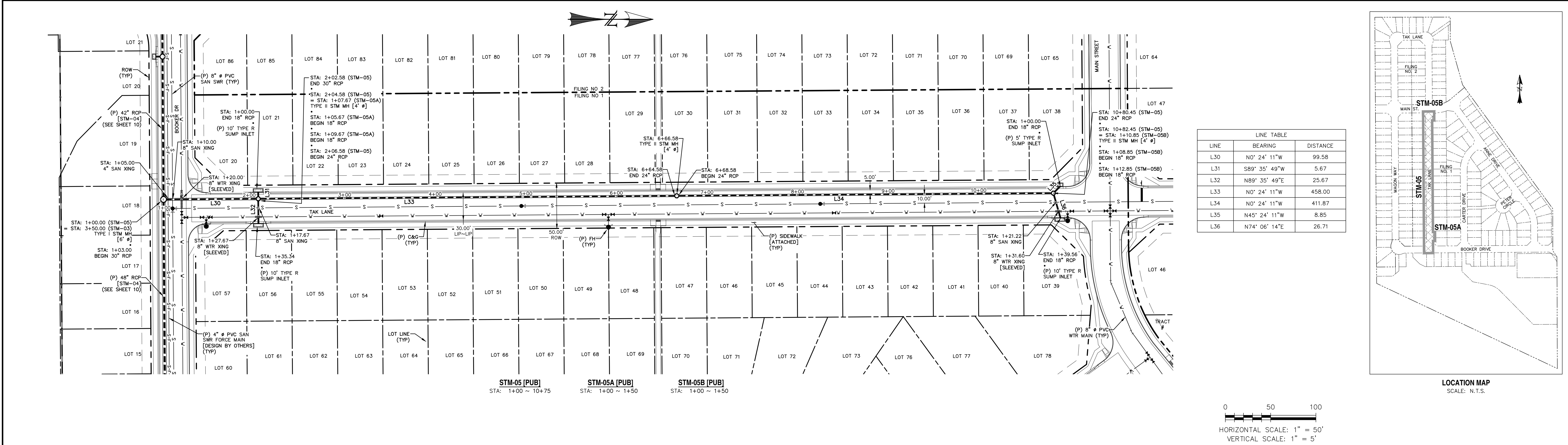
17-114

DRAWN BY: MGP

DATE: 03/30/21

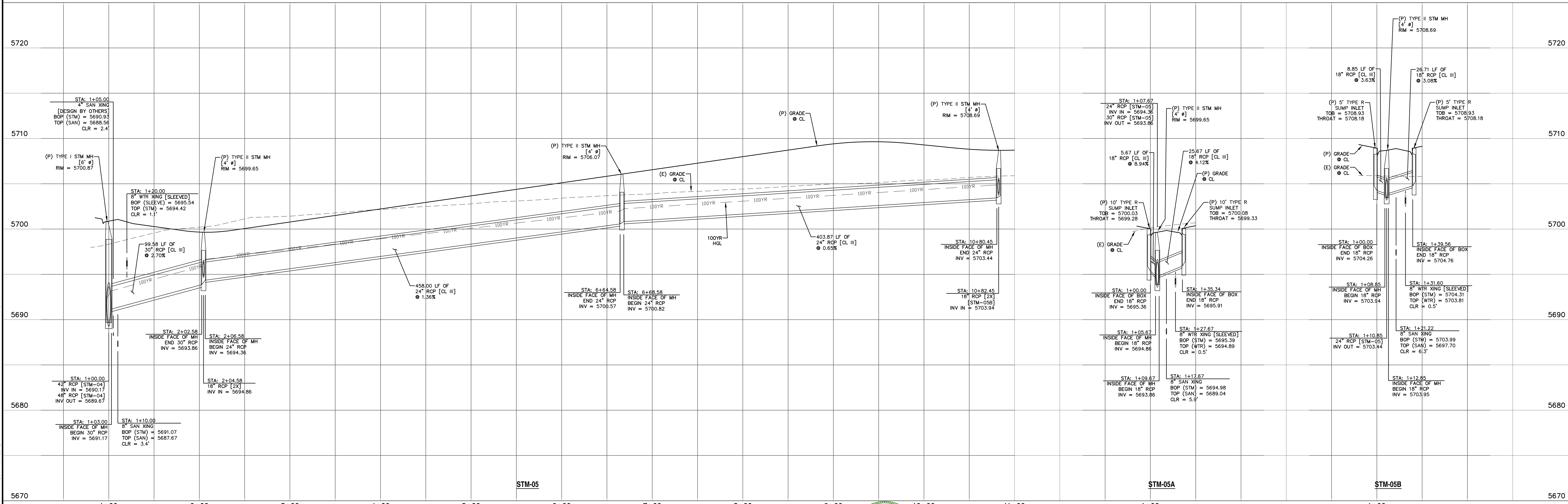
SHEET

10 OF 27



LINE TABLE		
LINE	BEARING	DISTANCE
L30	N0° 24' 11"W	99.58
L31	S89° 35' 49"W	5.67
L32	N89° 35' 49"E	25.67
L33	N0° 24' 11"W	458.00
L34	N0° 24' 11"W	411.87
L35	N45° 24' 11"W	8.85
L36	N74° 06' 14"E	26.71

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



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

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

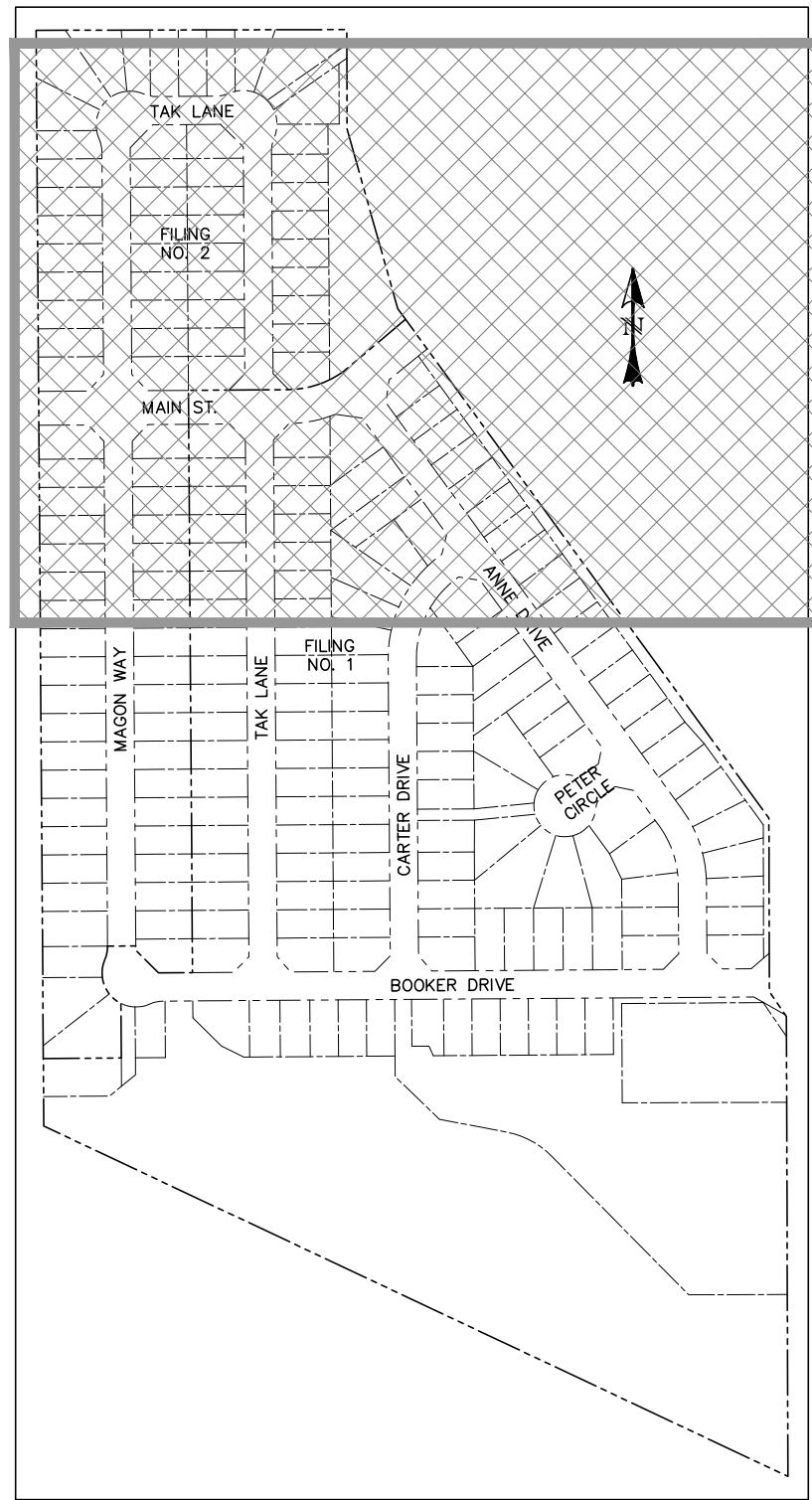
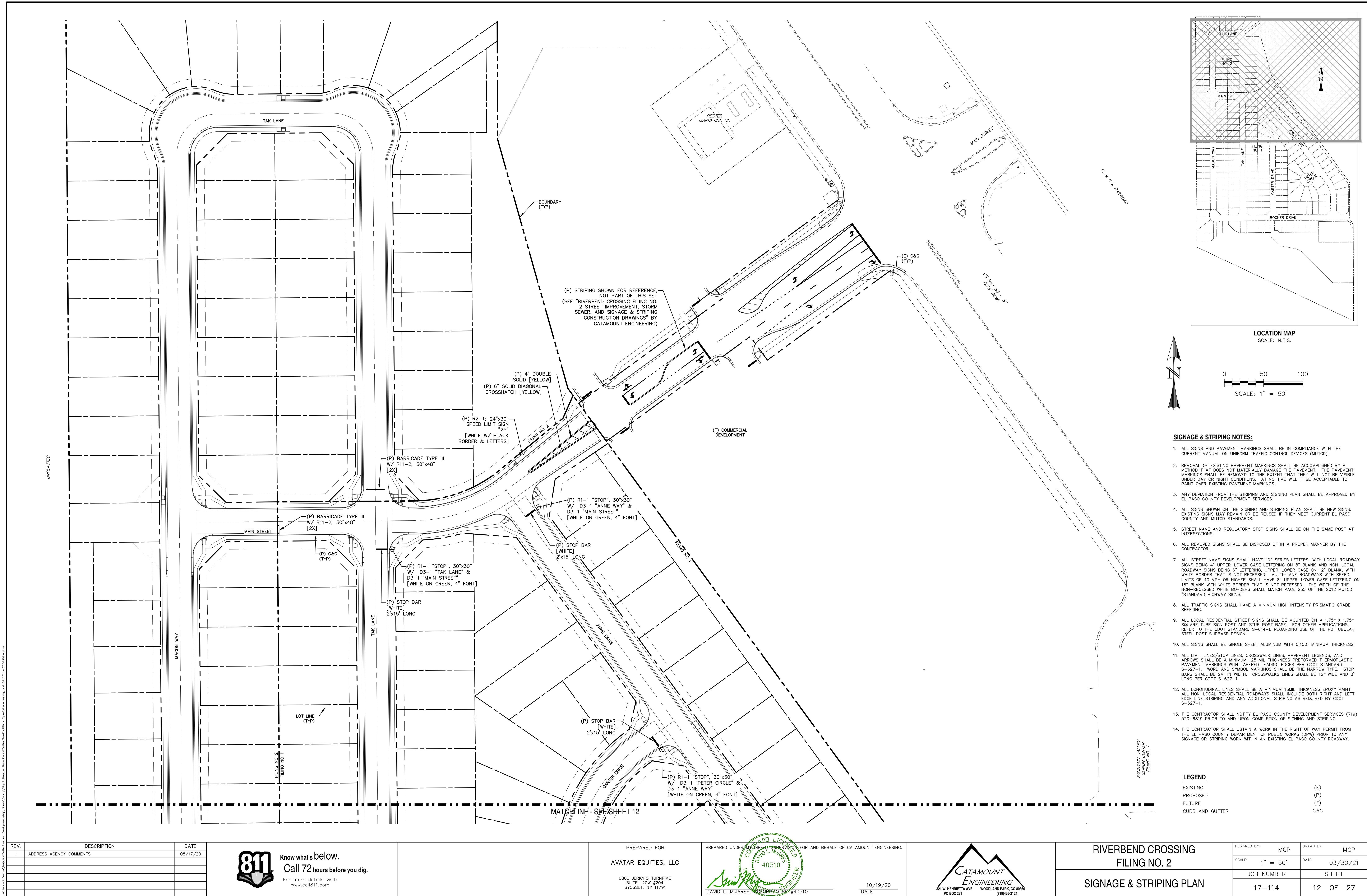
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.

DAVID L. MJARES, LICENSED PROFESSIONAL ENGINEER
10/19/20
DATE

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

RIVERBEND CROSSING
FILING NO. 2
STORM SEWER
PLAN & PROFILE

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 03/30/21
JOB NUMBER 17-114	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 STRIPING AND SIGNING 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

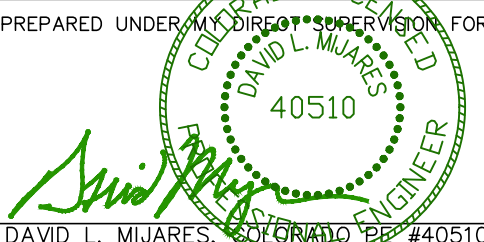
REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	08/17/20

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AVATAR EQUITIES, LLC

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SYOSSET, NY 11791

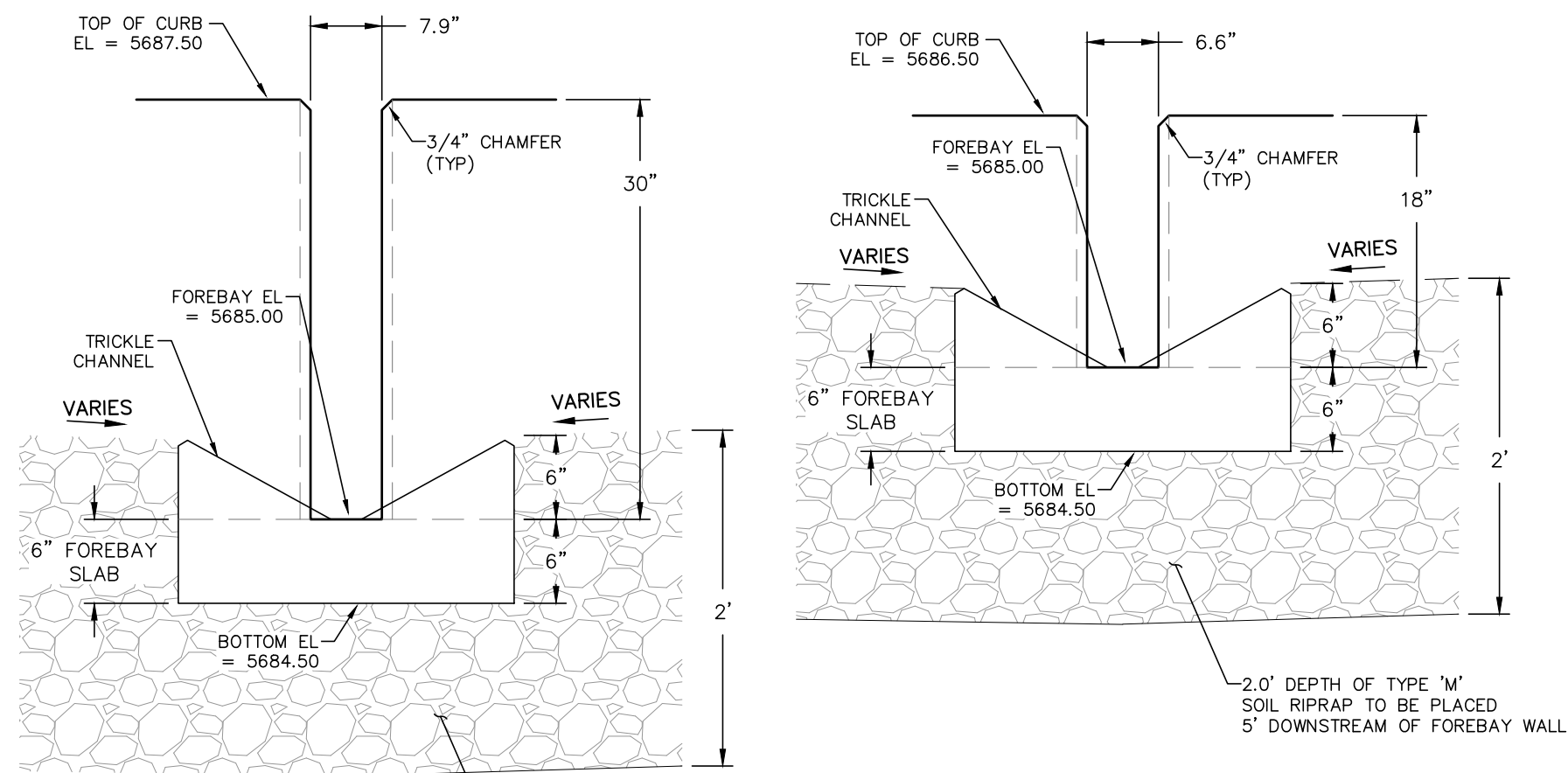
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DAVID L. MJARES, LICENSED PROFESSIONAL ENGINEER #40510
10/19/20
DATE

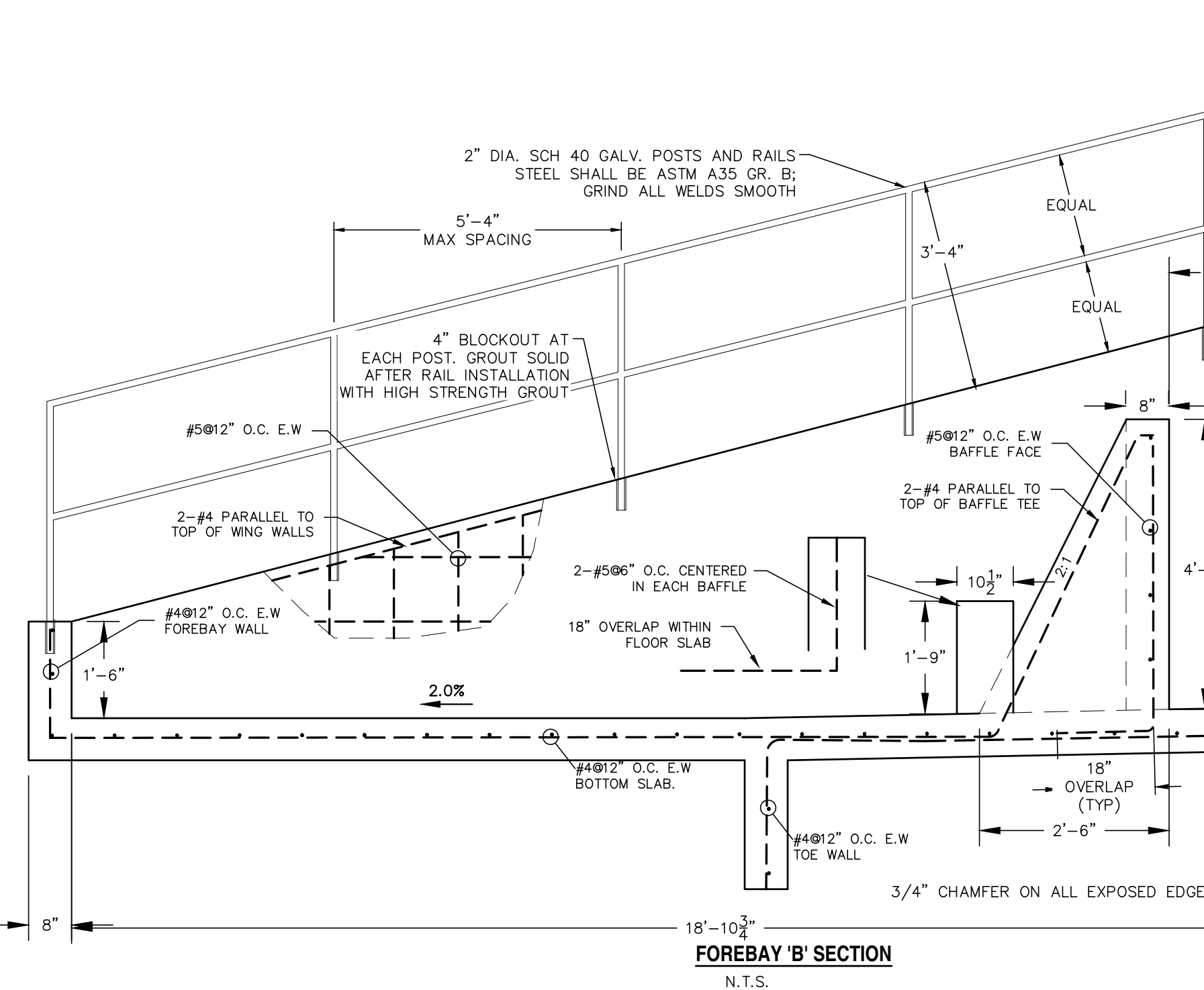
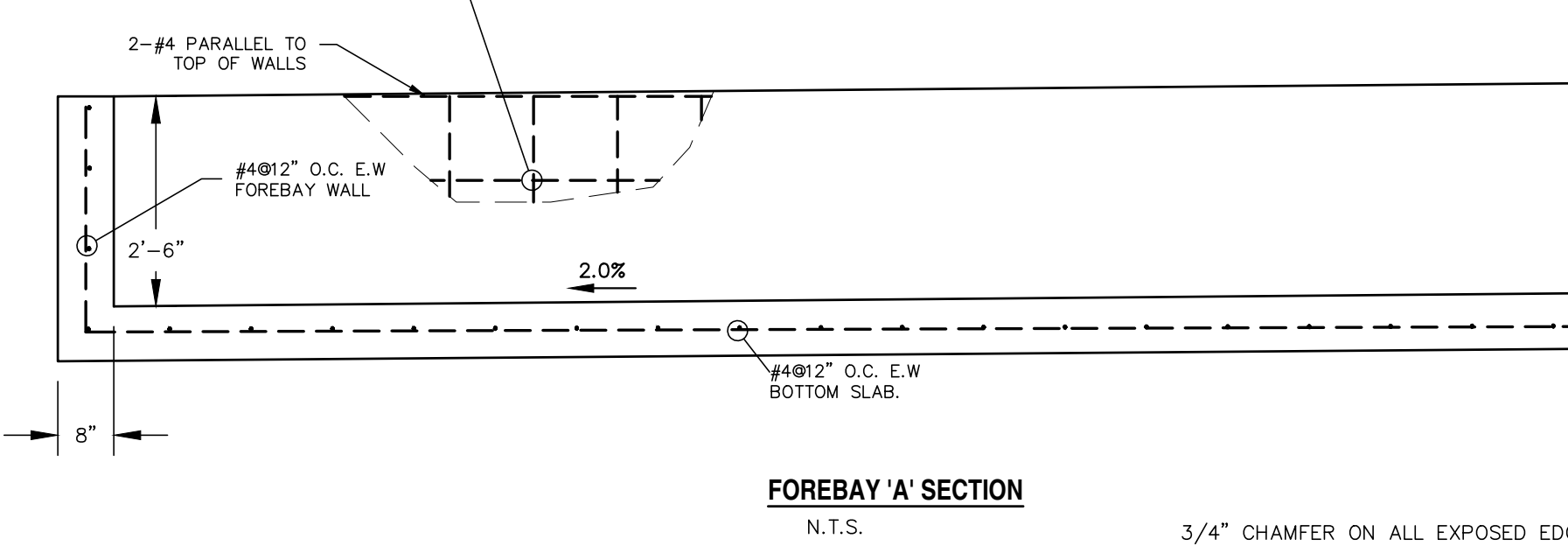
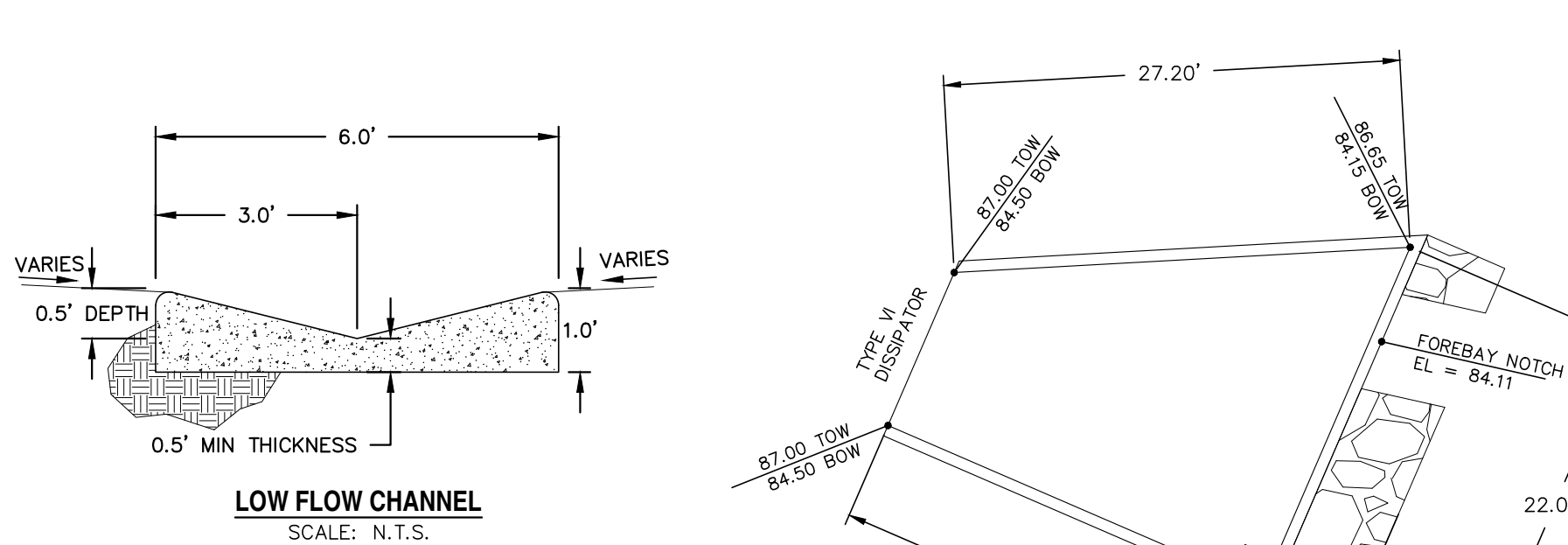

CATAMOUNT ENGINEERING
321 W. HENRIETTA AVE. WOODLAND PARK, CO 80866
PO BOX 221 (719) 426-2124

**RIVERBEND CROSSING
FILING NO. 2
SIGNAGE & STRIPING PLAN**

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 03/30/21
JOB NUMBER 17-114	SHEET 12 OF 27



2.0' DEPTH OF TYPE 'M' SOIL RIPRAP TO BE PLACED 5' DOWNSTREAM OF FOREBAY WALL



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



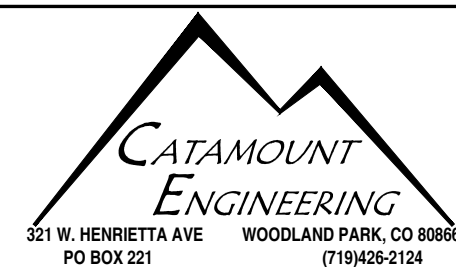
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6800 JERICHO TURNPIKE
SUITE 120W #204
SYOSSET, NY 11791

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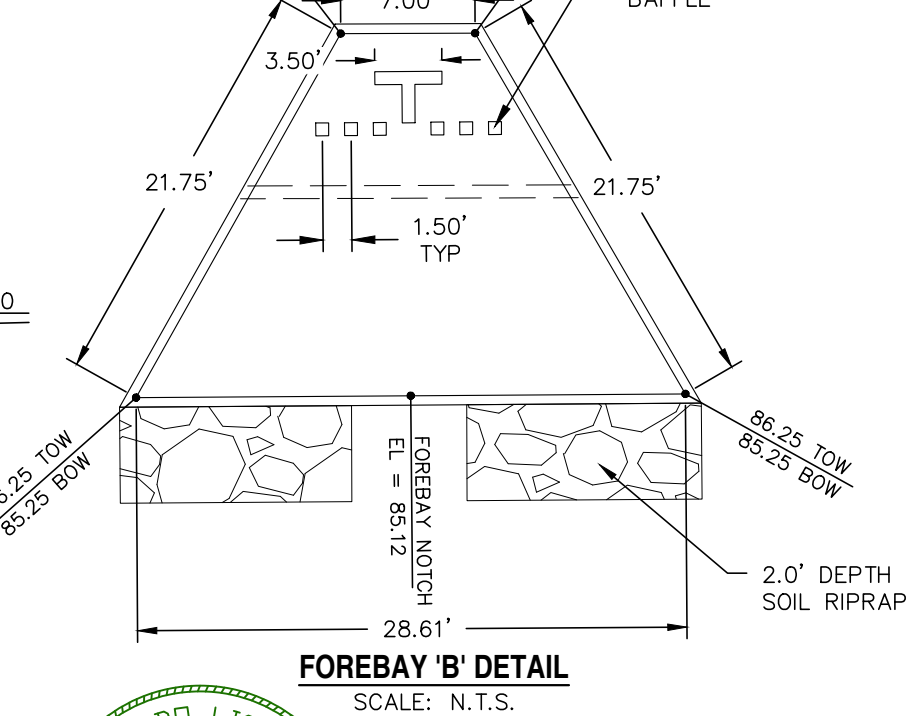
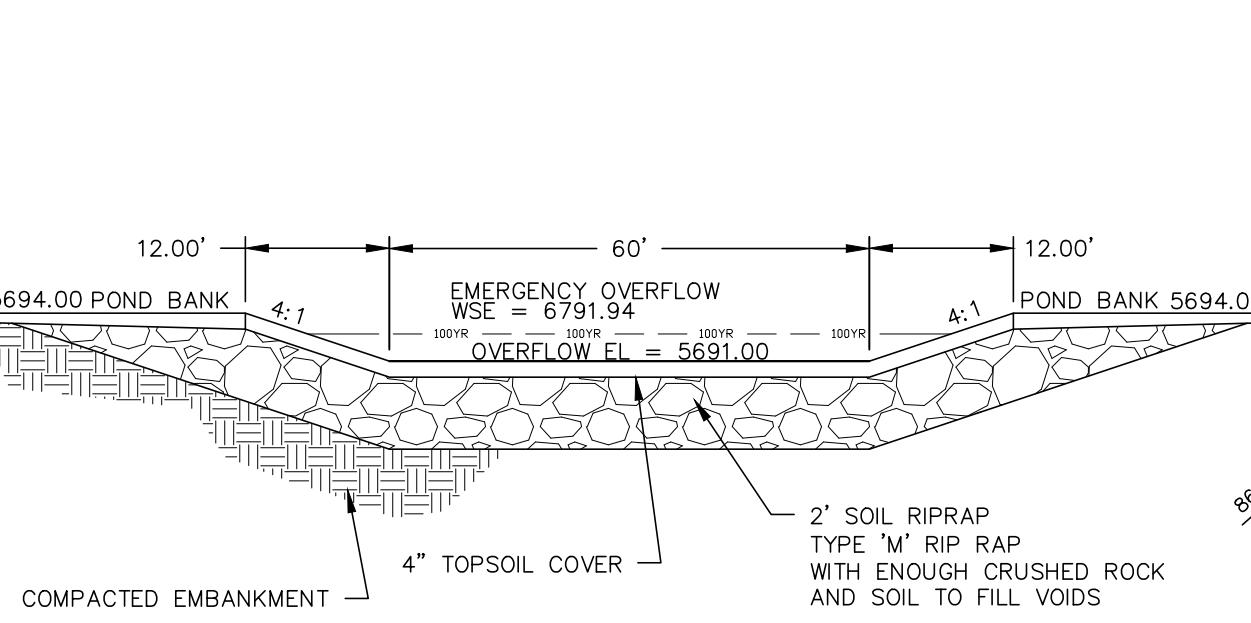
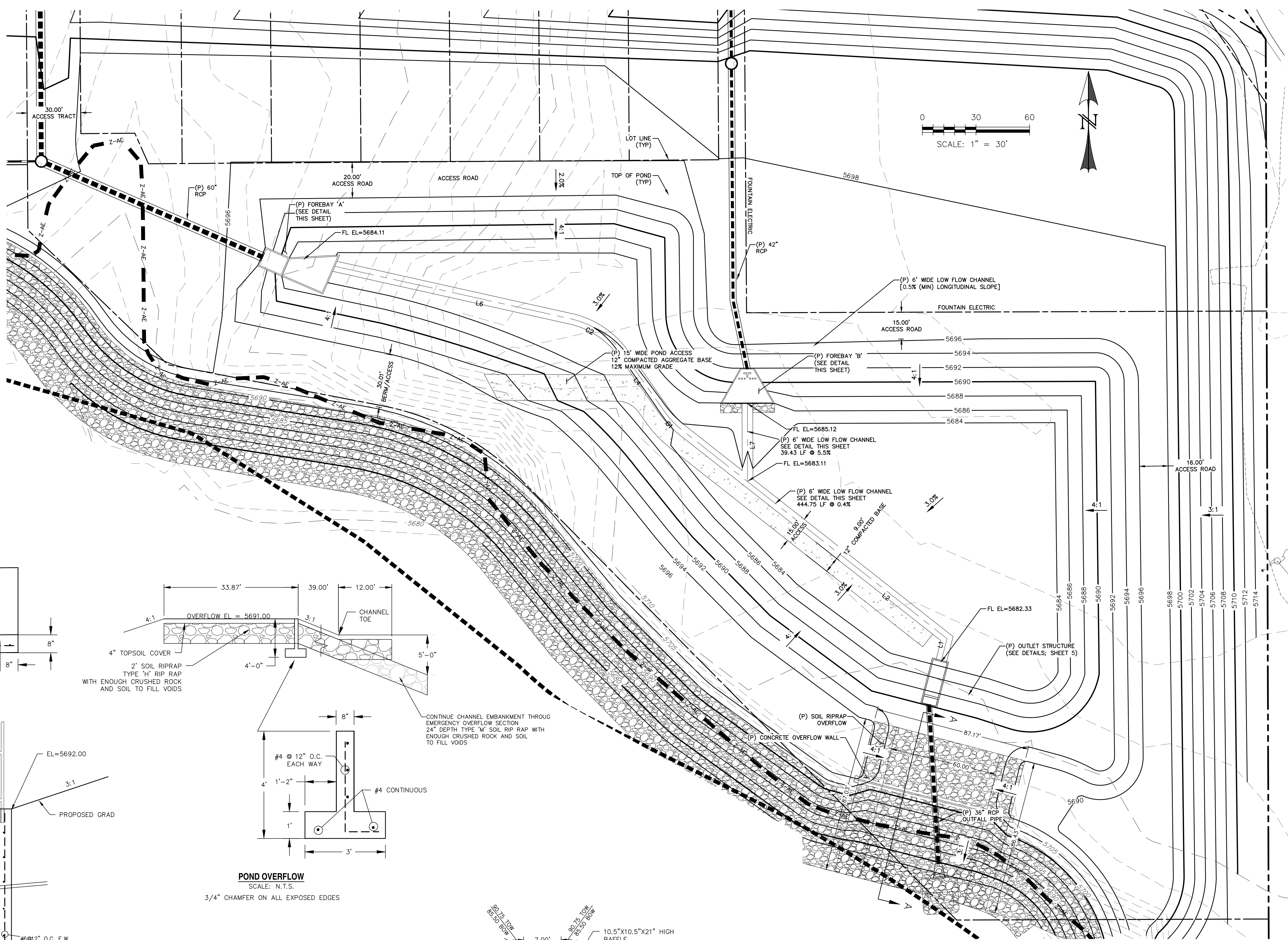
10/19/20
DATE



RIVERBEND CROSSING
FILING NO. 2

EXTENDED DETENTION BASIN

DESIGNED BY:	DLM	DRAWN BY:	MGP
SCALE:	1" = 30'	DATE:	03/30/21
JOB NUMBER	17-114	SHEET	14 OF 27



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

WARNING SIGN DETAIL
SCALE: N.T.S.

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.

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

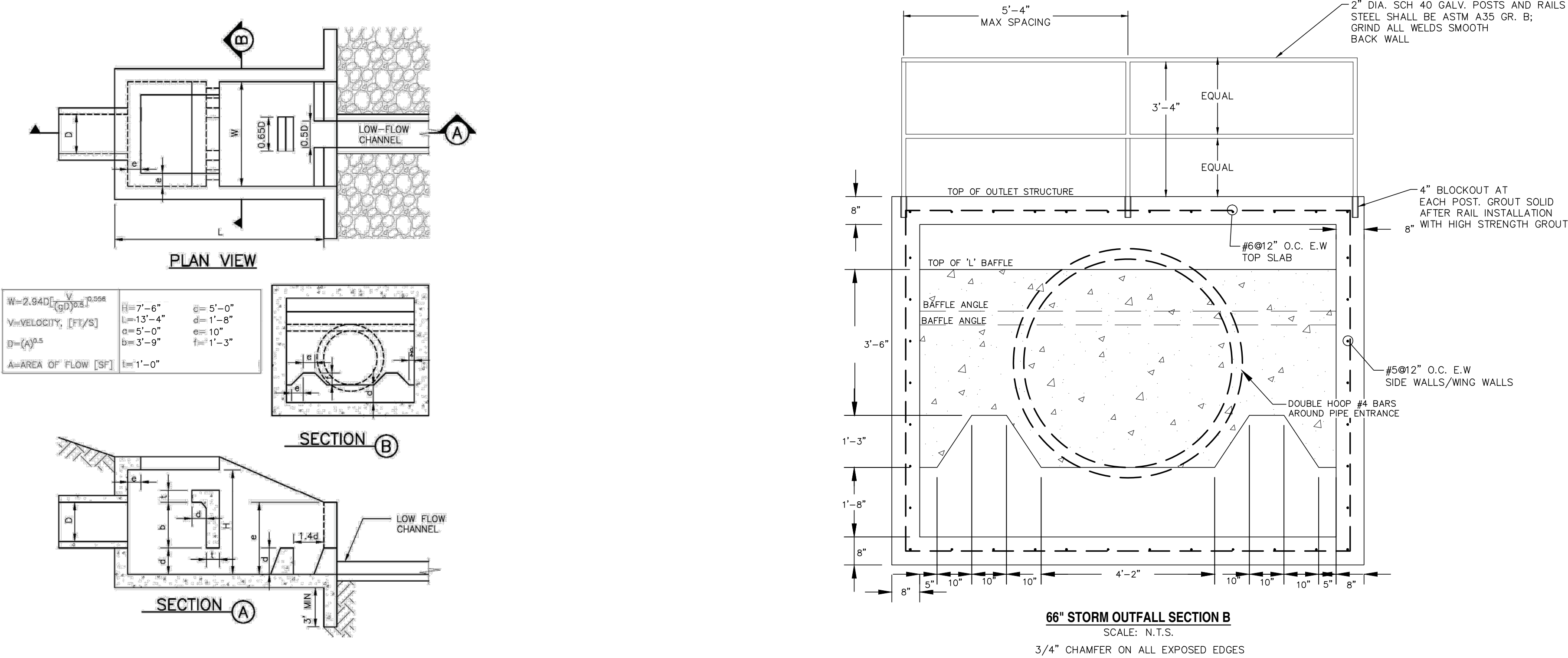
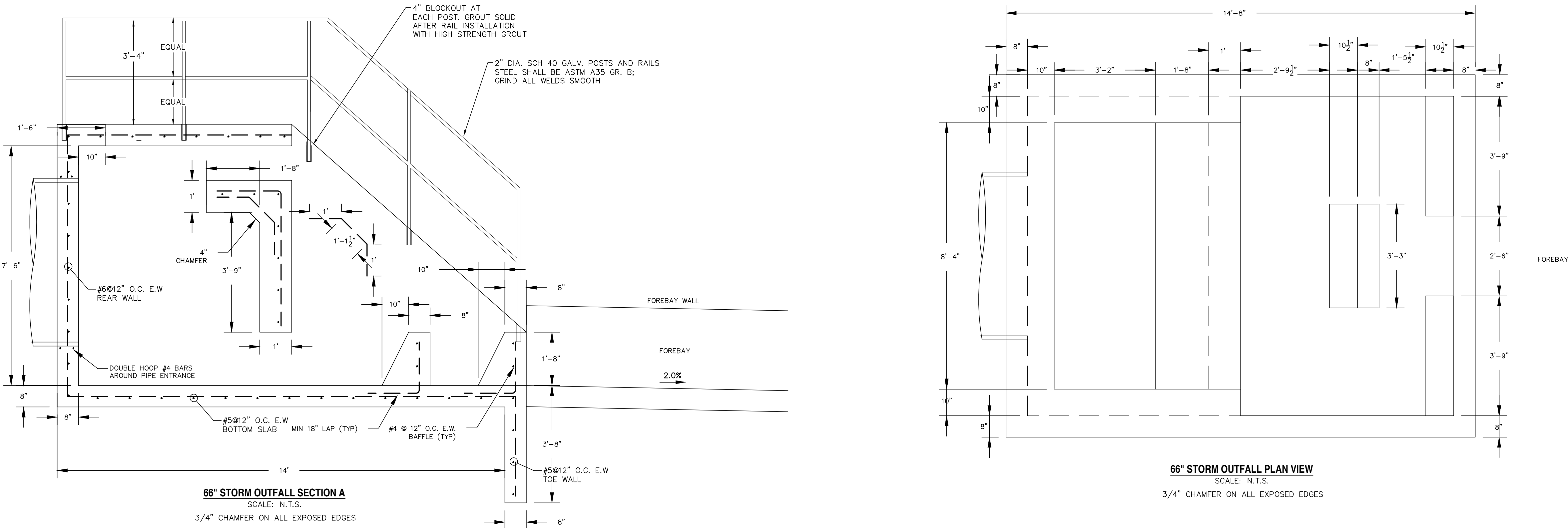


Figure 9-45. UDFCD modified USBR type VI impacts stilling basin (general design dimensions)

9-84 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 2 September 2017



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

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SYOSSET, NY 11791

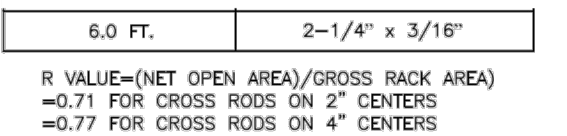
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DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER #40510
10/19/20
DATE

CATAMOUNT
ENGINEERING

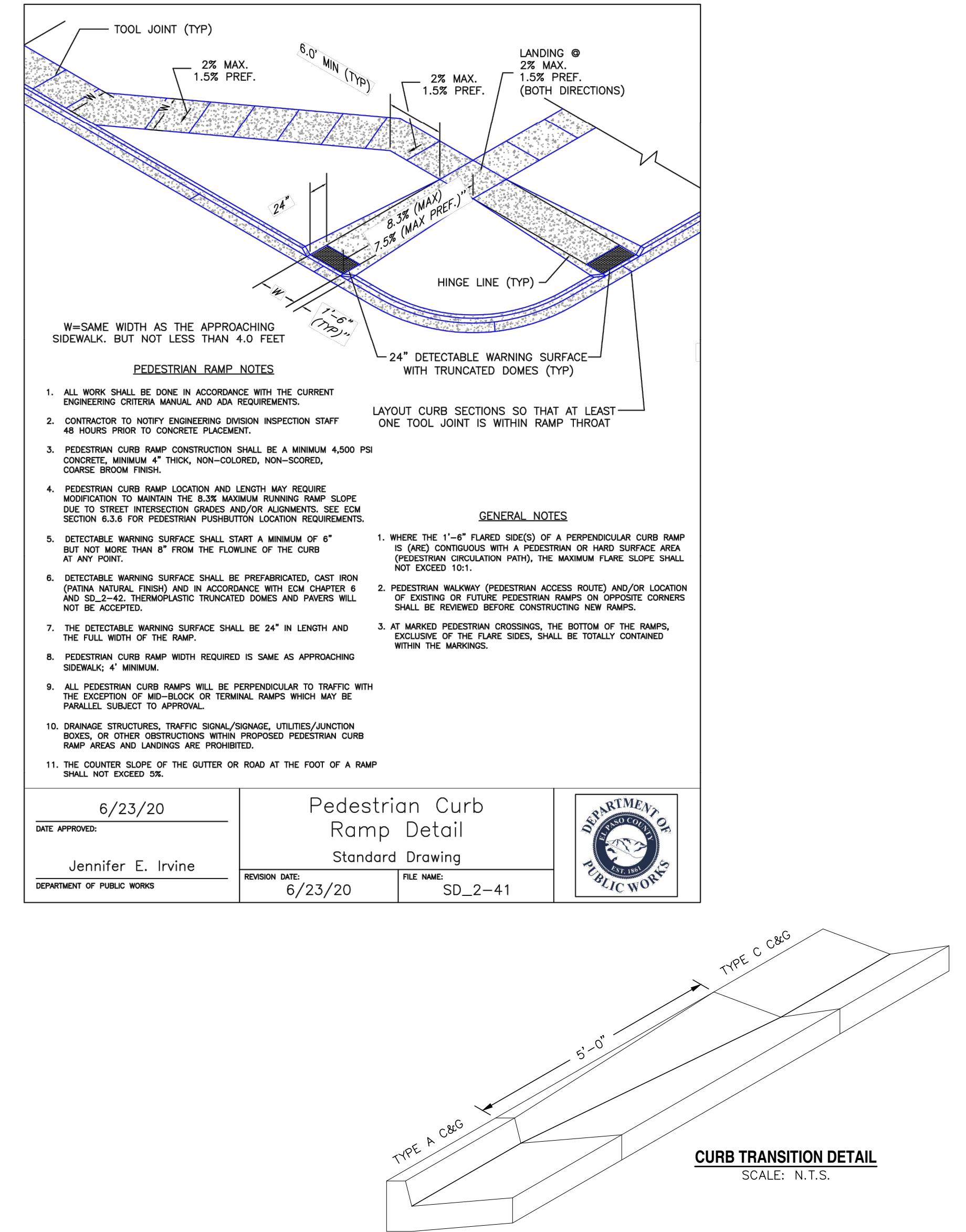
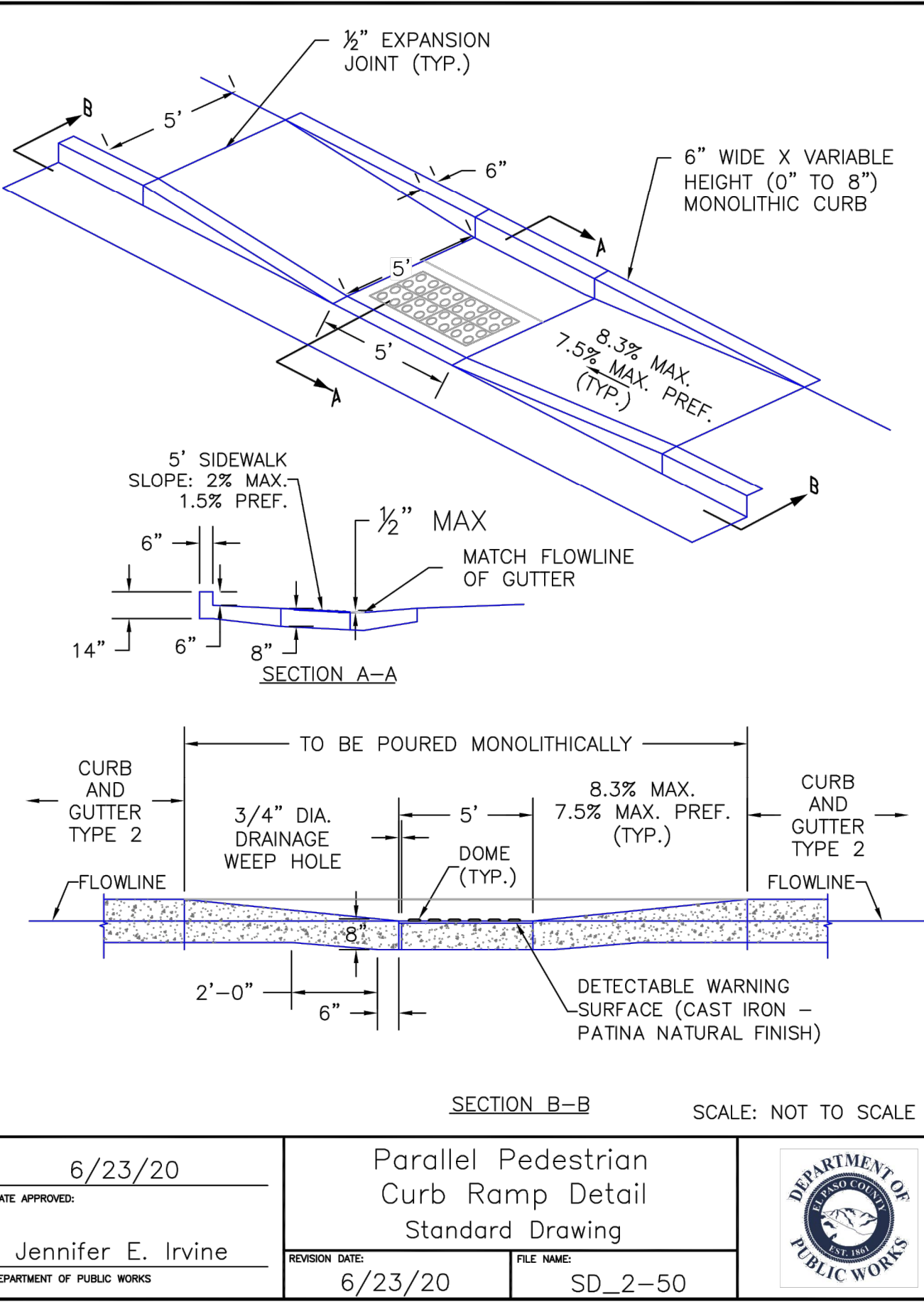
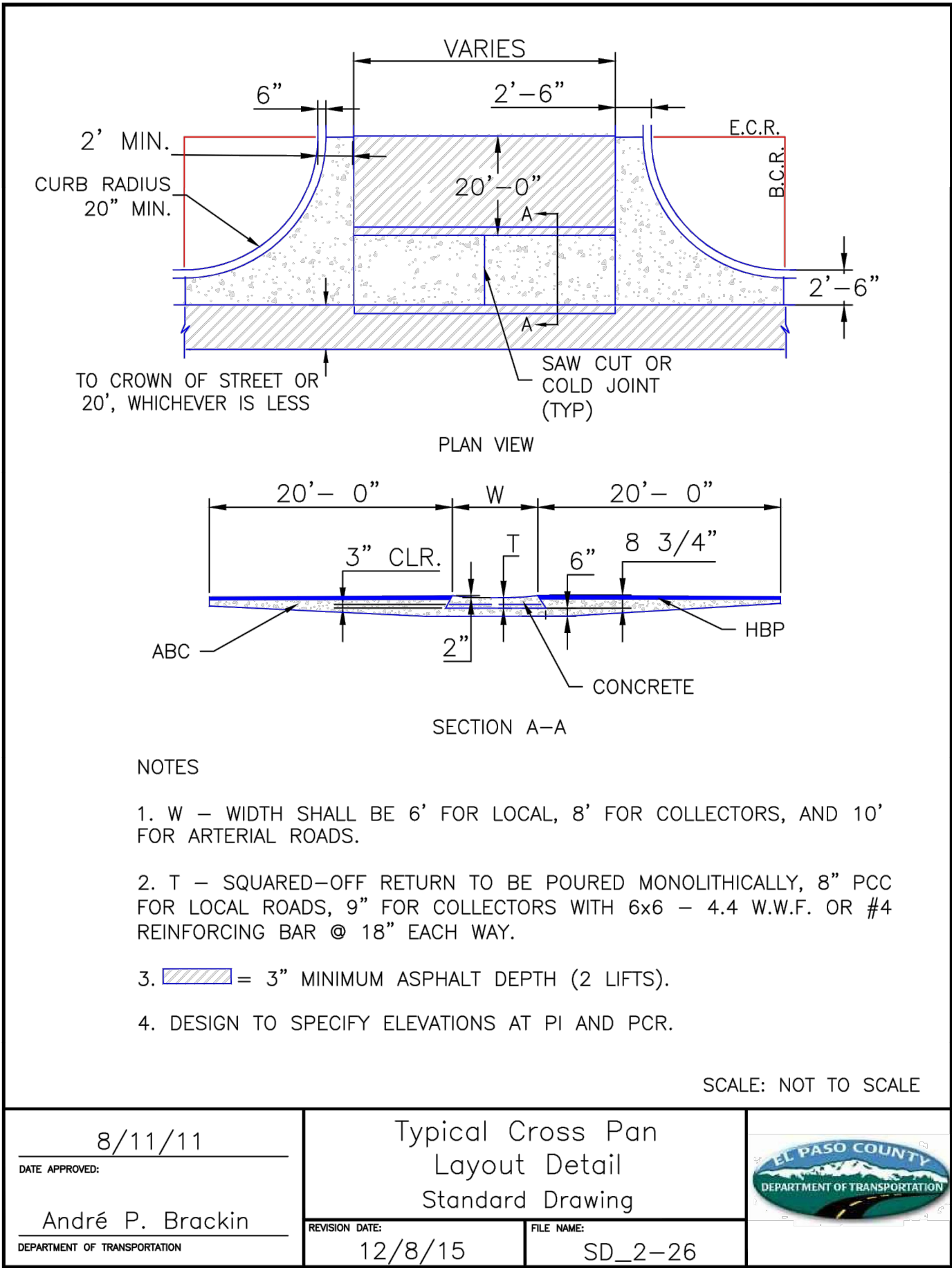
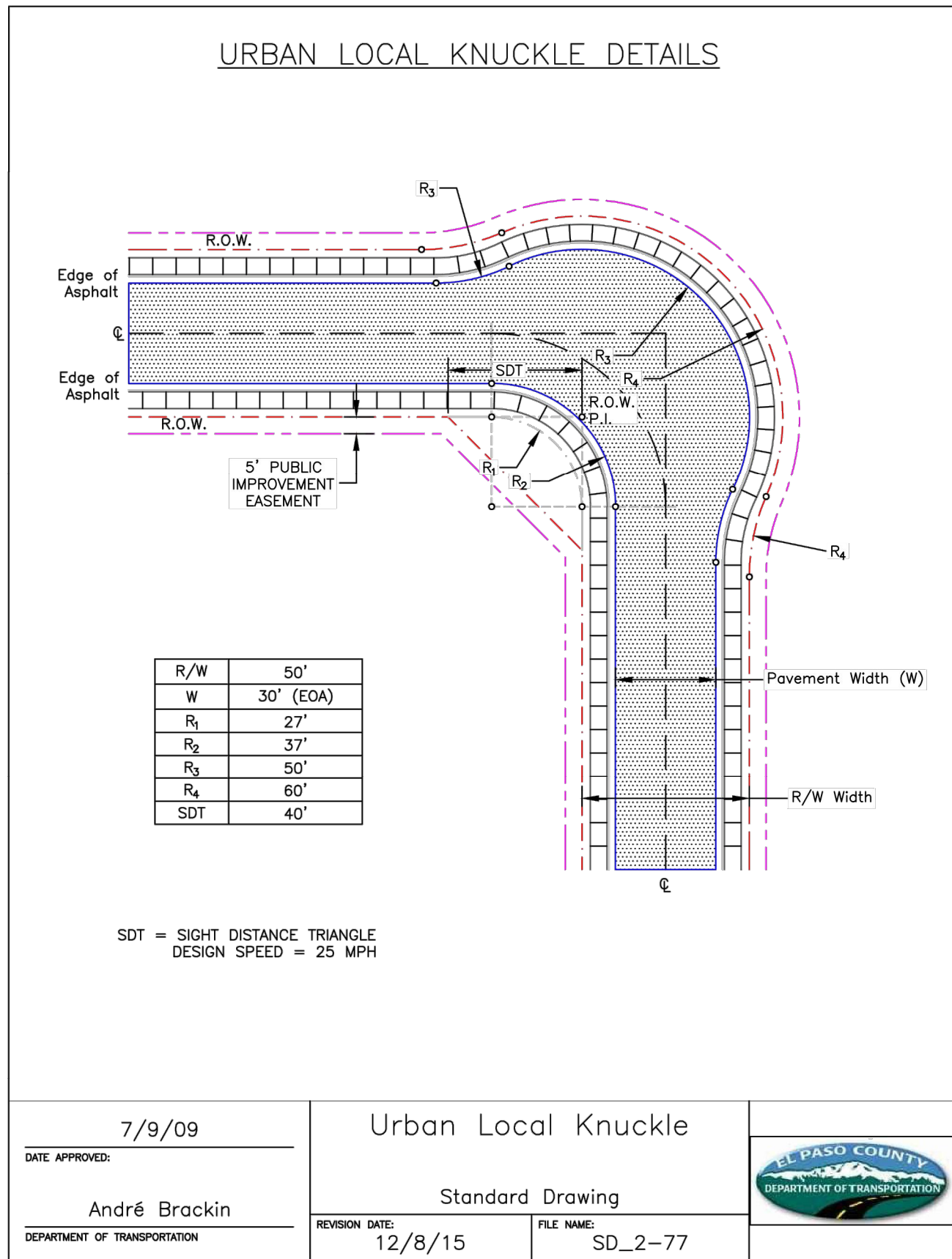
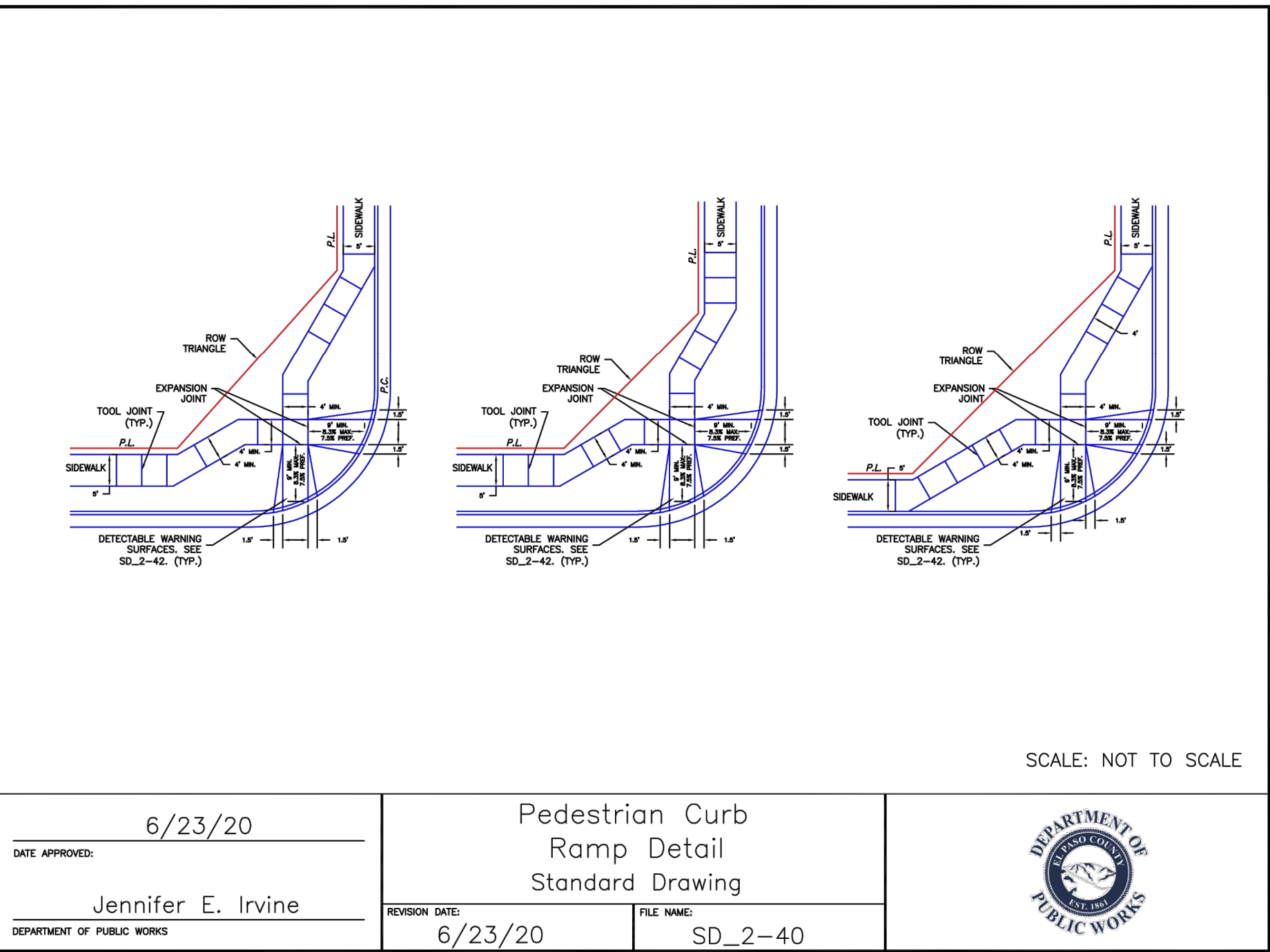
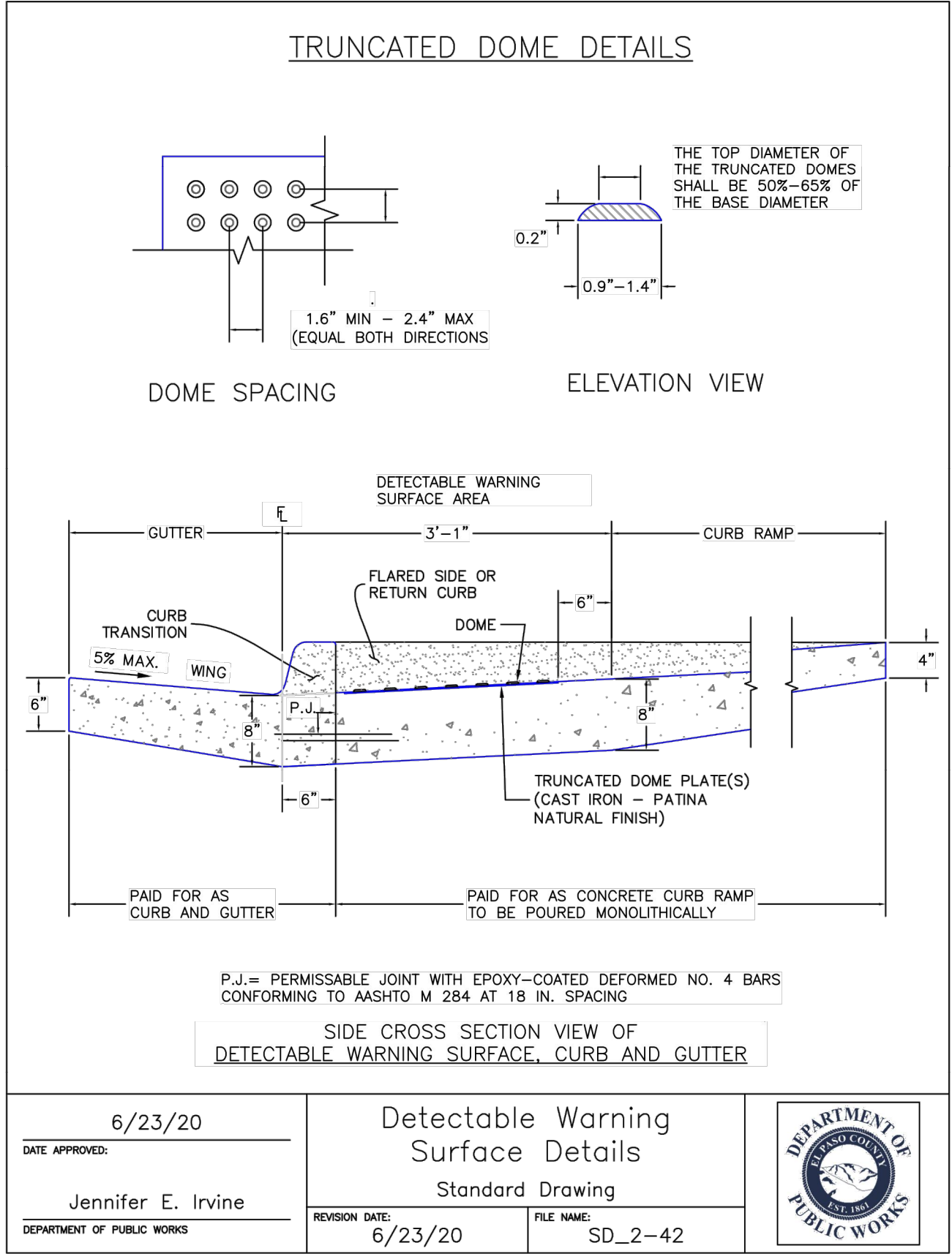
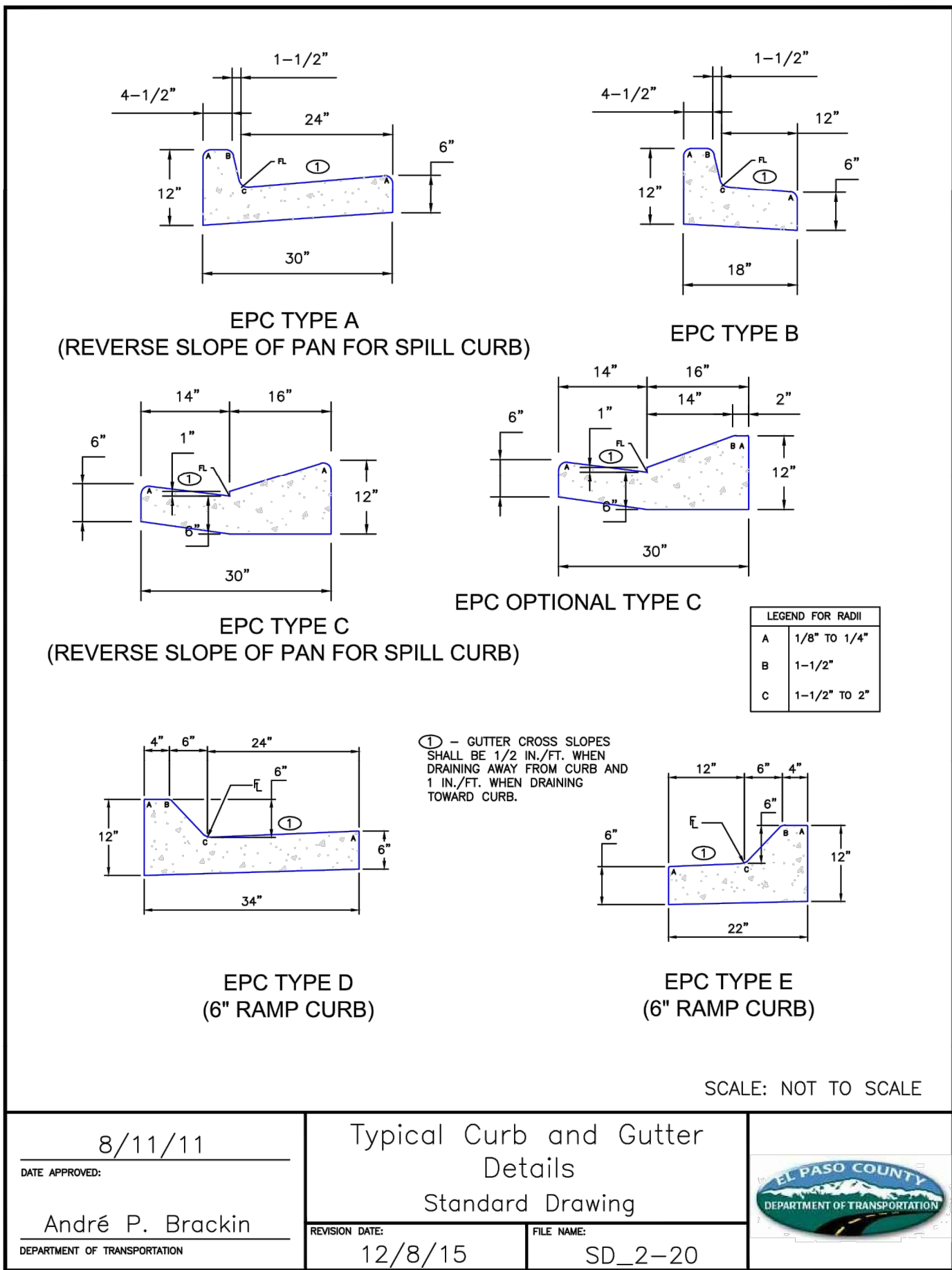
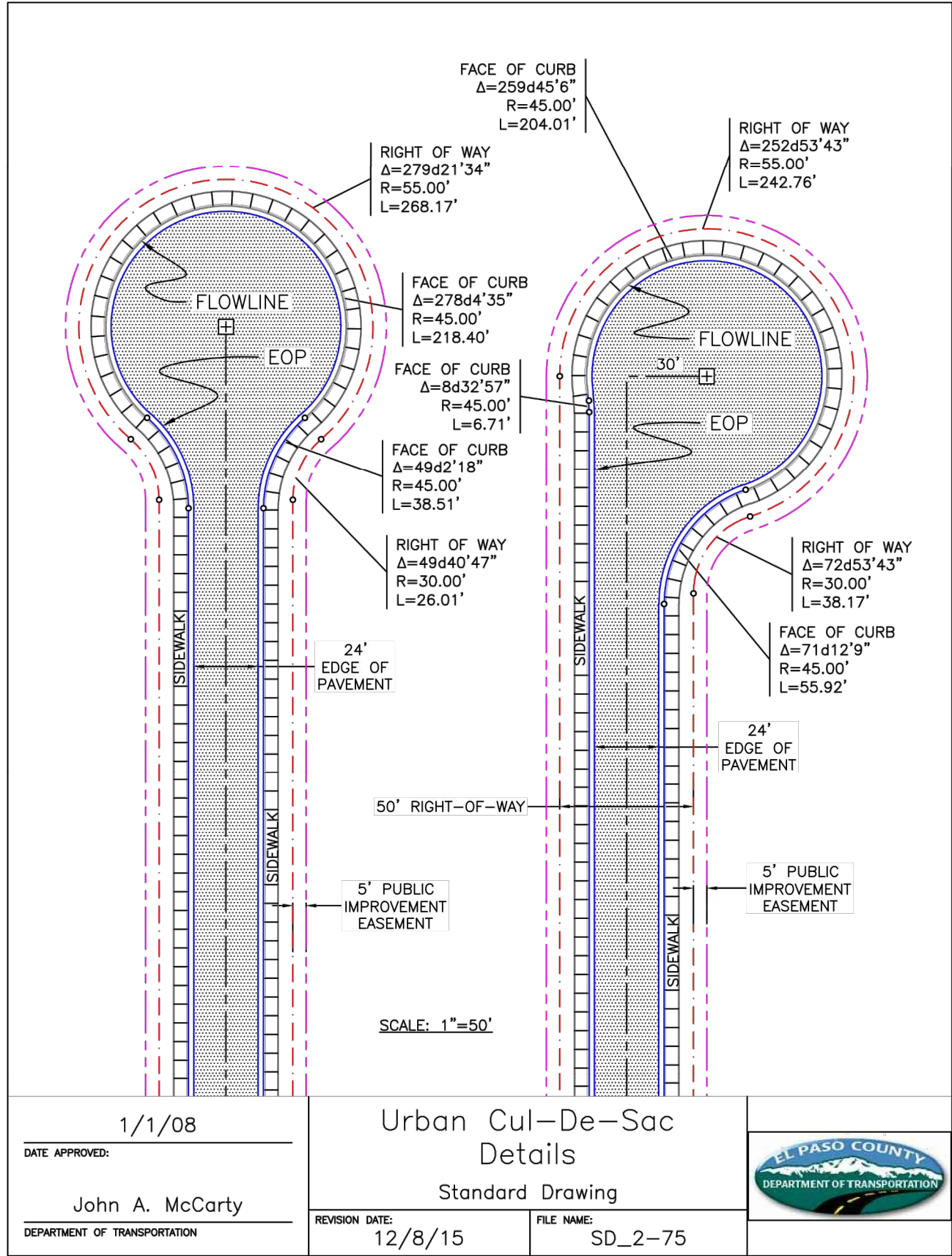
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PO BOX 221
WOODLAND PARK, CO 80866
(719) 428-2124

RIVERBEND CROSSING
FILING NO. 2
STORMWATER QUALITY
FACILITY DETAILS

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



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



REV.	DESCRIPTION	DATE
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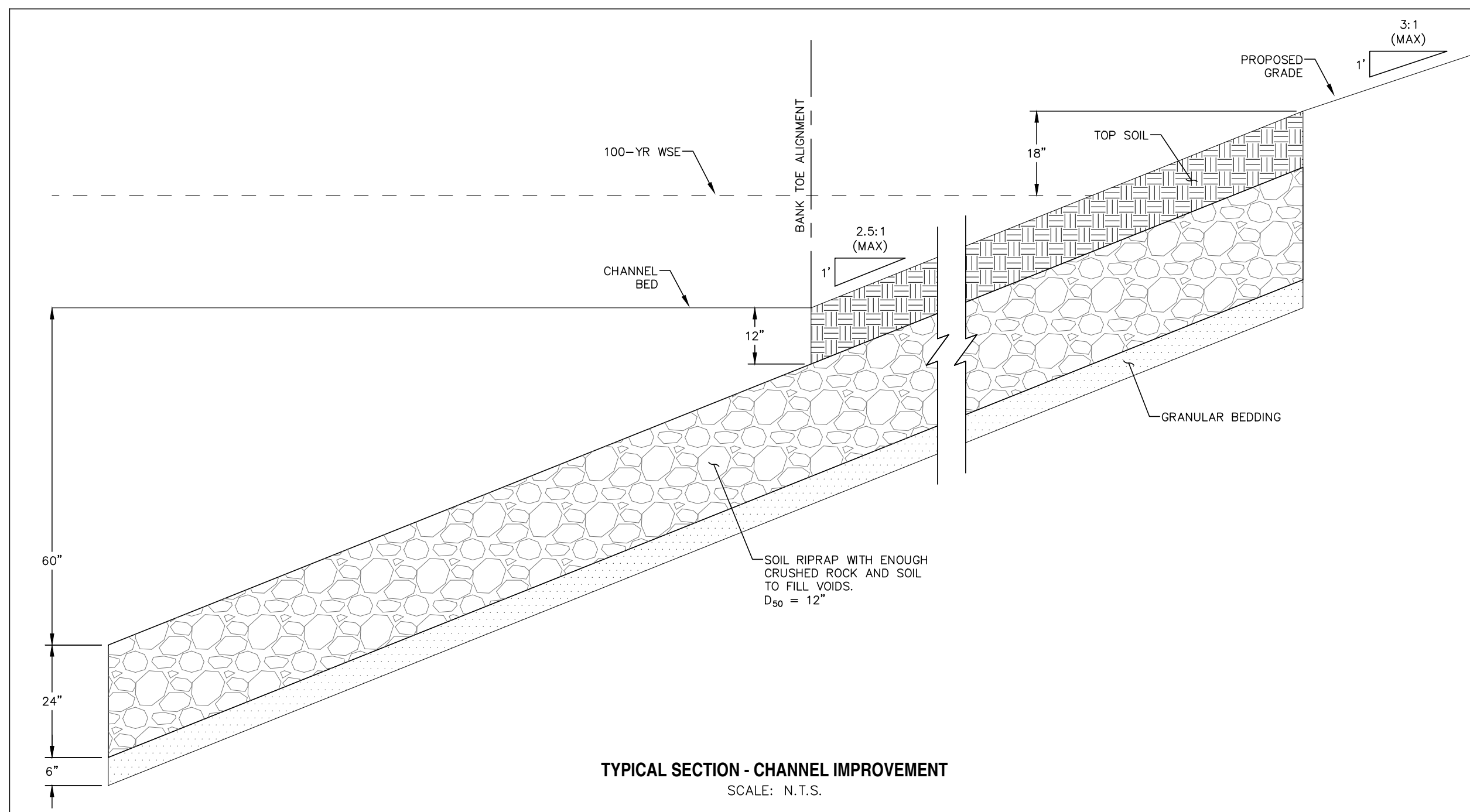
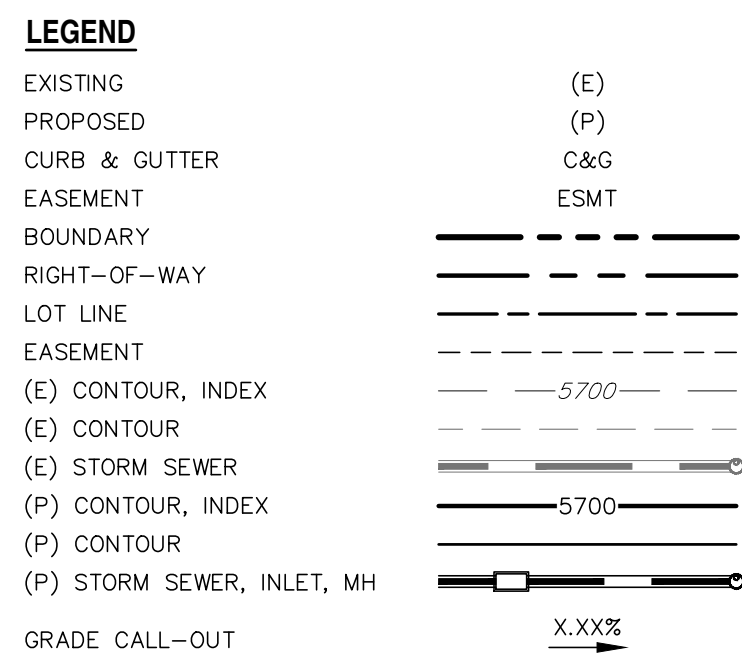
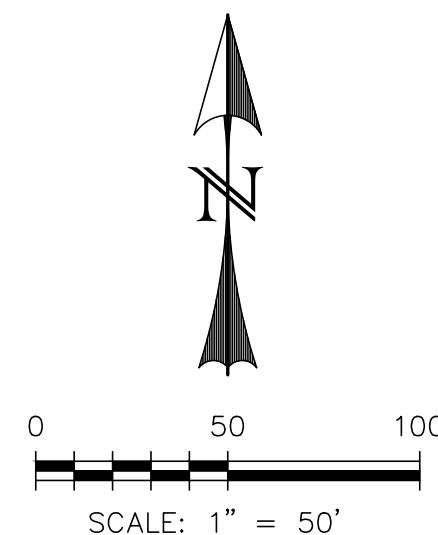
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SUITE 120W #204
SYOSSET, NY 11791

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

CATAMOUNT ENGINEERING
321 W. HENRIETTA AVE
PO BOX 221
WOOLAND PARK, CO 80086
(719) 428-2124

RIVERBEND CROSSING
FILING NO. 2
DETAIL SHEET

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



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



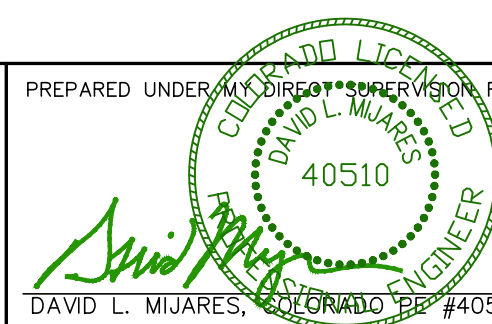
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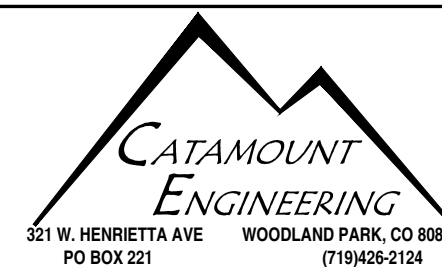
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SUITE 120W #204
SYOSSET, NY 11791

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF CATAMOUNT ENGINEERING



10/19/20
DATE



RIVERBEND CROSSING
FILING NO. 2
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

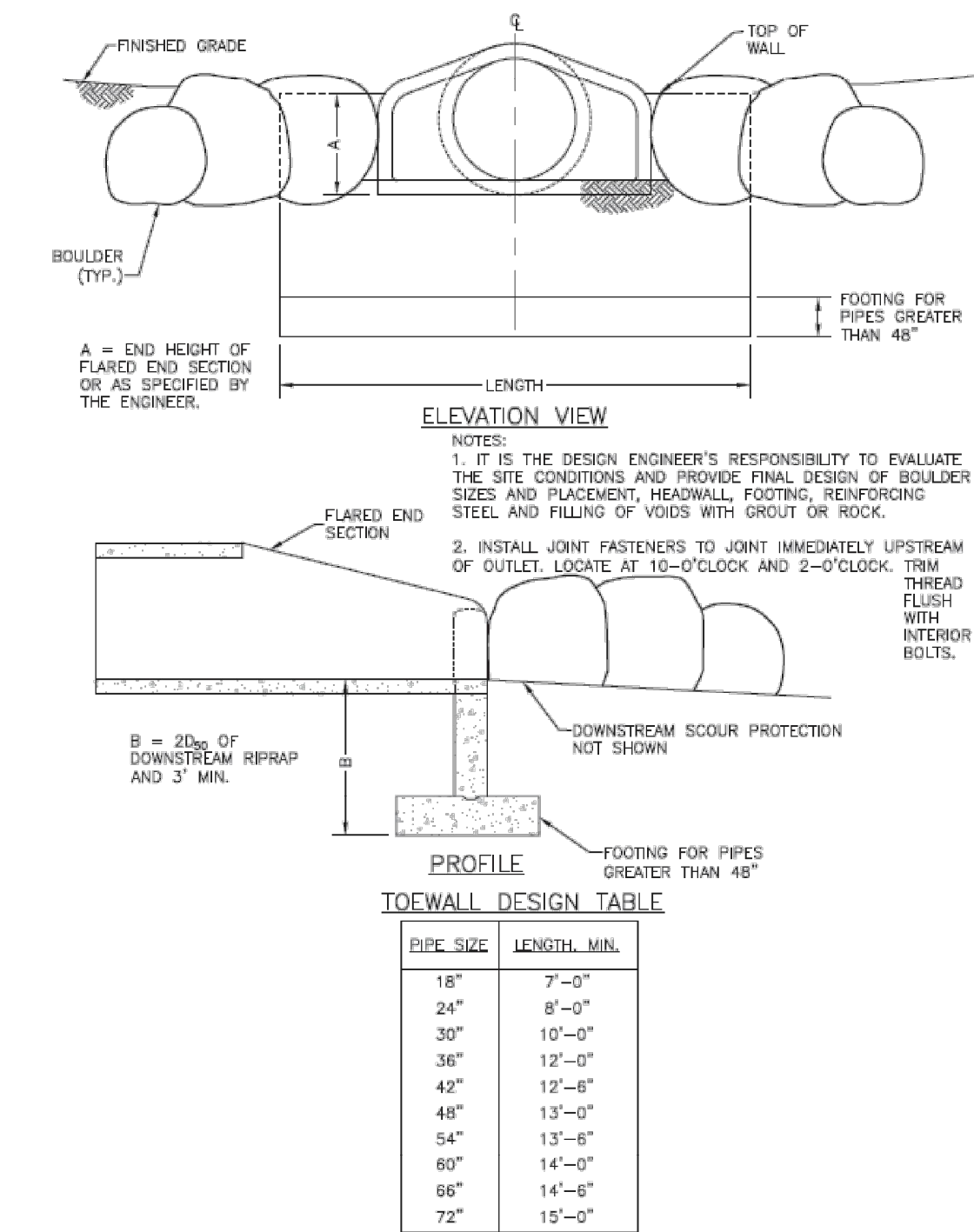


Figure 9-30. Flared end section (FES) headwall concept

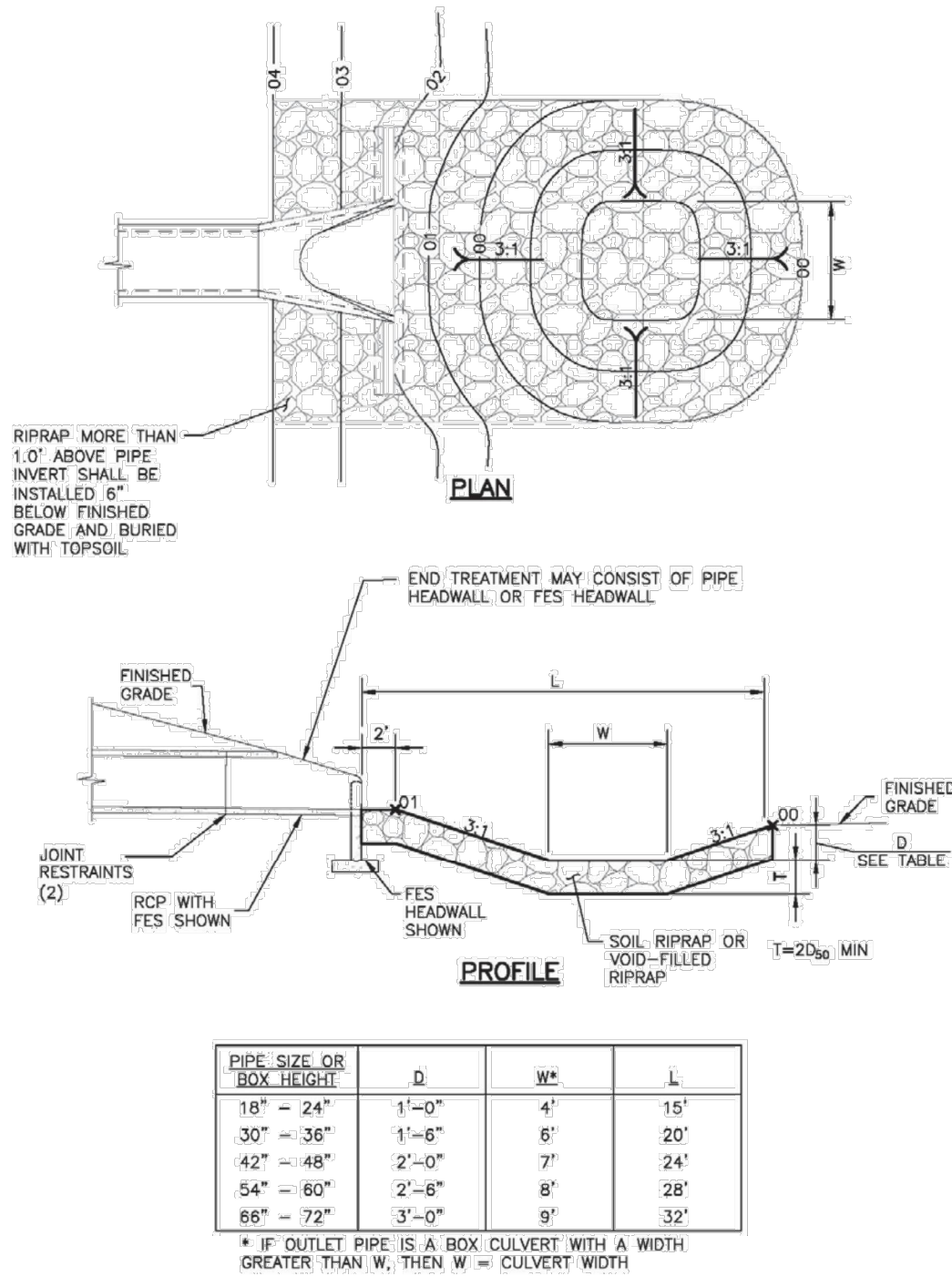
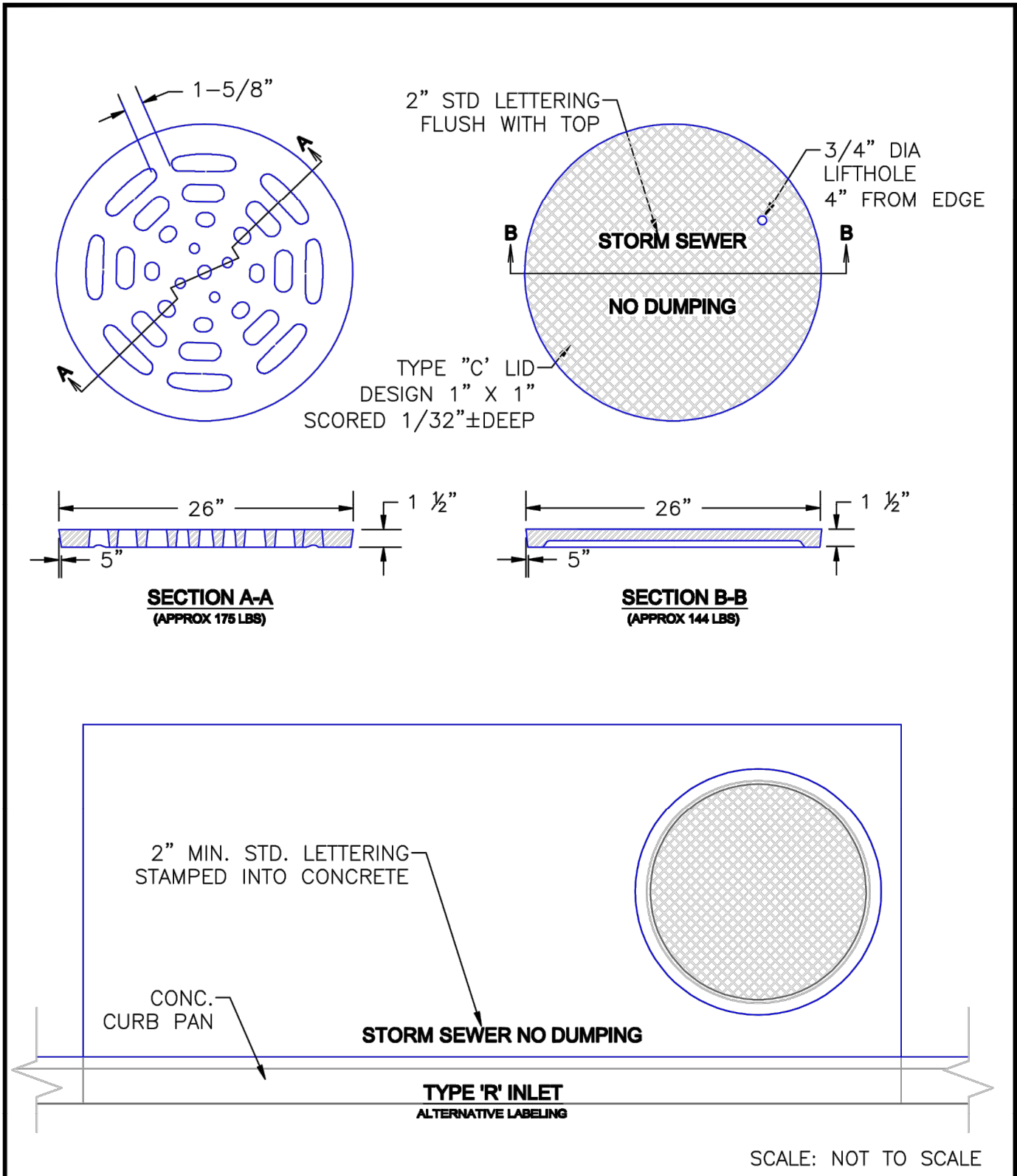
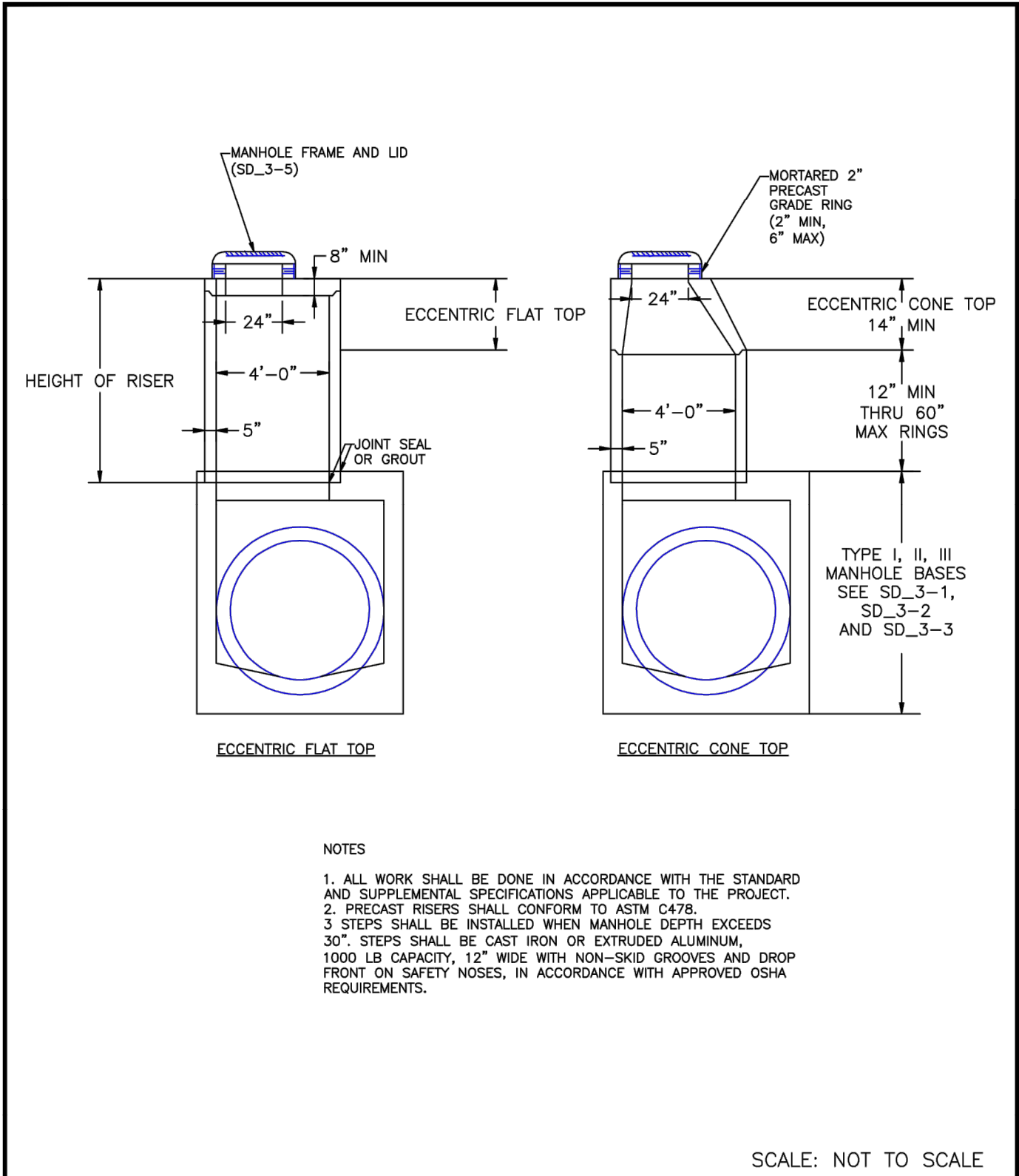


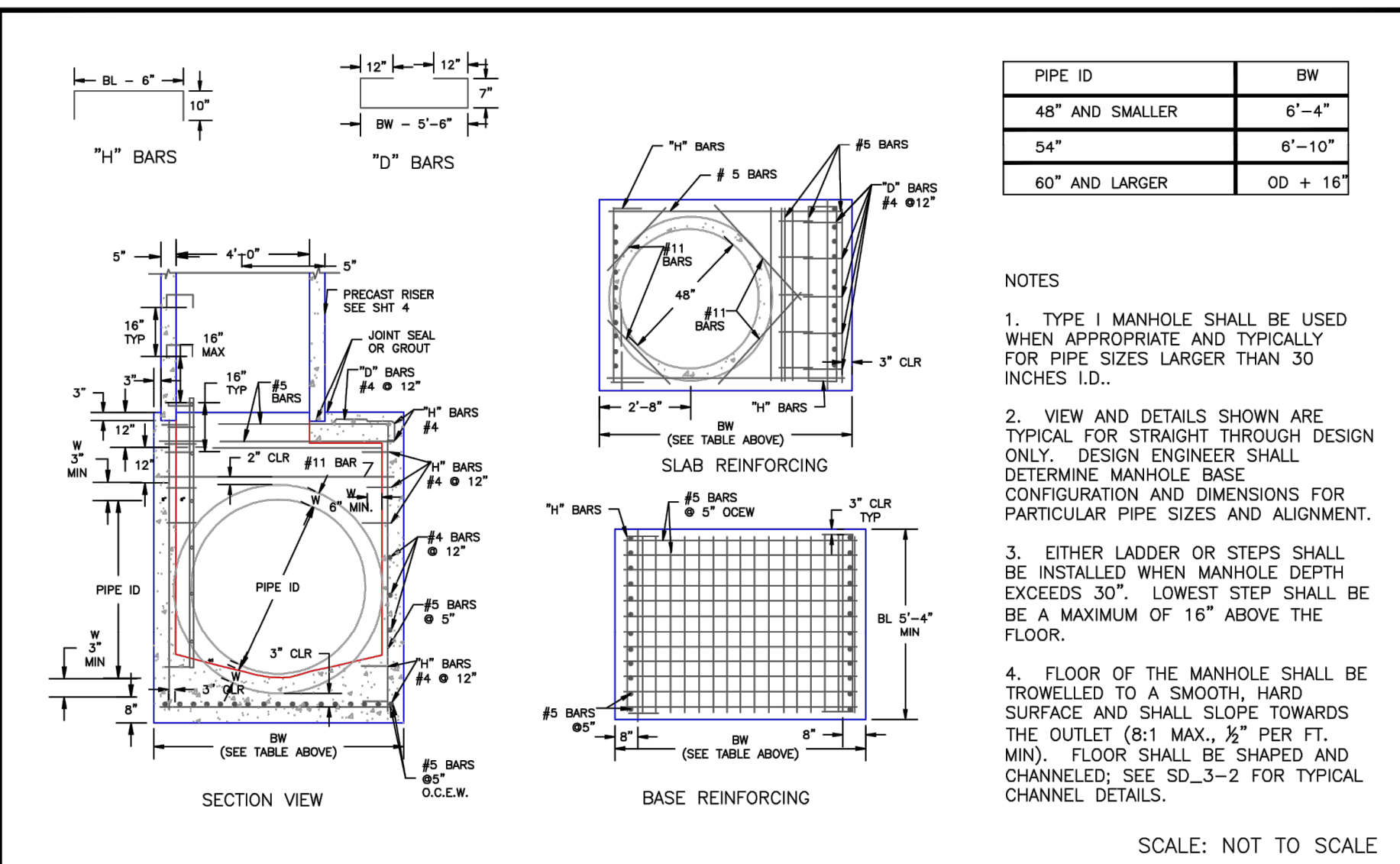
Figure 9-37. Low tailwater riprap basin



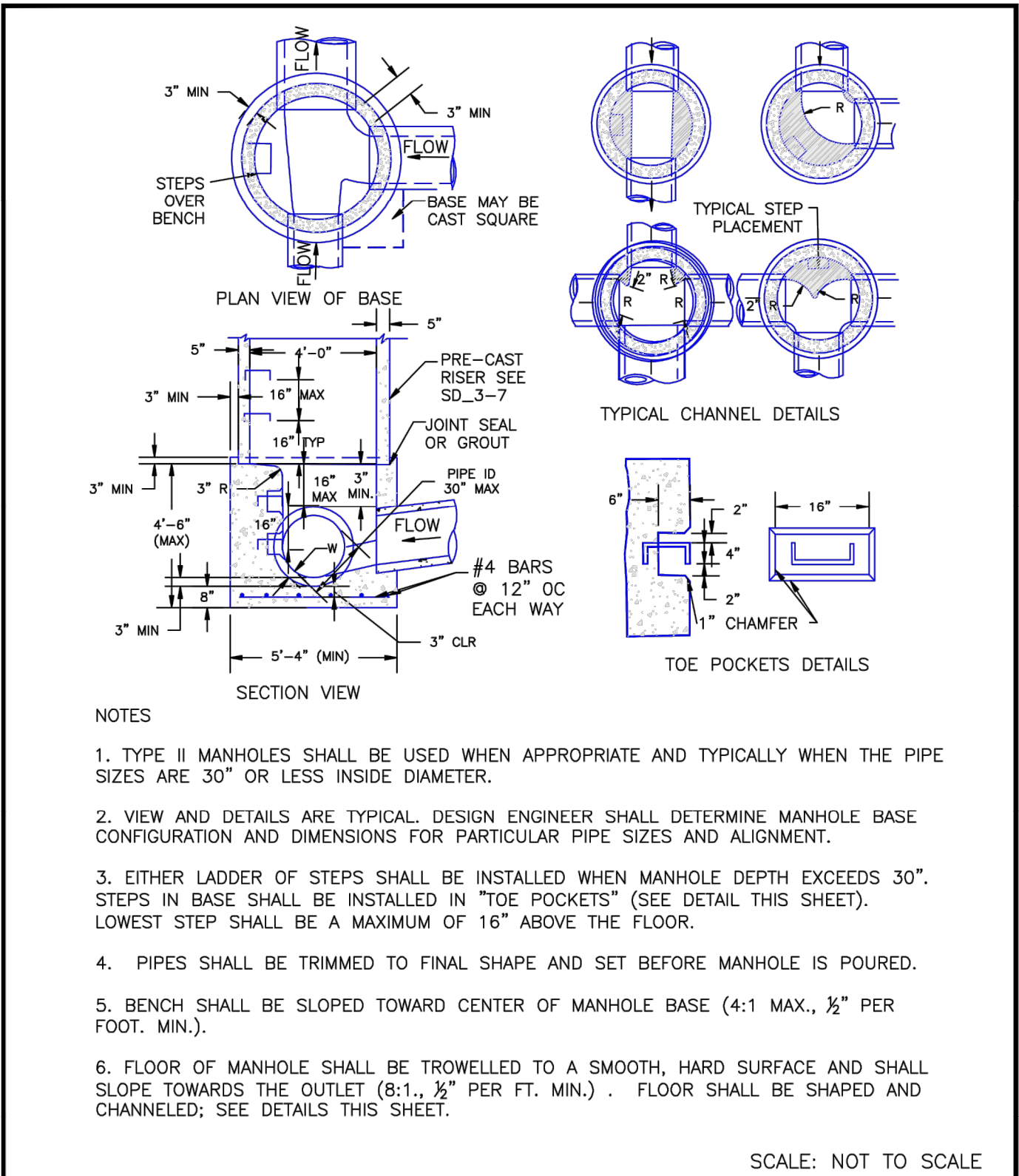
9/16/10
DATE APPROVED: André P. Brackin
REVISION DATE: 9/16/10
FILE NAME: SD_3-5
DEPARTMENT OF TRANSPORTATION



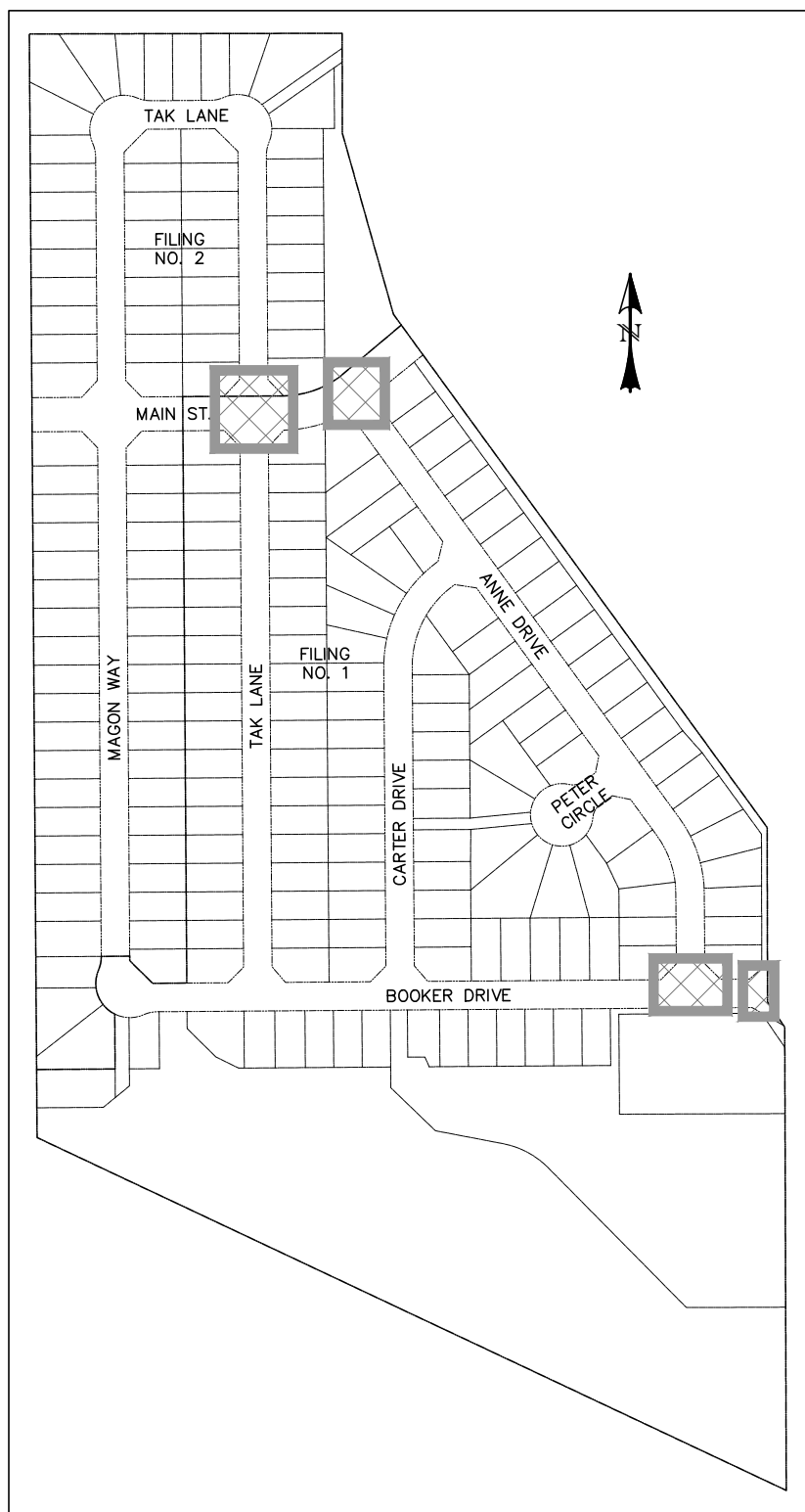
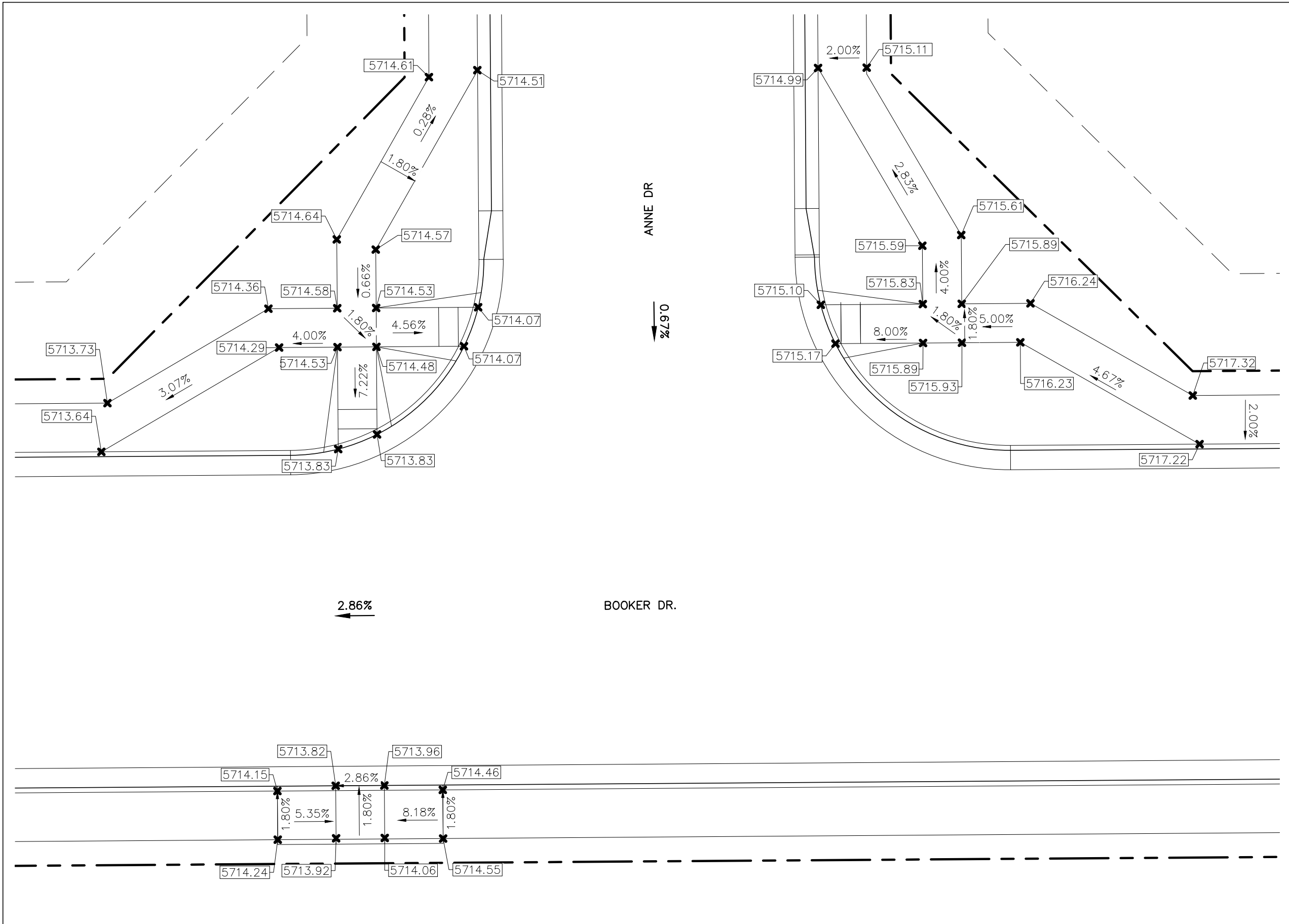
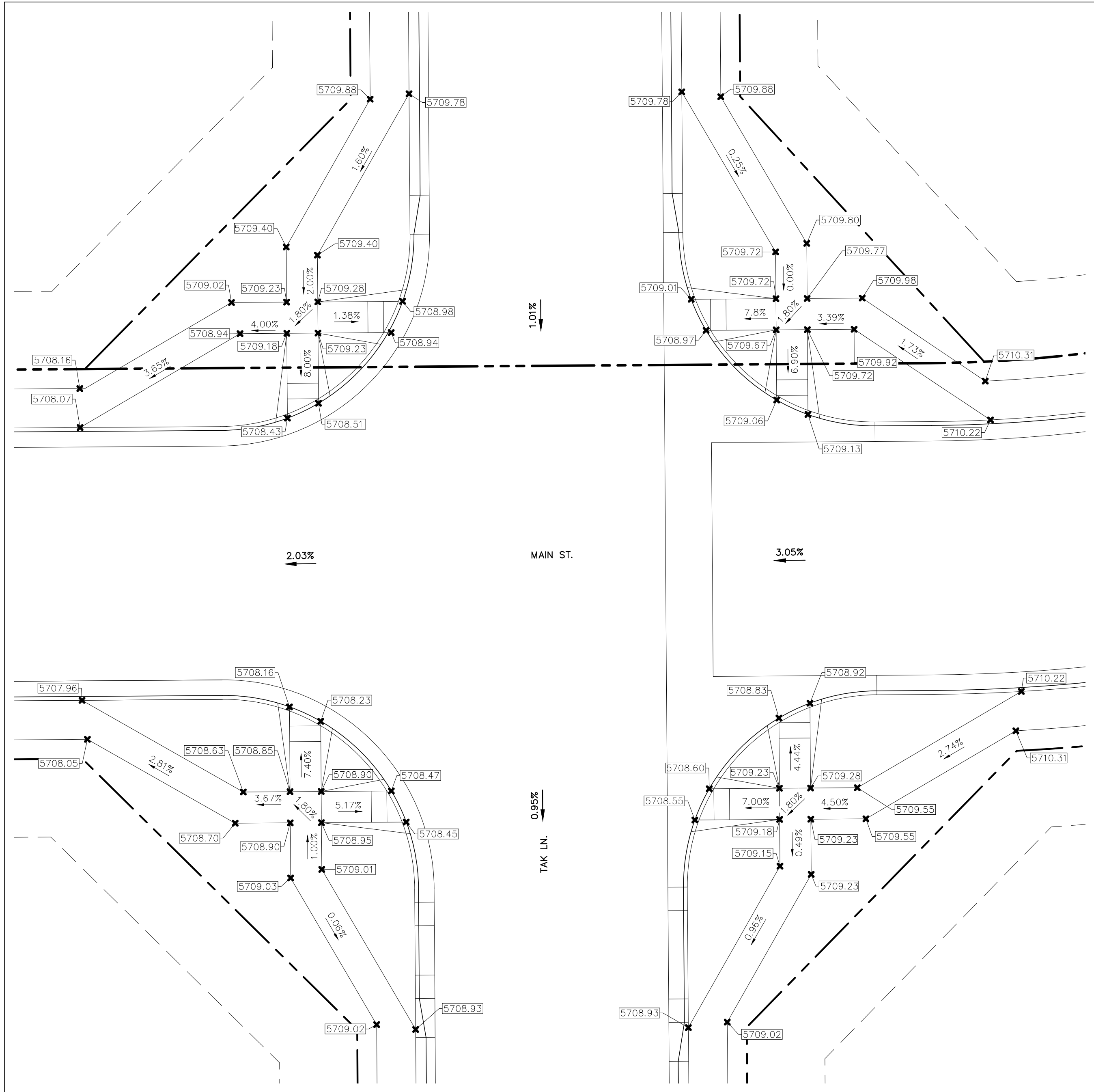
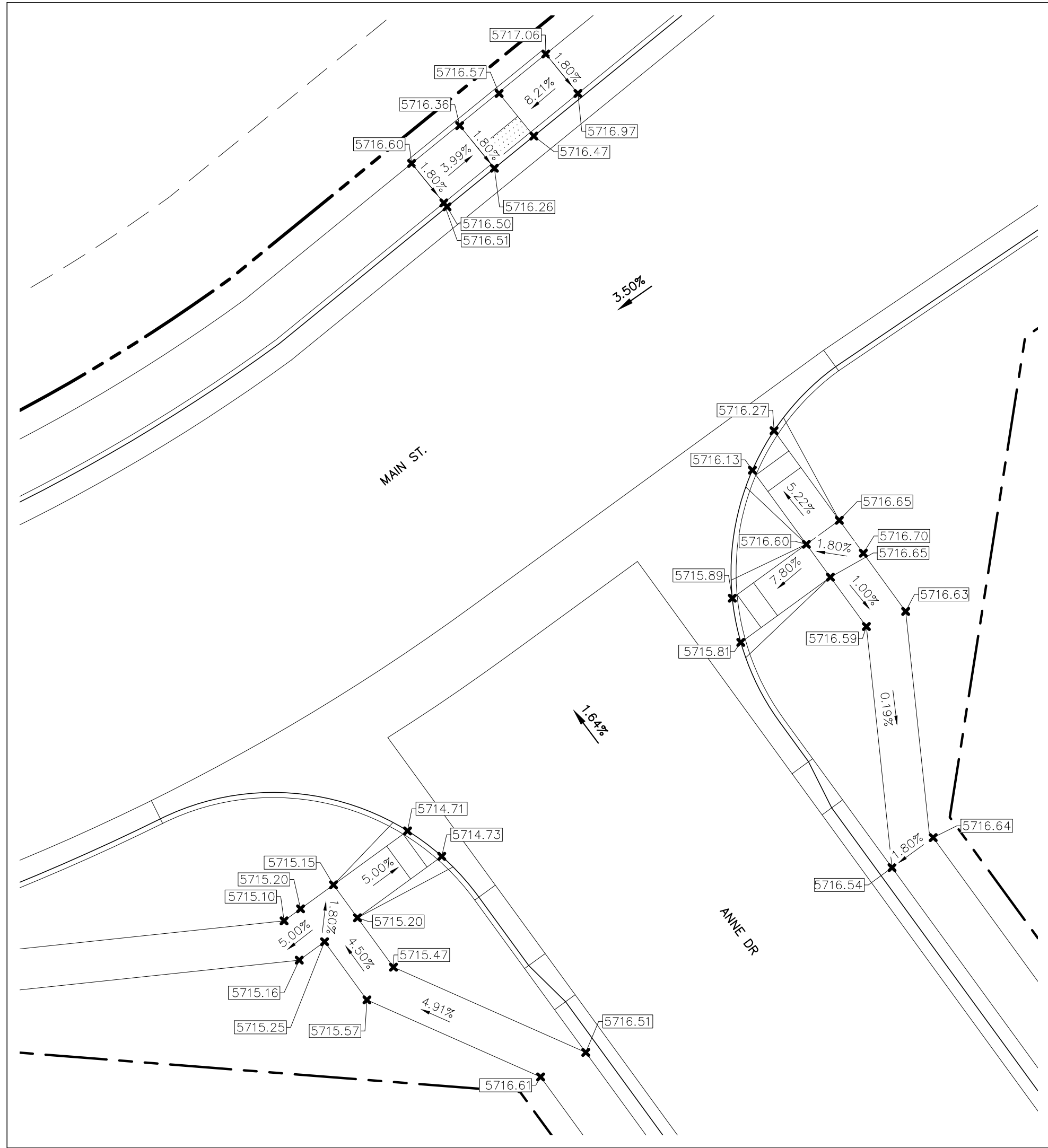
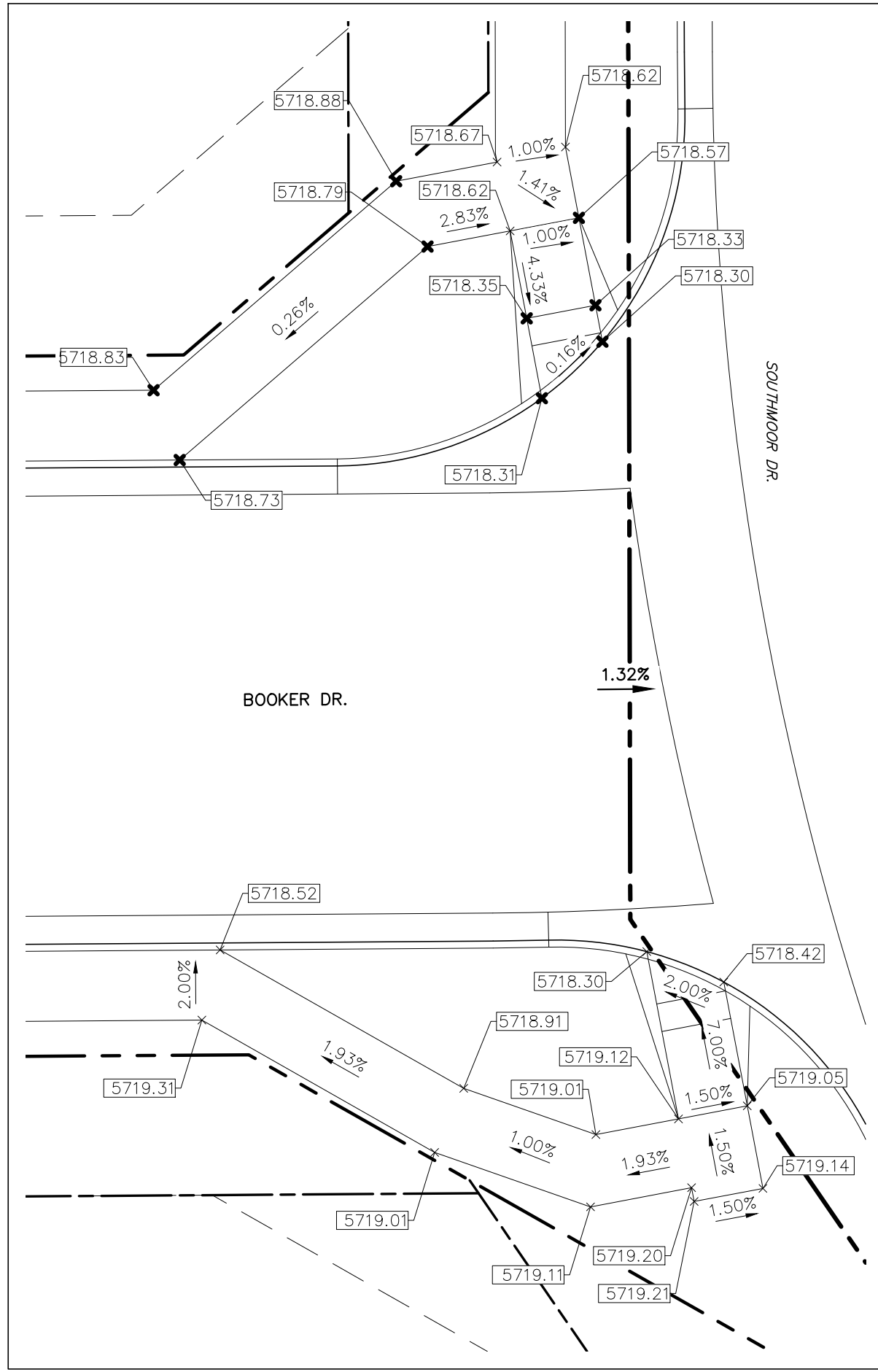
8/11/11
DATE APPROVED: André P. Brackin
REVISION DATE: 11/23/04
FILE NAME: SD_3-7
DEPARTMENT OF TRANSPORTATION



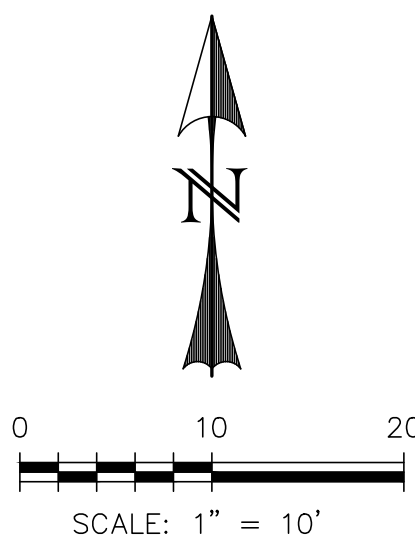
7/9/09
DATE APPROVED: André Brackin
REVISION DATE: 7/9/09
FILE NAME: SD_3-1
DEPARTMENT OF TRANSPORTATION



Storm Sewer Manhole Detail Type II Standard Drawing SD_3-2
DATE APPROVED: André P. Brackin
REVISION DATE: 11/10/04
FILE NAME: SD_3-2
DEPARTMENT OF TRANSPORTATION



LOCATION MAP
SCALE: N.T.S.



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

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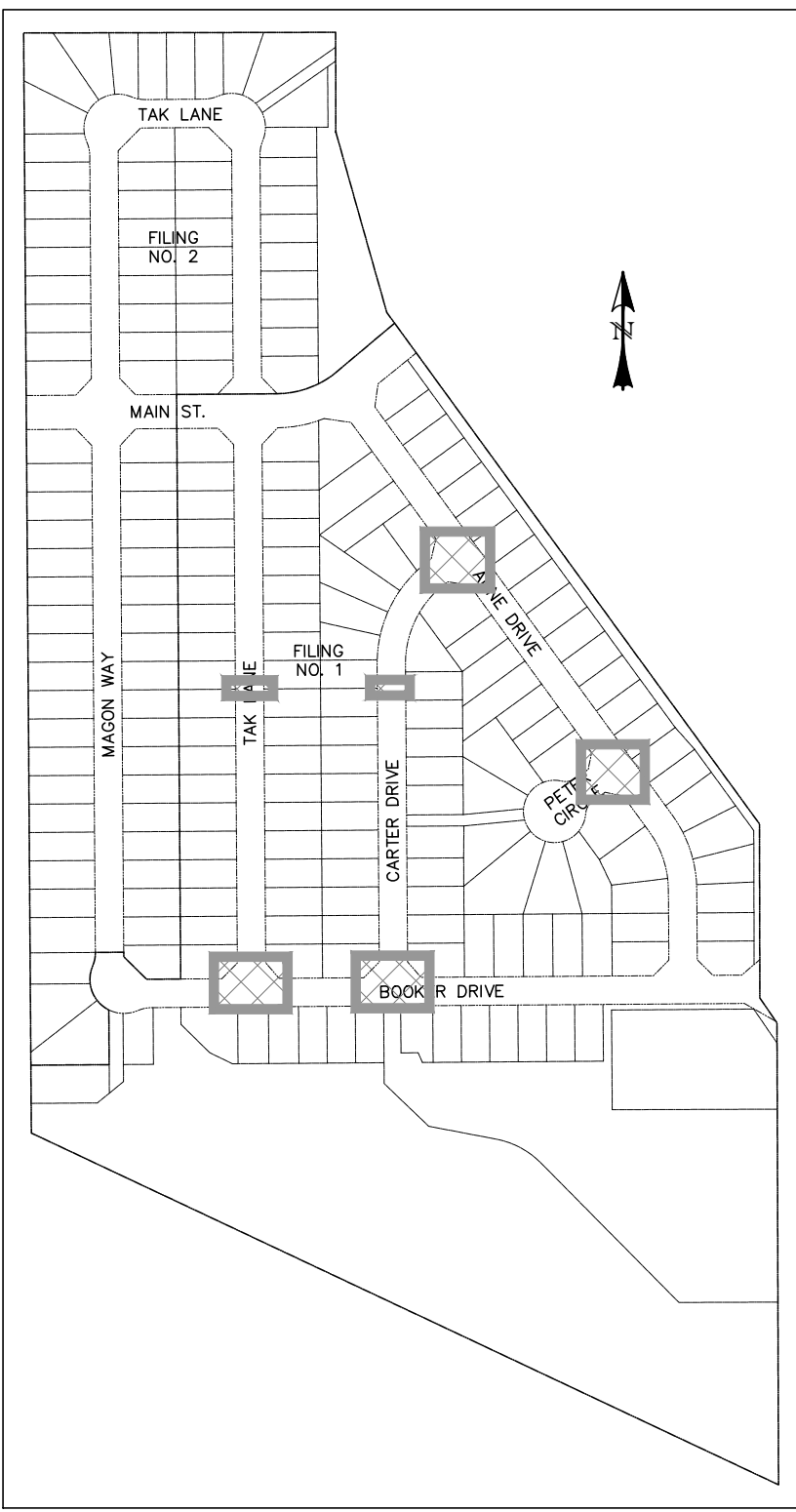
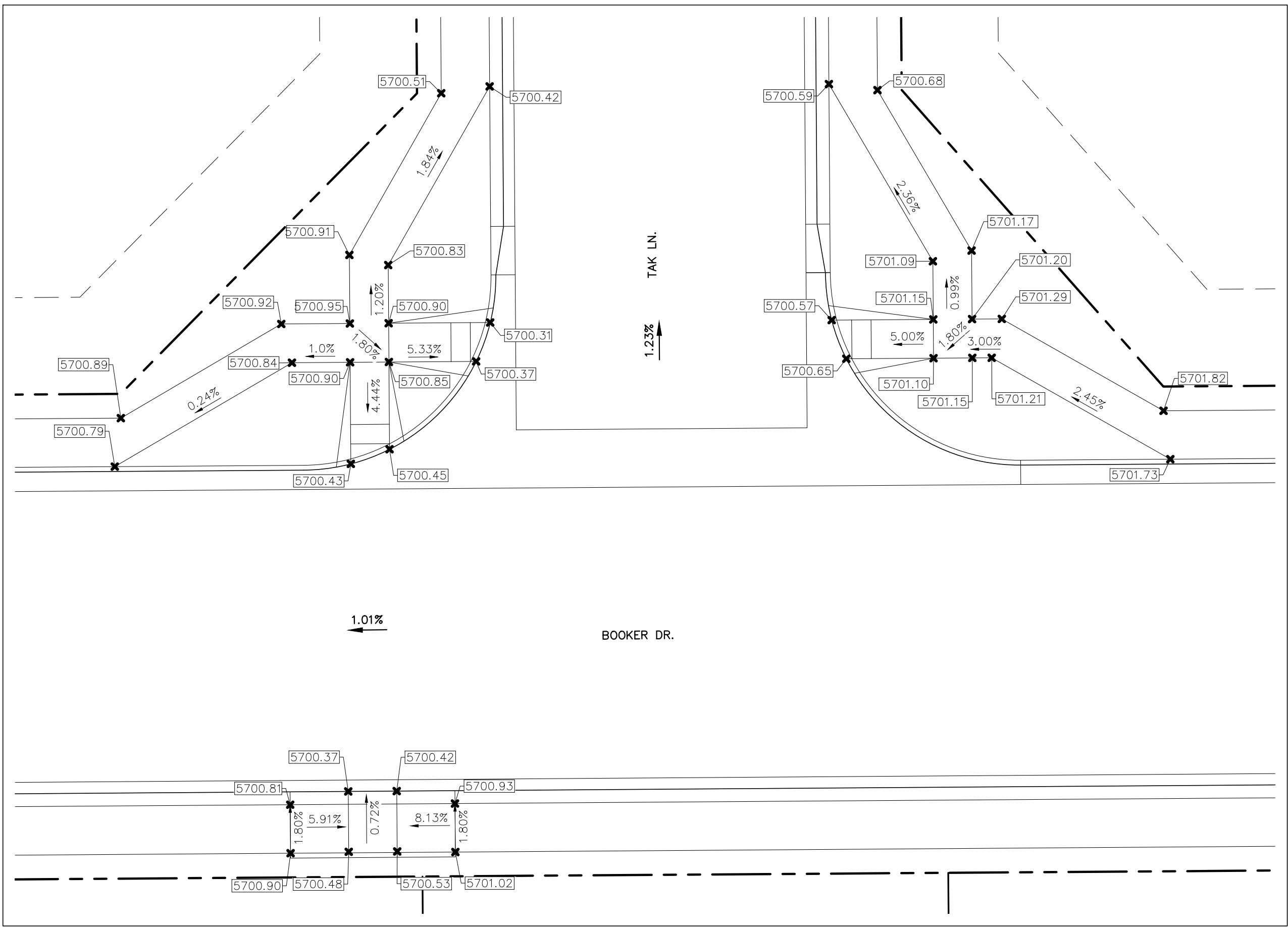
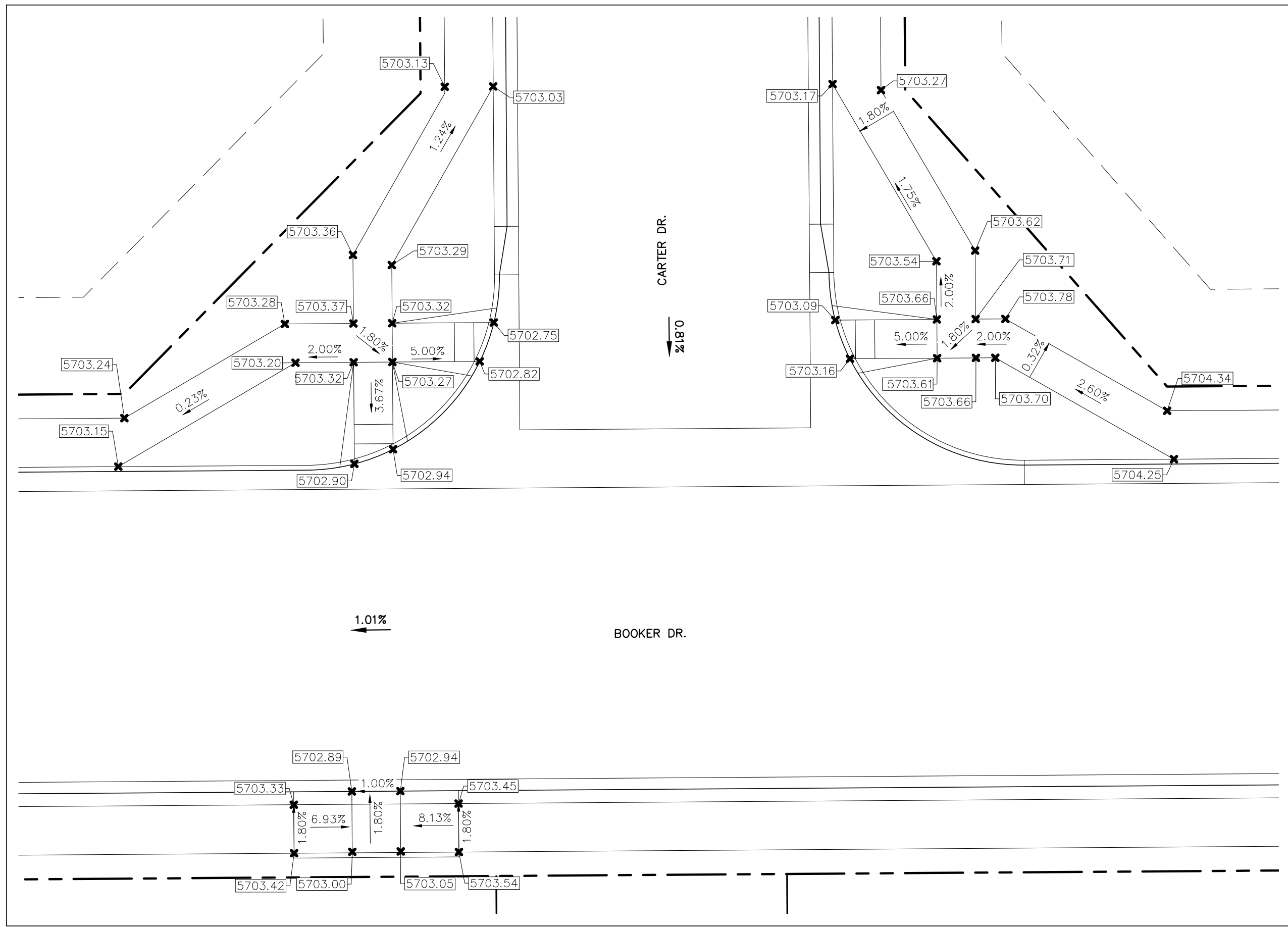
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SUITE 120W #204
SYOSSET, NY 11791

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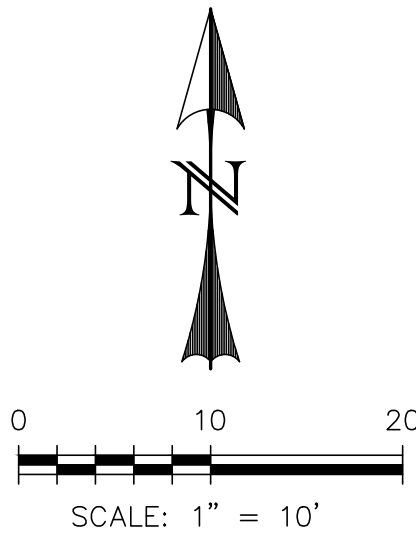
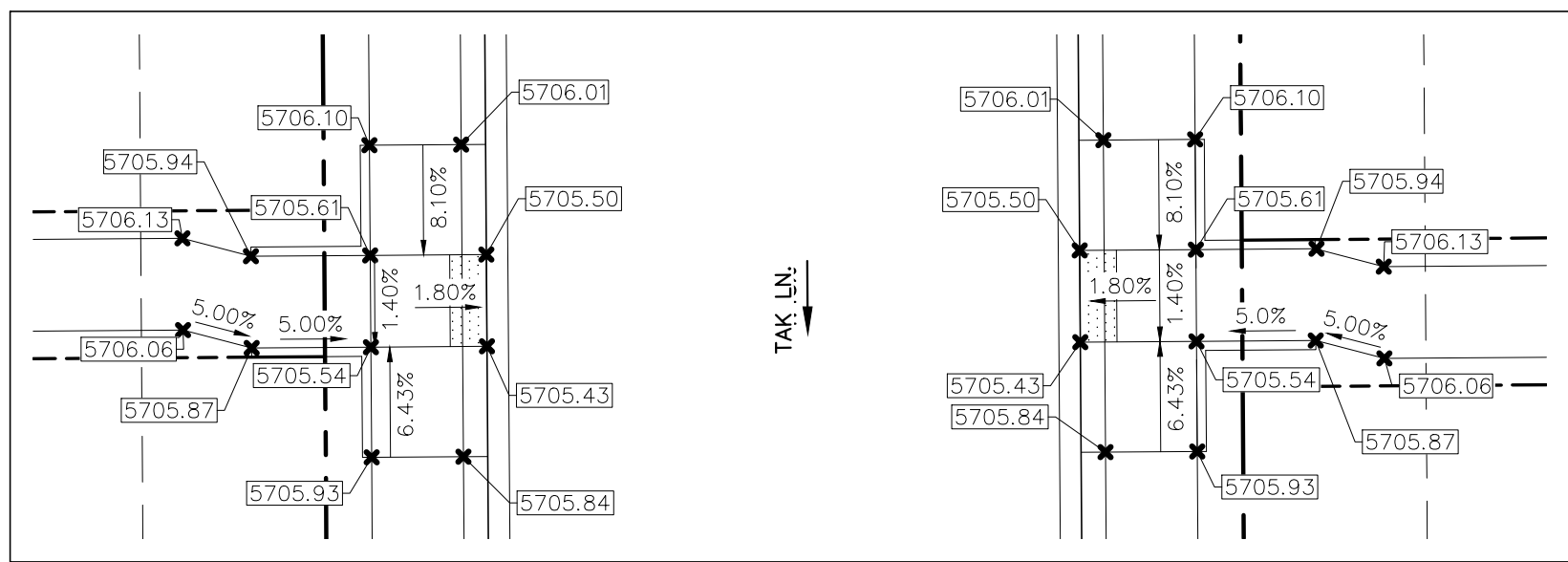
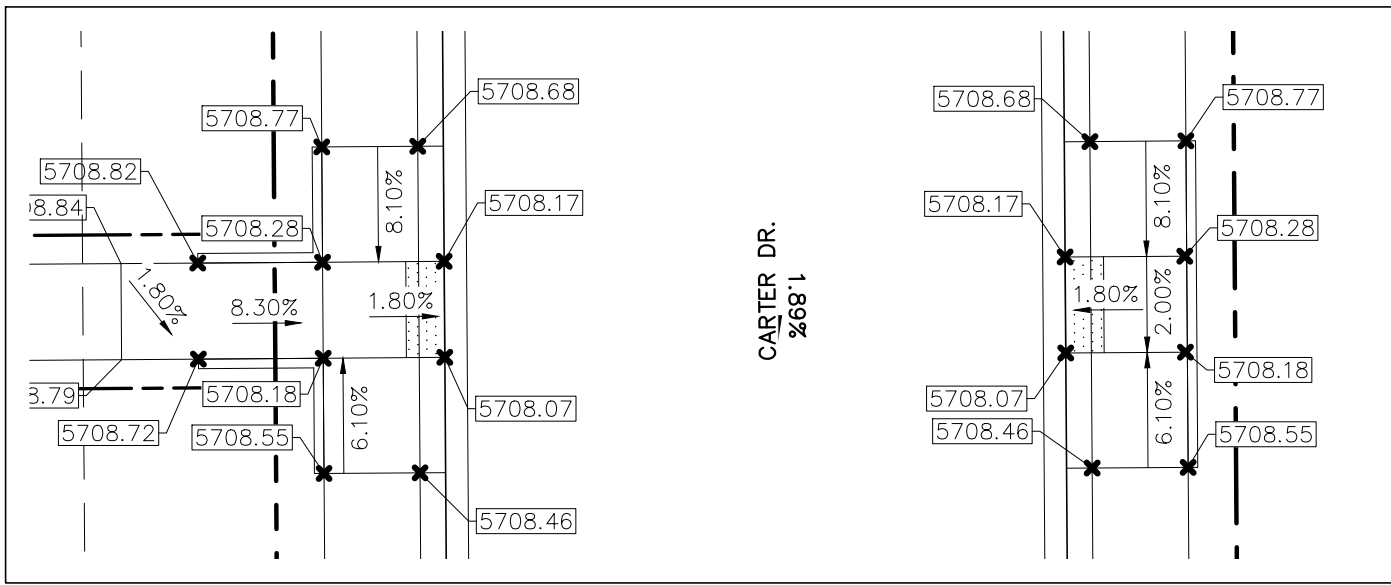
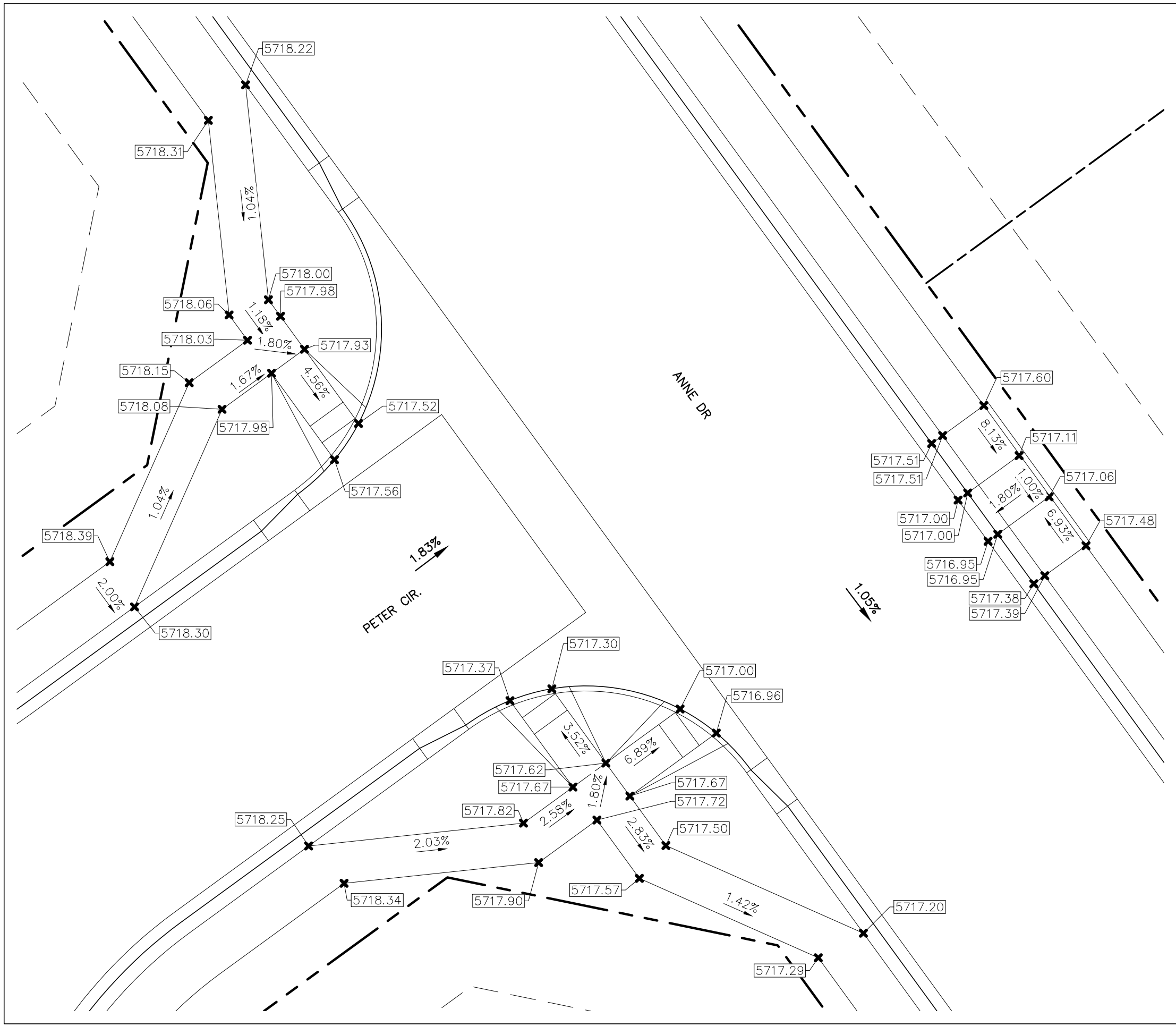
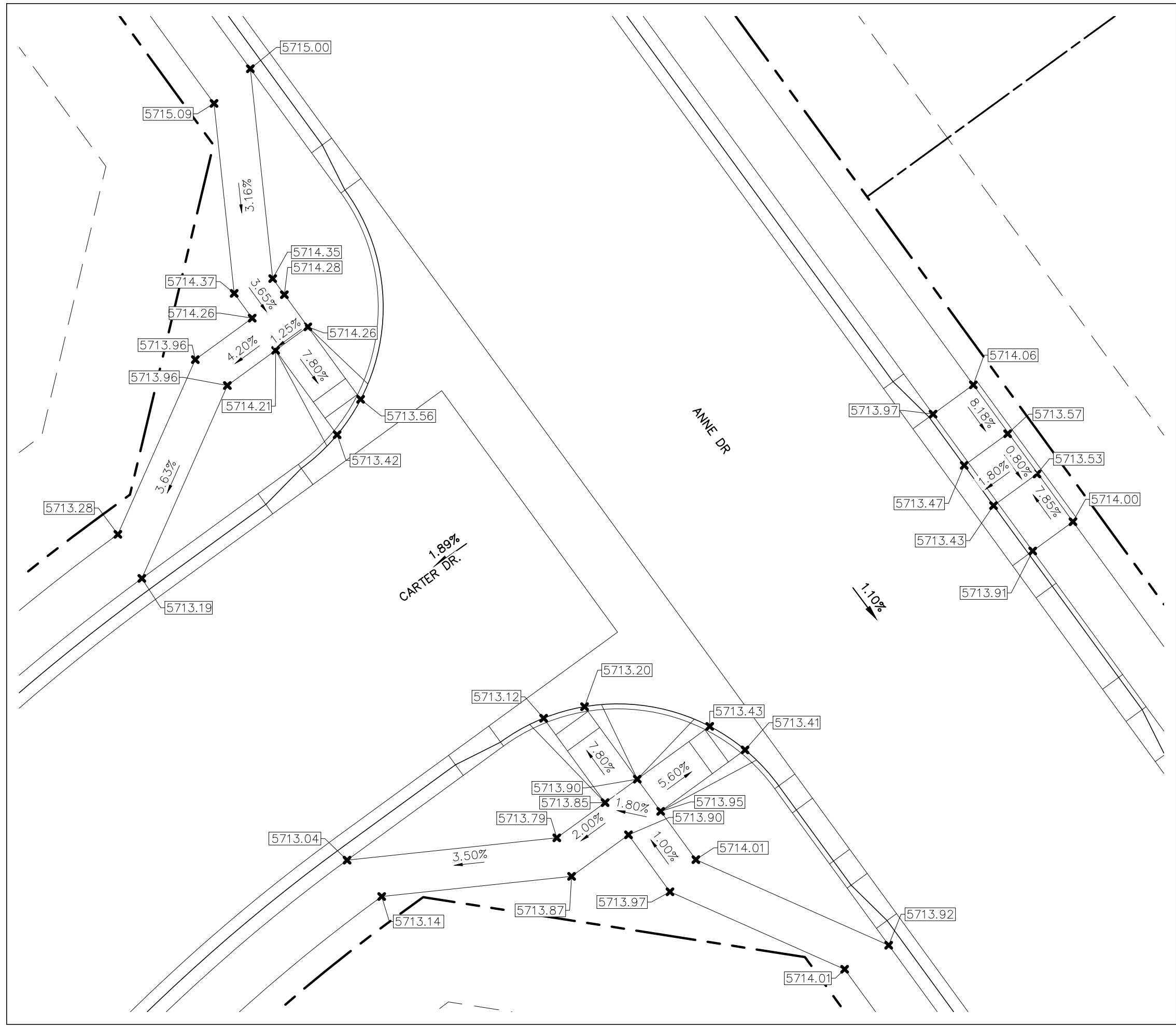
DAVID L. MIJARES, REGISTERED PROFESSIONAL ENGINEER #40510
10/19/20
DATE



RIVERBEND CROSSING FILING NO. 2		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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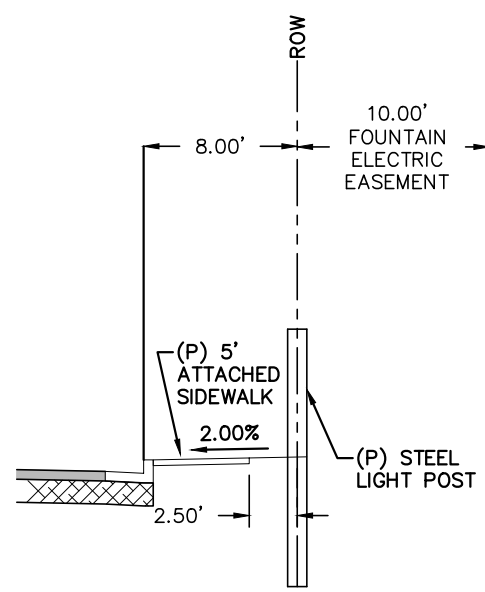
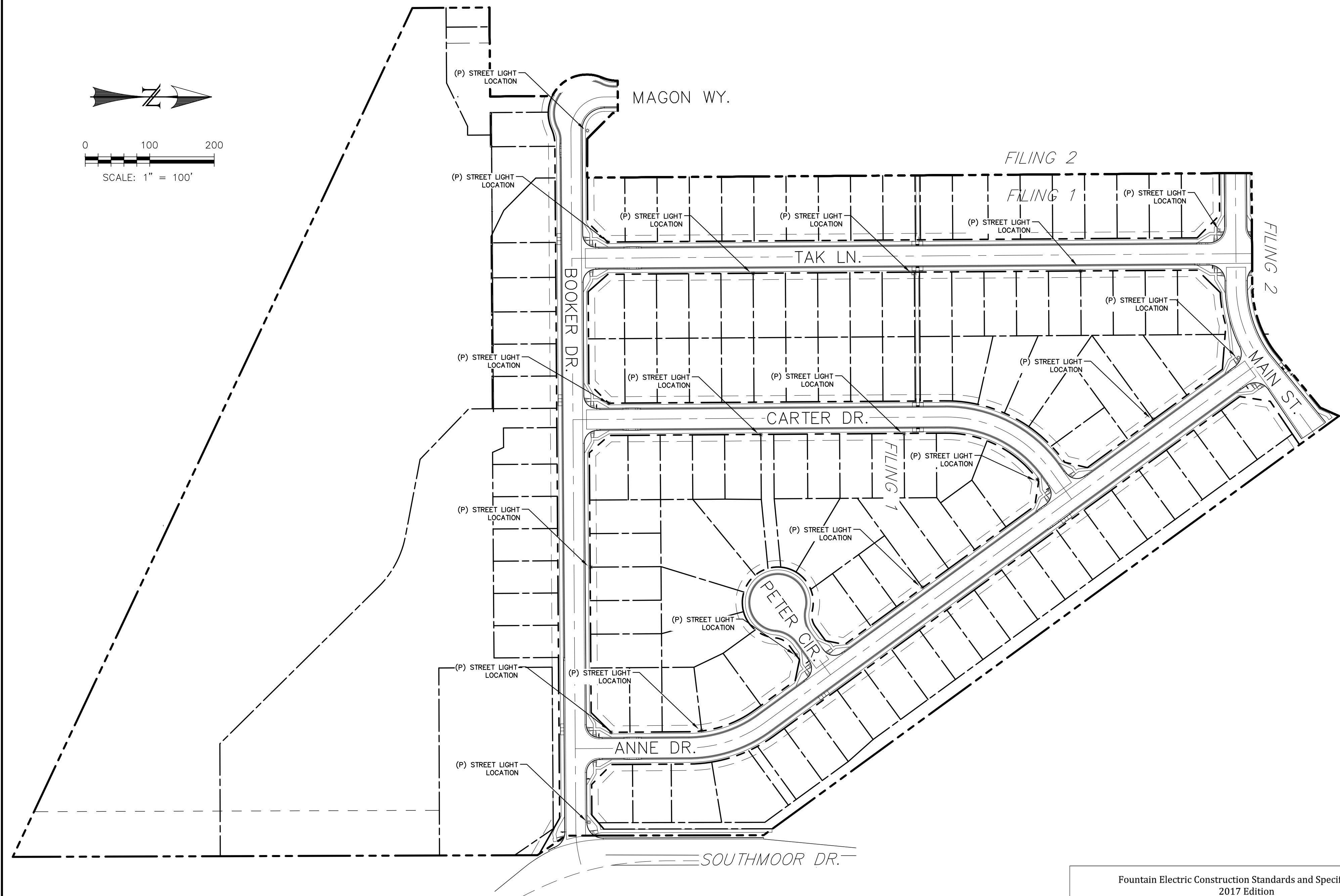
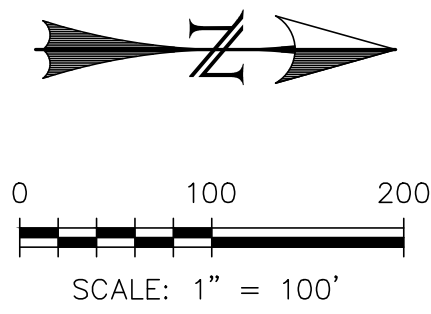
PREPARED FOR:
AVATAR EQUITIES, LLC
6800 JERICHO TURNPIKE
SUITE 120W #204
SYOSSET, NY 11791

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

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

**RIVERBEND CROSSING
FILING NO. 2
PEDESTRIAN RAMP DETAILS**

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



TYPICAL LIGHT POST LOCATION
(*SEE PLANS FOR LOCATIONS)
SCALE: N.T.S.

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.

2/10/17

Page 83

Fountain Electric Construction Standards and Specifications
2017 Edition

Locals-L1



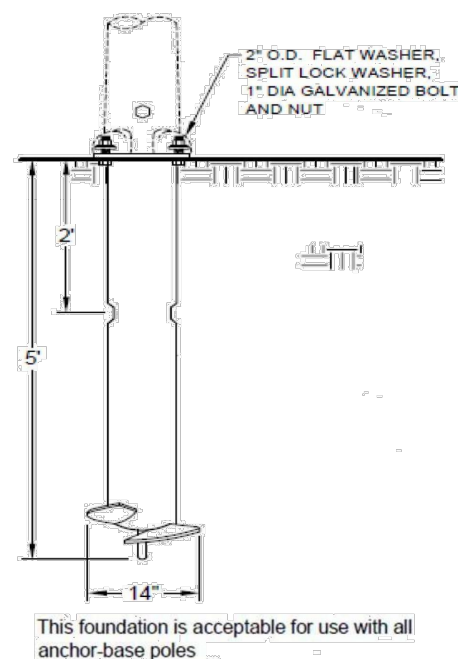
Collector L2



2/10/17

Page 85

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.

2/10/17

Page 87

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.

2/10/17

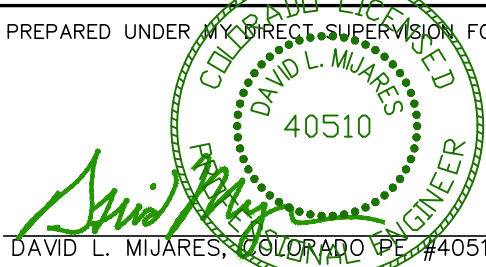
Page 84

REV.	DESCRIPTION	DATE



PREPARED FOR:

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.



03/26/21
DATE



LIGHTING PLAN

DESIGNED BY: DLM	DRAWN BY: DBM
SCALE: 1" = 100'	DATE:
JOB NUMBER 17-114	SHEET 22 OF

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 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 SEEDED. 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 CONFLICTS 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 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: XX
INTERSEED: XX
OTHER: XX

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: COVERED
ANCHORAGE DEPTH: 4"

SEED:
VARIETY SPECIES REQUIRED PLS. RATES PER ACRES (1000)
GOSHEN PRAIRIE SANDREED 6.5
VAUGHN SIEDATS GRAMMA 9.0
LOVINGTON BLUE GRAMMA 3.0
BLACKWELL SWITCH GRASS 4.0
PASTURA LITTLE BLUESTEM 7.5

(2) X OF SPECIES IN MIXTURE	(3) PLS SEEDING RATE PER SPECIES/ACRE	(4) PLANNED SEEDING RATE PER SPECIES/ACRE	(5) TOTAL PLS LBS/ SPECIES PLANNED (3) x (4)
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 ROLLED 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
MULCHING 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 CRIMPED INTO THE GROUND. ON SLOPES GREATER THAN 3:1, AN AGGRADY BLANKET SHOULD BE USED.
5. SUPPLEMENTAL WATER
ON LOW-LYING 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.

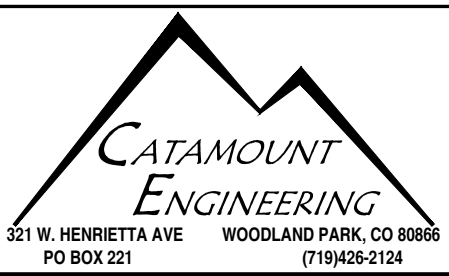
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PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF CATAMOUNT ENGINEERING.
DAVID L. MUIRES, COLORADO PROFESSIONAL ENGINEER
40510
10/19/20
DATE



RIVERBEND CROSSING
FILING NO. 2
GRADING & EROSION
CONTROL PLAN

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

1. 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.
2. CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY WETLANDS.
3. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE PROJECT 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.).
4. VEHICLE TRACKING OF SOILS OFF-SITE SHALL BE MINIMIZED.
5. 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.
6. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMITTED BY THE COUNTY OF EL PASO. IF 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.
7. 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.
8. 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.
9. 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 EROSION AND SEDIMENT CONTROL MANUAL. THE DURATION OF EARTH DISTURBANCE OPERATIONS SHALL BE LIMITED TO THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMP'S SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE.
10. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION.
11. 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.
12. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
13. SUSPENDED SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE MINIMIZED IN RUNOFF WATER BEFORE IT LEAVES THE SITE OF EARTH DISTURBANCE.
14. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR OVER A DISTURBED LAND AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON-EROSIVE VELOCITY.
15. 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 INCLUDED IN THE EROSION AND SEDIMENT CONTROL MANUAL. THE CONFORMANCE WITH THE EROSION CONTROL FEATURES SHOWN ON THE EROSION AND STORMWATER QUALITY CONTROL PLANS APPROVED BY THE COUNTY OF EL PASO, IF REQUIRED.
16. 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 MUST ALSO BE MULCHED WITHIN 21 DAYS AFTER 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.
17. 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.
18. 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 CHANNEL SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
19. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER, INCLUDING THE TEMPORARY OR PERMANENT RAMMING WITH MATERIALS FOR VEHICLE ACCESS.
20. 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, RULES, OR REGULATIONS OF OTHER FEDERAL OR STATE AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
21. 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, ORDERED 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.
22. 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. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER THE SPILL IS CONTAINED UNTIL APPROPRIATE CLEANUP METHODS CAN BE EMPLOYED. THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE FOLLOWED, ALONG WITH PROPER DISPOSAL METHODS.

SEEDING GUIDELINES

- 1. SEEDBED PREPARATION**

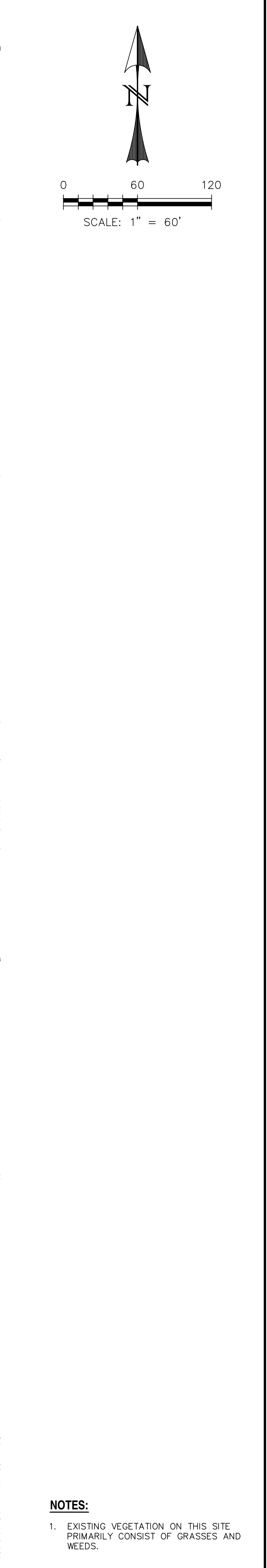
THE SEEDBED SHOULD BE WELL-SETTLED AND FIRM, BUT NOT SO HARD THAT THE SEEDS WOULD BE REJECTED AT THE SPECIFIED DEPTHS. COMPETITIVE STANDS OF WEEDS THAT ARE PRESENT BEFORE SEEDING SHOULD BE REMOVED BY SHALLOW TILLAGE OR BY APPLICATION OF HERBICIDES. SOIL THAT HAS BEEN OVER-CORRODED, BY TRAFFIC OR APPLICATION, ESPECIALLY WHEN WET, SHOULD BE LEFT TO BREAK UP ROOTING-RESTRICTIVE LAYERS, BY HARROWING, ROLLED, OR PACKED TO REPAIR THE REQUIRED FIRM SEEDBED.
- 2. FERTILIZATION**

SEEDING SHOULD BE APPLIED AT A RATE OF 50 POUNDS OF AVAILABLE NITROGEN PER ACRE AND 40 POUNDS OF AVAILABLE PHOSPHATE PER ACRE. FERTILIZER SHOULD BE APPLIED 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 TYPES OF SOILS. (1) IN THE WINTER, SEEDING SHOULD BE BROADCAST BY HAND, BY MECHANICAL SPREADER, OR BY HYDRAULIC EQUIPMENT ON AREAS THAT ARE COVERED, 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 SHOULD 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**

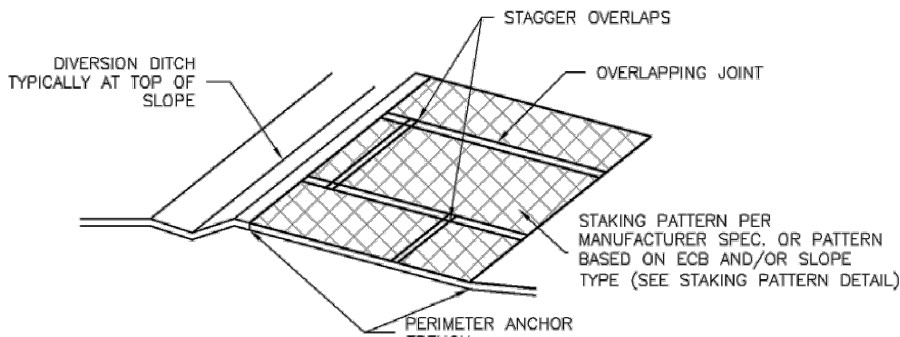
SEEDBED AREAS SHOULD BE MULCHED TO CONSERVE MOISTURE, PREVENT SURFACE SOIL COMPACTION OR CRUSTING, PREVENT ROOT AND EROSION, CONTROL INSECTS, AND HELP ESTABLISH PLANT COVER. NATIVE ORYZAL OR STRAW MULCH SHOULD BE APPLIED AT A RATE OF 2 TO 3 TONS PER ACRE AND CHIPPED INTO THE GROUND, ON SLOPES WHERE MULCHING IS NOT DESIRED. MULCH SHOULD NOT BE USED.
- 5. PERMANENT WATER**

IN LOW RAINFALL AREAS, WHERE WATER IS AVAILABLE AND SOILS ARE NOT HEAVY, PERMANENT WATER OR FLOODING SEEDING SHOULD BE PERFORMED DURING THE FIRST SEEDING SEASON. WATER APPLICATIONS SHOULD BE AT APPROXIMATELY ONE WEEK INTERVALS, AT A RATE OF 3/4" OF WATER PER APPLICATION, WHEN RAINFALL IS SUFFICIENT FOR PLANT DEVELOPMENT.

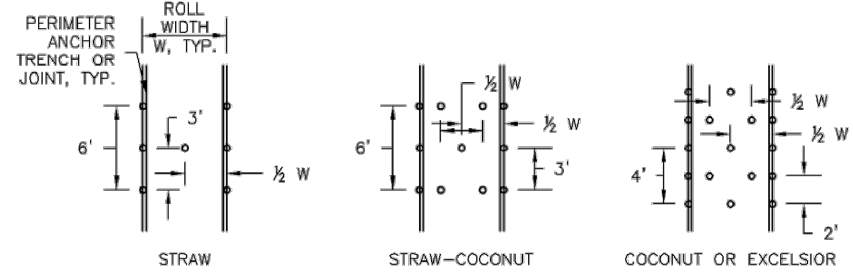


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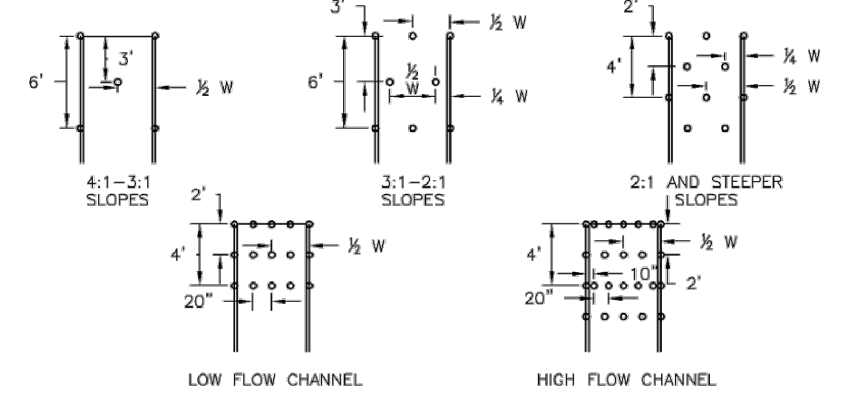
Rolled Erosion Control Products (RECP) EC-6



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 ECB
 - 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 VIDS 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 DRINKING CHANNEL. ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS.

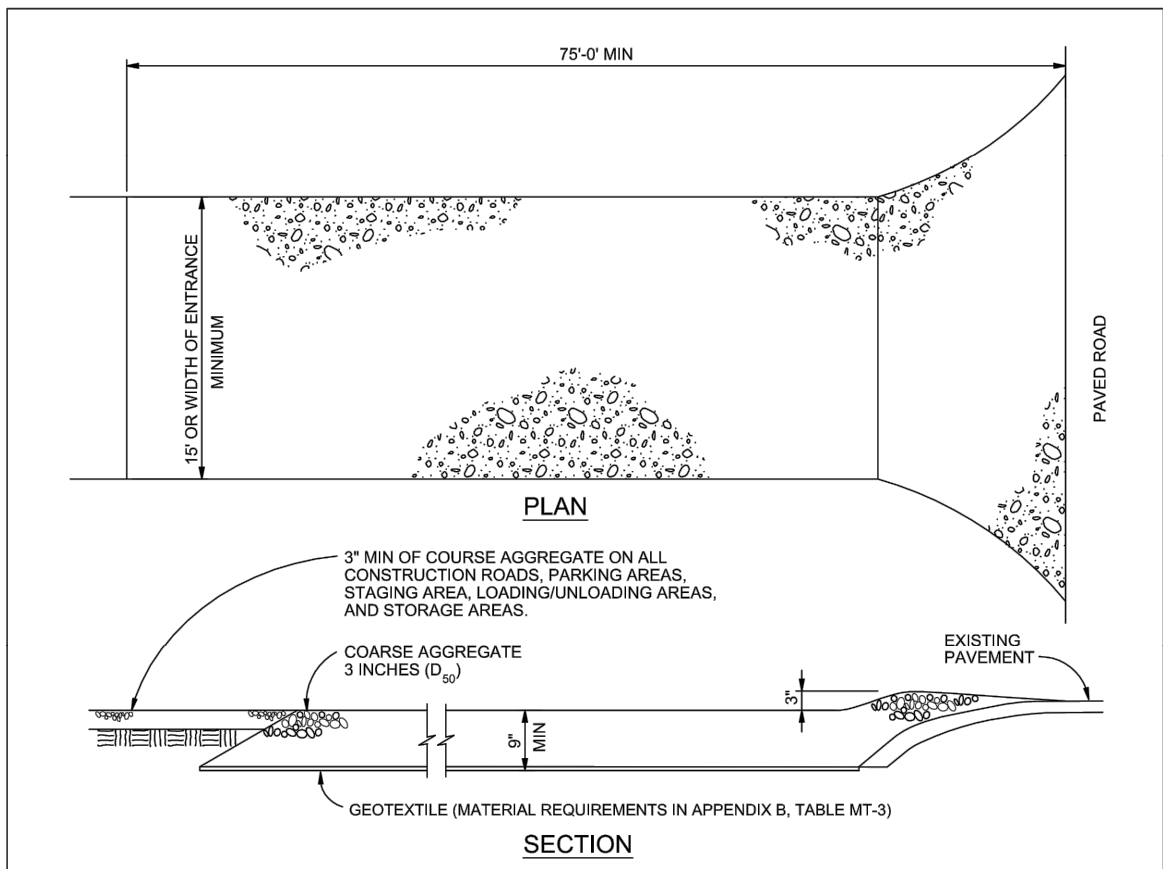
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EROSION CONTROL BLANKET MAINTENANCE NOTES

- 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 STORM SEWER DRAINS.
- 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 GRADINGS, 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 SPECIFIED TO ENSURE GOOD WORKING CONDITION.

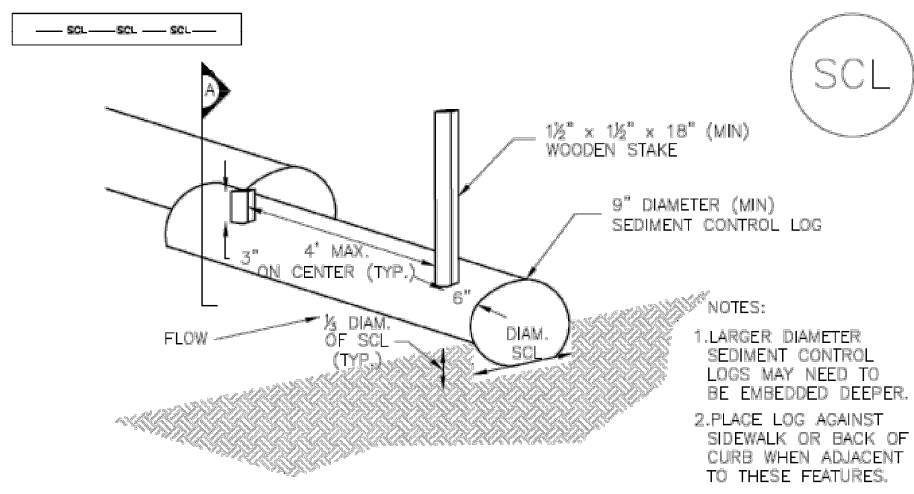
City of Colorado Springs Stormwater Quality

Figure VT-2 Vehicle Tracking

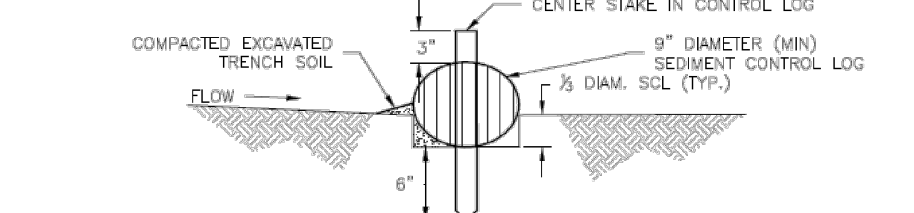
Application Examples



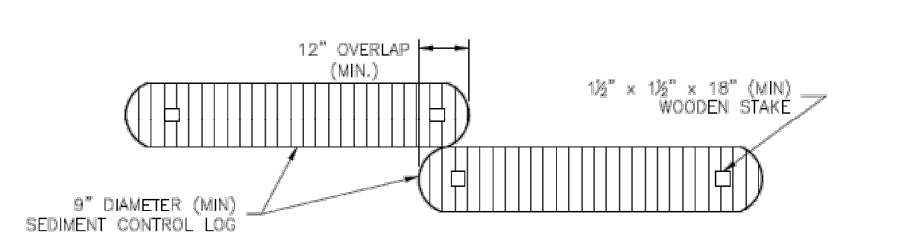
Sediment Control Log (SCL) SC-2



TRENCHED SEDIMENT CONTROL LOG



TRENCHED SEDIMENT CONTROL LOG



LOG JOINTS

SCL-1. TRENCHED SEDIMENT CONTROL LOG

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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

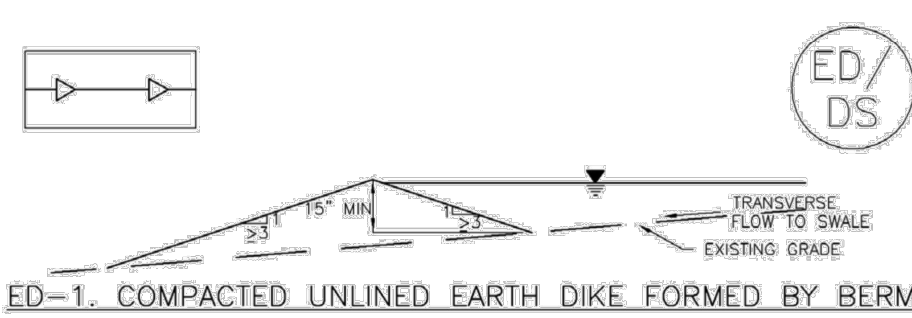
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF 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 SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDING AND MULCHED 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)

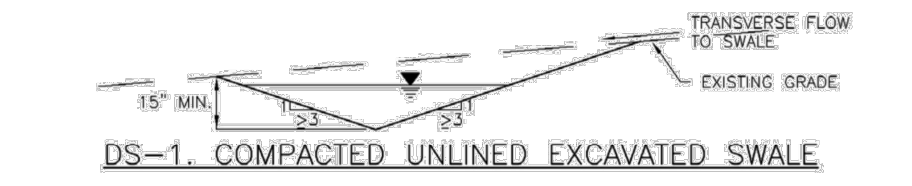
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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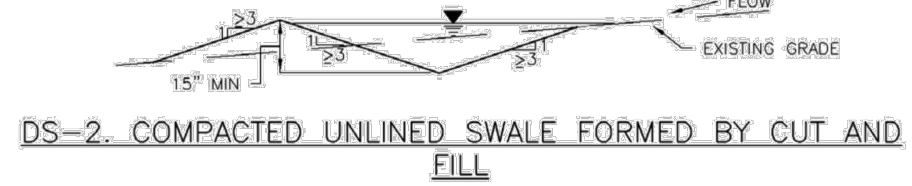
Earth Dikes and Drainage Swales (ED/DS) EC-10



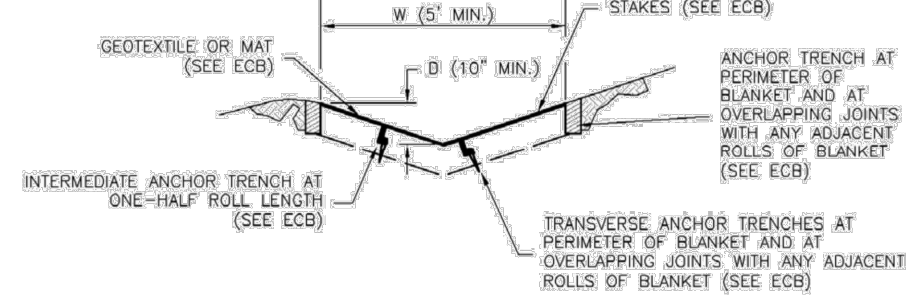
ED-1. COMPACTED UNLINED EARTH DIKE FORMED BY BERM



DS-1. COMPACTED UNLINED EXCAVATED SWALE



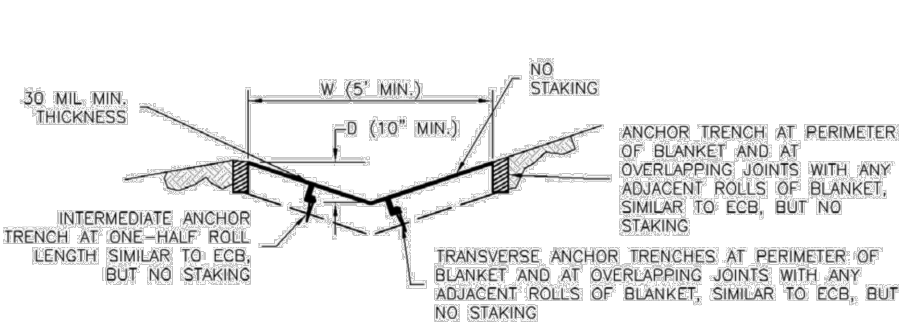
DS-2. COMPACTED UNLINED SWALE FORMED BY CUT AND FILL



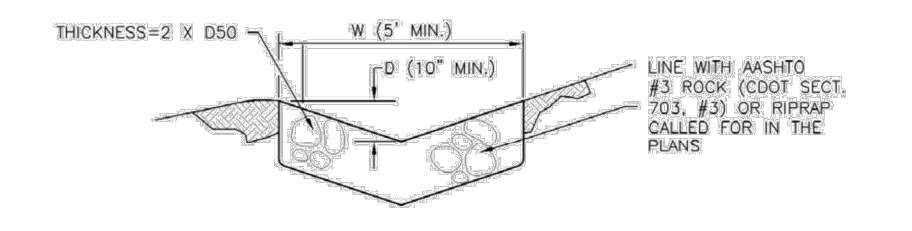
DS-3. ECB LINED SWALE (CUT AND FILL OR BERM)

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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.
- EMANKMENT 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

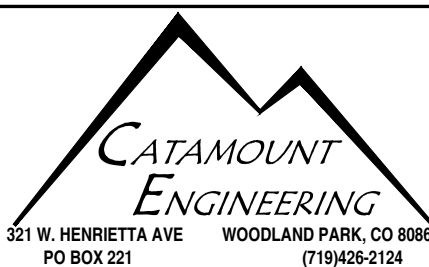
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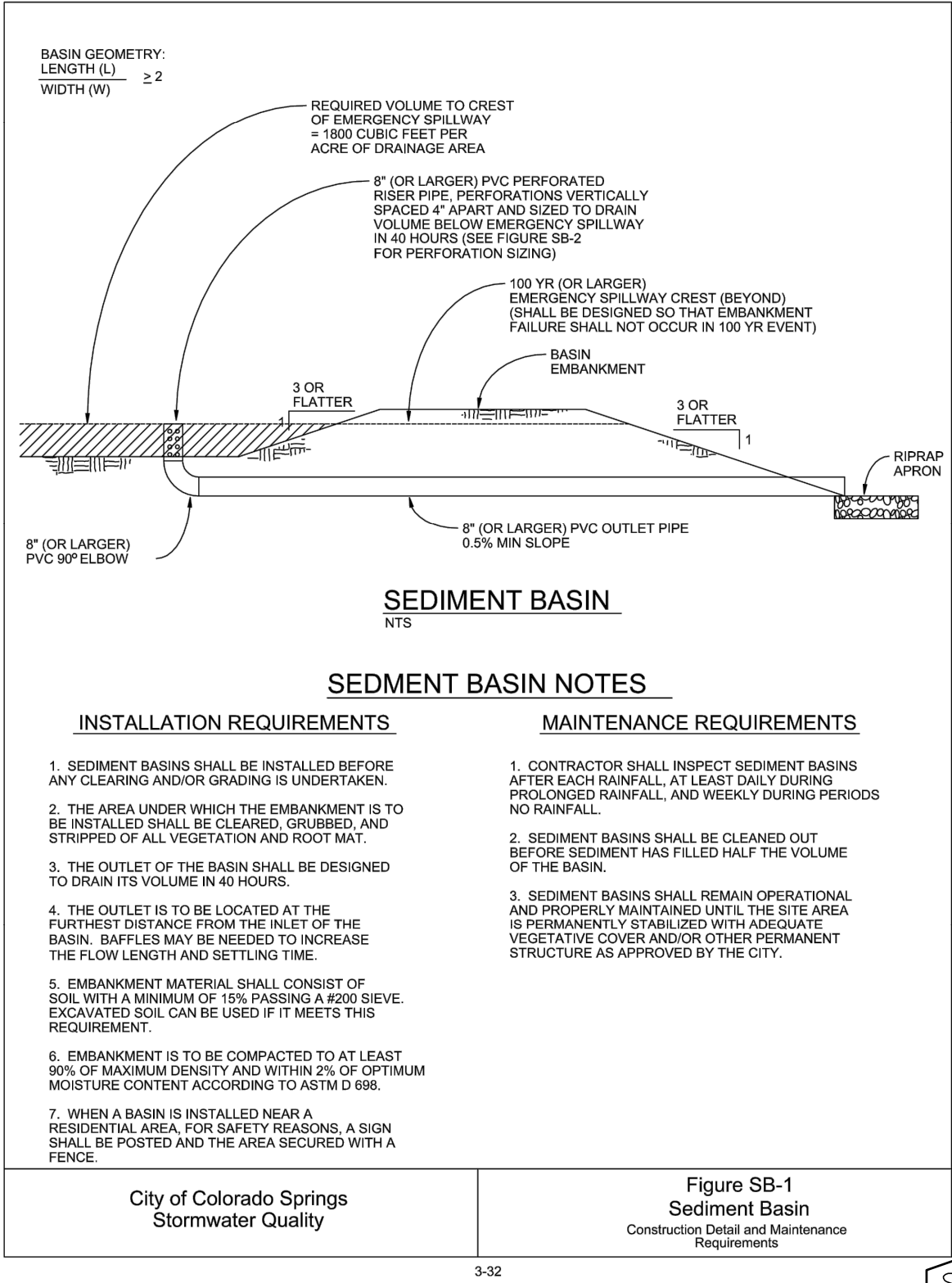
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SUITE 120W #204
SYOSSET, NY 11791

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DAVID L. MUÑOZ, COLORADO LICENSED PROFESSIONAL ENGINEER
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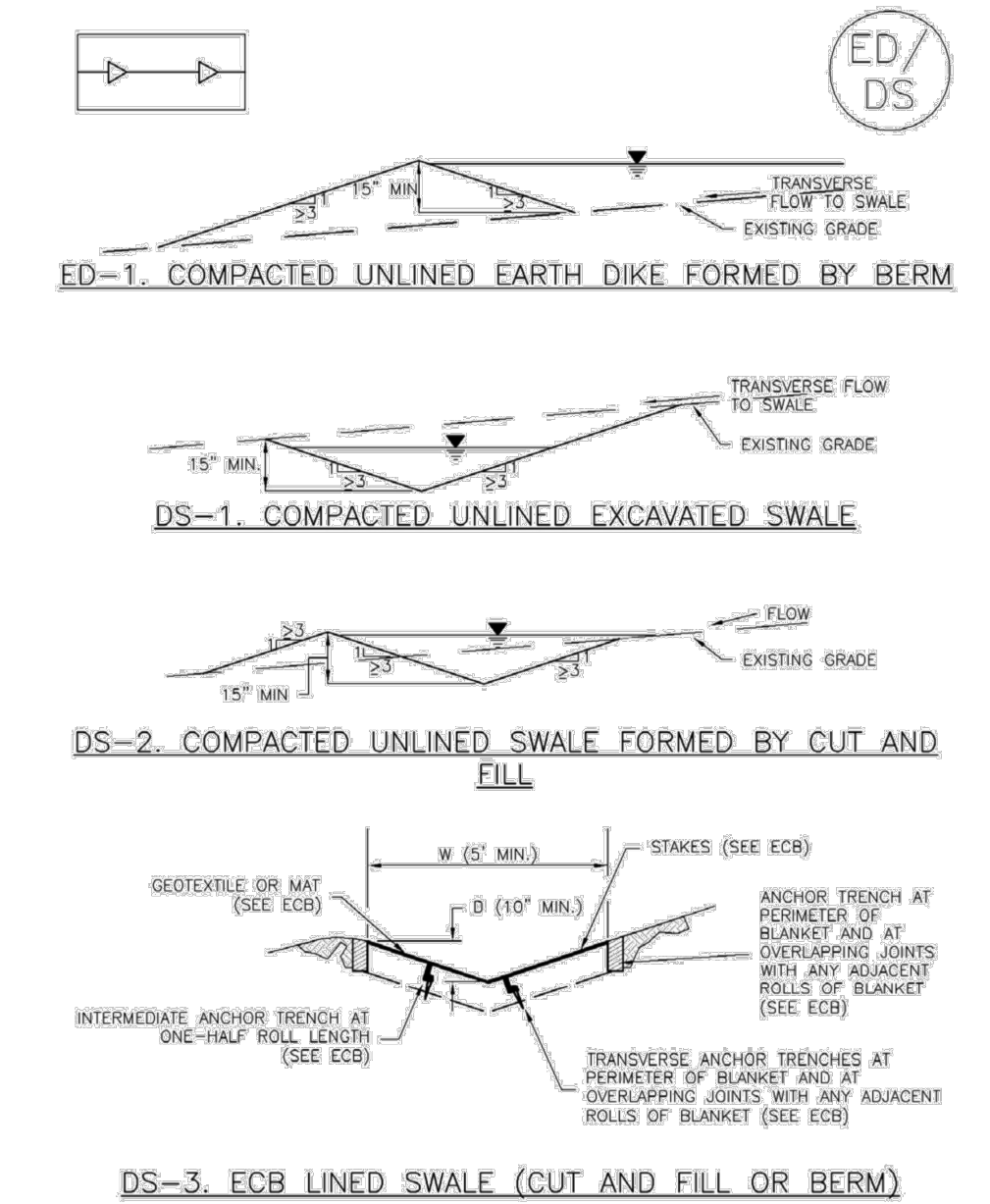


RIVERBEND CROSSING
FILING NO. 2
GRADING & EROSION
CONTROL DETAILS

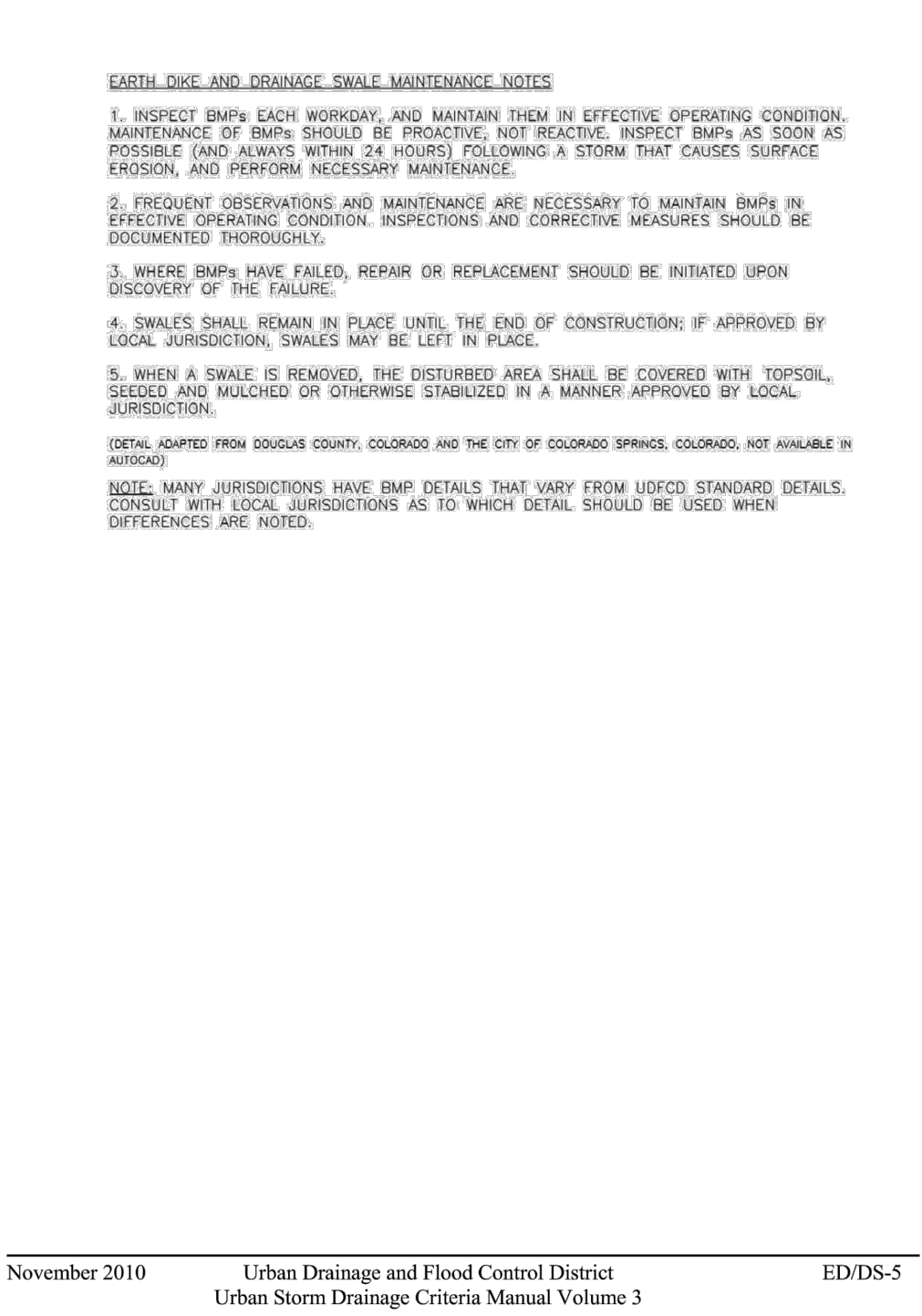
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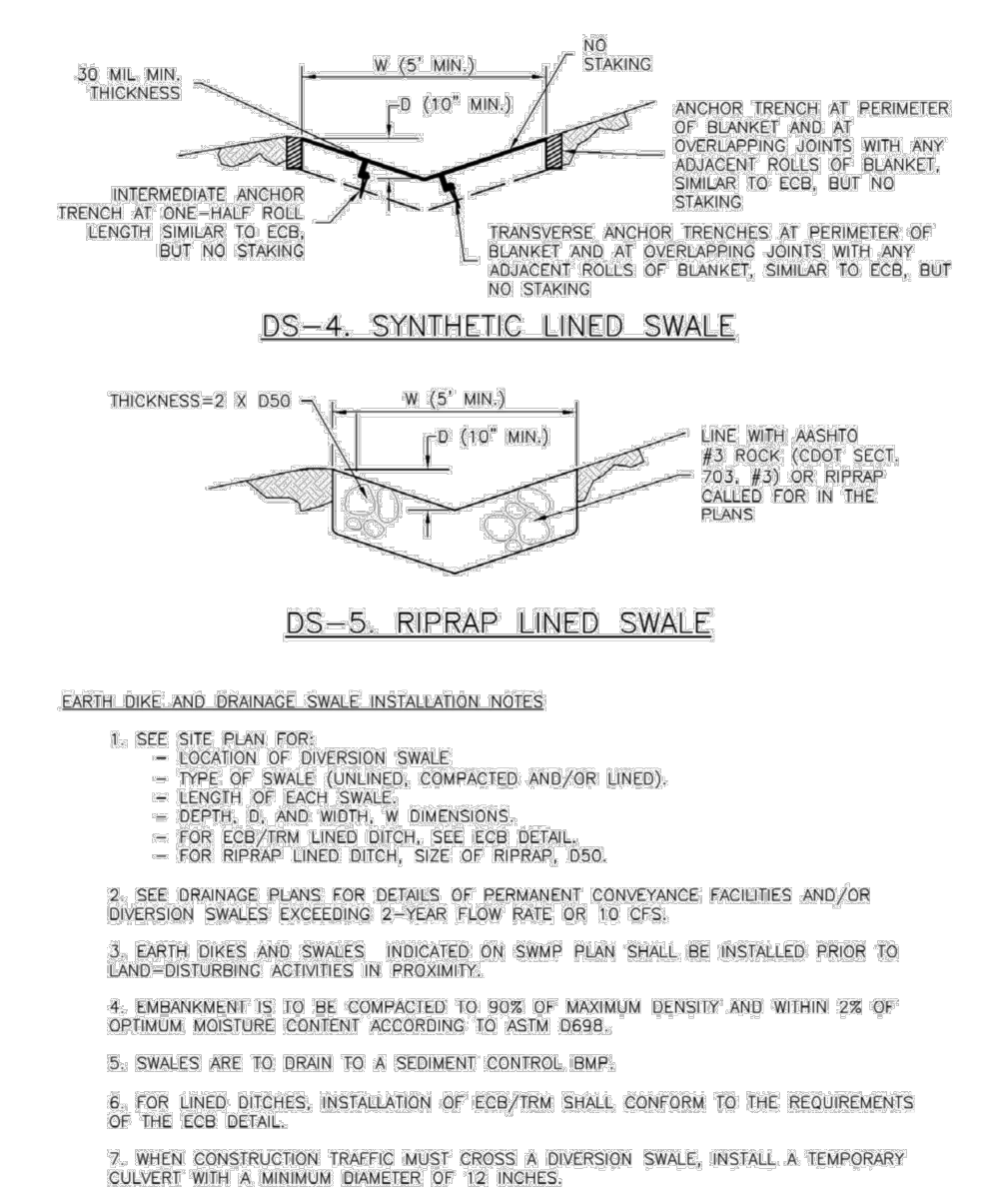
Earth Dikes and Drainage Swales (ED/DS) EC-10



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



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



Required Area per Row (in²)

Depth at Outlet (ft)	Depth at Outlet (ft)									
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
2	15.04	7.71	5.10	3.76	2.85	2.41	2.02	1.73	1.51	1.33
1	7.52	3.86	2.55	1.88	1.43	1.21	1.01	0.87	0.76	0.66
0.6	4.51	2.31	1.53	1.13	0.89	0.72	0.61	0.52	0.45	0.39
0.4	3.01	1.54	1.02	0.75	0.60	0.48	0.40	0.35	0.30	0.26
0.2	1.50	0.77	0.51	0.38	0.30	0.24	0.20	0.17	0.15	0.13
0.1	0.75	0.39	0.26	0.19	0.15	0.12	0.10	0.09	0.08	0.07
0.08	0.45	0.23	0.15	0.11	0.09	0.07	0.06	0.05	0.04	0.03
0.04	0.30	0.15	0.10	0.08	0.06	0.05	0.04	0.03	0.02	0.02
0.02	0.15	0.08	0.05	0.04	0.03	0.02	0.02	0.02	0.01	0.01
0.01	0.08	0.04	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.01

TABLE SB-1

Circular Perforation Sizing

Hole Diameter (in)	Hole Diameter (in)	Area per Row (in ²)		
		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 openings 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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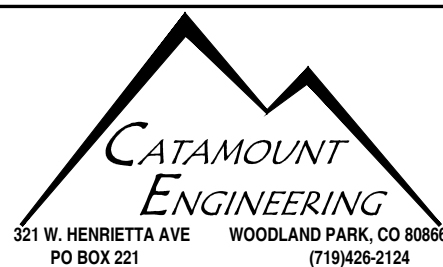
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